Oracle Application Express Workshop I

Acticity Guide – Volume I

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Table of Contents

Practices for Lesson 1: Oracle Application Express Workshop I

Chapter 1

Practices for Lesson 1

Practices Overview

There are no practices for lesson 1.

Practices for Lesson 2: Introducing Oracle Application Express

Chapter 2

Practices for Lesson 2: Overview

Practices Overview

There are two practices for this lesson. In these practices, you log in to Oracle Application Express and create the user that you will need for the rest of the practices in this course. You run a sample database application, install and use a packaged application by unlocking it, and import the OEHR packaged database application.

Practice 2-1: Using Oracle Application Express as a Workspace Administrator

Overview

In this practice, you log in to the Oracle Application Express workspace and create a developer user.

Assumptions

N/A

Tasks

a. Log in to Oracle Application Express with the following details:
   Workspace: **`ora<n>`**
   Username: **`ora<n>_admin`**
   Password: **`ora<n>`**

b. Create a developer user with the following details:
   Username and Password: **`ora<n>`**
   Email: **`ora<n>@oracle.com`**

Practice 2-2: Using Oracle Application Express as a Developer

Overview

In this practice, you:

- Log in to Oracle Application Express as a developer user
- Run the sample database application
- Install a packaged application and use it
- Import the OEHR database application and its supporting objects

Assumptions

You have created the **ora<n>** user from the previous practice.

Tasks

a. Log in to Oracle Application Express with the following details:
   Workspace: **ora<n>**
   Username: **ora<n>**
   Password: **ora<n>**
b. Run the sample database application.
c. Install, unlock, and use a packaged application.
d. Install the OEHR packaged database application and its supporting objects from the following location:
   /home/oracle/labs/oehr/oehr_object_app_installer.sql

Note: This application installs the database objects required for the rest of the practices in this course.

Solution 2-1: Using Oracle Application Express as a Workspace Administrator

Overview

In this solution, the steps to log in to the Oracle Application Express workspace and create a developer user are provided.

Tasks

a. Log in to Oracle Application Express with the following details:

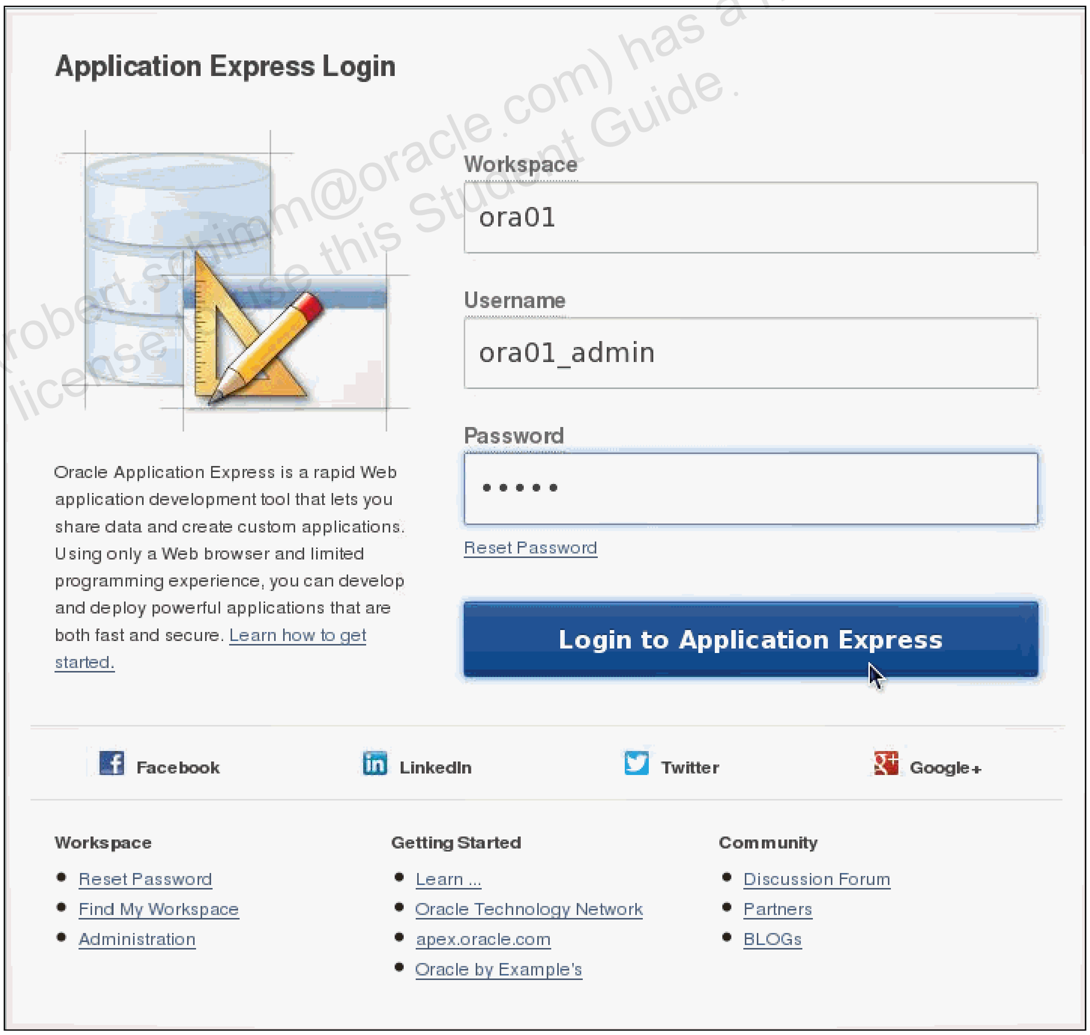
Workspace: `ora<n>`

Username: `ora<n>_admin`

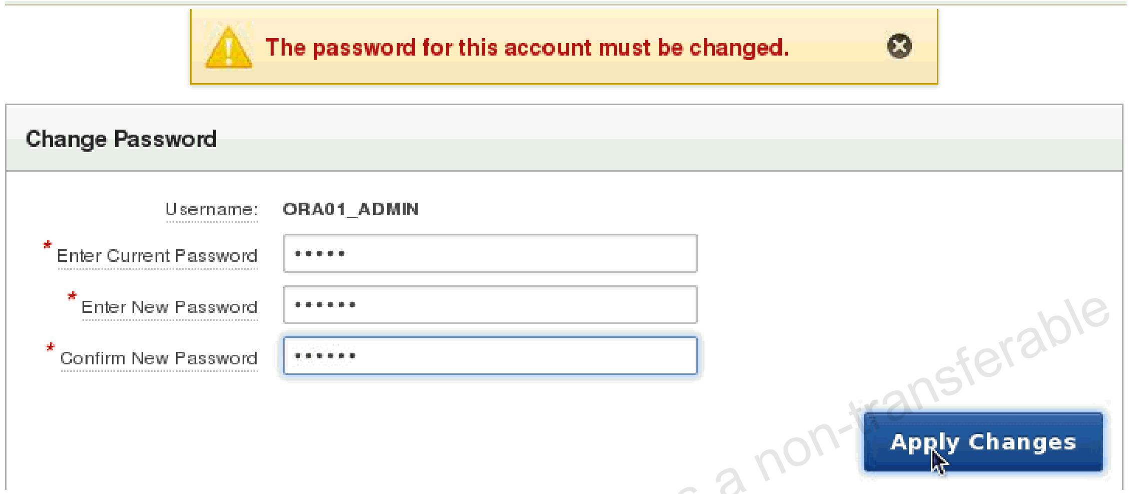
Password: `ora<n>`

1) Enter the following URL in your browser address bar:
http://<instructor_machine_name>:8080/apex

2) On the Login page, enter `ora<n>` for Workspace, `ora<n>_admin` for Username, and `ora<n>` for Password. Click **Login to Application Express**.



3) If you are prompted to change your password, enter the old and new passwords and click **Apply Changes**. (Make sure that the new password contains at least six characters, differs from the old password by at least two characters, contains at least one punctuation character, and contains at least one uppercase alphabetic character.)



4) Click **Return**.
5) You will be directed to log in again. Enter the new password and click **Login**.

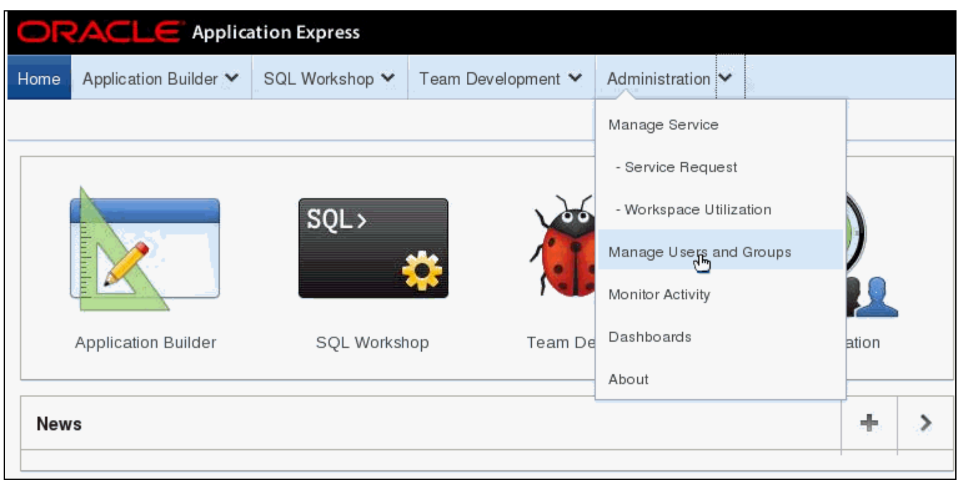
You have successfully logged in to the Oracle Application Express application as an administrator user.

b. Create a developer user with the following details:

Username and Password: `ora<n>`

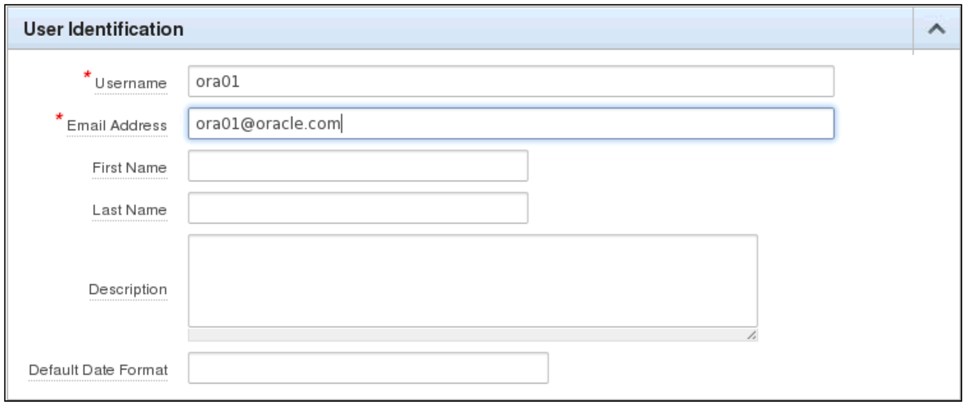
Email: `ora<n>@oracle.com`

1) Click the down arrow on the **Administration** tab and select **Manage Users and Groups**.

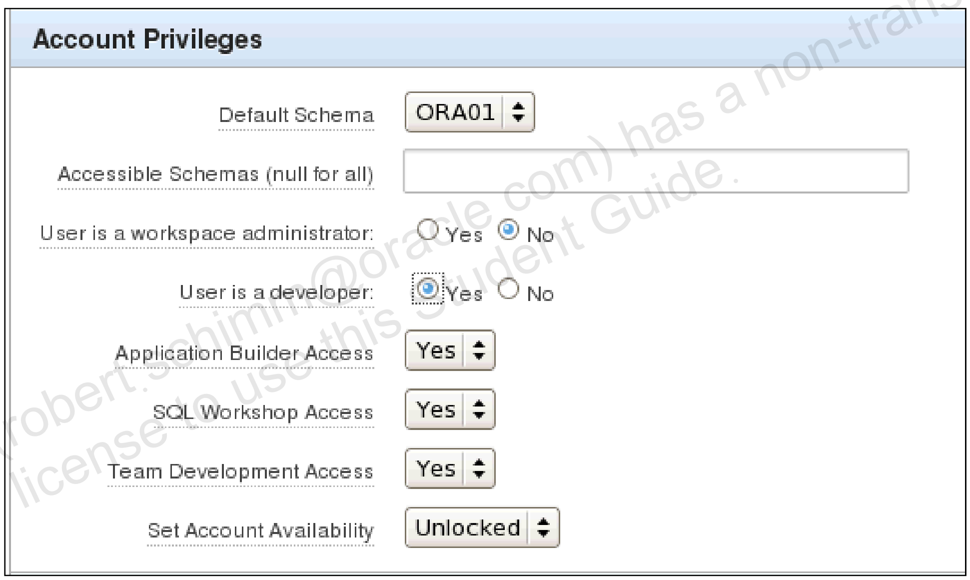


2) Click **Create User >**.

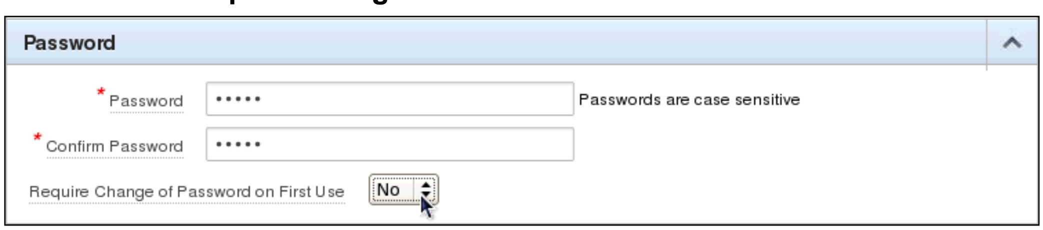
3) Enter `ora<n>` for **Username** and `ora<n>@oracle.com` for **Email Address**.



4) Scroll down and verify the account privileges. Make sure that “**User is a workspace administrator**” is set to **No** and “**User is a developer**” is set to **Yes**.

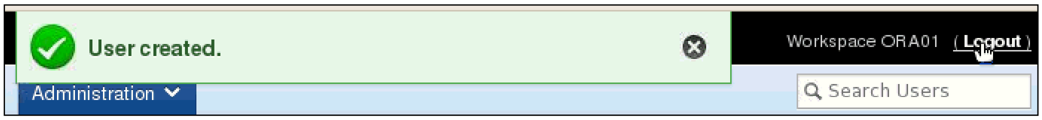


5) Scroll down and enter `ora<n>` for **Password** and **Confirm Password**. Select **No** for **Require Change of Password on First Use**.



6) Scroll up to the top of the page and click **Create User**.

7) Click **Logout**.



You have successfully created a developer user by logging in to the Oracle Application Express application as a workspace administrator.

Solution 2-2: Using Oracle Application Express as a Developer

Overview

In this practice solution, the steps to log in to Oracle Application Express as a developer, run a sample database application, import the OEHR sample database application and its supporting objects, and install a packaged application and use it are provided.

Tasks

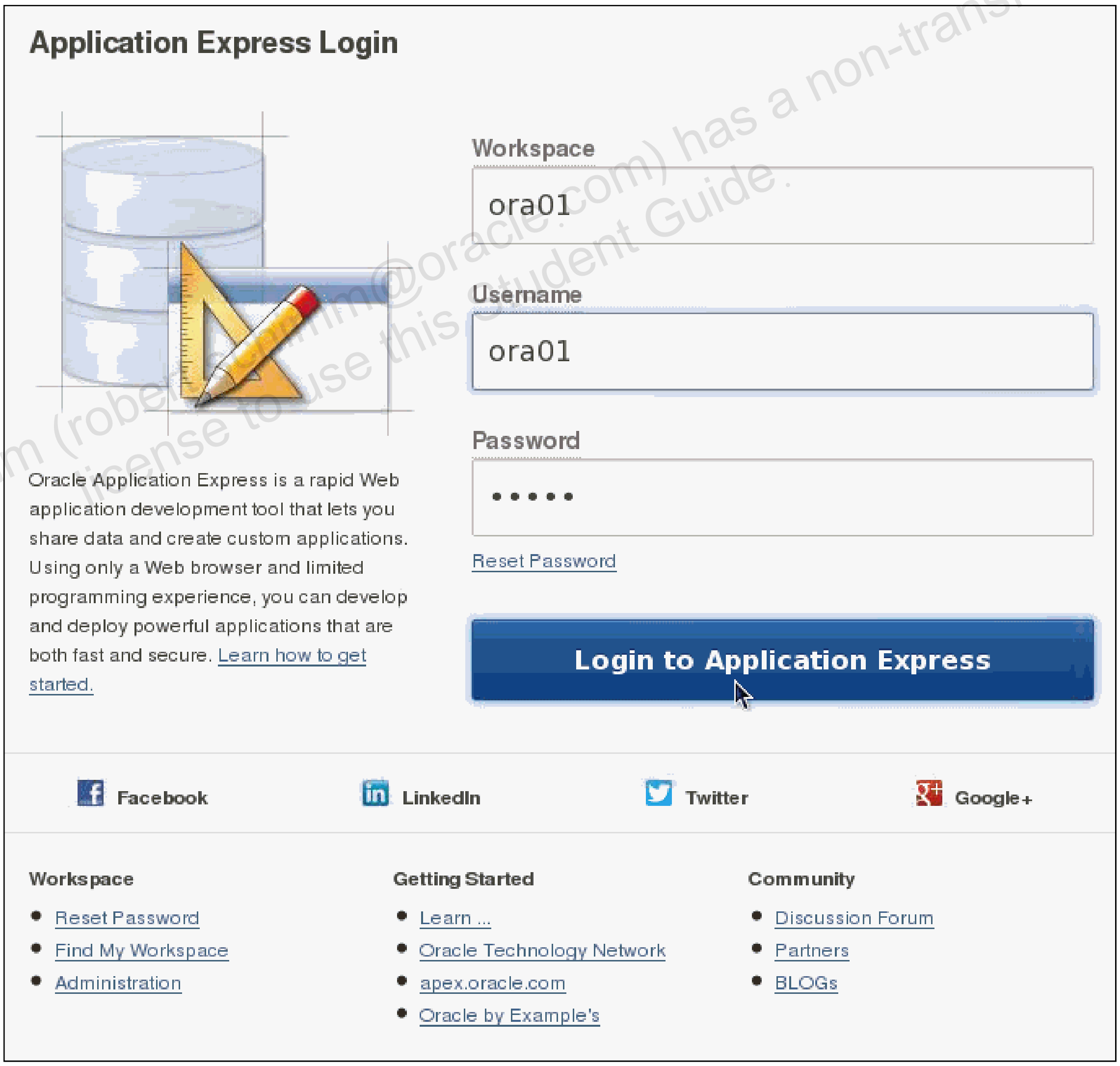
a. Log in to Oracle Application Express with the following details:

   Workspace: **`ora<n>`**

   Username: **`ora<n>`**

   Password: **`ora<n>`**

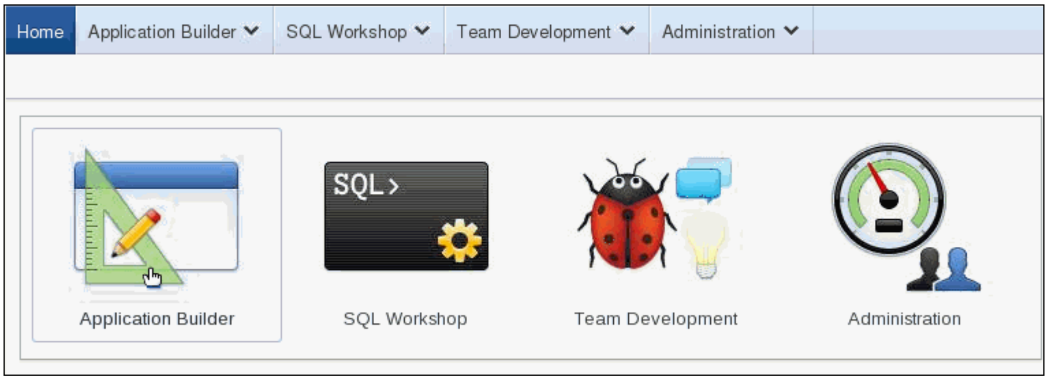
   1) Enter **`ora<n>`** for **Workspace**, **Username**, and **Password**. Click **Login to Application Express**.



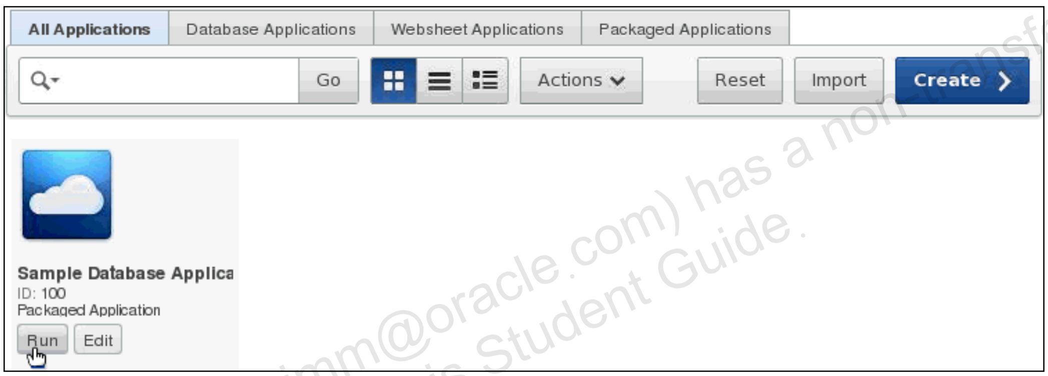
You have successfully logged in to Oracle Application Express as a developer.

b. Run the sample database application.

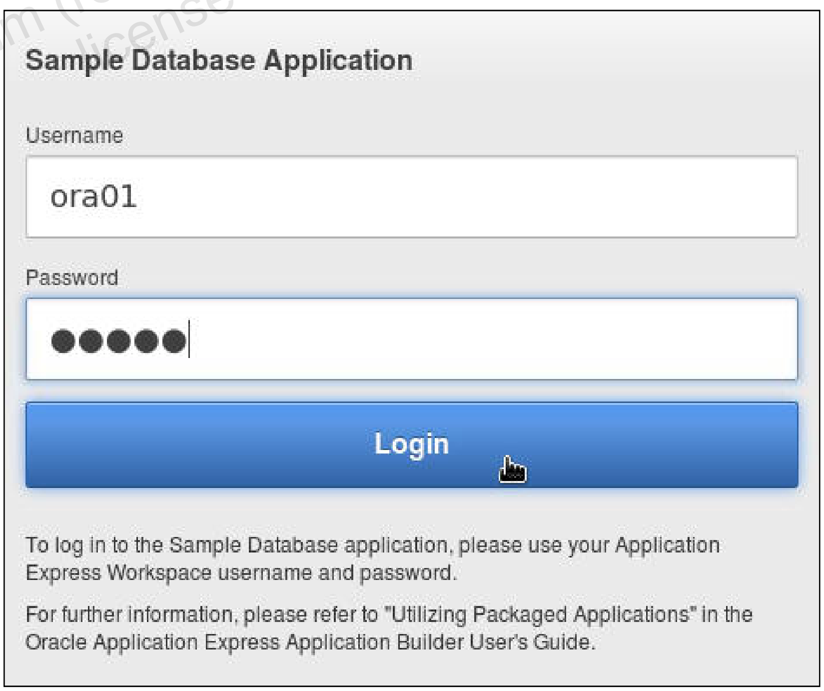
1) Click the **Application Builder** icon on the Oracle Application Express home page.



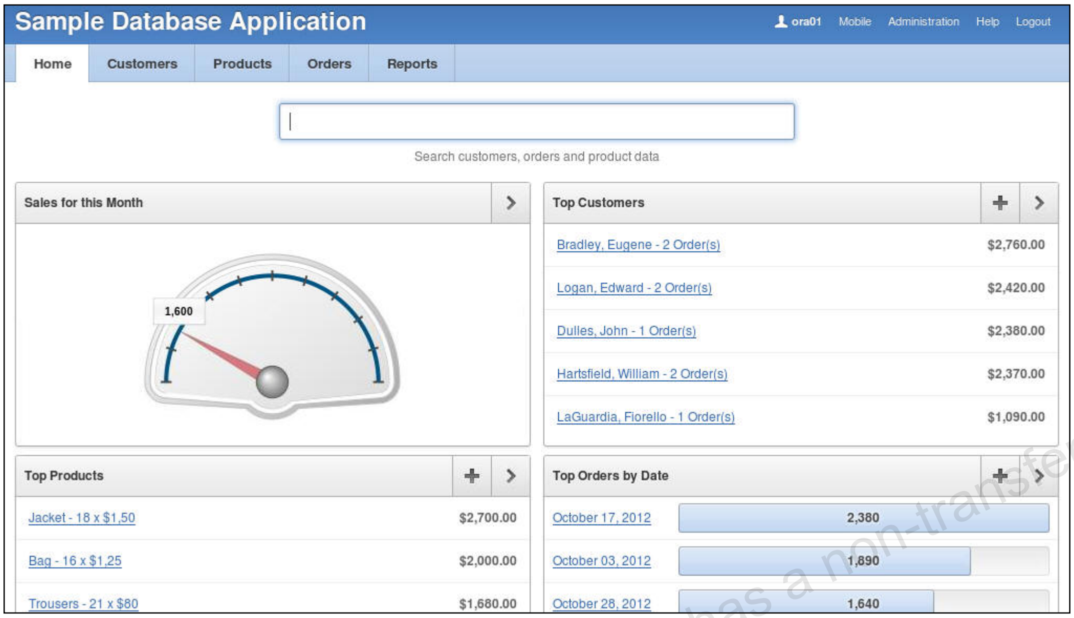
2) Click **Run** to run the **Sample Database Application**.



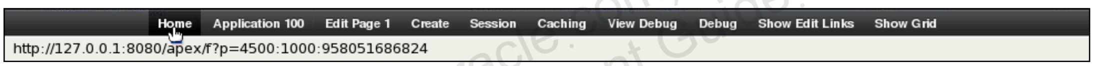
3) You will be prompted to enter your login credentials to log in to the application. Enter your Application Express Username and Password. Enter `ora<n>` for both Username and Password, and click **Login**.



4) The Sample Database Application is displayed. Click the various tabs and try to understand what the application does.



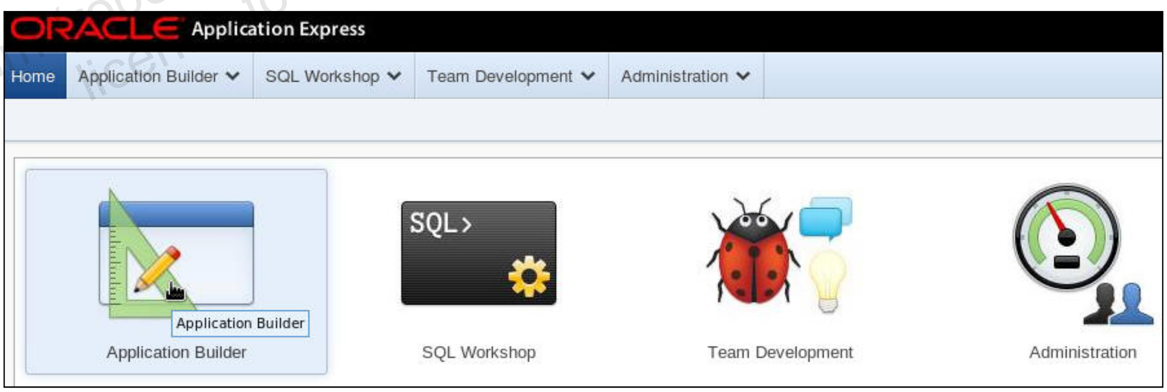
5) Click the **Home** button on the toolbar at the bottom.



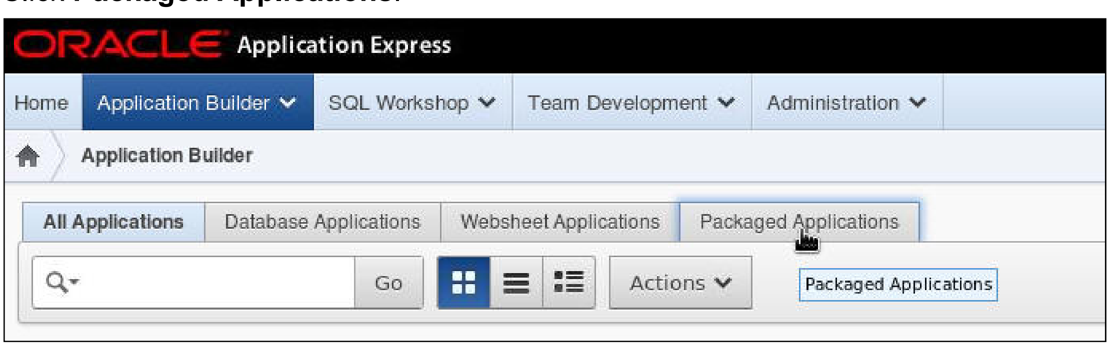
You have successfully run the sample database application.

c. Install, unlock, and use a packaged application.

1) Navigate to the Application Builder page by clicking the Application Builder icon.

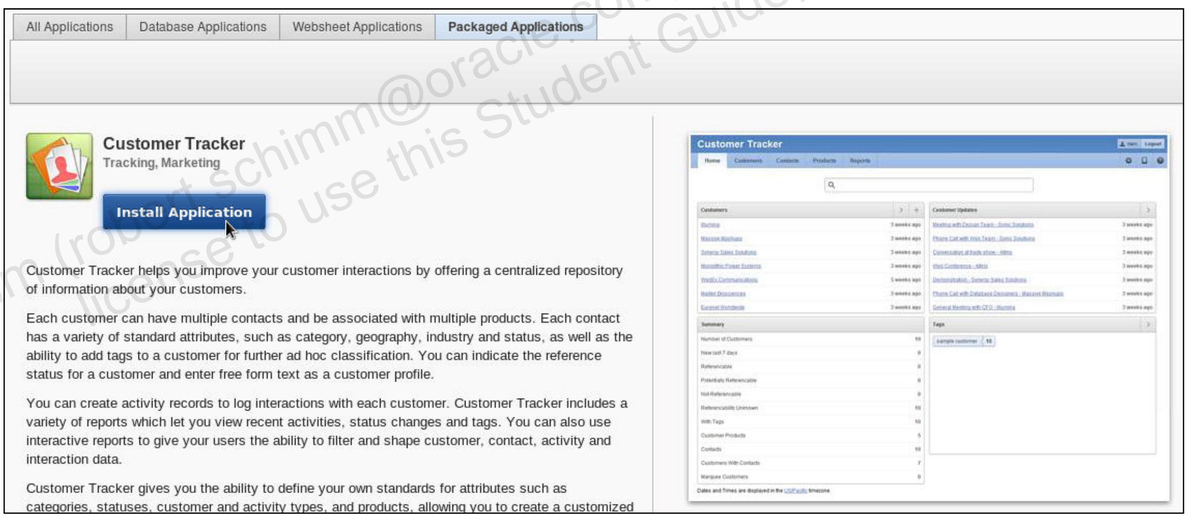


2) Click **Packaged Applications**.

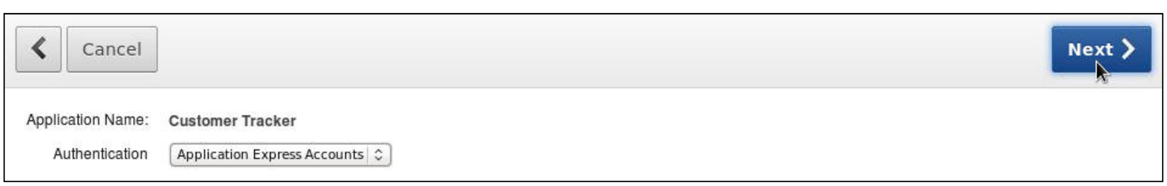


3) You find a set of packaged applications that are available for you to install. In this activity, you install the Customer Tracker application. Click **Customer Tracker**.

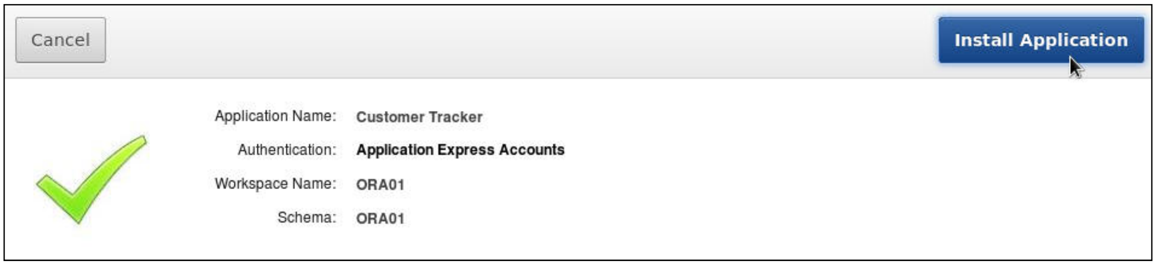
4) A description about the application is available. Read the description and click **Install Application**.



5) Retain the default authentication and click **Next >**.

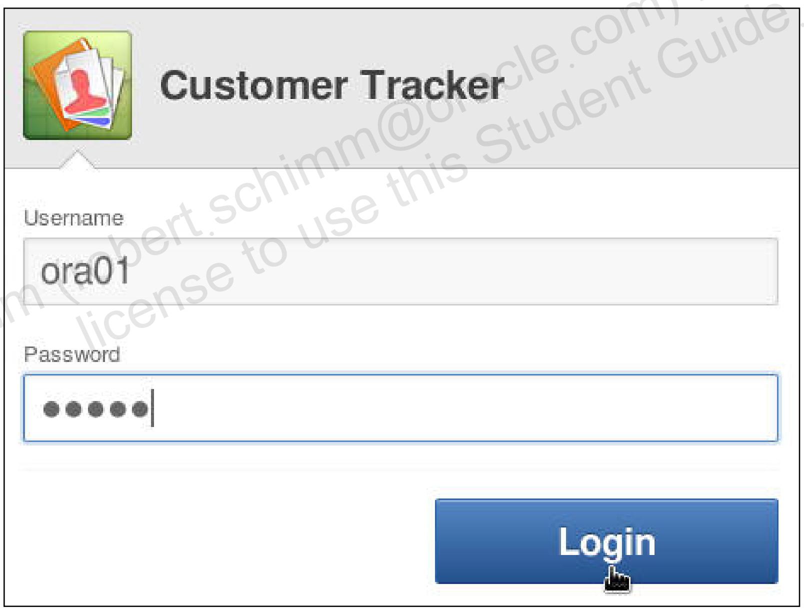


6) Click **Install Application**.

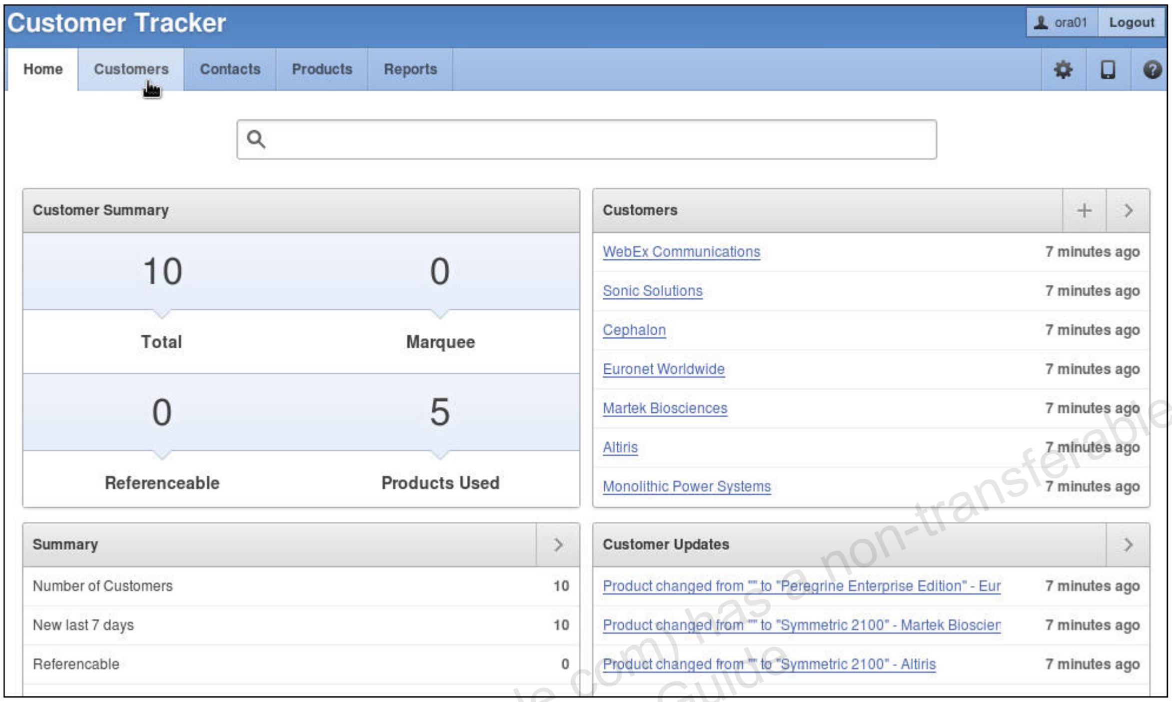


7) After installing the application, click **Run Application**.

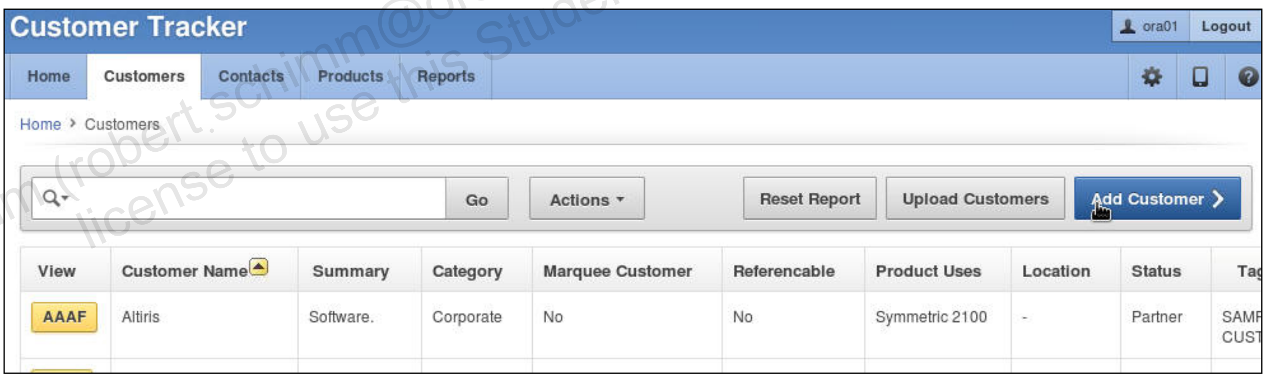
8) Enter your login credentials to log in to the application.



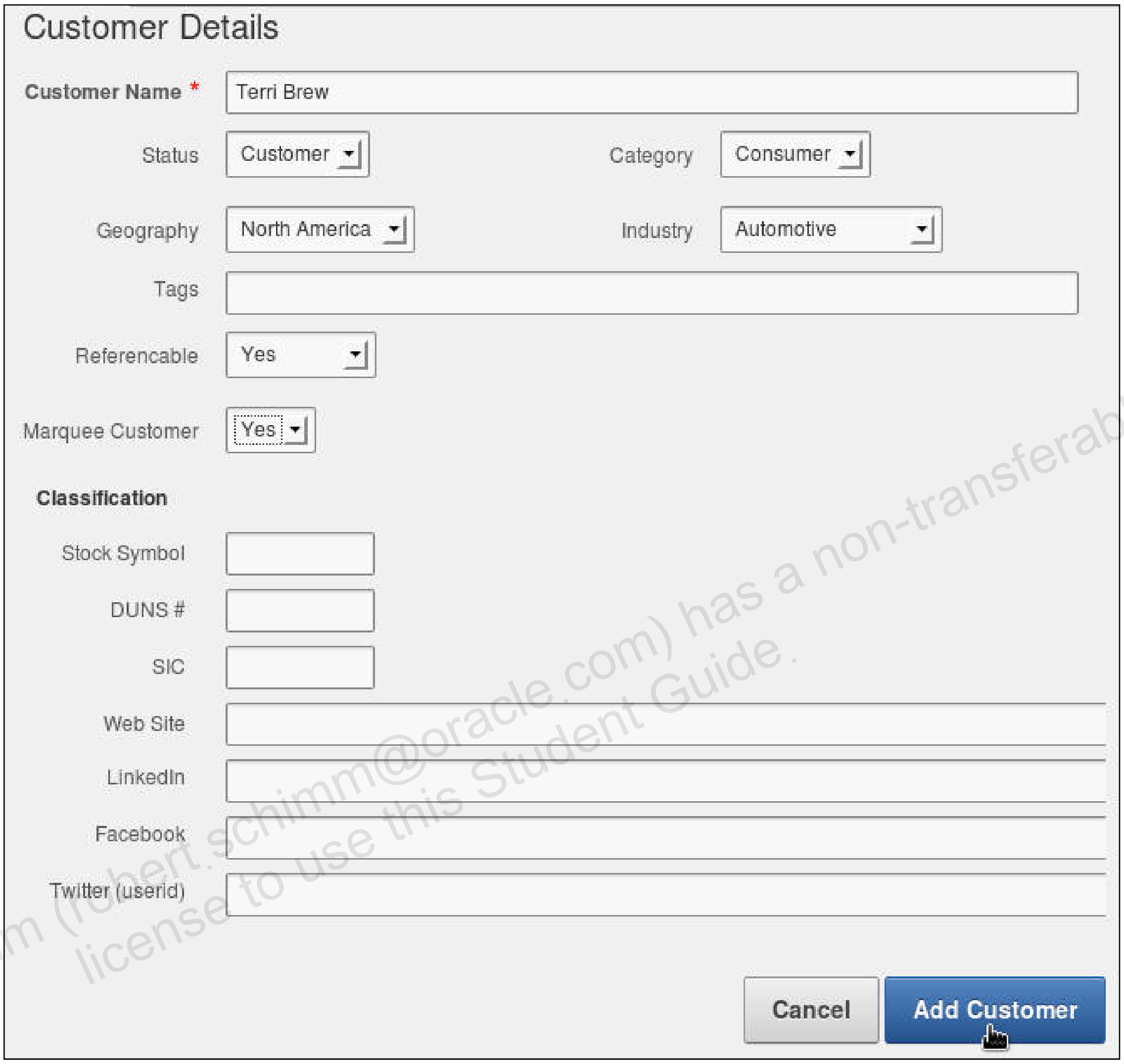
9) You are taken to the Home page of the application. You can click the tabs to understand how the application works. Click **Customers**.



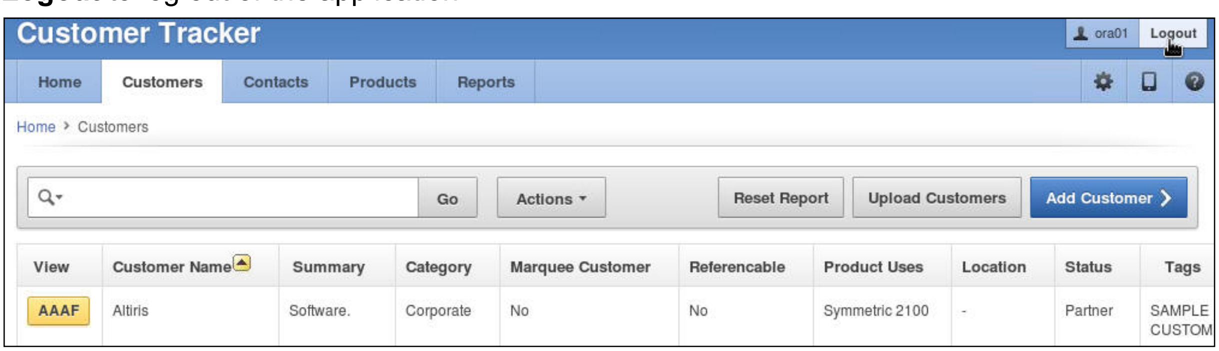
10) Click **Add Customer>** to add customer data.



11) Provide some information in the form input fields and click **Add Customer** at the bottom of the page. This will add the customer data into the database.



12) Similarly, you can try similar activities with the different tabs available. Click **Logout** to log out of the application.



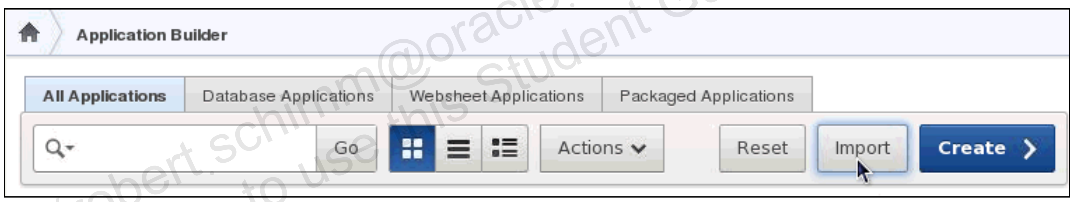
d. Install the OEHR packaged database application and its supporting objects from the following location:

`/home/oracle/labs/oehr/oehr_object_app_installer.sql`

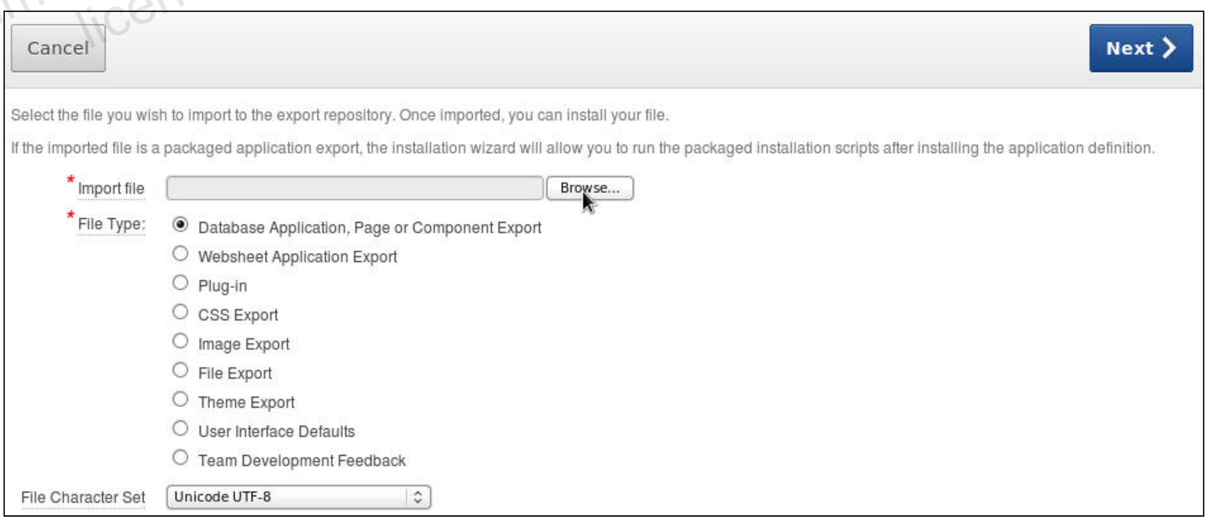
Note: This application installs the database objects required for the rest of the practices in this course.

1) Navigate to the **Application Builder** page by clicking the **Application Builder** icon.

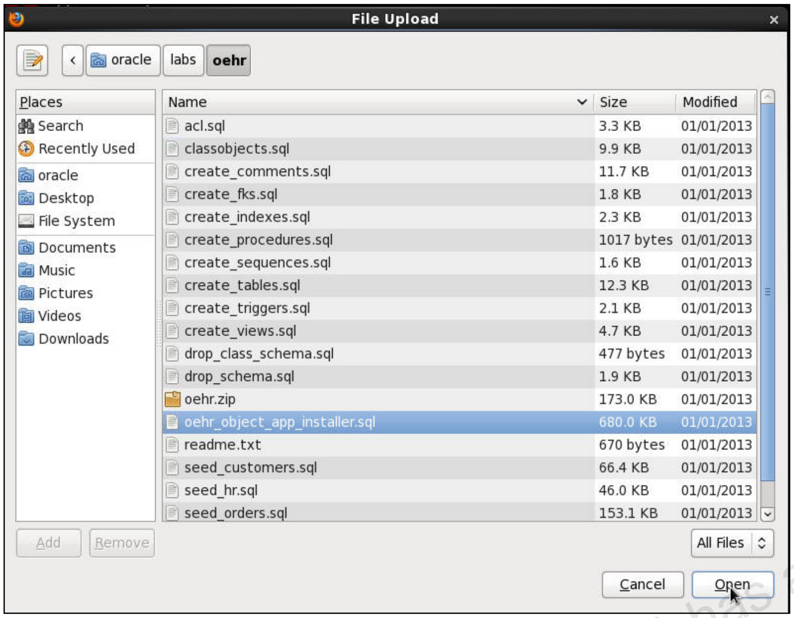
2) Click the **Import** button.



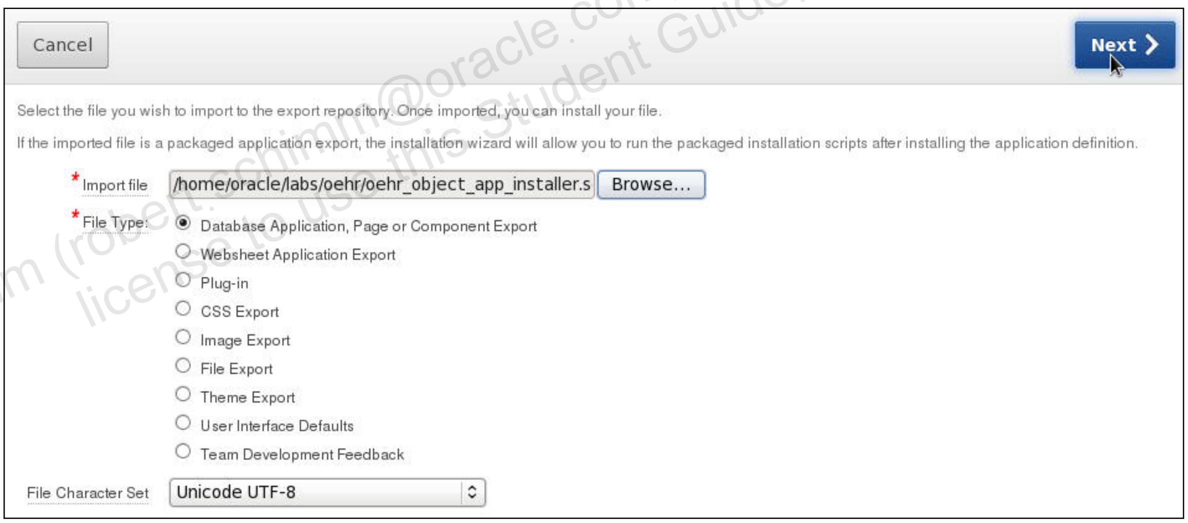
3) Click the **Browse** button.



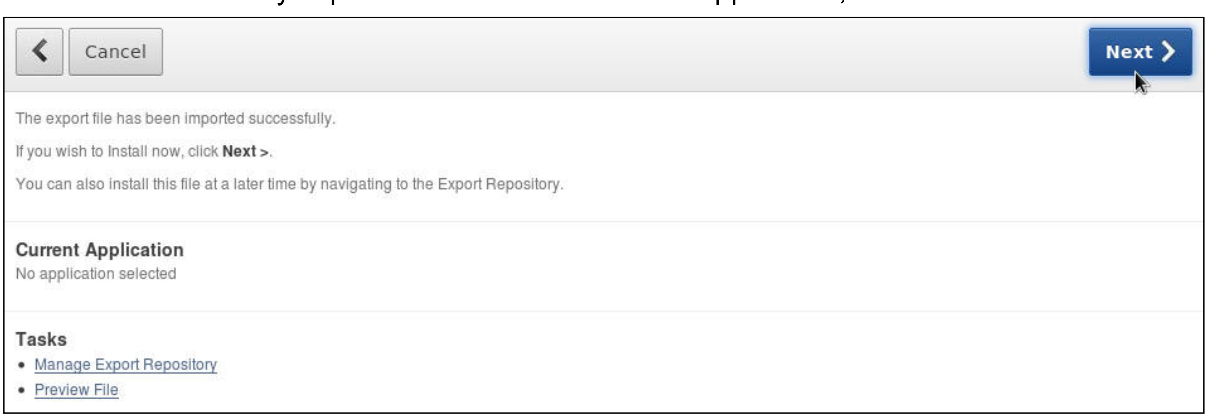
4) Browse to the `/home/oracle/labs/oehr` folder, select the `oehr_object_app_installer.sql` script file, and click **Open**.



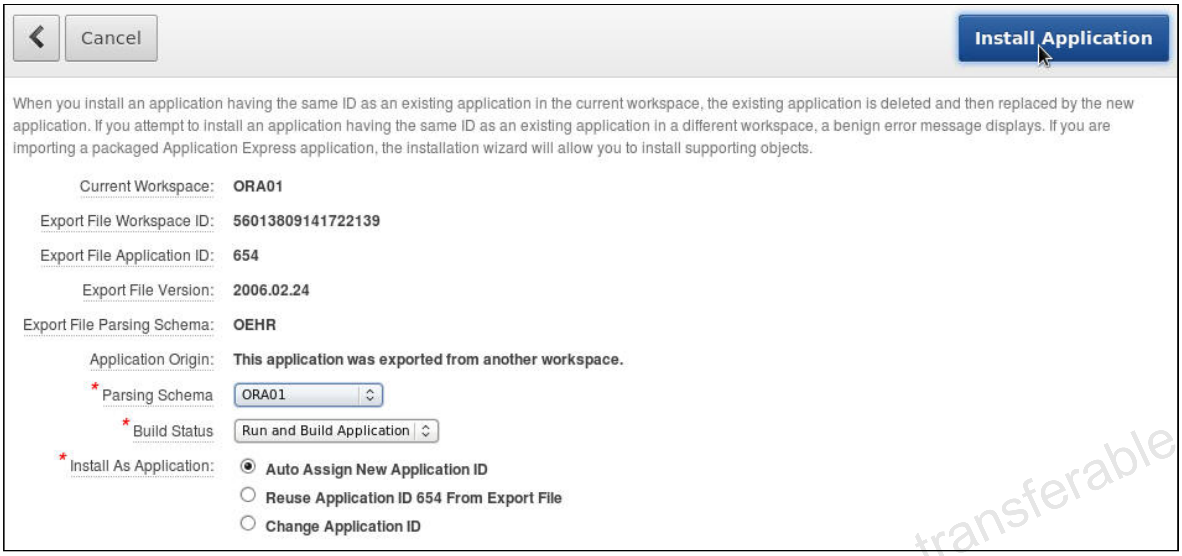
5) Click **Next>** to import the file.



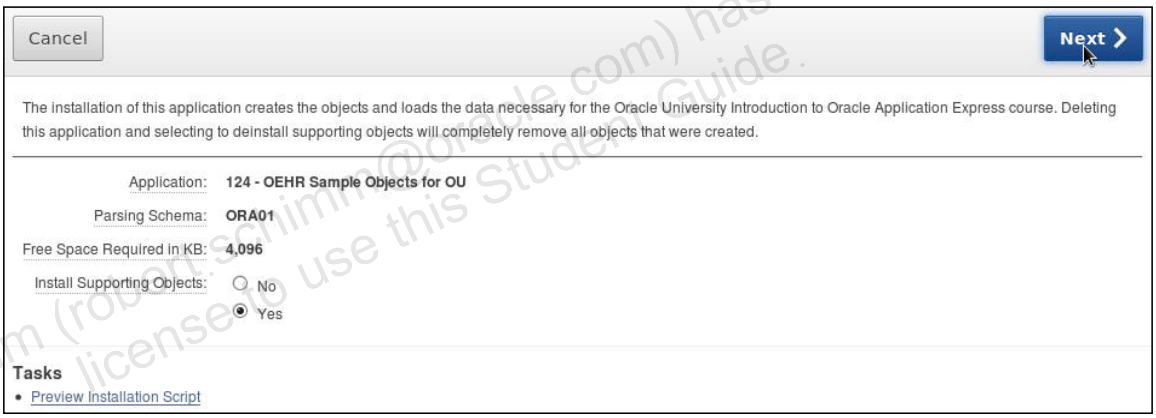
6) You have successfully imported the file. To install the application, click **Next >**.



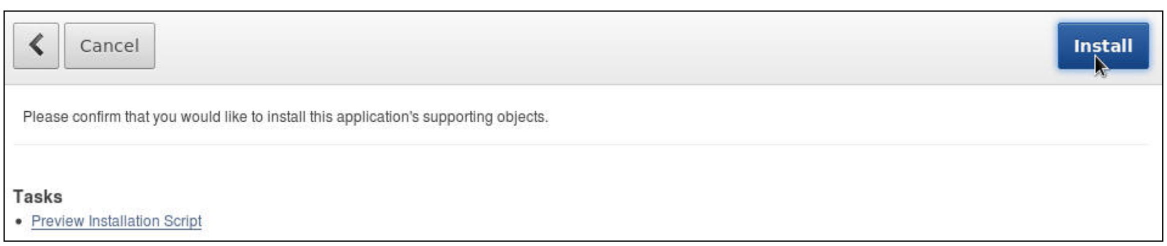
7) Select `ora<n>` for the parsing schema and click **Install Application**.



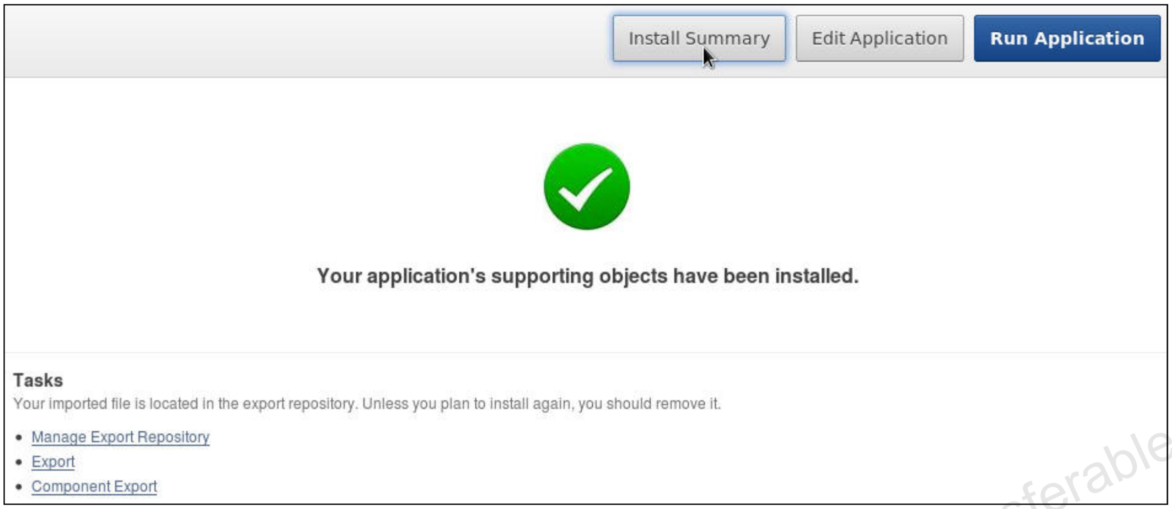
8) To install the supporting objects for the application, ensure that **Install Supporting Objects** is **Yes** and click **Next >**.



9) Click Install.



10) Click **Install Summary**.



11) Review the **Install Summary**.

Install Summary

Script Name	Status	Statements Successful	Statements with Errors	Total Statements
create tables	Success	17	0	17
create procedures	Success	1	0	1
create sequences	Success	8	0	8
create indexes	Success	28	0	28
create fks	Success	10	0	10
create triggers	Success	7	0	7
create views	Success	9	0	9
create comments	Success	88	0	88
seed hr	Success	218	0	218
seed customers	Success	341	0	341
seed products	Success	576	0	576
seed orders	Success	1889	0	1889
report total:		**3192**	**0**	**3192**
				1 - 12

You have successfully imported and installed the OEHR sample database application and its supporting objects.

Practices for Lesson 3: Creating a Database Application

Chapter 3

Practice 3-1: Creating Database Applications

Overview

In this practice, you:

- Create a database application from a spreadsheet
- Create a desktop application
- Add a mobile user interface to the application

Assumptions

You have performed Practice 2-1 and Practice 2-2.

Tasks

a. Create an application named Tasks based on the **`tasks.txt`** file available in the **`/home/oracle/labs/files`** folder. The file has tab-delimited information and the first row contains the column names. Name the table, where the data from the file is uploaded, Tasks.

b. Create a database desktop application named Order Management. In the rest of the practices in this course, you will enhance and complete this application by creating pages, regions, processes, and so on.

c. Add a mobile user interface to the Order Management desktop application.

Solution 3-1: Creating Database Applications

Overview

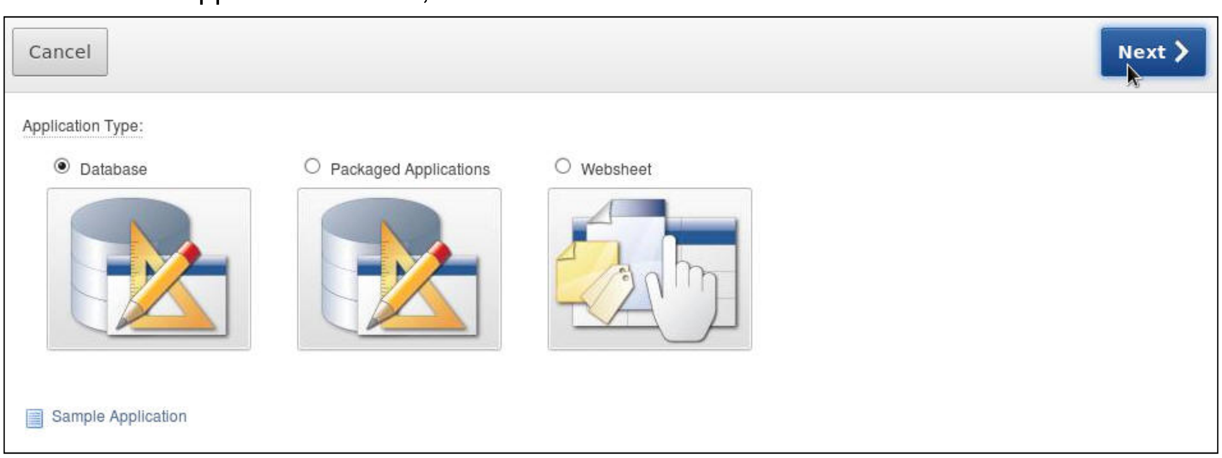
In this practice solution, the steps to create a database application from a spreadsheet and steps to create a desktop application and add a mobile user interface to the application are provided.

Tasks

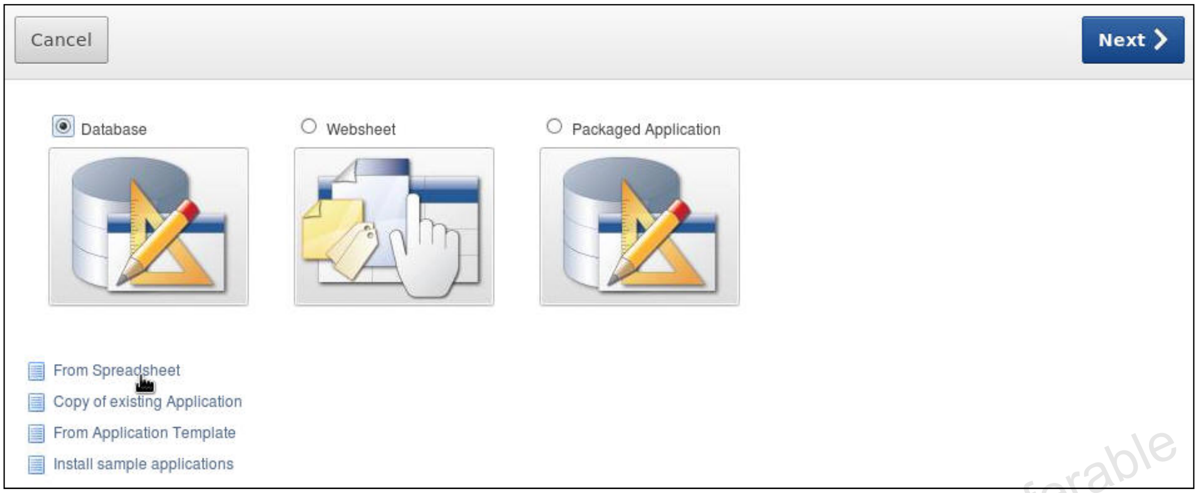
a. Create an application named TASKS based on the **`tasks.txt`** file available in the **`/home/oracle/labs/files`** folder. The file has tab-delimited information and the first row contains the column names. Name the table, where the data from the file is uploaded, Tasks.

1) Select the **Application Builder** pull down and click **Create**.

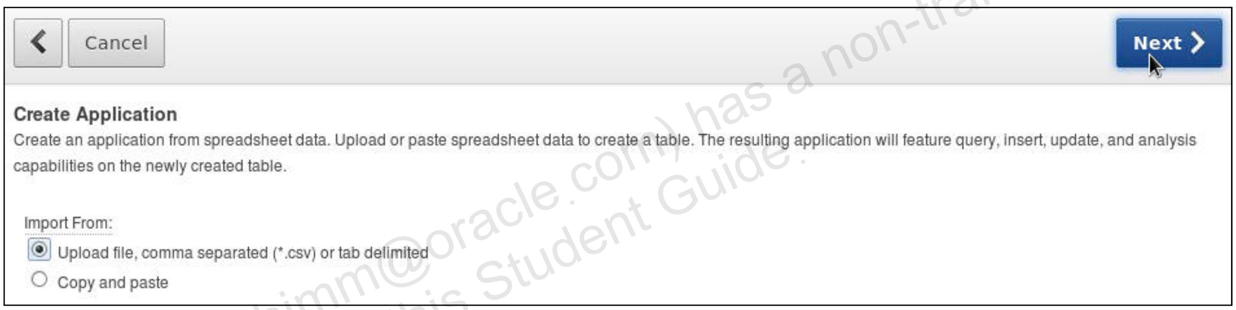
2) In the Create Application Wizard, make sure **Database** is selected and click **Next**.



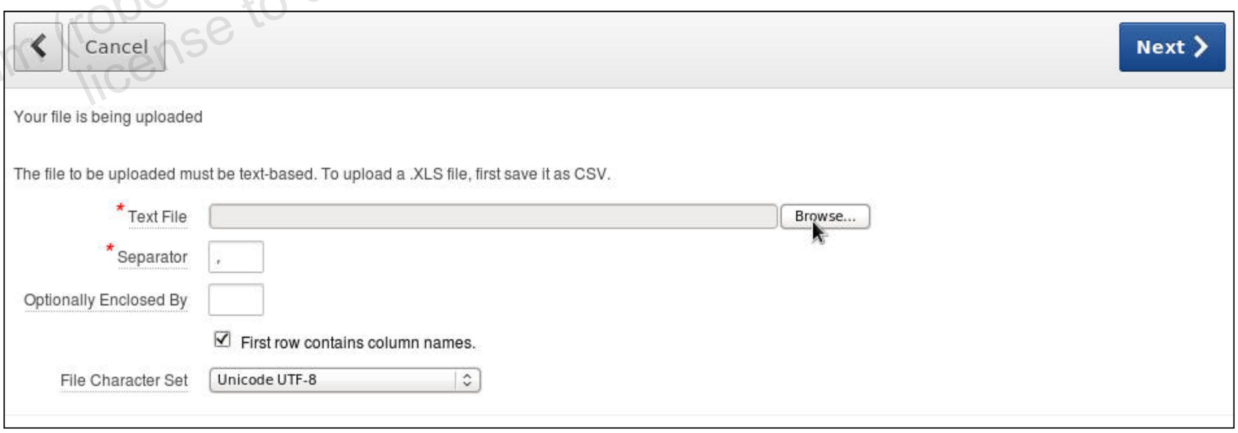
3) Select **From Spreadsheet**.



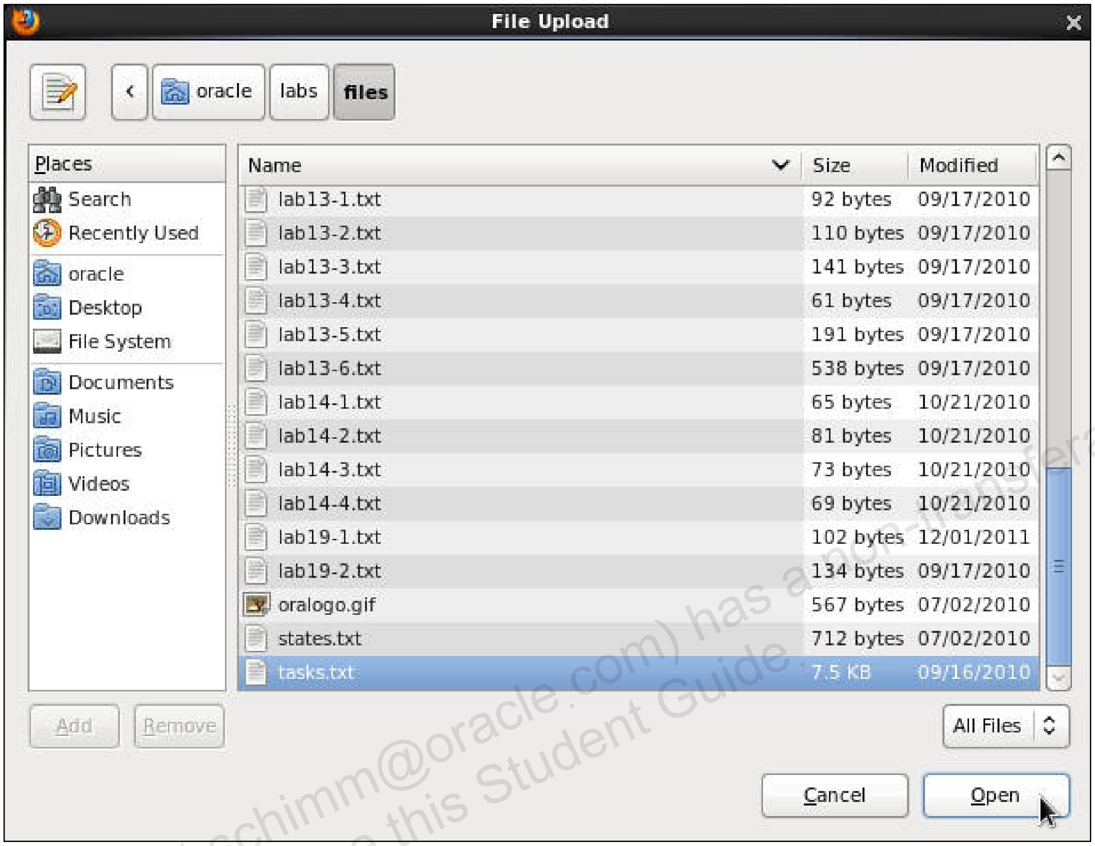
4) Select **Upload file, comma separated (*.csv) or tab delimited** and click **Next >**.



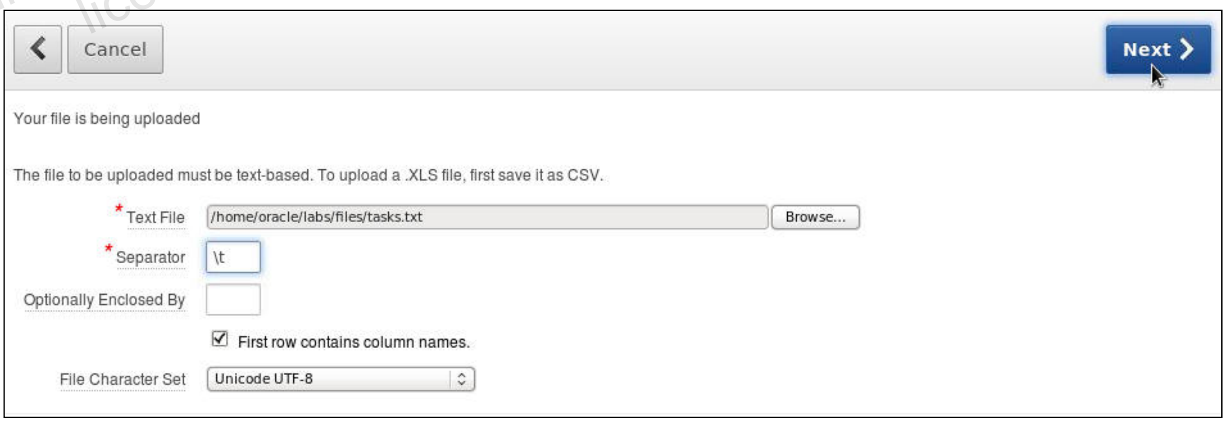
5) Click the **Browse** button to select the file in the **Text File** field or enter the file name in the field.



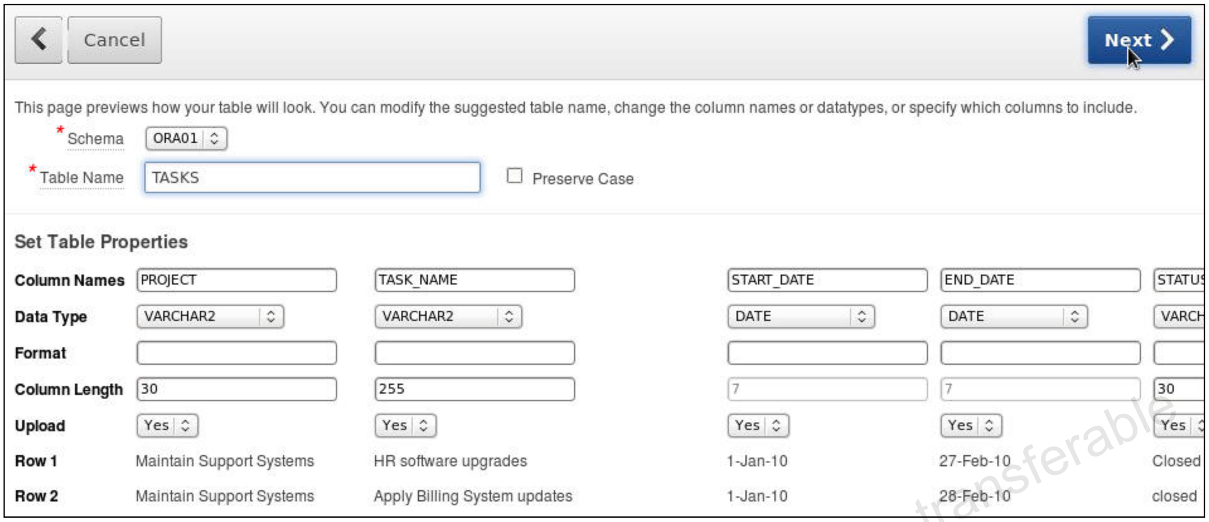
6) Select the **tasks.txt** file from the `/home/oracle/labs/files` folder and click **Open**.



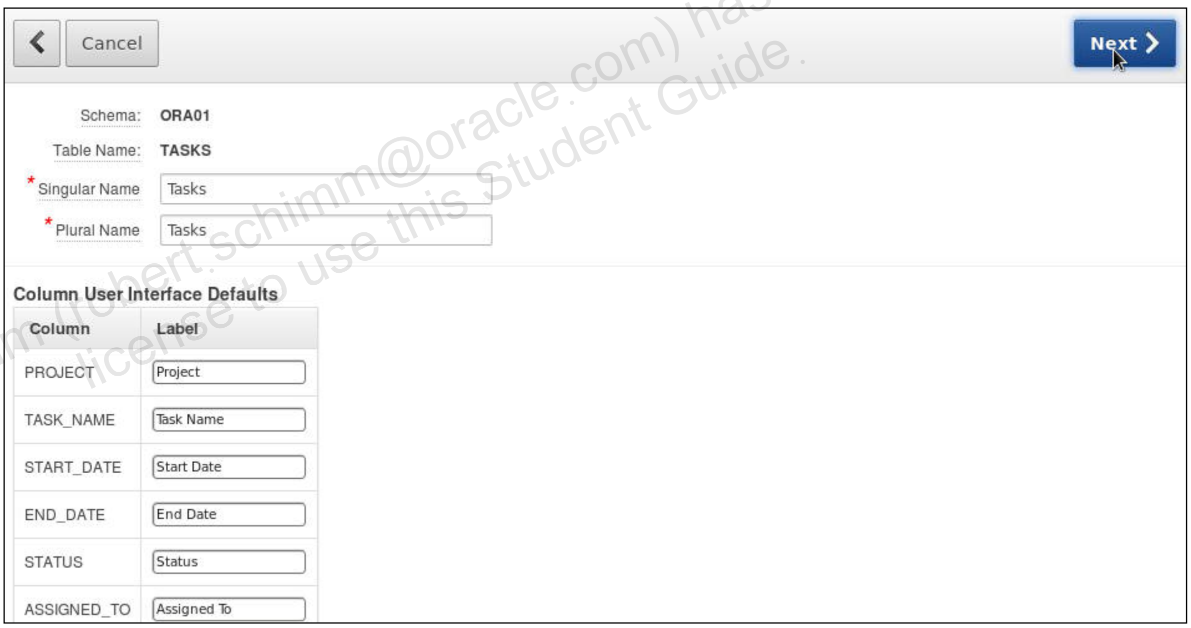
7) To specify that the data is tab delimited, enter `\t` in the Separator field. Ensure that the **First row contains column names** check box is selected and click **Next >**.



8) For Table Name, enter `TASKS`. Note that you can see all the data sorted as rows and columns. Click **Next >**.

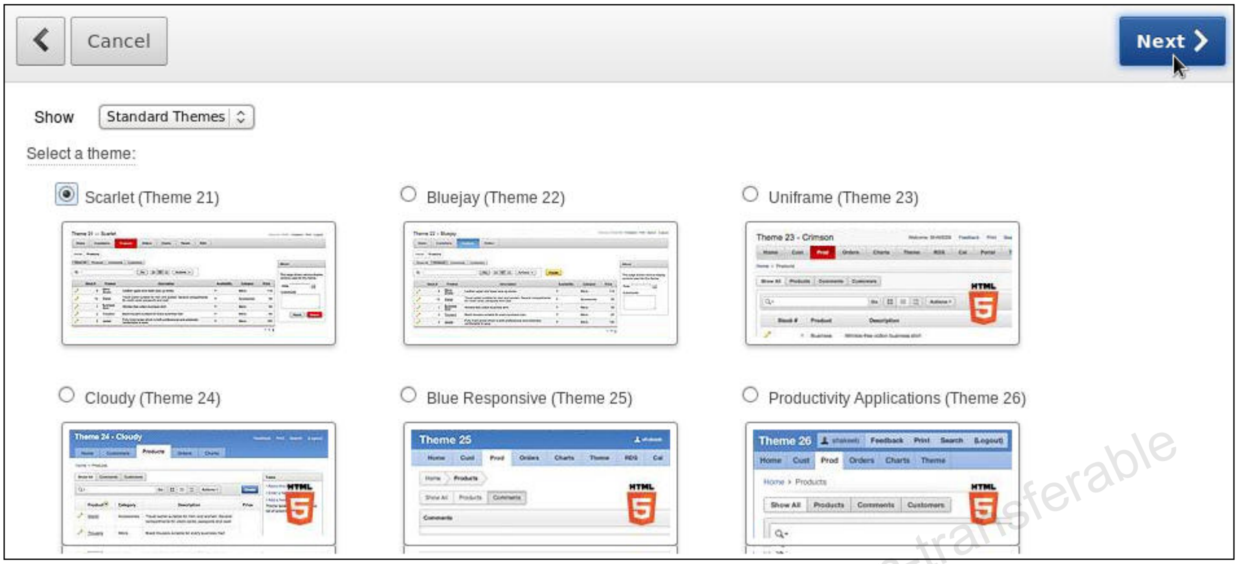


9) Ensure that Plural Name is `Tasks` and accept all other default values. Click **Next >**.

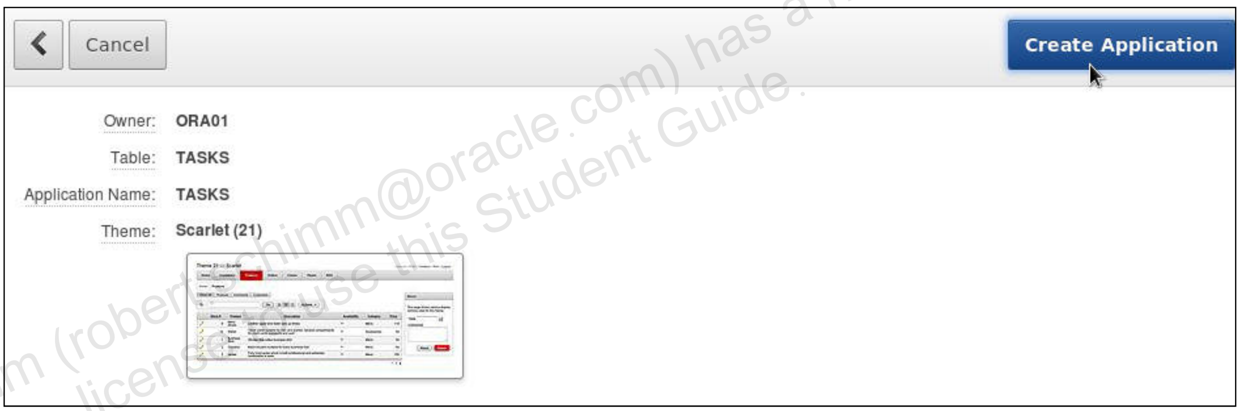


10) Ensure that Application Name is `TASKS`, Create Mode is **Read and Write**, and Report Implementation is **Interactive**. Click **Next >**.

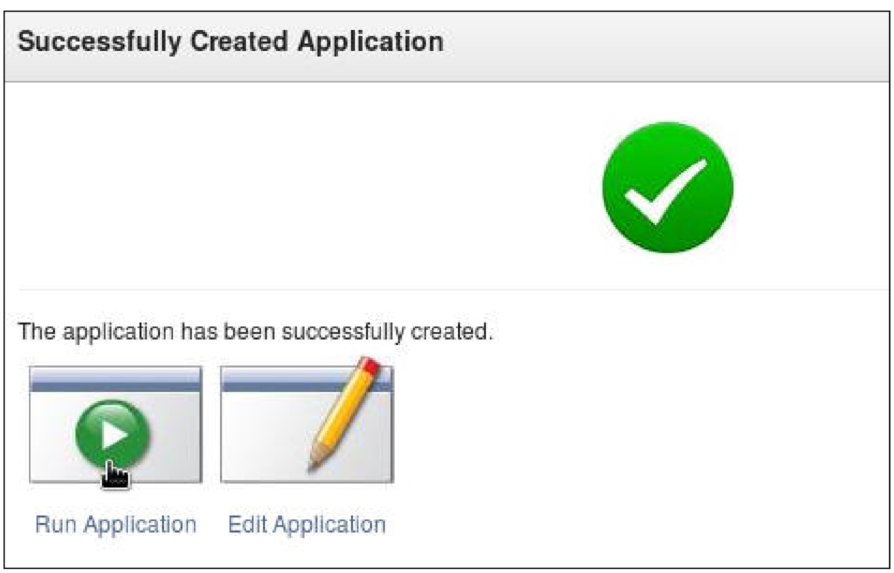
11) Select **Scarlet (Theme 21)**. Click **Next >**.



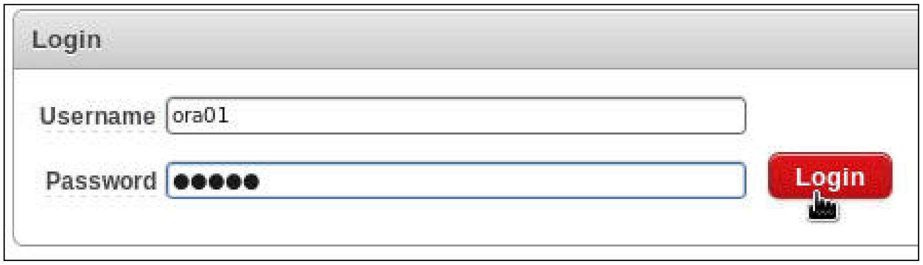
12) Click **Create Application**.



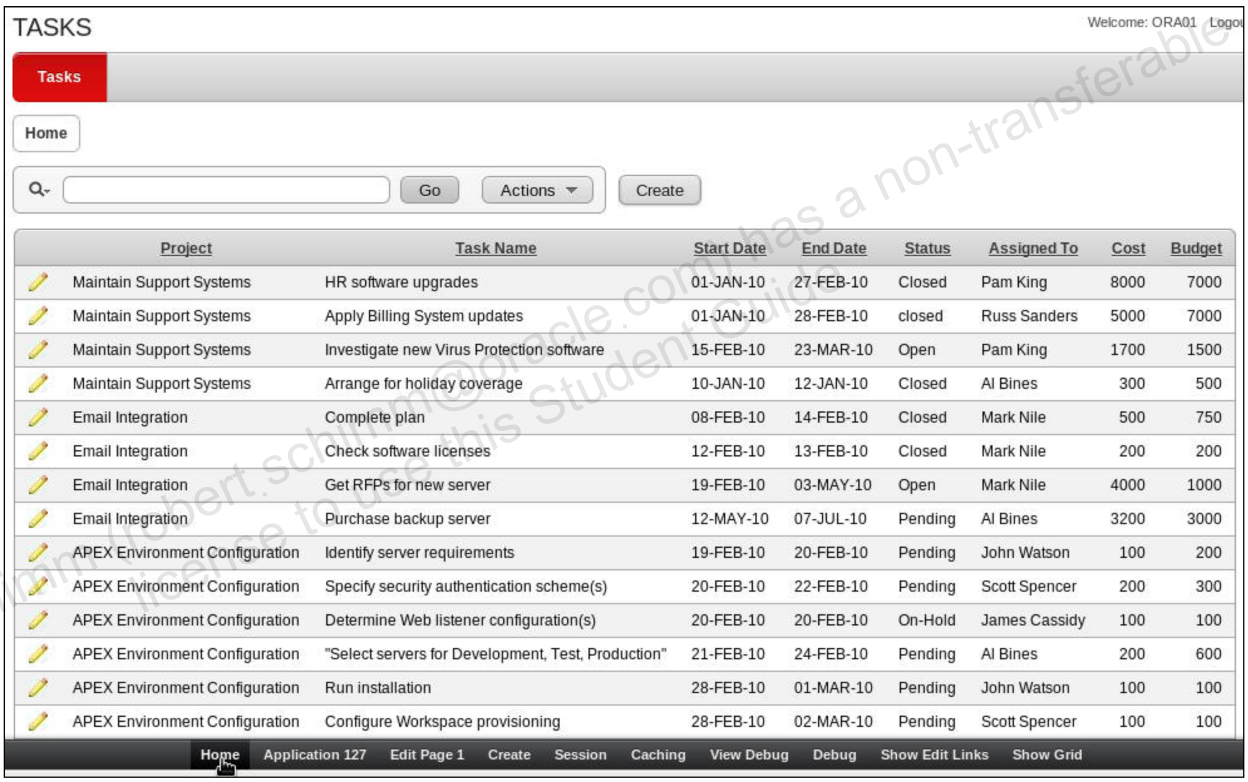
13) To view the application, click **Run Application.**



14) For Username and Password, use **`ora<n>`** (where `n` is the number that you are assigned). Click **Login**.



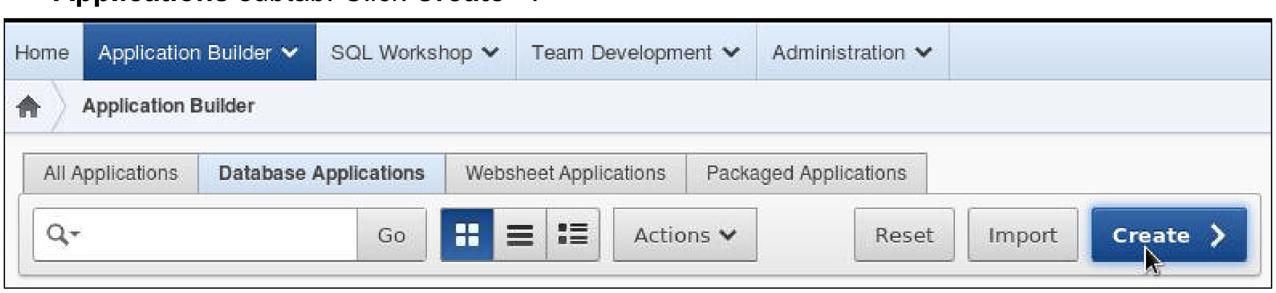
15) The home page of the TASKS application is displayed. It displays an interactive report by using the data from the flat file. Click **Home** on the Developer toolbar to return to the development environment.



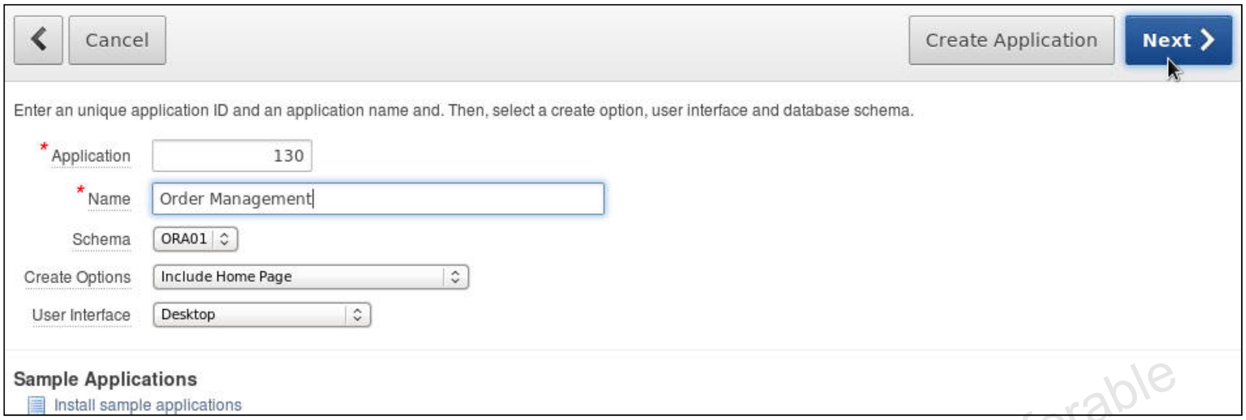
Project	Task Name	Start Date	End Date	Status	Assigned To	Cost	Budget
Maintain Support Systems	HR software upgrades	01-JAN-10	27-FEB-10	Closed	Pam King	8000	7000
Maintain Support Systems	Apply Billing System updates	01-JAN-10	28-FEB-10	closed	Russ Sanders	5000	7000
Maintain Support Systems	Investigate new Virus Protection software	15-FEB-10	23-MAR-10	Open	Pam King	1700	1500
Maintain Support Systems	Arrange for holiday coverage	10-JAN-10	12-JAN-10	Closed	Al Bines	300	500
Email Integration	Complete plan	08-FEB-10	14-FEB-10	Closed	Mark Nile	500	750
Email Integration	Check software licenses	12-FEB-10	13-FEB-10	Closed	Mark Nile	200	200
Email Integration	Get RFPs for new server	19-FEB-10	03-MAY-10	Open	Mark Nile	4000	1000
Email Integration	Purchase backup server	12-MAY-10	07-JUL-10	Pending	Al Bines	3200	3000
APEX Environment Configuration	Identify server requirements	19-FEB-10	20-FEB-10	Pending	John Watson	100	200
APEX Environment Configuration	Specify security authentication scheme(s)	20-FEB-10	22-FEB-10	Pending	Scott Spencer	200	300
APEX Environment Configuration	Determine Web listener configuration(s)	20-FEB-10	20-FEB-10	On-Hold	James Cassidy	100	100
APEX Environment Configuration	"Select servers for Development, Test, Production"	21-FEB-10	24-FEB-10	Pending	Al Bines	200	600
APEX Environment Configuration	Run installation	28-FEB-10	01-MAR-10	Pending	John Watson	100	100
APEX Environment Configuration	Configure Workspace provisioning	28-FEB-10	02-MAR-10	Pending	Scott Spencer	100	100

b. Create a database desktop application named Order Management. In the rest of the practices in this course, you will enhance and complete this application by creating pages, regions, processes, and so on.

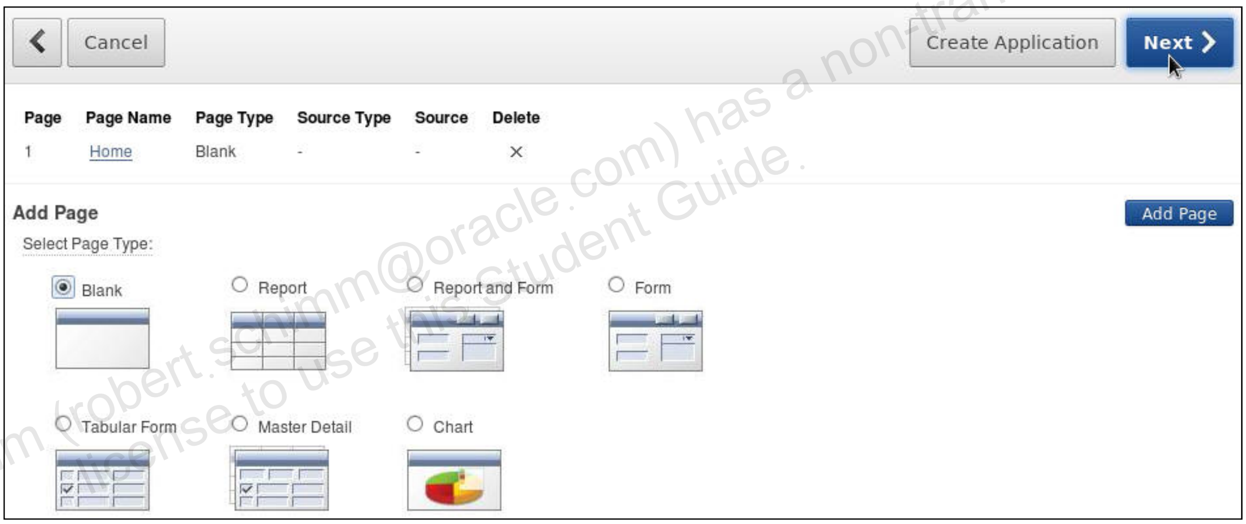
1) Navigate to the **Application Builder** home page and click the **Database Applications** subtab. Click **Create >**.



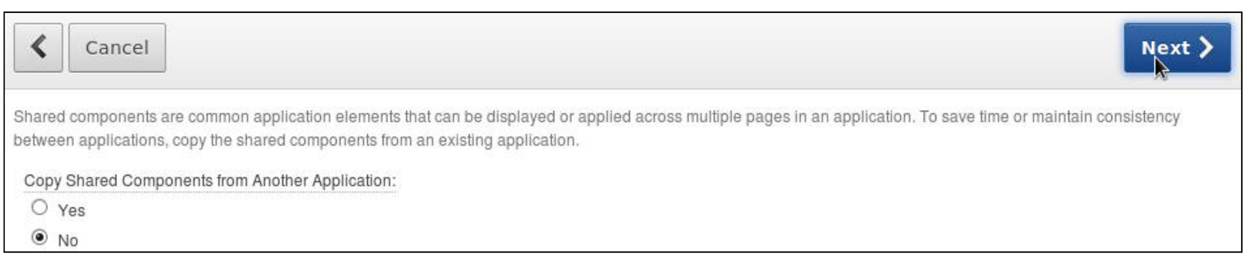
2) Enter **Order Management** for Name, and make sure that `ORA<n>` (where `n` is the number that you are assigned) is selected for Schema and **Desktop** for User Interface. Click **Next >**.



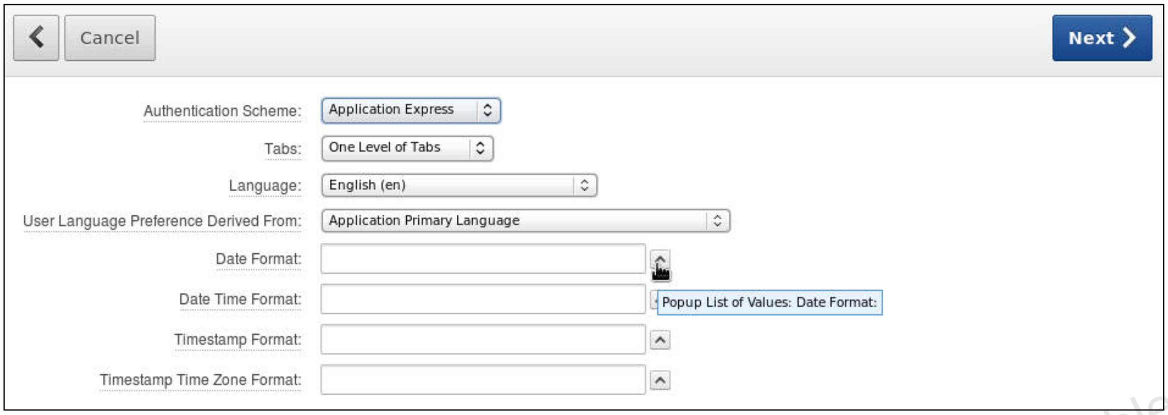
3) Notice that a Home page will be created. Click **Next >**.

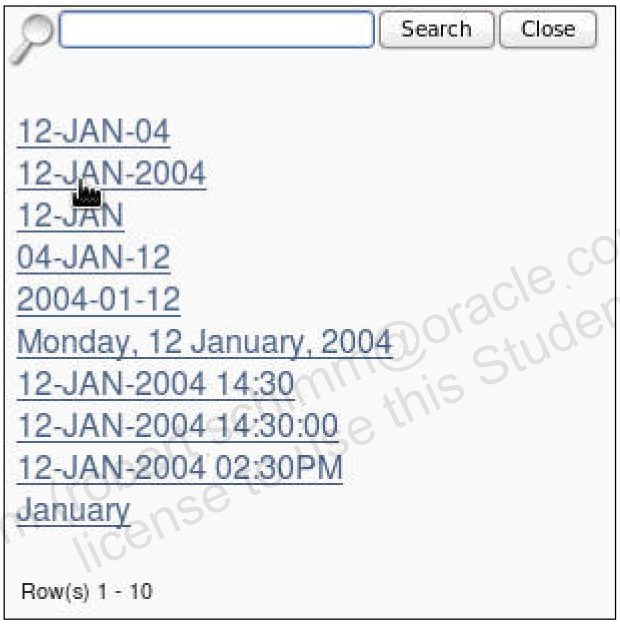


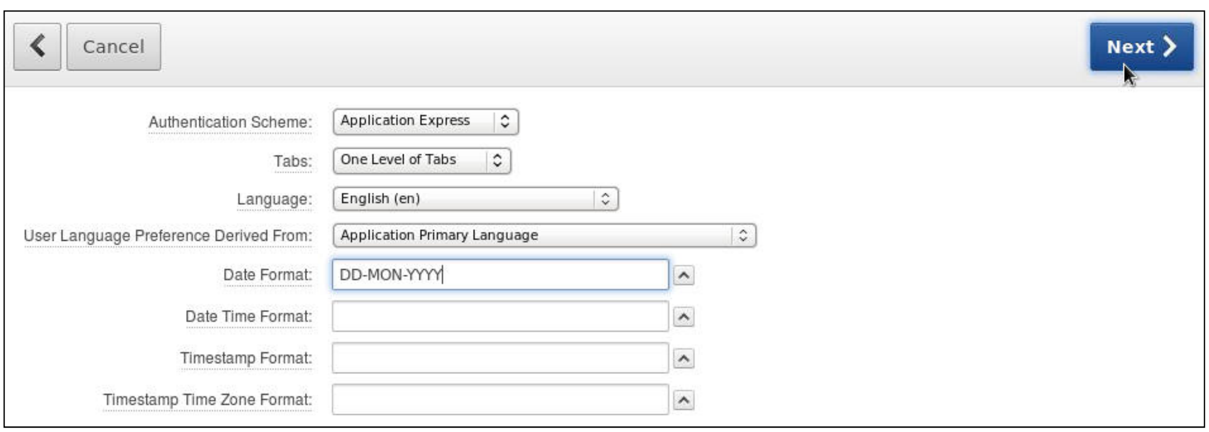
4) Accept the default and click **Next >**.



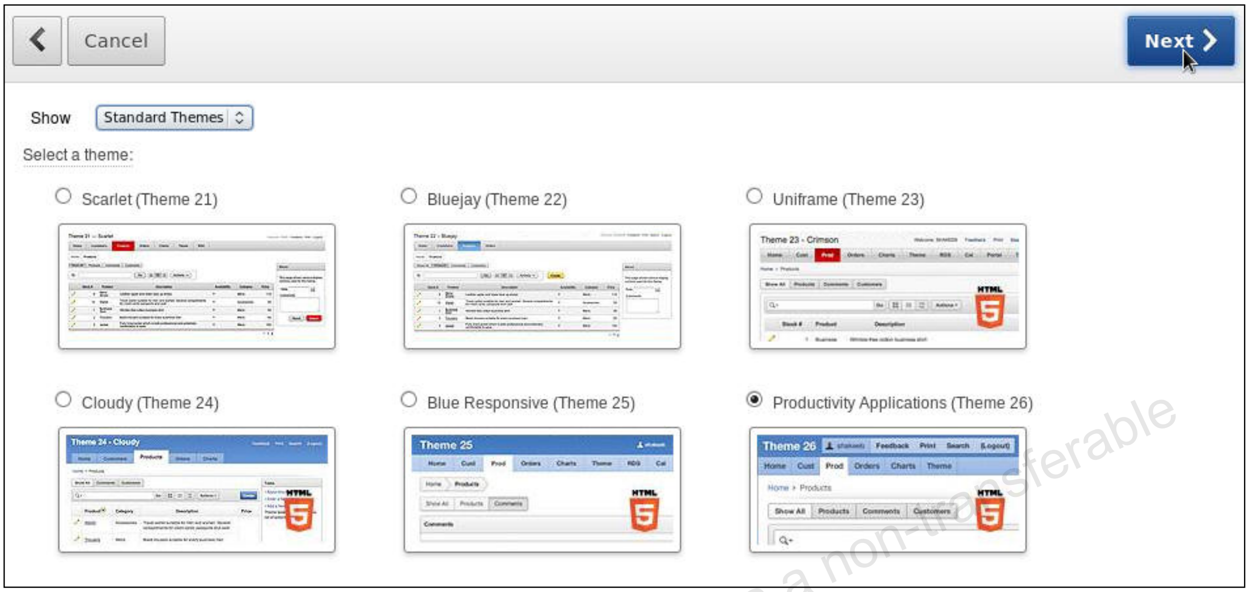
5) Select **`DD-MON-YYYY`** for **Date Format** by clicking the up arrow to the right, and click **Next >**.



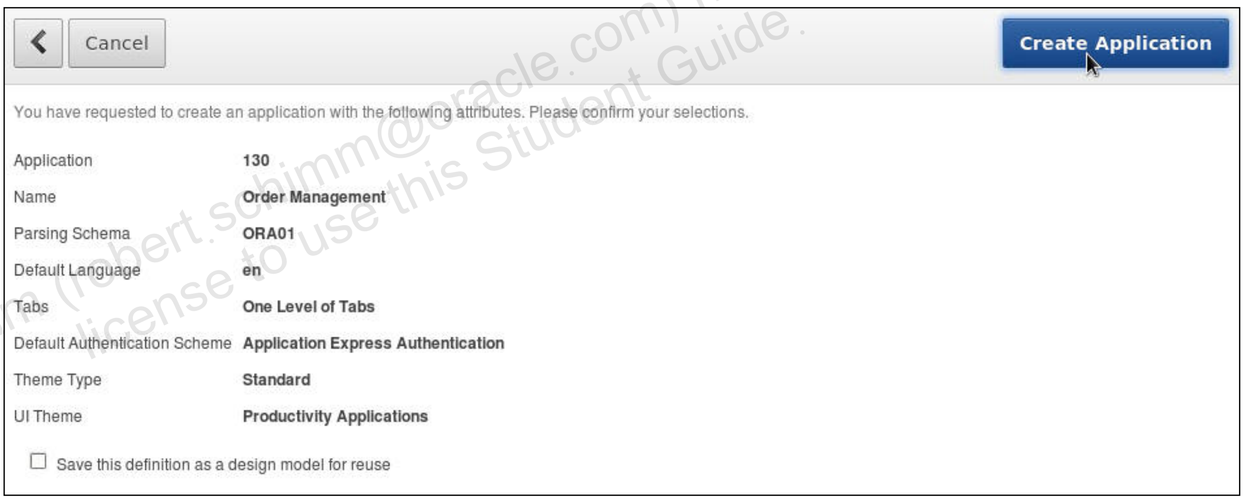




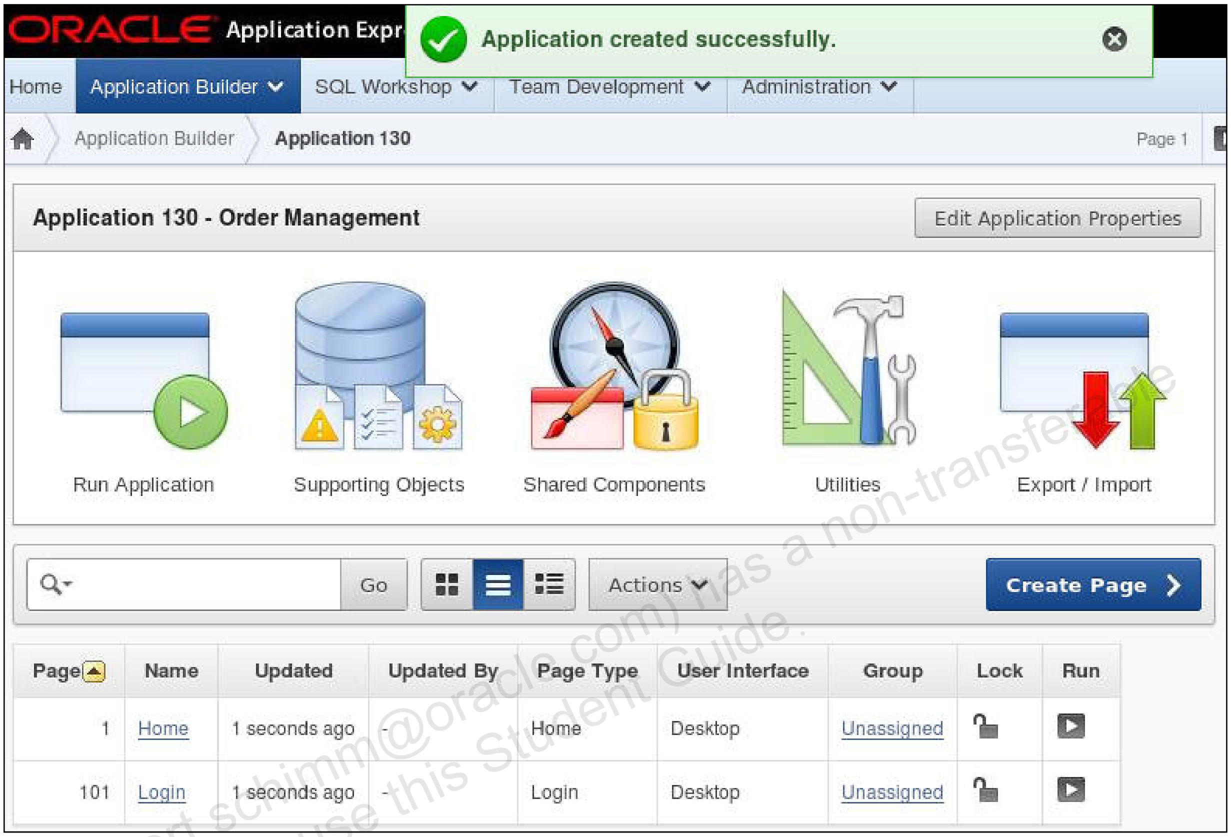
6) Accept the default theme **Productivity Applications (Theme 26)** and click **Next >**.



7) Click **Create Application**.

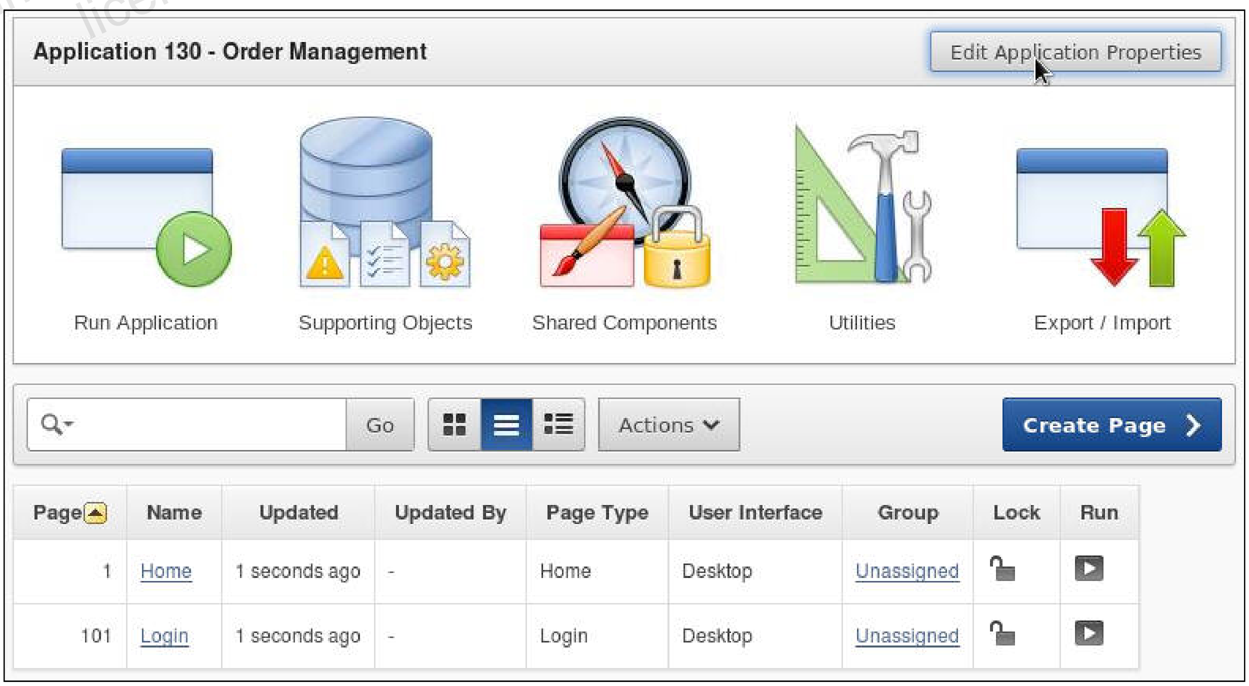


8) An application with an empty Home page and the default Application Express Authentication Login page are created. You will complete this application in the rest of the practices in this course.

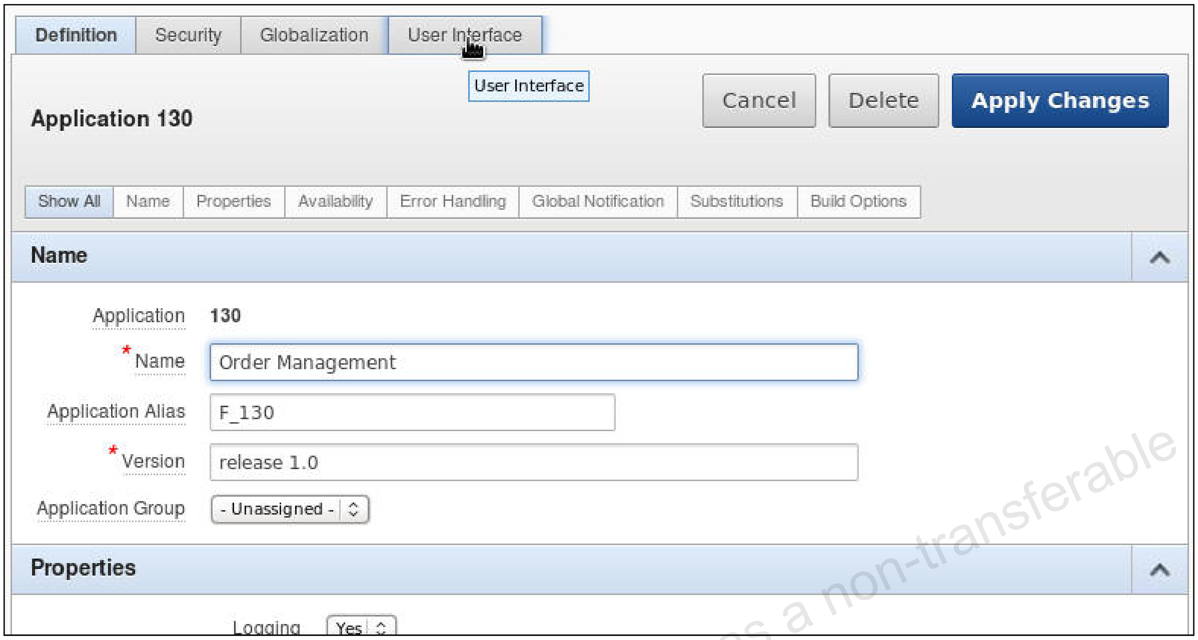


c. Add a mobile user interface to the Order Management desktop application.

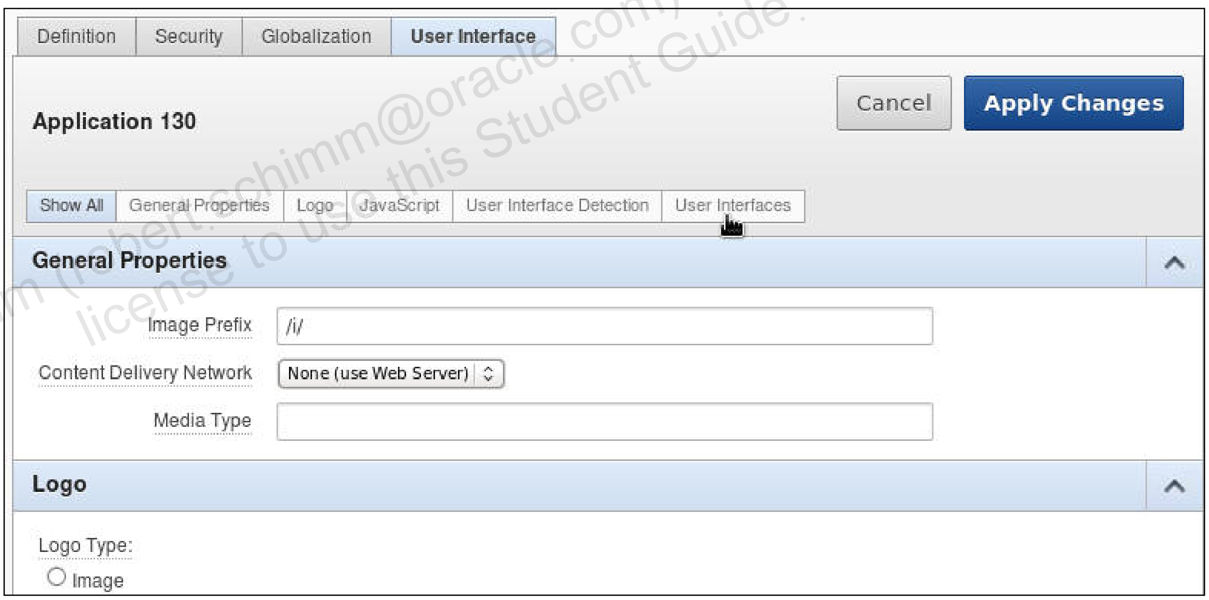
1) Click **Edit Application Properties**.



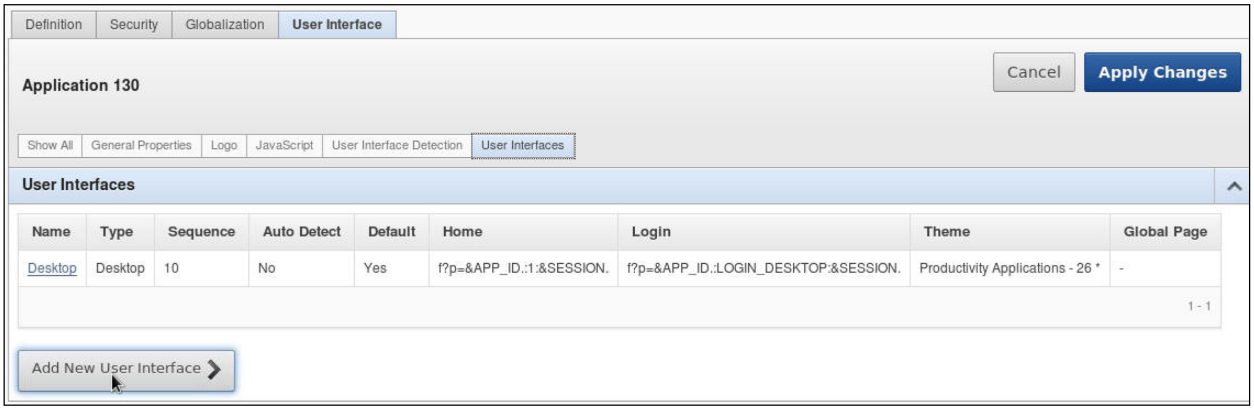
2) Click the **User Interface** tab.



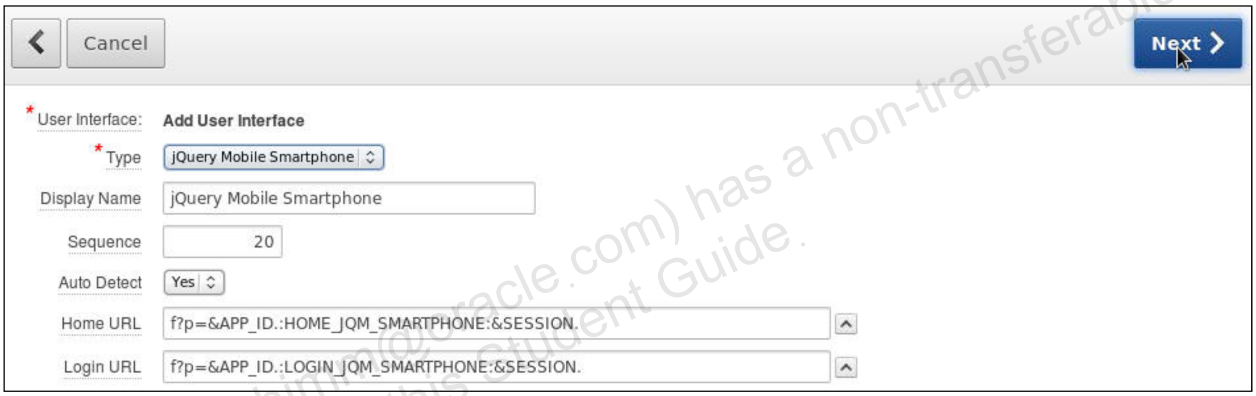
3) Click the **User Interfaces** subtab.



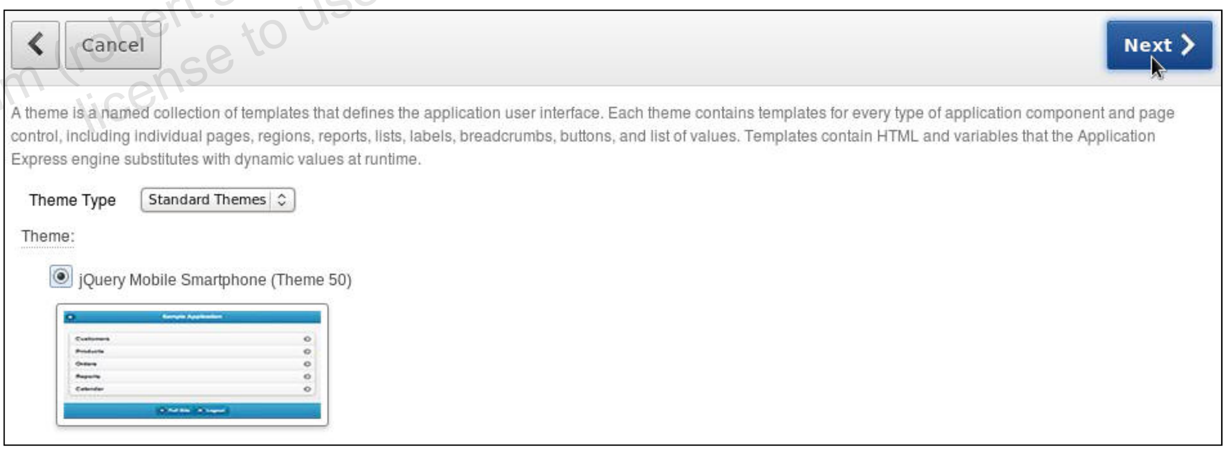
4) Click **Add New User Interface >**.



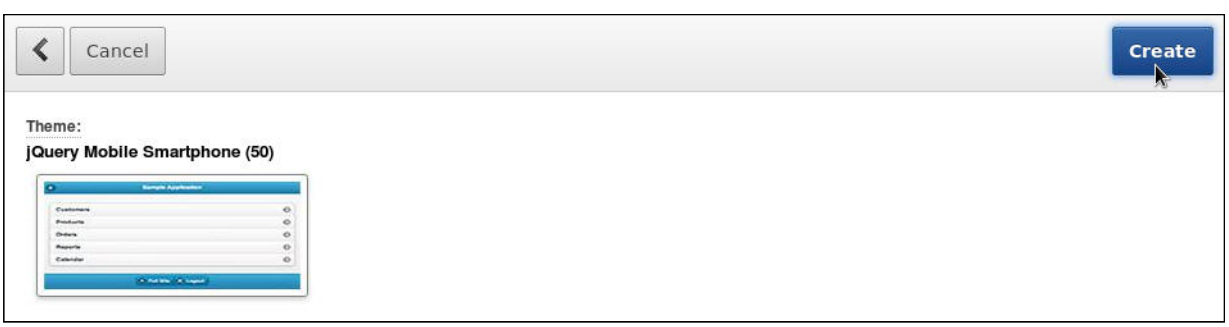
5) For Type, select **jQuery Mobile Smartphone** and click **Next >**.



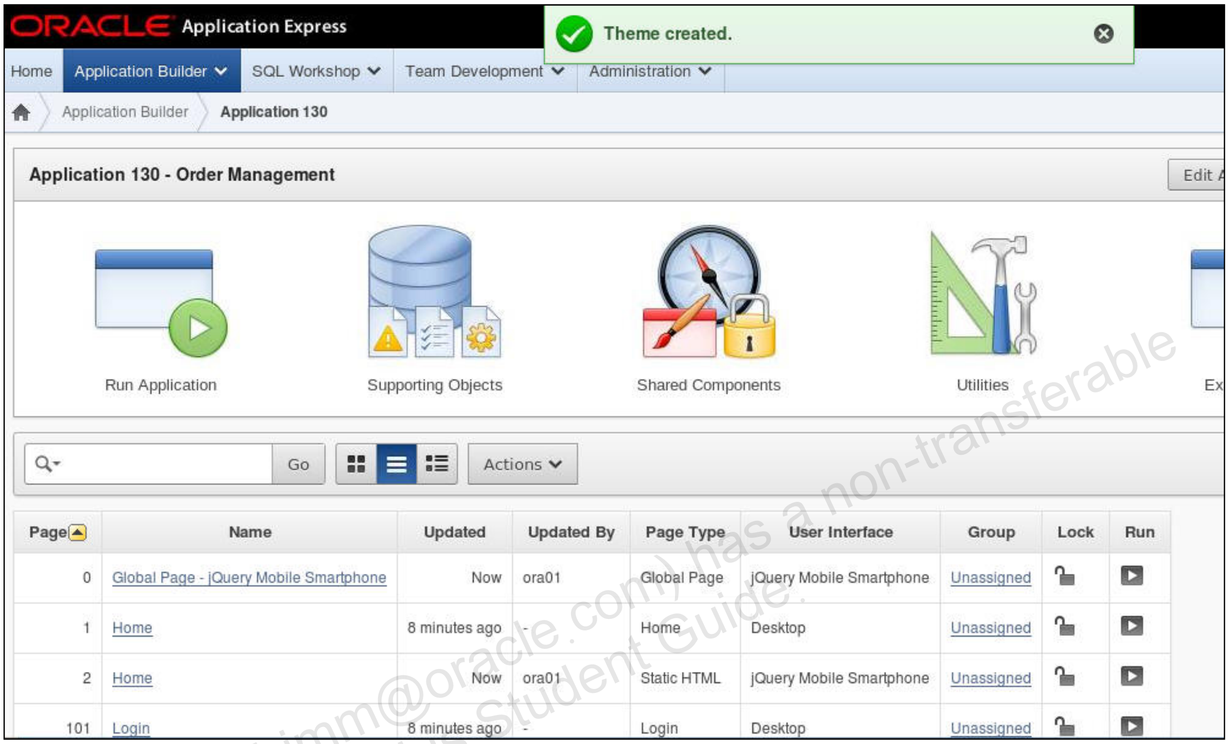
6) Select **jQuery Mobile Smartphone (Theme 50)** and click **Next >**.



7) Click **Create**.



8) This will add a new set of mobile pages to the application. Each user interface has its own Home page. When running the application on a desktop, page 1 will be displayed. When running the application on a mobile device, page 2 will be displayed. This capability will be discussed in later lessons in the class.



Practices for Lesson 4: Using and Creating Interactive Reports

Chapter 4

Practices for Lesson 4: Overview

Practices Overview

There are two practices for this lesson. In these practices, you build and manipulate an interactive report, and customize it.

Practice 4-1: Building and Manipulating an Interactive Report

Overview

In this practice, you create and manipulate two interactive reports.

Assumptions

You have performed the previous practices or imported the **LAB031_SOLN.sql** exported application.

Tasks

a. Create an interactive report to display all the columns from the OEHR_CUSTOMERS table on a new page in the Order Management application. Name the page **Customers** and the region **Customer Report**. Perform the following customizations to the report:
   - Create a filter on the city of Philadelphia.
   - Create a highlight where the Credit Limit is greater than 2500.
   - Display only the Customer Name, Address, and Credit Limit.
   - Delete the filter that you created previously.
   - Display the rows in ascending order by state.
   - Display only five rows to see how pagination works.
   - Create a Group By report to display the number of customers in a particular province or state. Change the pagination to display all rows.
   - Save the report as a private report called My Report.
   - Reset the Primary Report to its original state.
   - Display a single row view.

b. Create an interactive report on a new page in the Order Management application to display details (employee_id, first_name, last_name, manager_id, and commission_pct) from the OEHR_CUSTOMERS table about who earns a commission. Name the page and the report **Employee Commissions**. From the Create Report Wizard, create a breadcrumb for the page and select the Home page as the parent page. After creating the report, make the following customizations to the report:
   - Management proposes to increase the commission of employees whose existing commission percentage is less than or equal to 0.15. Create a computed column called New Commission, to display the new commission. The new commission scheme includes:
     - Employees with a commission percentage of 0.1 will get an additional commission of 0.15.
     - Employees with a commission percentage of 0.15 will get an additional commission of 0.05.
   - Create a control break on Manager ID.
   - Display the maximum commission earned by employees under each manager.
   - Download the HTML report.

- Save all the customizations that you have made to this report so that it is available to other managers, but is not the default report. Name the saved report as Commission Proposal.
- Reset the Primary Report.

Practice 4-2: Customizing an Interactive Report

Overview

In this practice, you customize the interactive report that you created in the previous practice.

Assumptions

You have performed the previous practices.

Tasks

a. Make the following customizations to the Employee Commissions report.
   - Hide `EMPLOYEE_ID` and change `MANAGER_ID` to be the `FIRST_NAME` and `LAST_NAME` of the manager.
   - Remove the Highlight option from the Actions menu.
   - Remove the Single Row View icon for each row in the report.
   - Run the report and confirm the changes that you made.

Solution 4-1: Building and Manipulating an Interactive Report

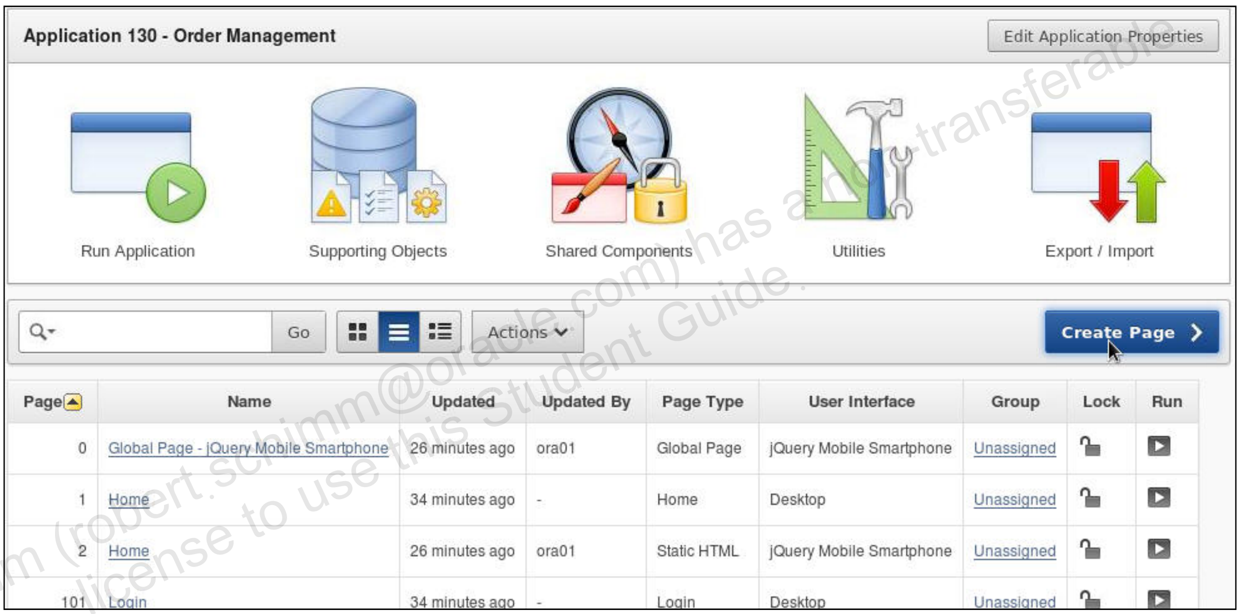
Overview

In this practice, you create and manipulate two Interactive reports.

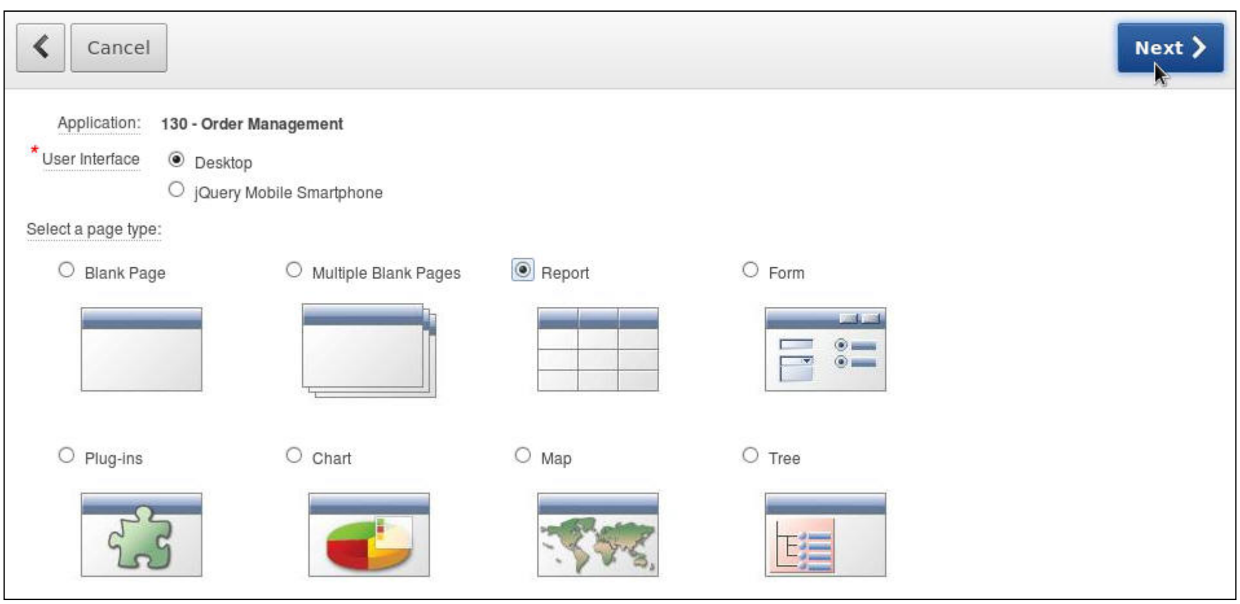
Tasks

a. Create an interactive report to display all the columns from the `OEHR_CUSTOMERS` table on a new page in the Order Management application. Name the page **Customers** and give the region the **Customer Report**. Do not create a tab for the page now.

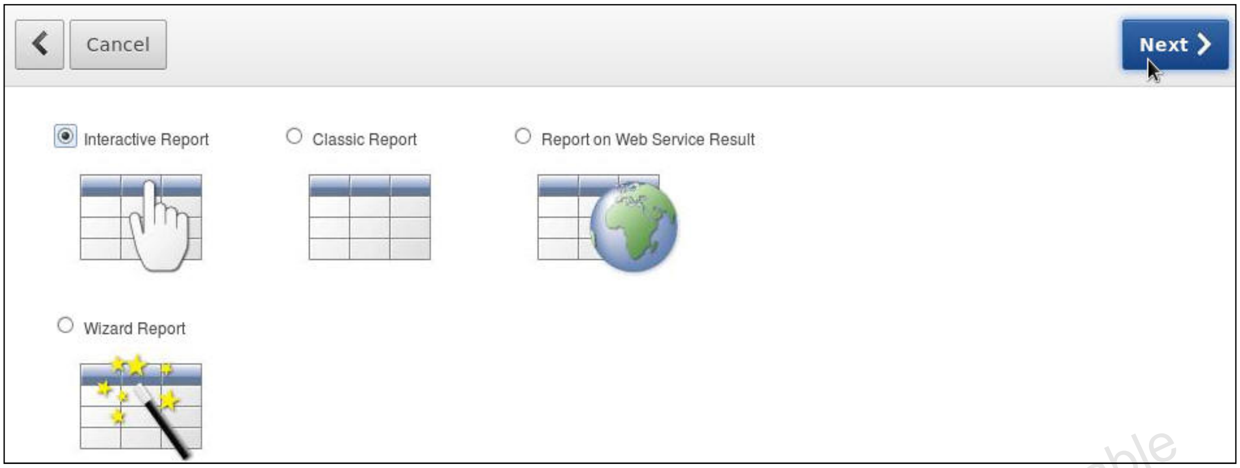
1) Navigate to the Order Management application home page and click **Create Page >**.



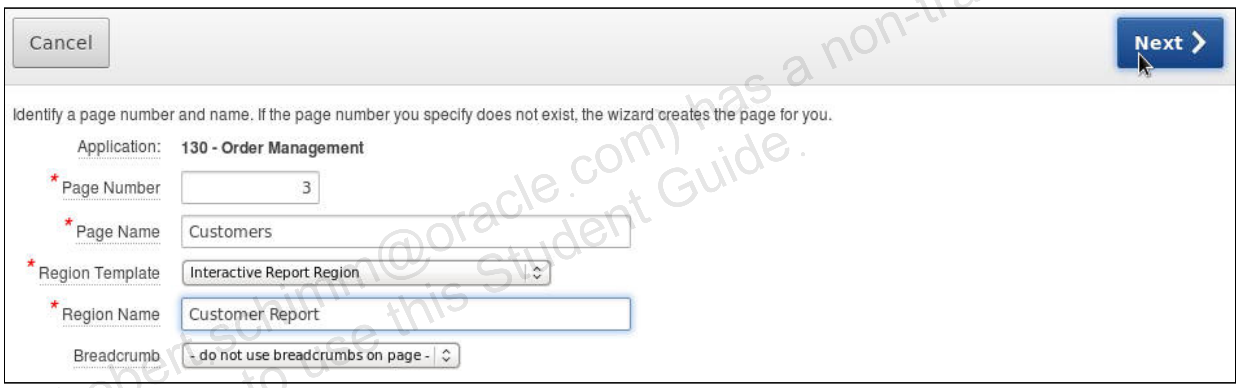
2) Select **Report** and click **Next >**.



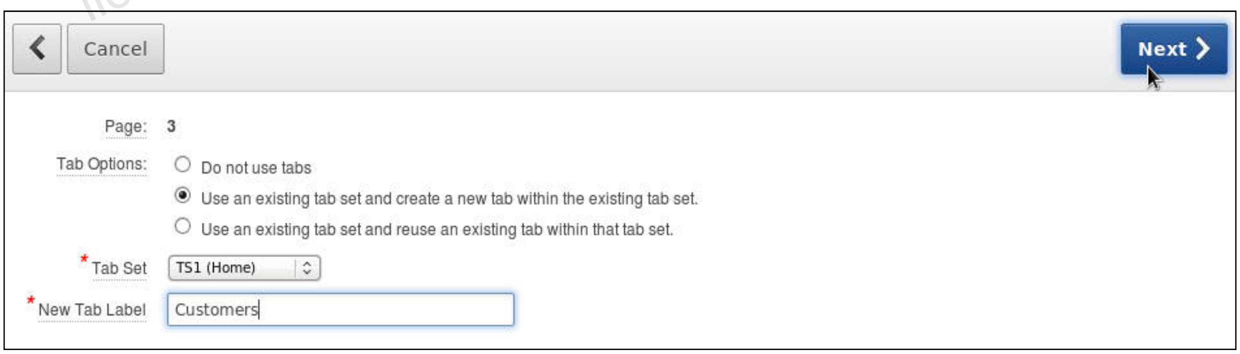
3) Select **Interactive Report** and click **Next >**.



4) Enter `Customers` for **Page Name** and `Customer Report` for **Region Name**. Click **Next >**.

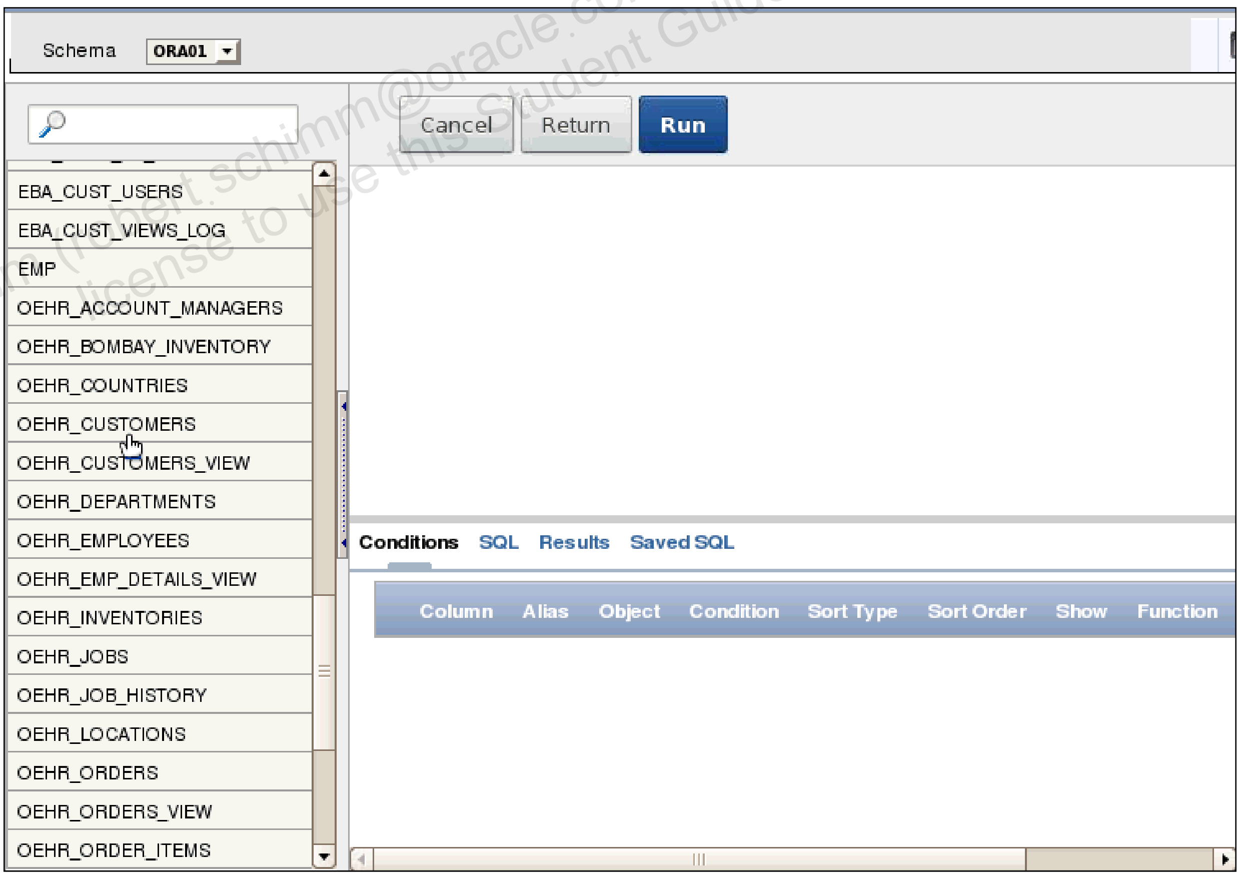


5) Select **Use an existing tab set and create a new tab within the existing tab set** for Tab Options, enter **Customers** for New tab Label, and click **Next >**.

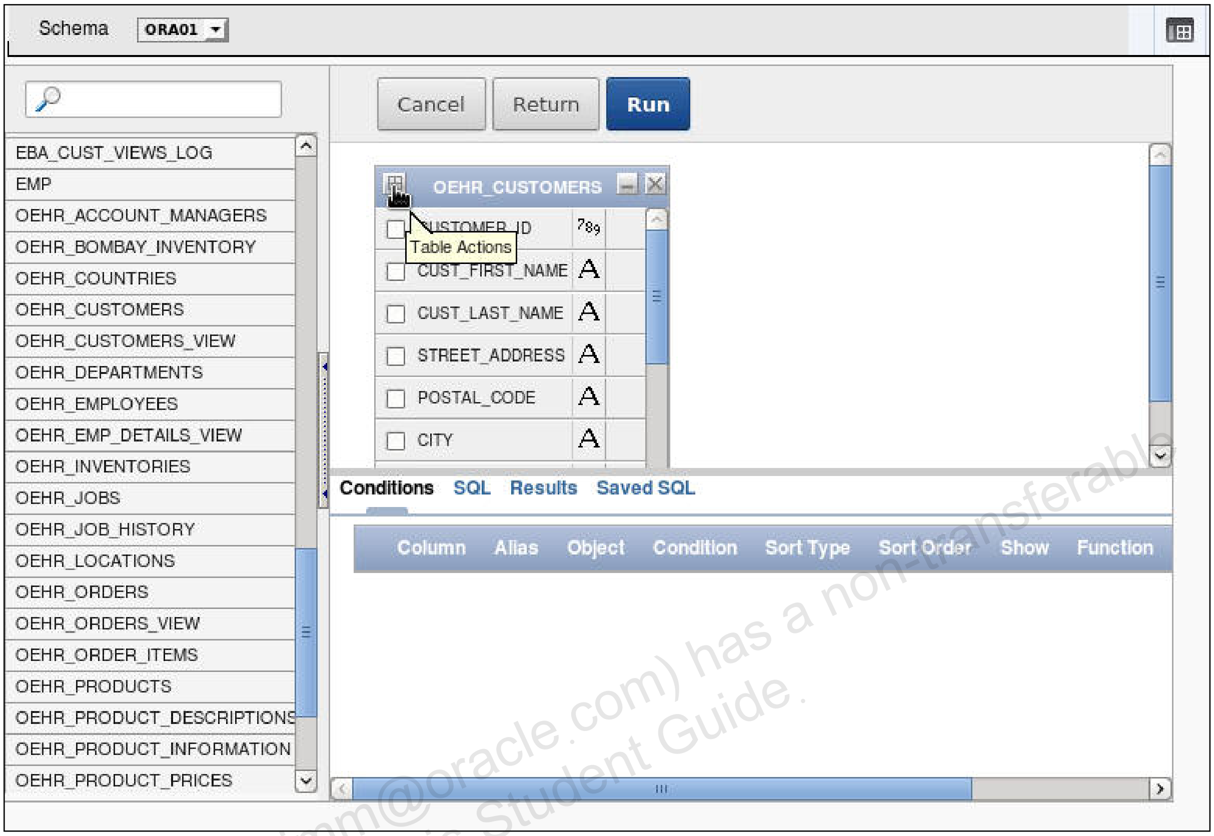


6) You can either directly enter the query to create the report or use Query Builder to create the query. Click **Query Builder**.

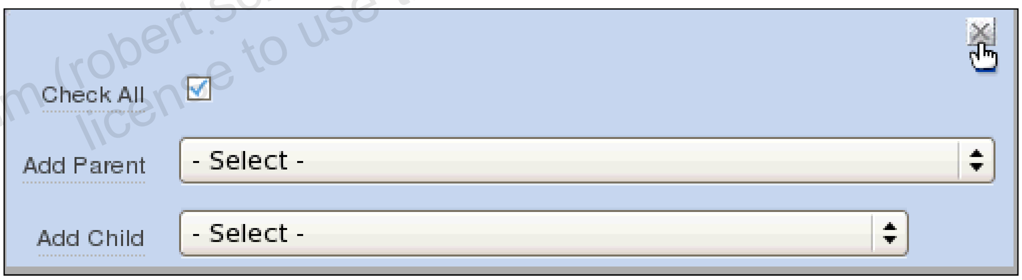
7) In the left pane, click the `OEHR_CUSTOMERS` table name.



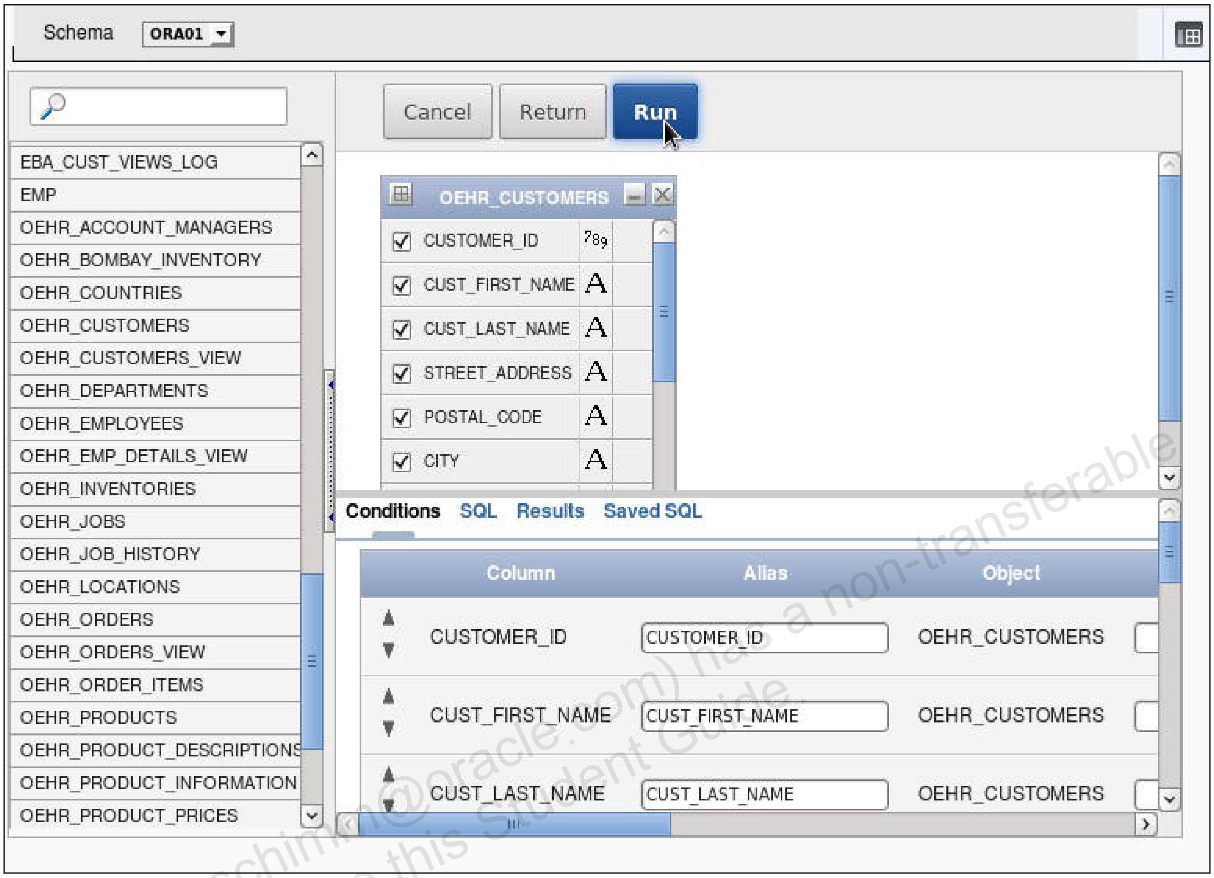
8) Click the **Table Actions** icon.



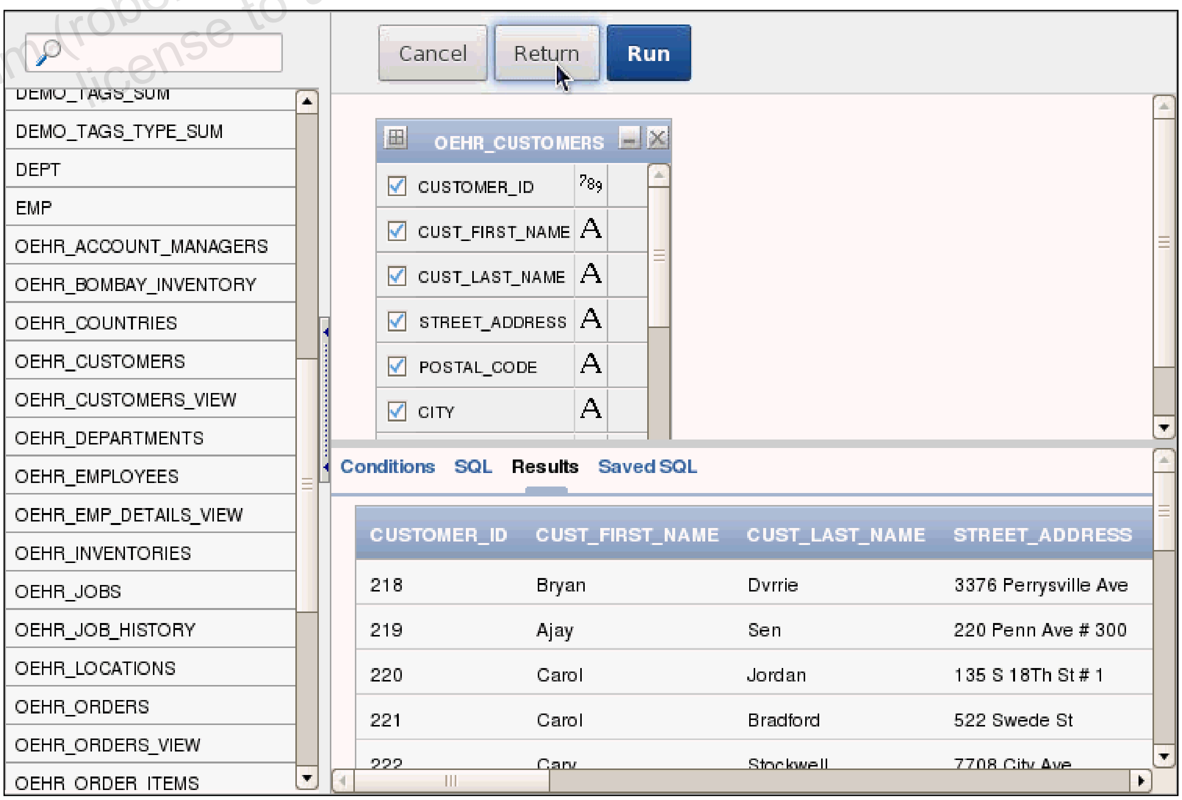
9) Select the **Check All** check box and close the dialog box.



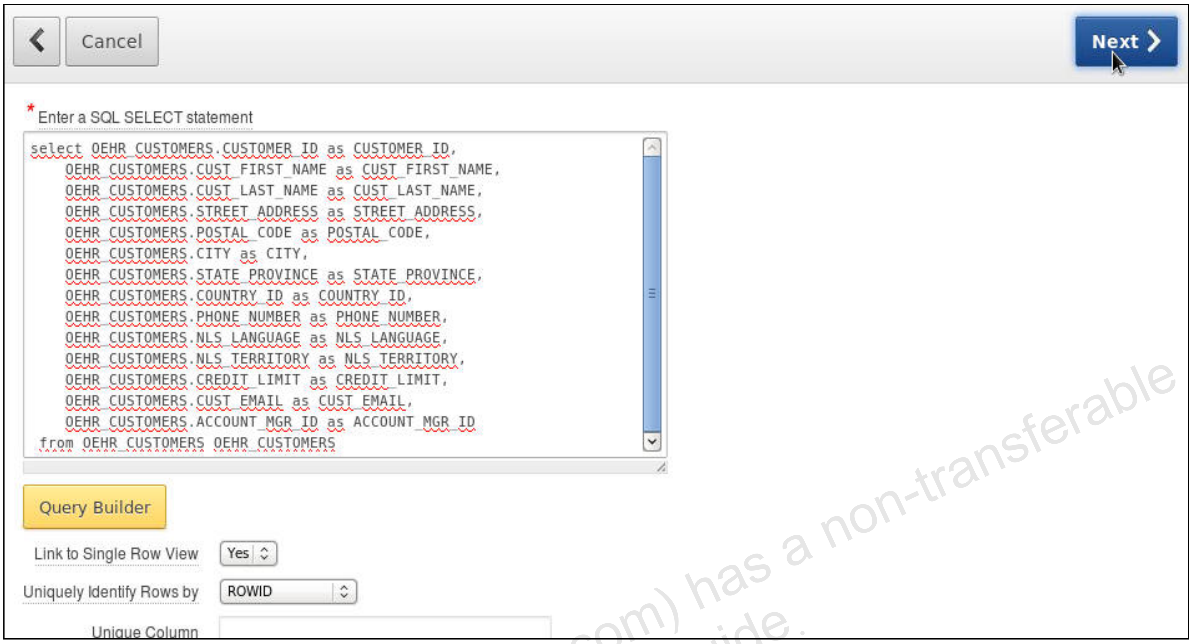
10) Click the **Run** button.



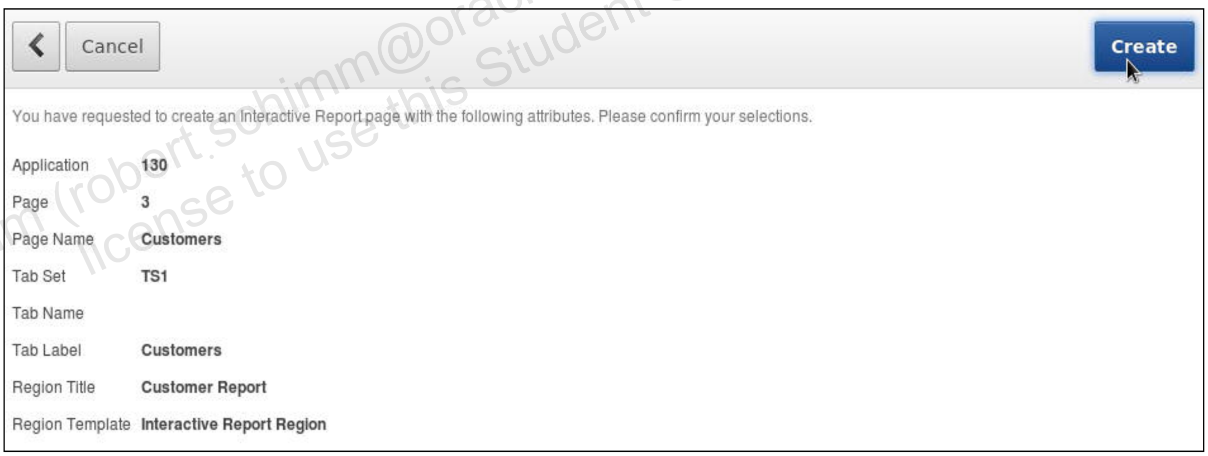
11) Click the **Return** button.



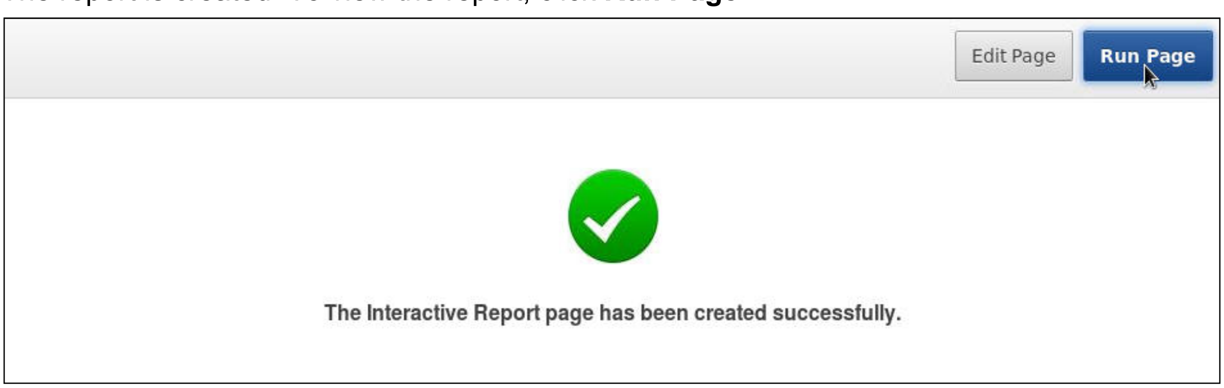
12) Click **Next >**.
Note: You may receive an error when redirected back to this page. Ignore the error and click Next.



13) Click **Create**.

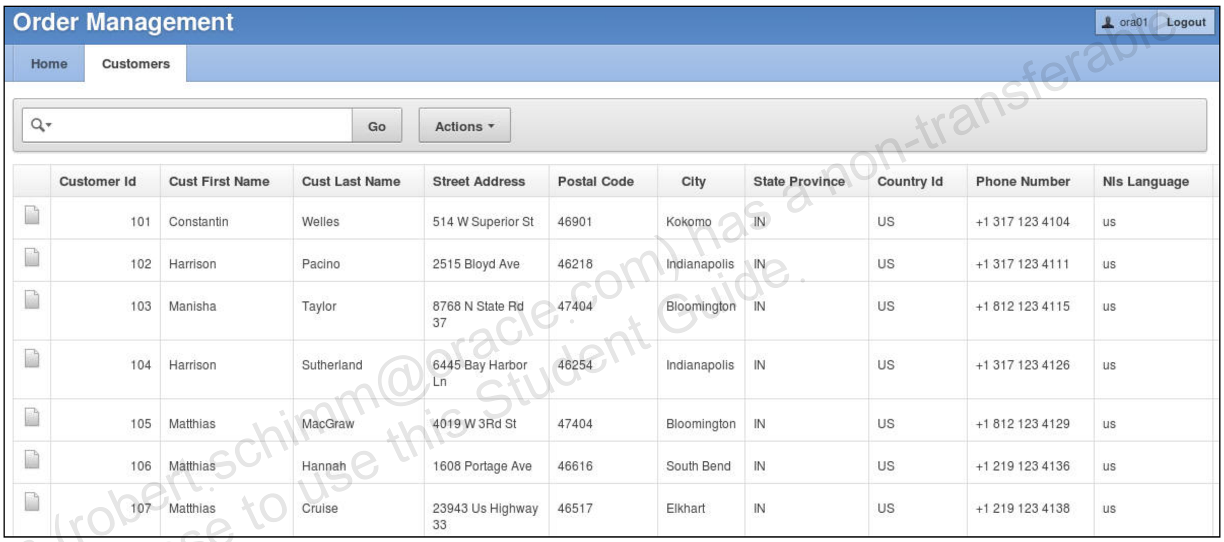


14) The report is created. To view the report, click **Run Page**.



15) When you run the page, the Login window opens. Enter `ora<n>` for **Username** and **Password** and click **Login**.

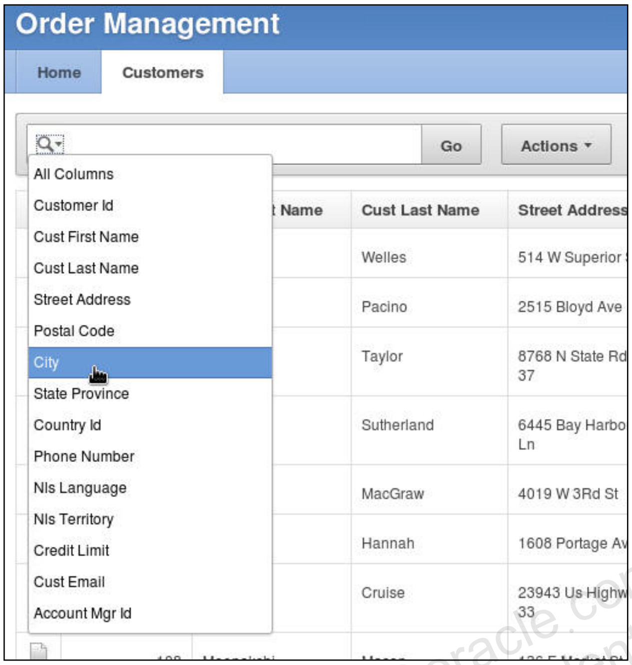
16) The interactive report is displayed.



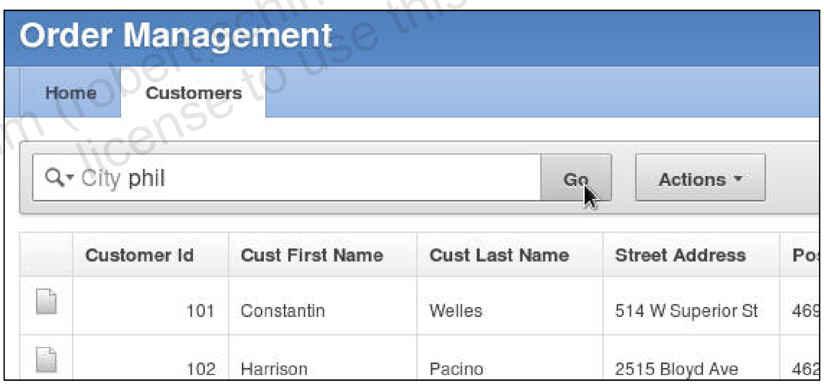
	Customer Id	Cust First Name	Cust Last Name	Street Address	Postal Code	City	State Province	Country Id	Phone Number	Nls Language
	101	Constantin	Welles	514 W Superior St	46901	Kokomo	IN	US	+1 317 123 4104	us
	102	Harrison	Pacino	2515 Bloyd Ave	46218	Indianapolis	IN	US	+1 317 123 4111	us
	103	Manisha	Taylor	8768 N State Rd 37	47404	Bloomington	IN	US	+1 812 123 4115	us
	104	Harrison	Sutherland	6445 Bay Harbor Ln	46254	Indianapolis	IN	US	+1 317 123 4126	us
	105	Matthias	MacGraw	4019 W 3Rd St	47404	Bloomington	IN	US	+1 812 123 4129	us
	106	Matthias	Hannah	1608 Portage Ave	46616	South Bend	IN	US	+1 219 123 4136	us
	107	Matthias	Cruise	23943 Us Highway 33	46517	Elkhart	IN	US	+1 219 123 4138	us

- **Create a filter on the city of Philadelphia.**

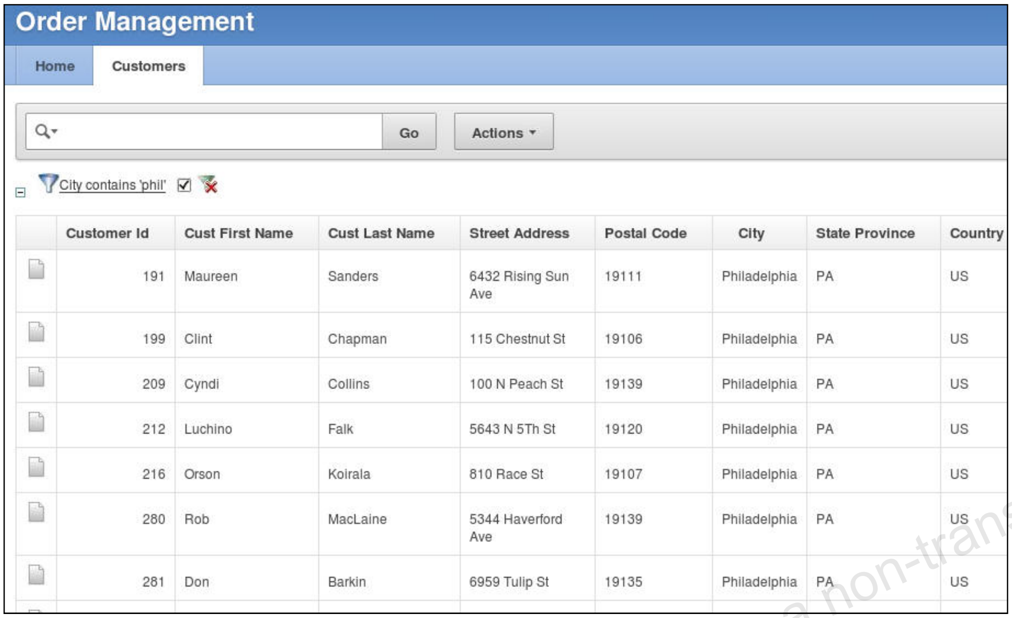
17) You want to show records only for a particular city. Select **City** from the Column Selector. Note that if you do not select the column, the search criteria you enter in the next step will search all columns.



18) Enter **phil** in the search field and click **Go**. Note that the % wildcard is implied and is not entered.

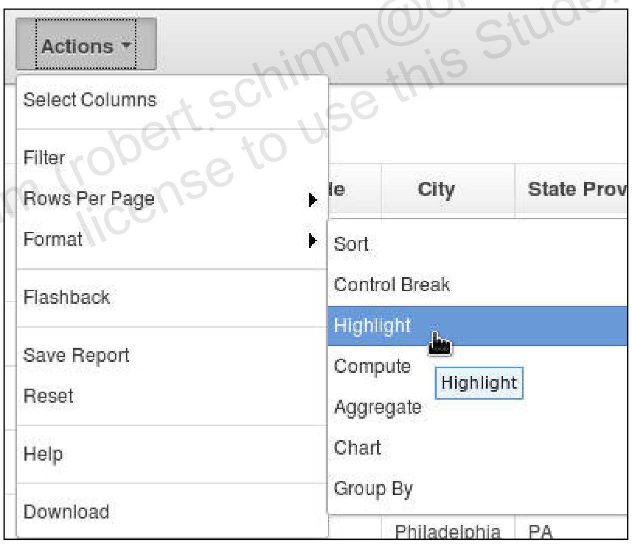


A filter is applied and only the records that meet the search criteria are displayed.

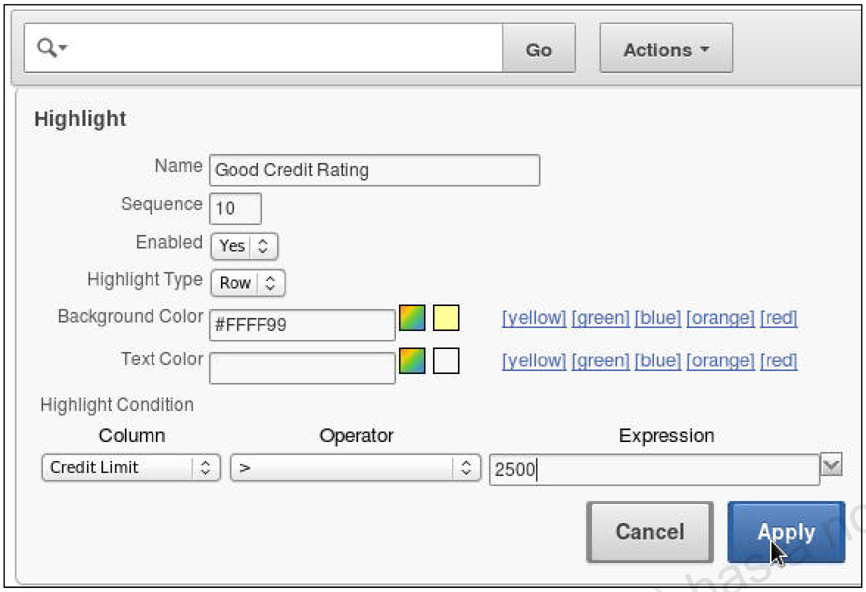


- **Create a highlight where credit limit is greater than 2500.**

19) To highlight only those customers whose credit limit is greater than 2500, click **Actions** and select **Format** > **Highlight**.



20) Enter a name for the highlight, for example, **Good Credit Rating**. Specify a color for the highlight, for example, select **[yellow]**. Select **Credit Limit** for Column, **>** for Operator, and enter **2500** for Expression. Then click **Apply**.

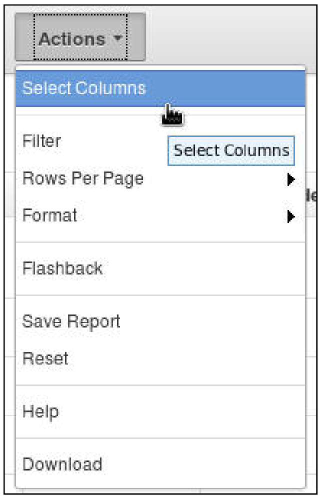


The records that meet the criteria are highlighted.

Customer Id	Cust First Name	Cust Last Name	Street Address	Postal Code	City	State Province	Country Id	Phone Number	Nls L
191	Maureen	Sanders	6432 Rising Sun Ave	19111	Philadelphia	PA	US	+1 215 123 4644	us
199	Clint	Chapman	115 Chestnut St	19106	Philadelphia	PA	US	+1 215 123 4676	us
209	Cyndi	Collins	100 N Peach St	19139	Philadelphia	PA	US	+1 215 123 4708	us
212	Luchino	Falk	5643 N 5Th St	19120	Philadelphia	PA	US	+1 215 123 4721	us
216	Orson	Koirala	810 Race St	19107	Philadelphia	PA	US	+1 215 123 4738	us
220	Carol	Jordan	135 S 18Th St # 1	19103	Philadelphia	PA	US	+1 215 123 4743	us
222	Cary	Stockwell	7708 City Ave	19151	Philadelphia	PA	US	+1 215 123 4745	us
224	Clara	Krige	101 E Olney Ave	19120	Philadelphia	PA	US	+1 215 123 4748	us
229	Ian	Chapman	601 Market St	19106	Philadelphia	PA	US	+1 215 123 4768	us
230	Danny	Wright	5565 Baynton St	19144	Philadelphia	PA	US	+1 215 123 4771	us
264	George	Adjani	1136 Arch St	19107	Philadelphia	PA	US	+1 215 123 4702	us
265	Irene	Laughton	6Th And Master St	19122	Philadelphia	PA	US	+1 215 123 4749	us

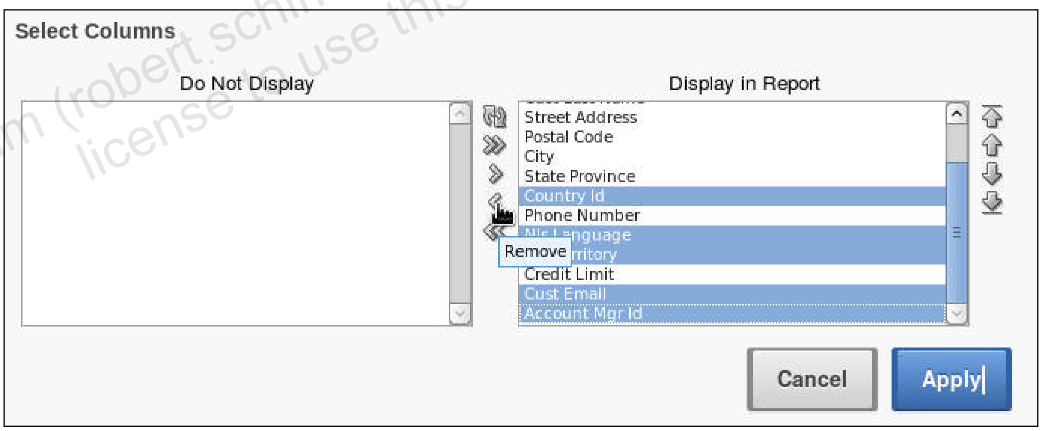
- **Display only the Customer Name, Address, and Credit Limit.**

21) You do not want some of the columns to appear on the report. Click **Actions** and select **Select Columns**.

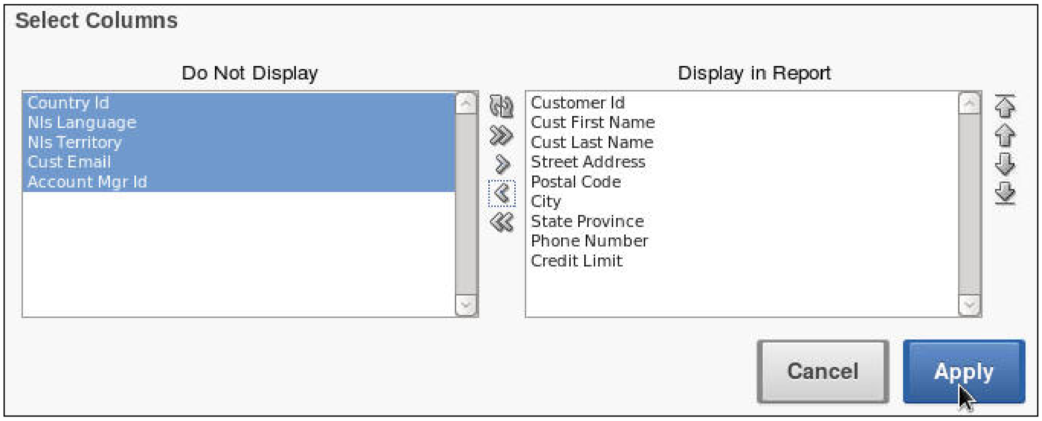


22) Ctrl-select the following columns and click **Remove (<)** to move them to the **Do Not Display** area. Note that you will still be able to perform other actions against these columns even though they are not displayed in the report.

```
Country ID
NLs Language
NLs Territory
Cust Email
Account Mgr ID
```



23) Click **Apply**.

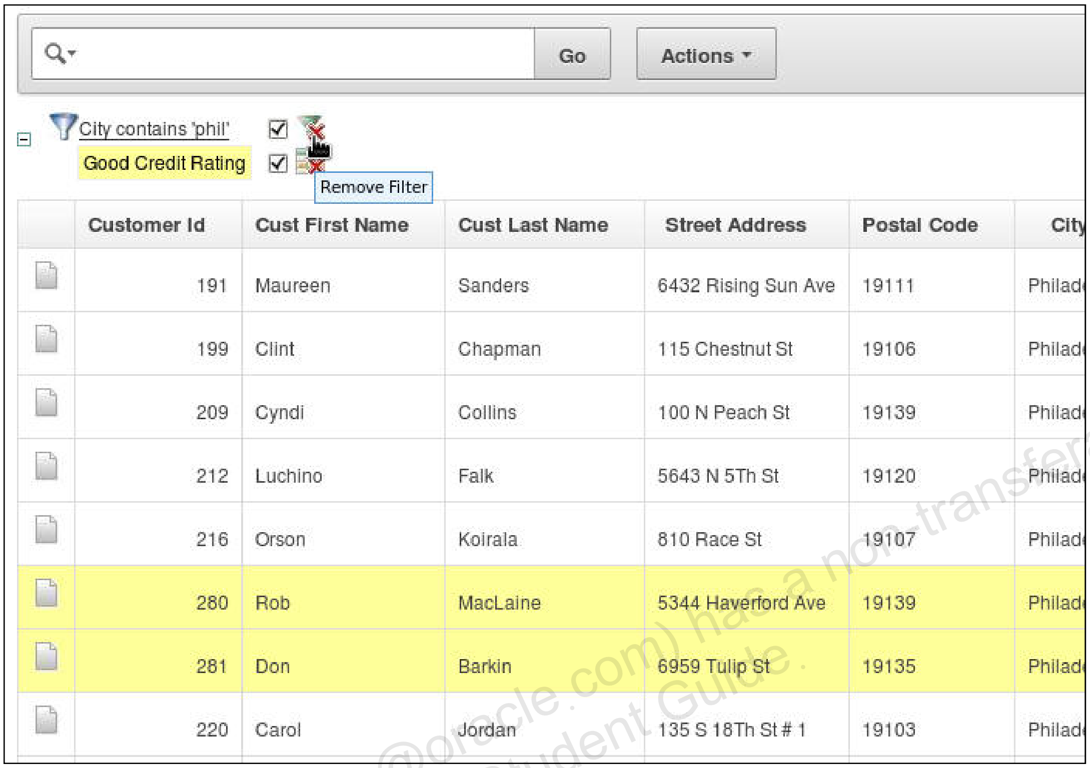


Only the columns you selected appear in the report.

Customer Id	Cust First Name	Cust Last Name	Street Address	Postal Code	City	State Province	Phone Number	Credit Limit
191	Maureen	Sanders	6432 Rising Sun Ave	19111	Philadelphia	PA	+1 215 123 4644	1200
199	Clint	Chapman	115 Chestnut St	19106	Philadelphia	PA	+1 215 123 4676	1400
209	Cyndi	Collins	100 N Peach St	19139	Philadelphia	PA	+1 215 123 4708	1400
212	Luchino	Falk	5643 N 5Th St	19120	Philadelphia	PA	+1 215 123 4721	1500
216	Orson	Koirala	810 Race St	19107	Philadelphia	PA	+1 215 123 4738	1900
220	Carol	Jordan	135 S 18Th St # 1	19103	Philadelphia	PA	+1 215 123 4743	2300
222	Cary	Stockwell	7708 City Ave	19151	Philadelphia	PA	+1 215 123 4745	2300
224	Clara	Krige	101 E Olney Ave	19120	Philadelphia	PA	+1 215 123 4748	2300
229	Ian	Chapman	601 Market St	19106	Philadelphia	PA	+1 215 123 4768	2400
230	Danny	Wright	5565 Baynton St	19144	Philadelphia	PA	+1 215 123 4771	2400
264	George	Adjani	1136 Arch St	19107	Philadelphia	PA	+1 215 123 4702	3600
265	Irene	Laughton	6Th And Master St	19122	Philadelphia	PA	+1 215 123 4749	3600

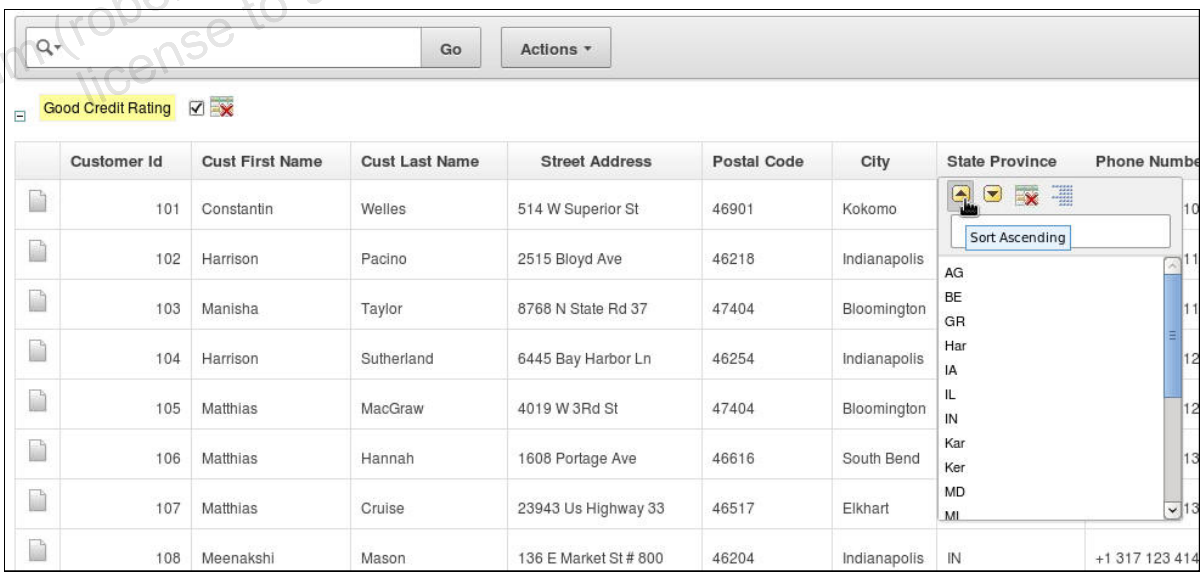
- **Delete the filter that you created previously.**

24) You want to delete the filter that you created earlier. Click the **Remove Filter** icon for the **City contains 'phil'** filter.



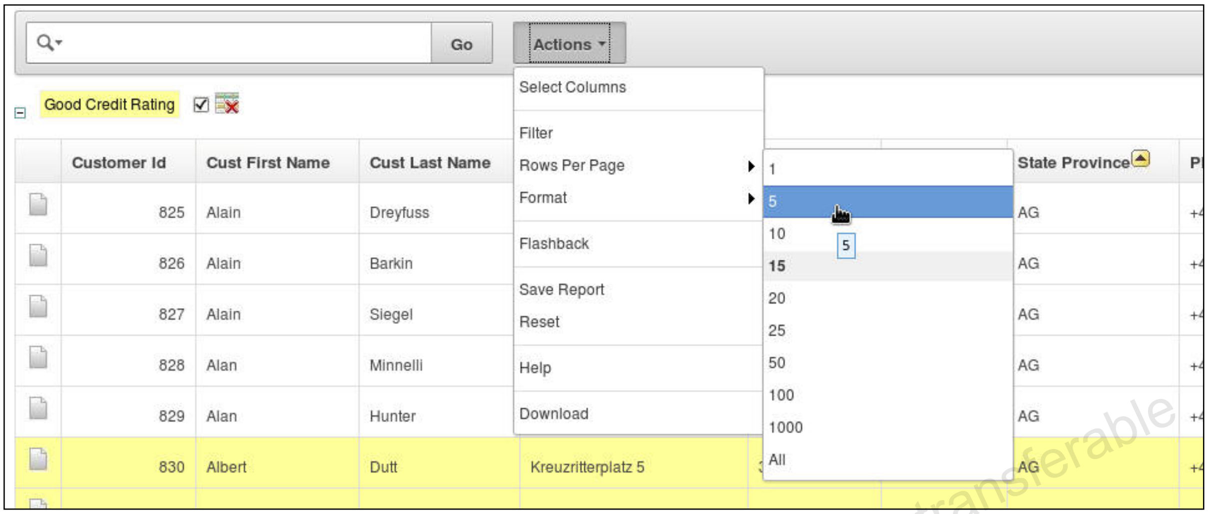
- **Display the rows in ascending order by state.**

25) You want to sort by **State Province**. Select the Column Header for the **State Province** and click the **Sort Ascending** icon.

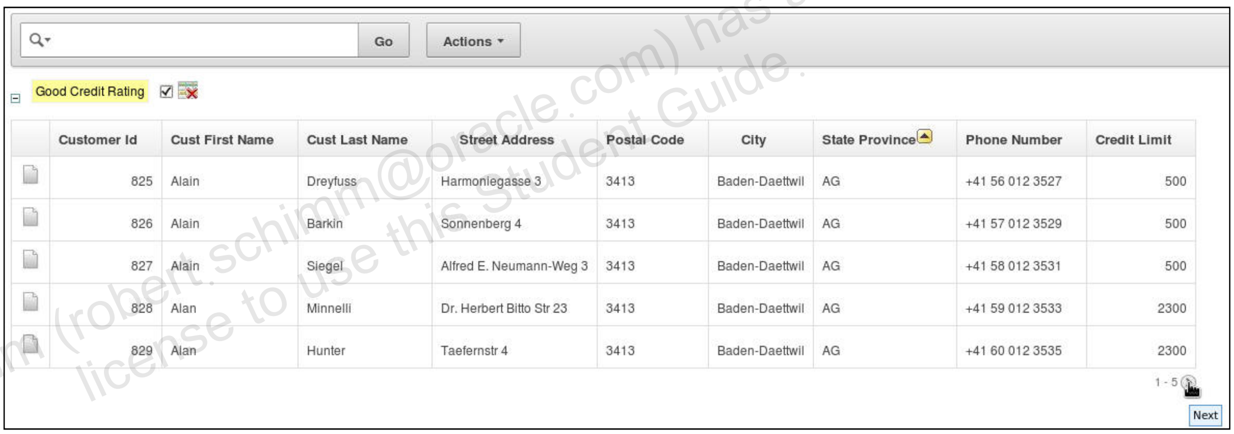


- **Display only five rows to see how pagination works.**

26) You want to change the number of rows that are displayed in the report. Click **Actions** > **Rows Per Page** > **5**. Note that the default value is 15.

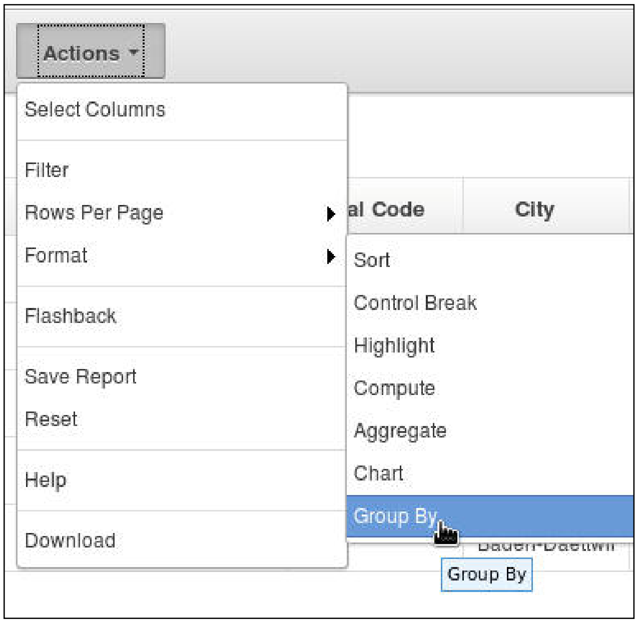


27) Note that only five rows are displayed. The pagination is automatically specified and you can click the right arrow (**>**) to move to the next page.

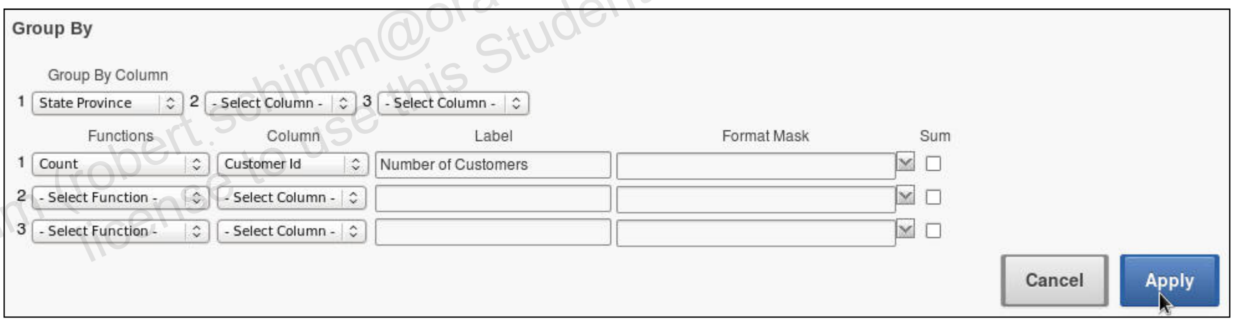


- **Create a Group By report to display the number of customers in a particular province or state. Change the pagination to display all rows.**

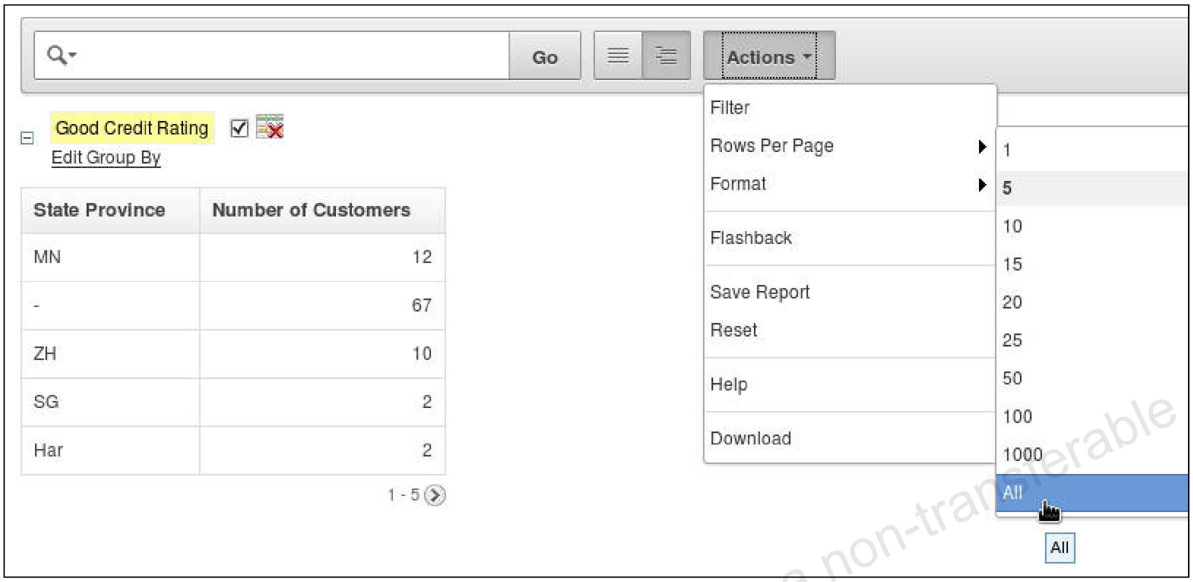
28) To create a **Group By** report, click **Actions** and select **Format > Group By**.



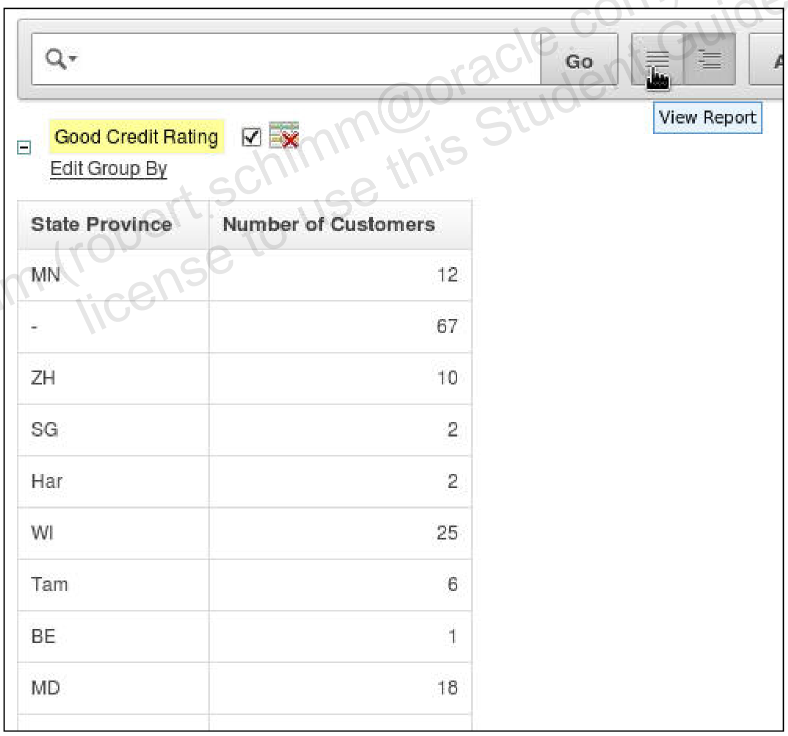
29) You want to show a list of states and how many customers are contained in that state. Select **State Province** for Group By Column, **Count** for Functions, and **Customer Id** for Column, and enter **Number of Customers** for Label. Then click **Apply**.



30) Your **Group By** report is displayed. Because the report does not have many rows, you want to show them all. Click **Actions**, select **Rows Per Page**, and select **All**.

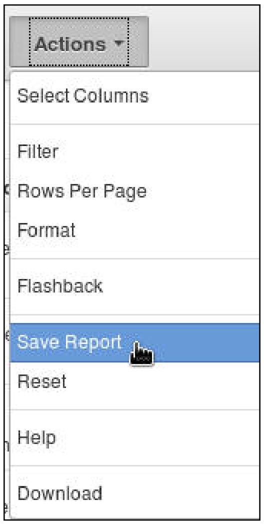


31) The state provinces and the number of customers per state are displayed. To return to the detail report, click the **View Report** icon.



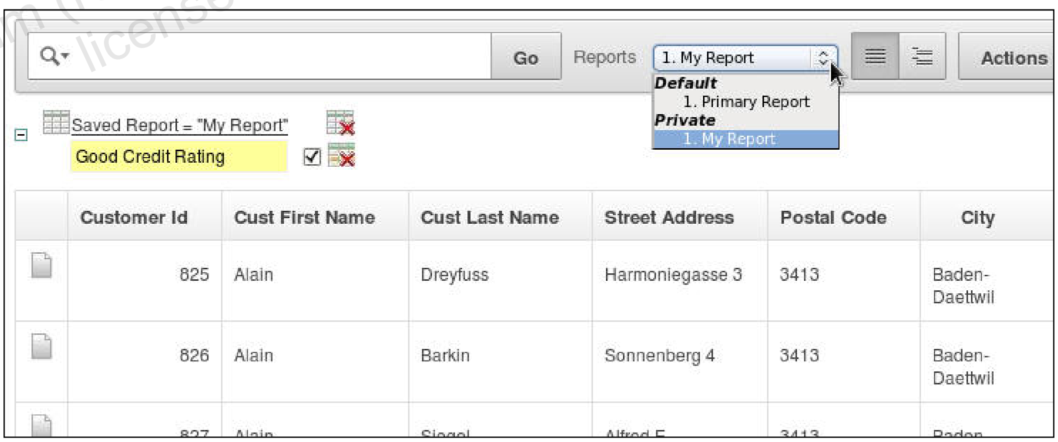
- **Save the report as a private report called My Report.**

32) You want to save this report as a private report that is available only to you. Click **Actions** and select **Save Report**.



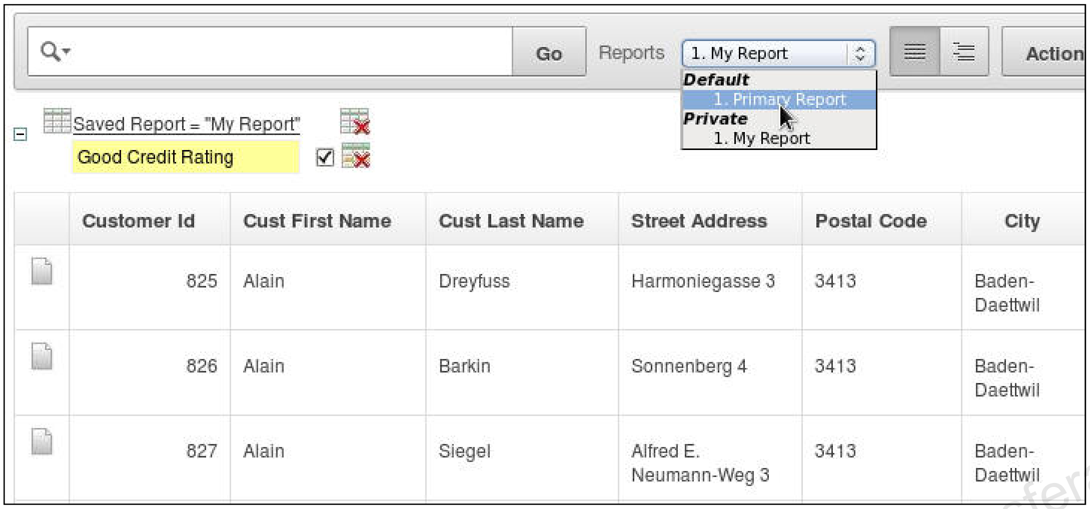
33) Enter **My Report** for Name and click **Apply**.

34) The report is saved. Click the Reports drop-down list to see the list of reports.

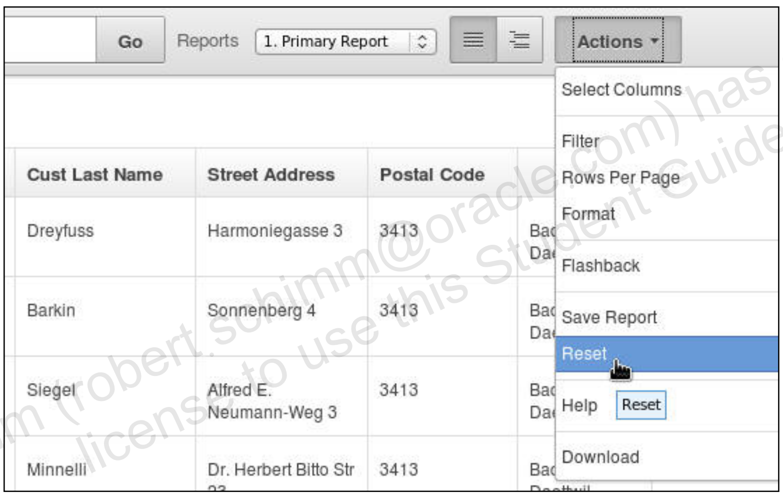


- **Reset the Primary Report to its original state.**

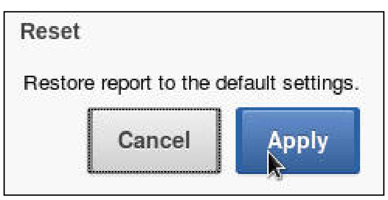
35) Select **Primary Report**.



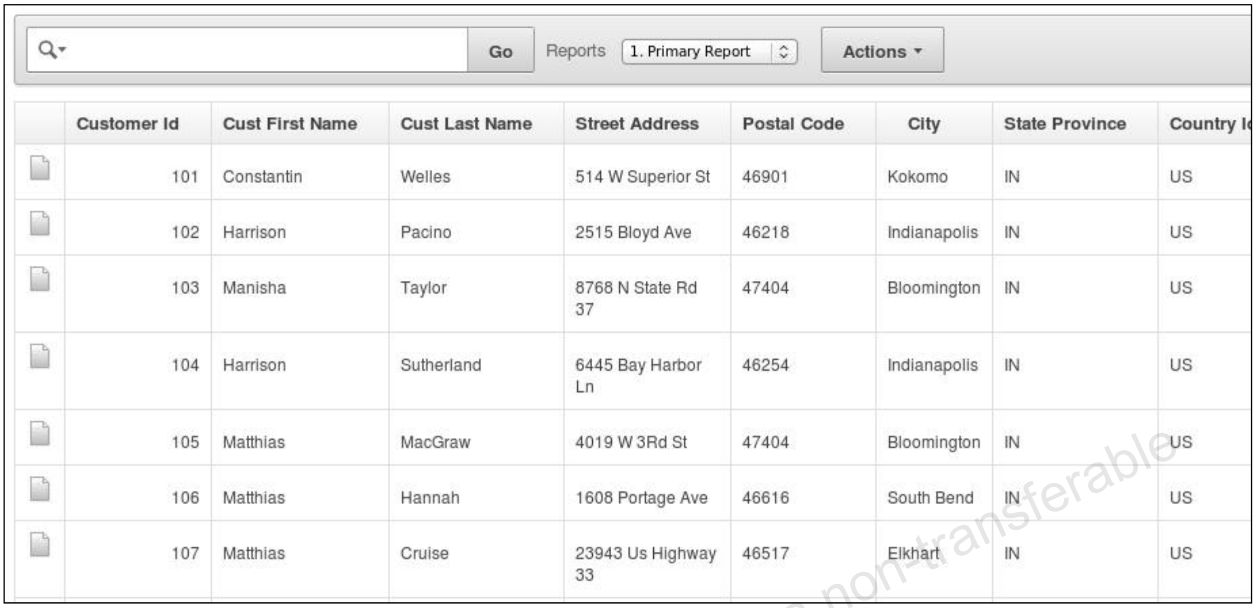
36) To return to the default settings, click **Actions** and select **Reset**.



37) Click **Apply**.



38) You see the original report without customizations.



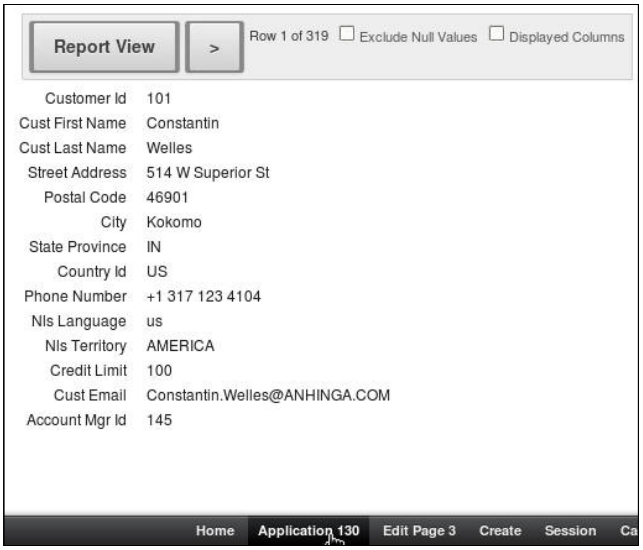
	Customer Id	Cust First Name	Cust Last Name	Street Address	Postal Code	City	State Province	Country Id
	101	Constantin	Welles	514 W Superior St	46901	Kokomo	IN	US
	102	Harrison	Pacino	2515 Bloyd Ave	46218	Indianapolis	IN	US
	103	Manisha	Taylor	8768 N State Rd 37	47404	Bloomington	IN	US
	104	Harrison	Sutherland	6445 Bay Harbor Ln	46254	Indianapolis	IN	US
	105	Matthias	MacGraw	4019 W 3Rd St	47404	Bloomington	IN	US
	106	Matthias	Hannah	1608 Portage Ave	46616	South Bend	IN	US
	107	Matthias	Cruise	23943 Us Highway 33	46517	Elkhart	IN	US

- **Display a single row view.**

39) You can view a row at a time. Click a **Single Row View** icon for one of the rows.

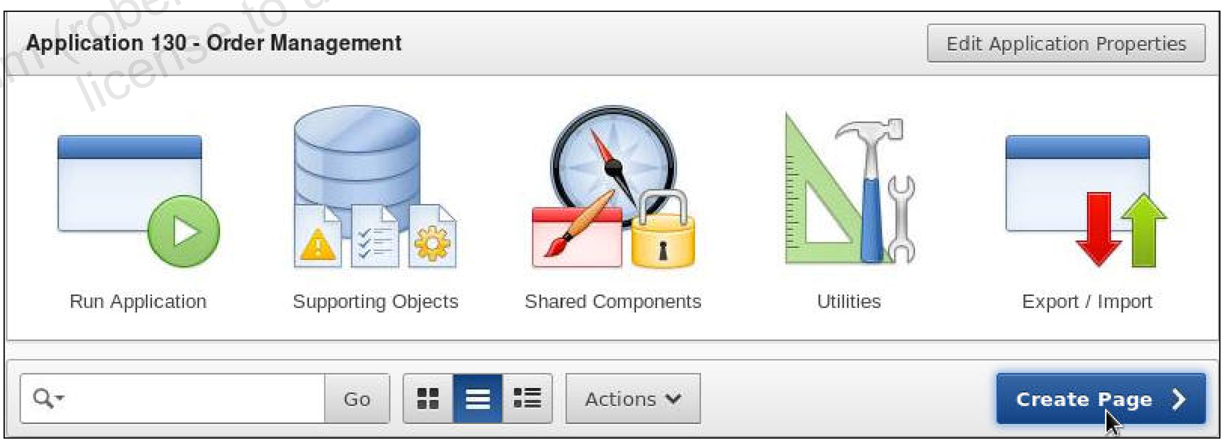
	Customer Id	Cust First Name	Cust Last Name	Street Address	Postal Code	City	State Province	Country
	101	Constantin	Welles	514 W Superior St	46901	Kokomo	IN	US
	102	Harrison	Pacino	2515 Bloyd Ave	46218	Indianapolis	IN	US
	103	Manisha	Taylor	8768 N State Rd 37	47404	Bloomington	IN	US
	104	Harrison	Sutherland	6445 Bay Harbor Ln	46254	Indianapolis	IN	US

40) One row is displayed. You can click the right arrow (**>)** or left arrow (**<**) to scroll to the next or previous row. You have completed this interactive report. Click the **Application** link at the bottom of the page.

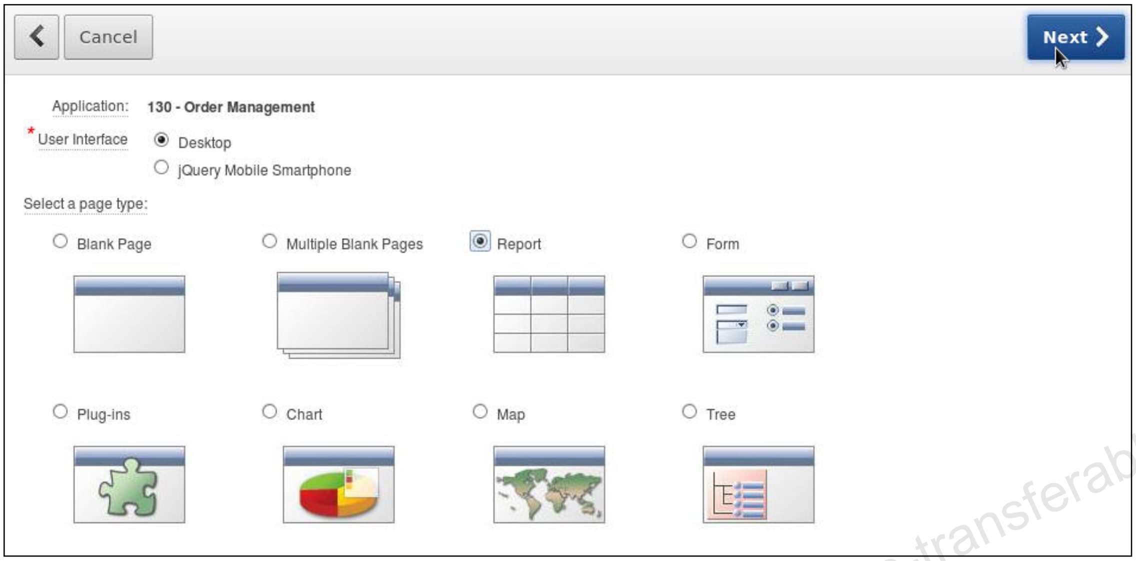


b. Create an interactive report on a new page in the Order Management application to display details (`employee_id`, `first_name`, `last_name`, `manager_id`, and `commission_pct`) from the `OEHR_CUSTOMERS` table about who earns a commission. Name the page and the report **Employee Commissions**. From the Create Report Wizard, create a breadcrumb for the page and select the Home page as the parent page.

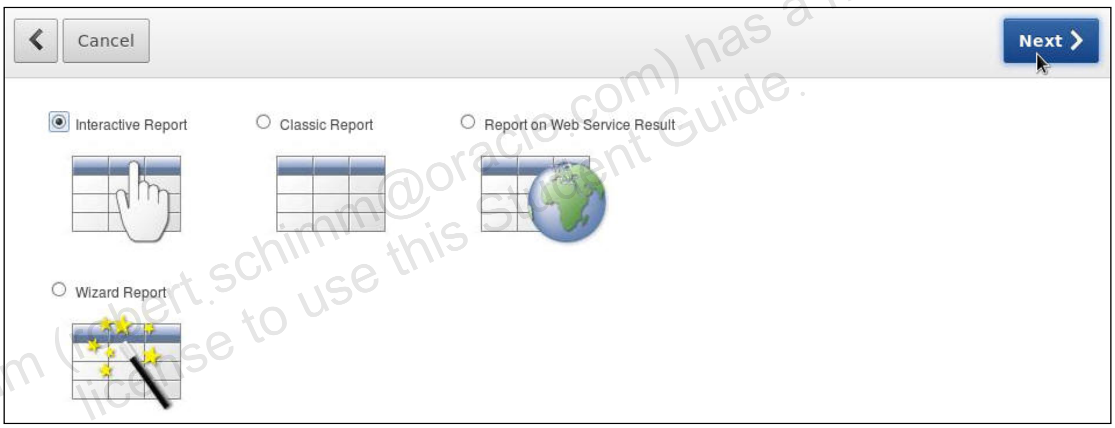
1) Navigate to the **Order Management** application page. Click **Create Page >**.



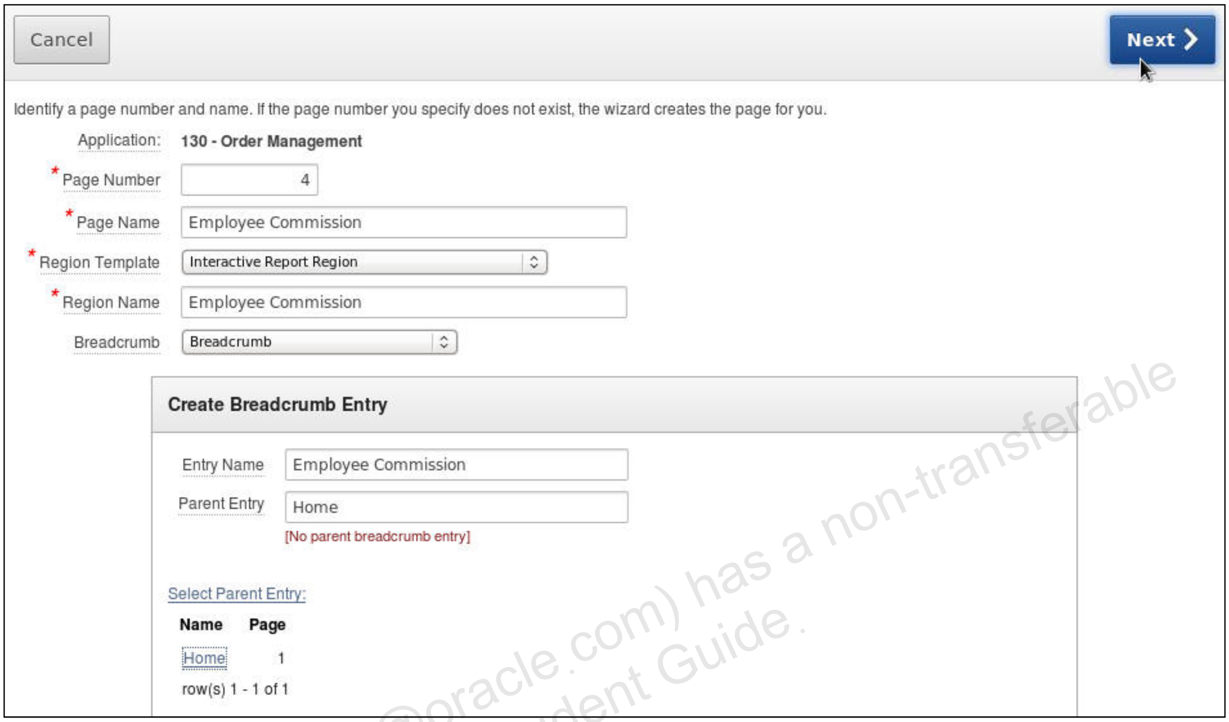
2) Select **Report** and click **Next >**.



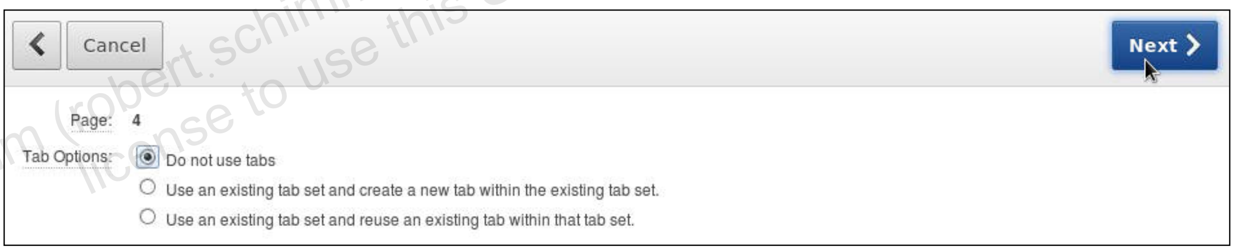
3) Select **Interactive Report** and click **Next >**.



4) Enter `Employee Commission` for both **Page Name** and **Region Name**. Select **Breadcrumb** for **Breadcrumb** and select **Home** for **Parent Entry** and click **Next >**.



5) Accept the default and click **Next >**.

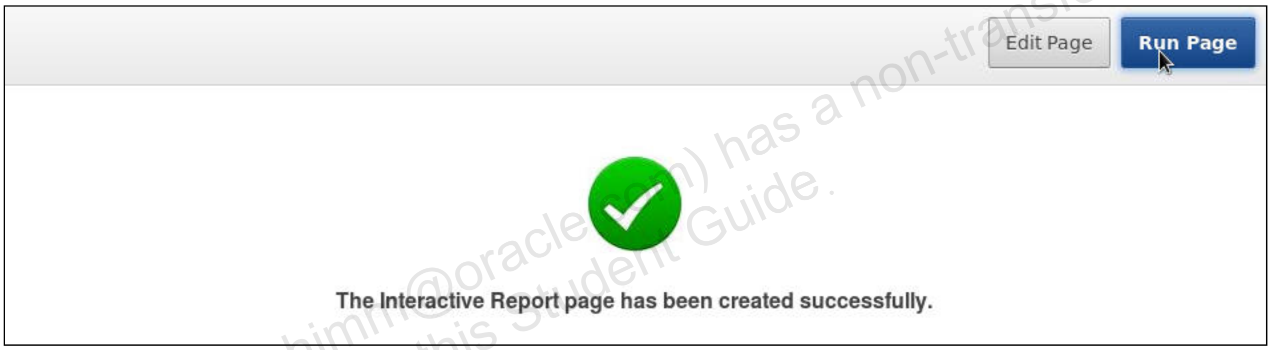


6) Enter the following SQL `SELECT` statement and click **Next >**. You can copy and paste the SQL statement from **`/home/oracle/labs/files/commission.sql`**. Alternatively, you can use the Query Builder button to create the report query.

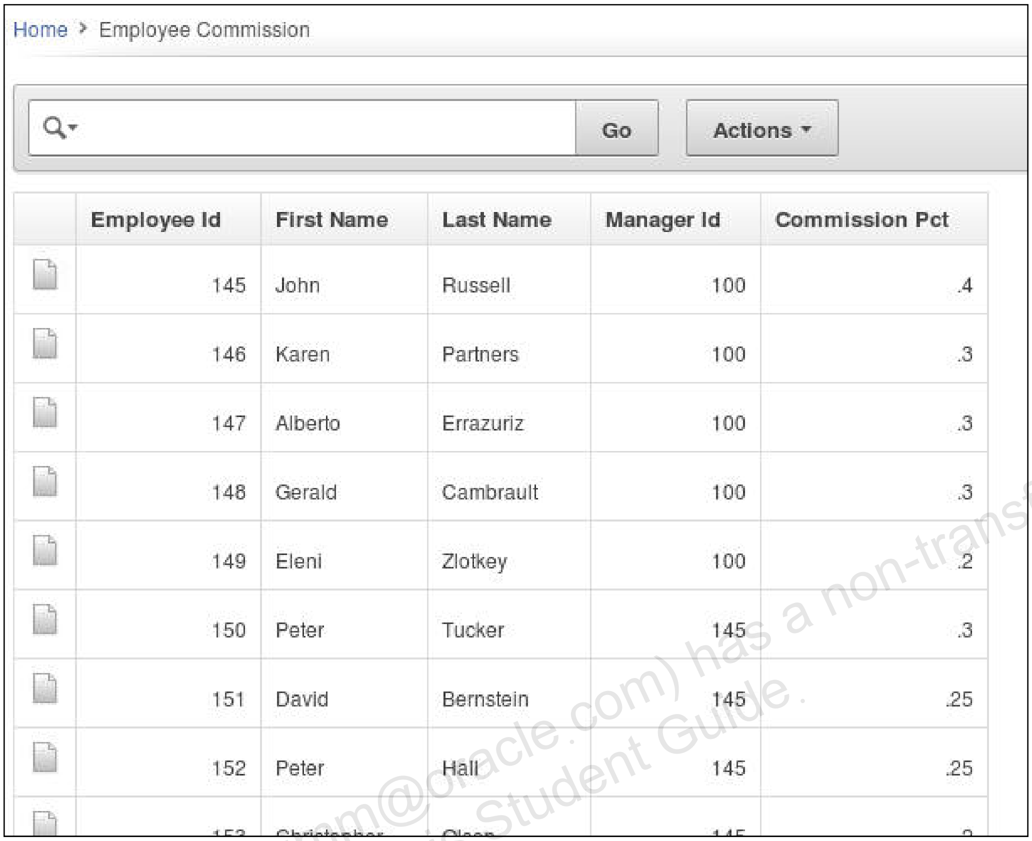
```
SELECT employee_id, first_name, last_name, manager_id,
commission_pct
FROM OEHR_EMPLOYEES
WHERE commission_pct IS NOT NULL;
```

7) Click **Create**.

8) Click **Run Page**.

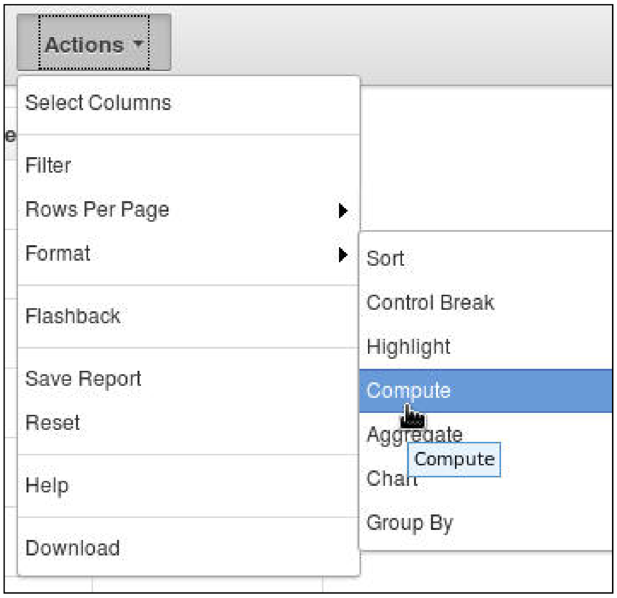


9) If prompted, enter your login credentials. Your report is displayed.



- Management proposes to increase the commission of employees whose existing commission percentage is less than or equal to 0.15. Create a computed column called New Commission, to display the new commission. The new commission scheme includes:
  - Employees with a commission percentage of 0.1 will get an additional commission of 0.15.
  - Employees with a commission percentage of 0.15 will get an additional commission of 0.05.

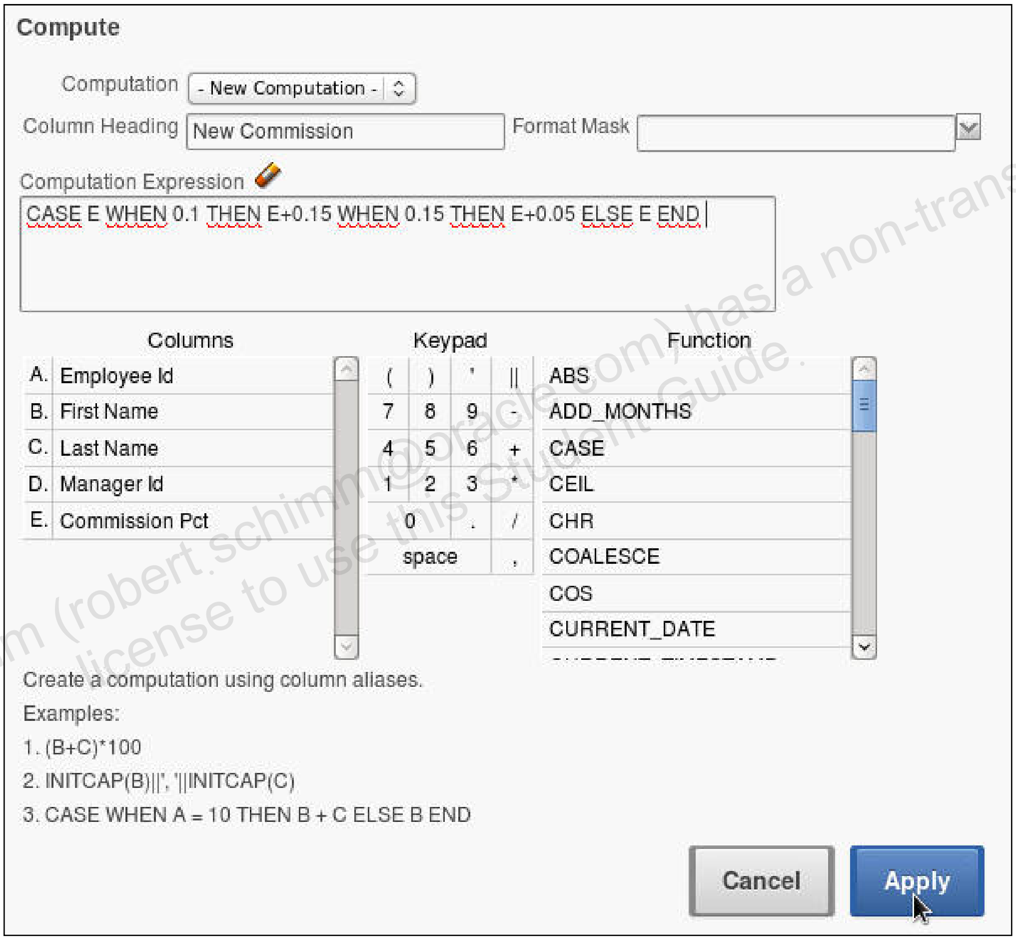
10) To create a new computation, click **Actions** and select **Format > Compute**.



11) Enter **New Commission** for Column Heading. The computation should add .15 to a commission of .1 and .05 to a commission of .15. You will use the following **`CASE`** statement to perform the computation (located in `/home/oracle/labs/files/lab4_1_1.txt`):

```
CASE E WHEN 0.1 THEN E+0.15 WHEN 0.15 THEN E+0.05 ELSE E END
```

You can use the columns list, functions list, and keypad to enter the code in the computation area or paste the previous **`CASE`** statement into the computation area. When you select Commission Pct from Columns, notice that the letter corresponding to the column appears in the computation area. This is the column alias. After entering the code, click **Apply**.

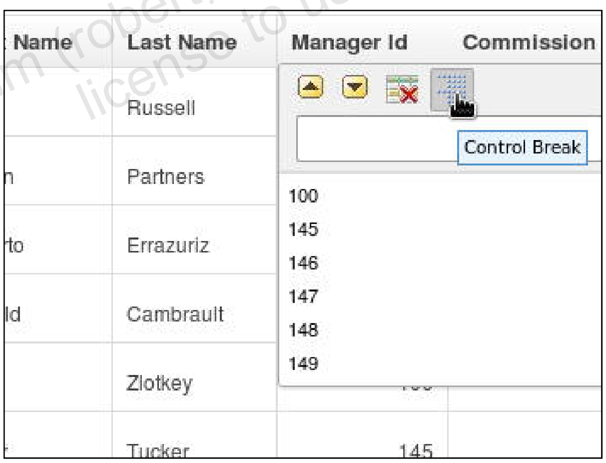


Note that the computed column now appears in the report.

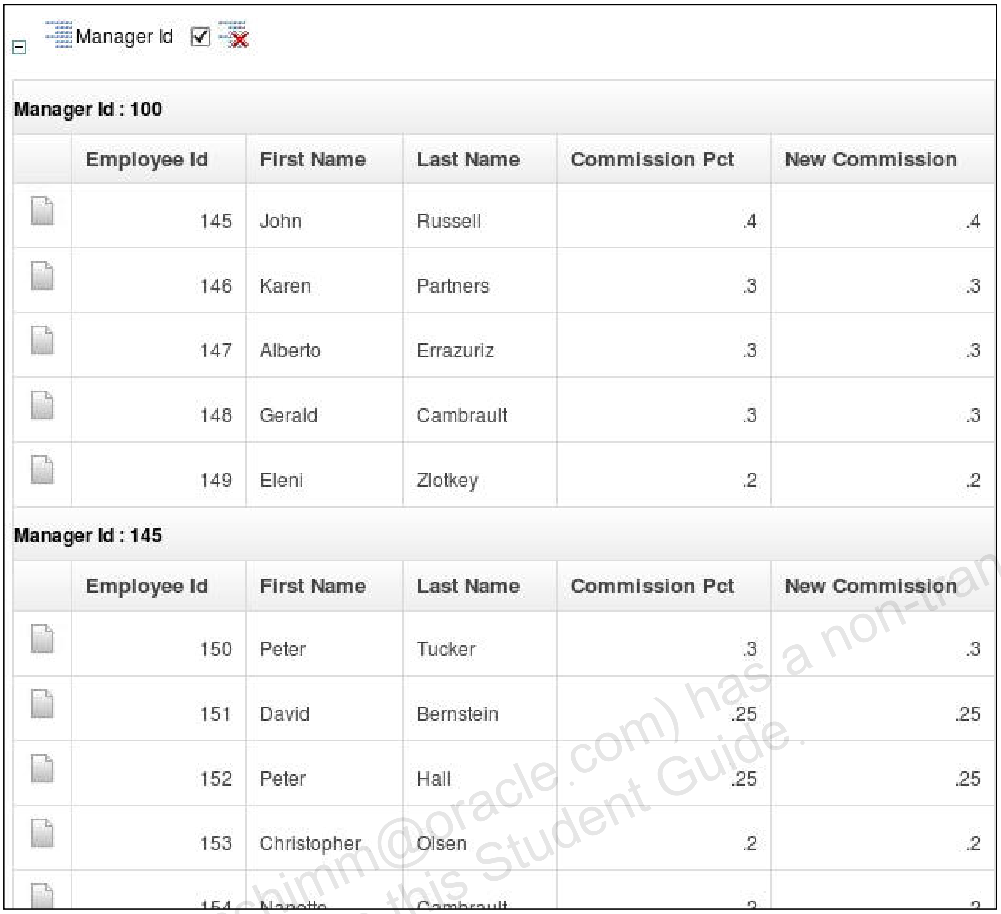
	Employee Id	First Name	Last Name	Manager Id	Commission Pct	New Commission
	145	John	Russell	100	.4	.4
	146	Karen	Partners	100	.3	.3
	147	Alberto	Errazuriz	100	.3	.3
	148	Gerald	Cambrault	100	.3	.3
	149	Eleni	Zlotkey	100	.2	.2
	150	Peter	Tucker	145	.3	.3
	151	David	Bernstein	145	.25	.25
	152	Peter	Hall	145	.25	.25
	153	Christopher	Olsen	145	.2	.2
	154	Nanette	Cambrault	145	.2	.2
	155	Oliver	Tuvault	145	.15	.2
	156	Janette	King	146	.35	.35
	157	Patrick	Sully	146	.35	.35

- **Create a control break on Manager ID.**

12) To create a control break on the Manager ID, click the `Manager ID` column header and click the **Control Break** icon. Alternatively, you can click **Actions** and select **Format > Control Break**.



Note that the column is eliminated and now appears before each break point in the report.



Manager Id

Manager Id : 100

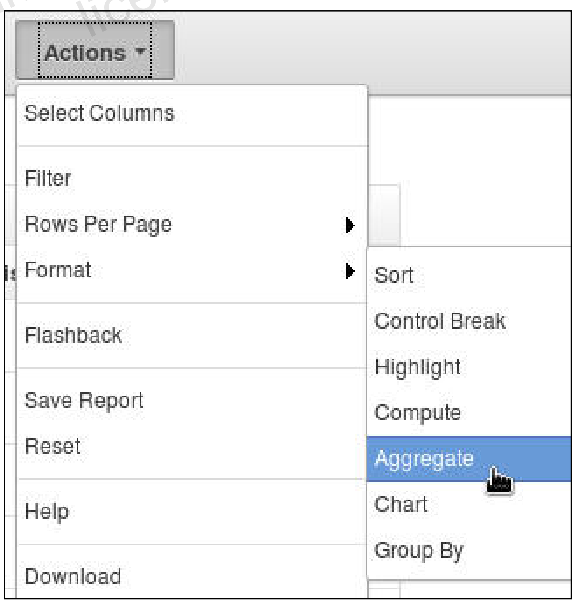
	Employee Id	First Name	Last Name	Commission Pct	New Commission
	145	John	Russell	.4	.4
	146	Karen	Partners	.3	.3
	147	Alberto	Errazuriz	.3	.3
	148	Gerald	Cambrault	.3	.3
	149	Eleni	Zlotkey	.2	.2

Manager Id : 145

	Employee Id	First Name	Last Name	Commission Pct	New Commission
	150	Peter	Tucker	.3	.3
	151	David	Bernstein	.25	.25
	152	Peter	Hall	.25	.25
	153	Christopher	Olsen	.2	.2

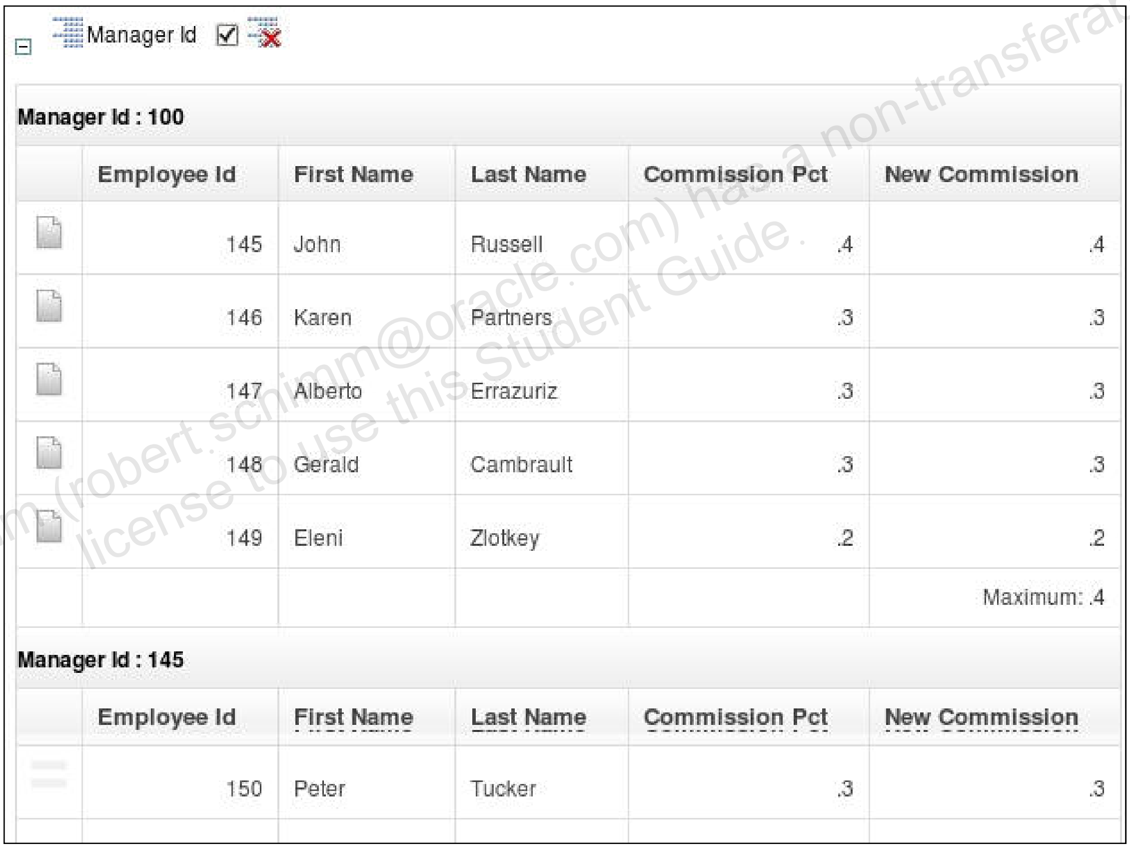
- **Display the maximum commission earned by employees under each manager.**

  13) To find out the maximum commission earned by employees under each manager, click **Actions** and select **Format > Aggregate**.



14) Select **Maximum** from the function list. Select `**New Commission`, which is a computed column from the column list, and click **Apply**.

The report now includes the maximum commission earned by employees under each manager.



Manager Id

Manager Id : 100

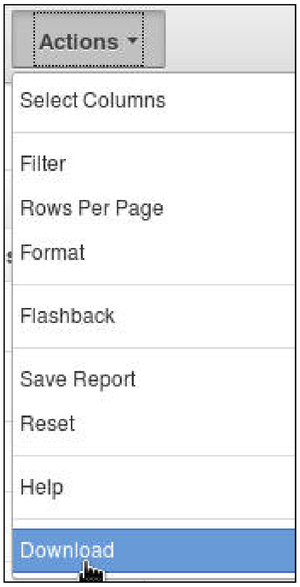
	Employee Id	First Name	Last Name	Commission Pct	New Commission
	145	John	Russell	.4	.4
	146	Karen	Partners	.3	.3
	147	Alberto	Errazuriz	.3	.3
	148	Gerald	Cambrault	.3	.3
	149	Eleni	Zlotkey	.2	.2
					Maximum: .4

Manager Id : 145

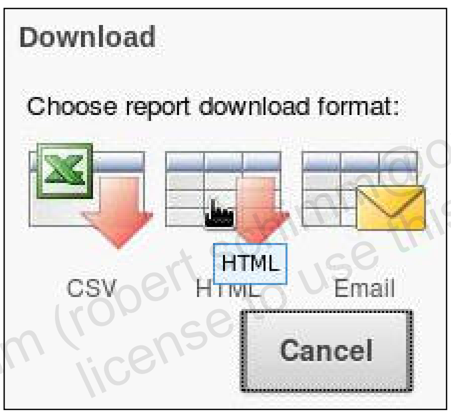
	Employee Id	First Name	Last Name	Commission Pct	New Commission
	150	Peter	Tucker	.3	.3

- **Download the HTML report.**

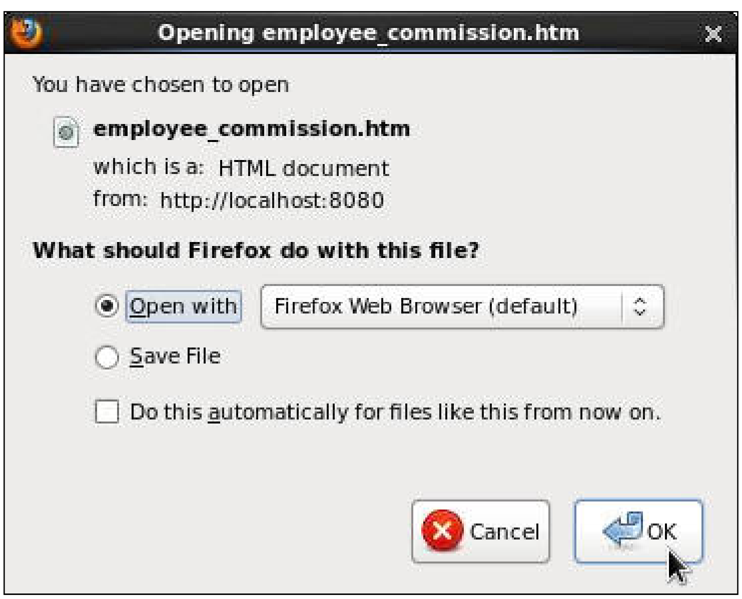
15) To download a report in multiple formats, click **Actions** and select **Download**.



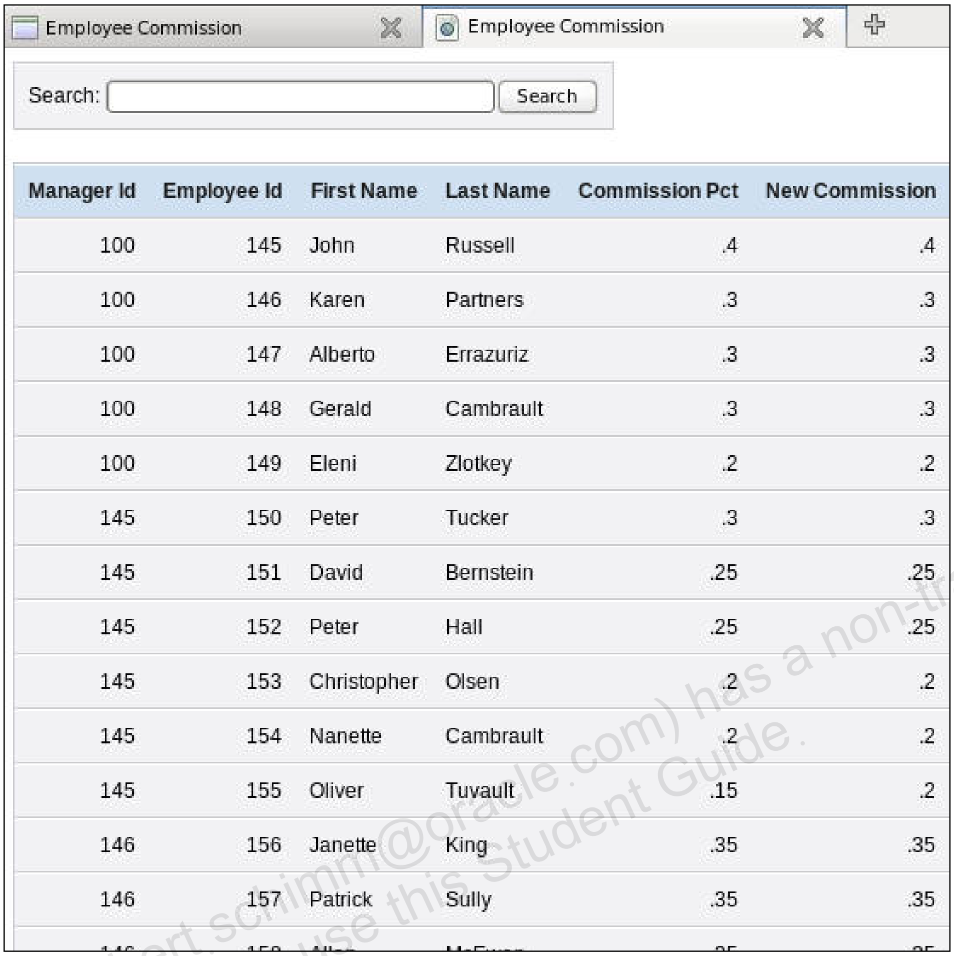
16) Click **HTML**.



17) Click **OK** to view a report in a web browser.



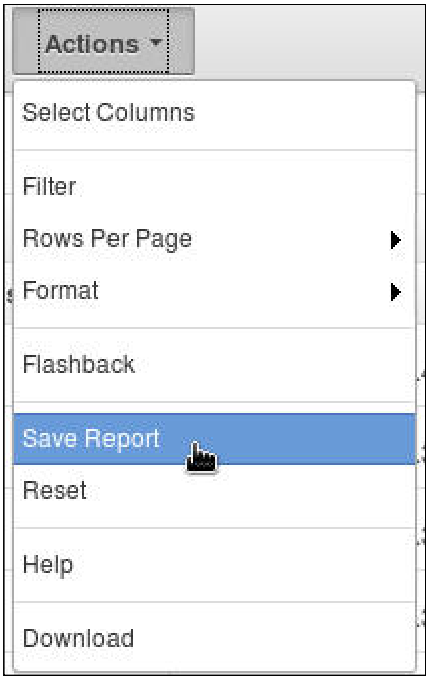
The HTML report is displayed on a new tab.



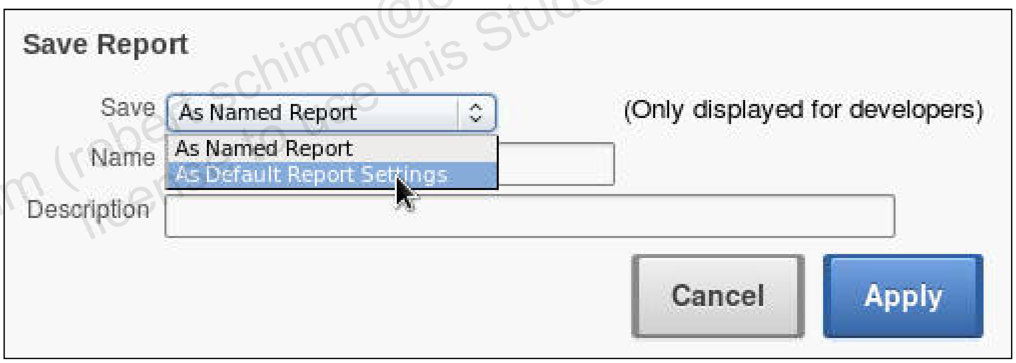
Manager Id	Employee Id	First Name	Last Name	Commission Pct	New Commission
100	145	John	Russell	.4	.4
100	146	Karen	Partners	.3	.3
100	147	Alberto	Errazuriz	.3	.3
100	148	Gerald	Cambrault	.3	.3
100	149	Eleni	Zlotkey	.2	.2
145	150	Peter	Tucker	.3	.3
145	151	David	Bernstein	.25	.25
145	152	Peter	Hall	.25	.25
145	153	Christopher	Olsen	.2	.2
145	154	Nanette	Cambrault	.2	.2
145	155	Oliver	Tuvault	.15	.2
146	156	Janette	King	.35	.35
146	157	Patrick	Sully	.35	.35

- **Save all the customizations that you made to this report so that it is available to other managers but is not the default report. Name the saved report Commission Proposal.**

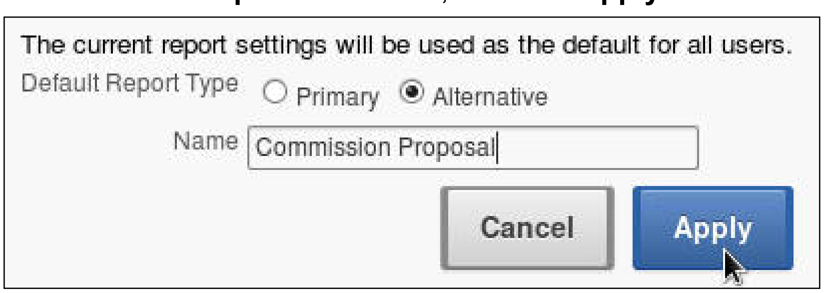
18) Click the Interactive Report tab. To save all the customizations that you made to this report and to make it available to other managers, click **Actions** and select **Save Report**.



19) Select **As Default Report Settings** from the **Save** drop-down list.



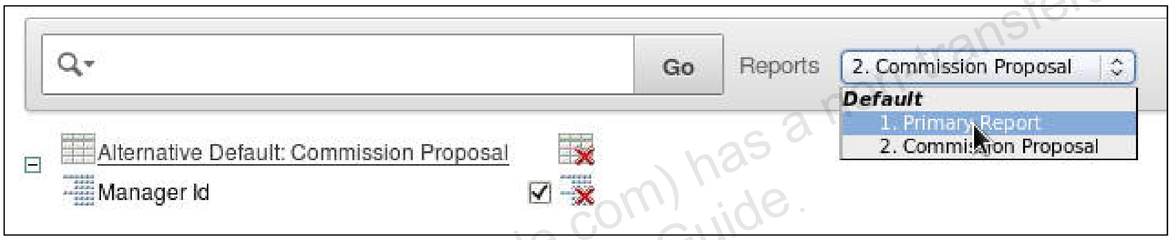
20) You want to make this report available to other users. However, you do not want to make it the default report. Select **Alternative** for **Default Report Type**, enter **Commission Proposal** for **Name**, and click **Apply**.



The alternative report is now listed in the **Reports** drop-down list.

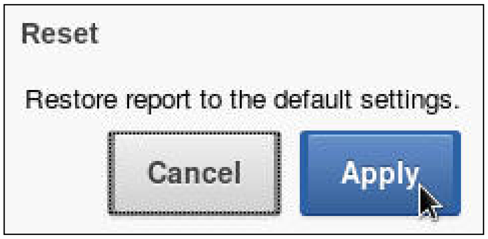
- **Reset the Primary Report.**

21) Select **Primary Report** from the Reports drop-down list.

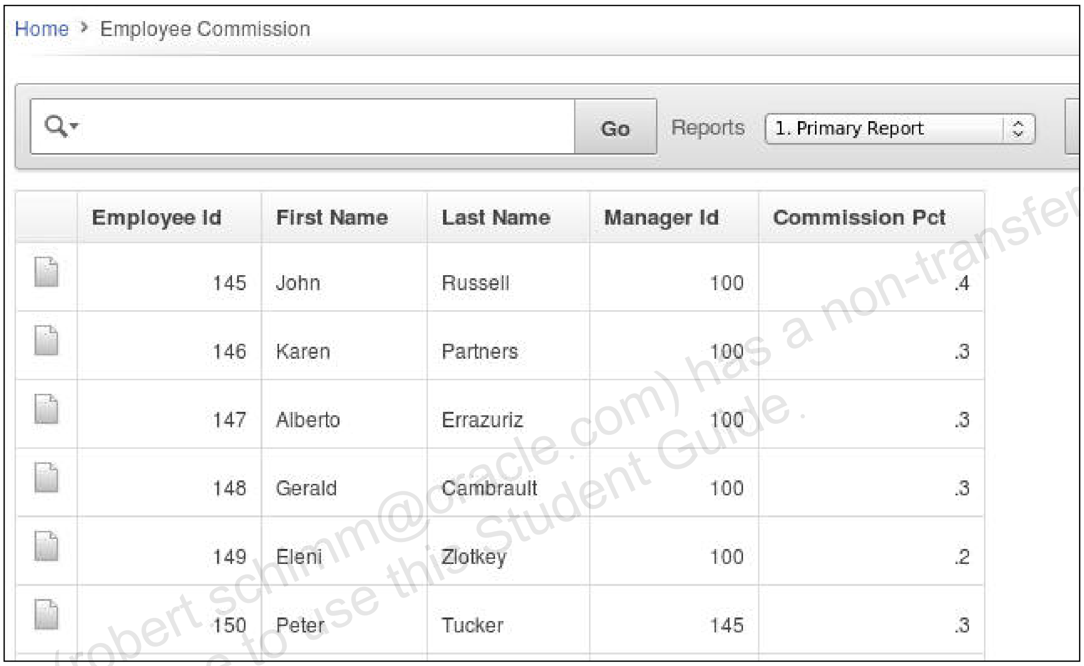


22) To reset this primary report to its original settings, click **Actions** and select **Reset**.

23) Click **Apply**.



The primary report is reset to its original settings.



Employee Id	First Name	Last Name	Manager Id	Commission Pct
145	John	Russell	100	.4
146	Karen	Partners	100	.3
147	Alberto	Errazuriz	100	.3
148	Gerald	Cambrault	100	.3
149	Eleni	Zlotkey	100	.2
150	Peter	Tucker	145	.3

Solution 4-2: Customizing an Interactive Report

Overview

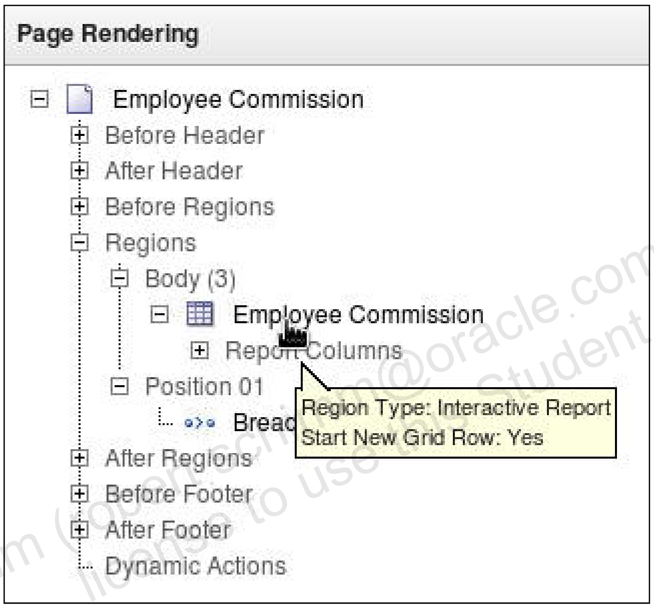
In this practice, you customize the Employee Commission interactive report that you created in the previous practice.

Tasks

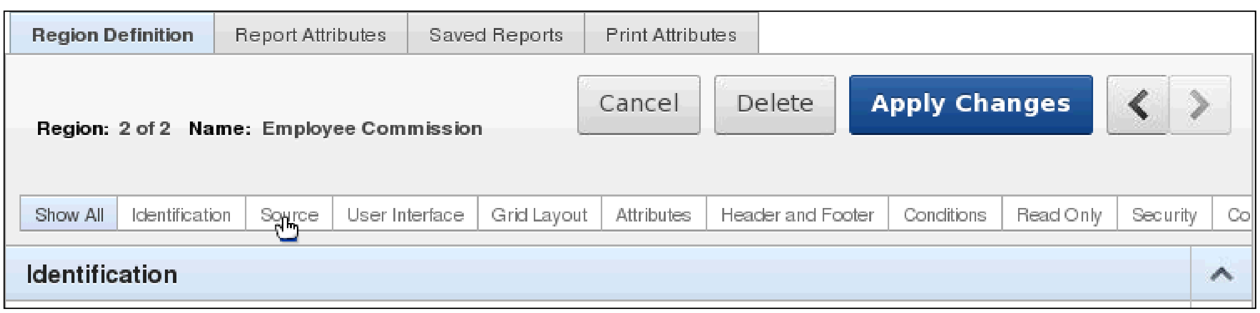
a. Make the following customizations to the Employee Commission report:

- **Hide the `EMPLOYEE_ID` column and change the `MANAGER_ID` to be the `FIRST_NAME` and `LAST_NAME` of the manager.**

1) Navigate to the Employee Commission report page in the Order Management application. Under **Regions** > **Body**, double-click **Employee Commission**.

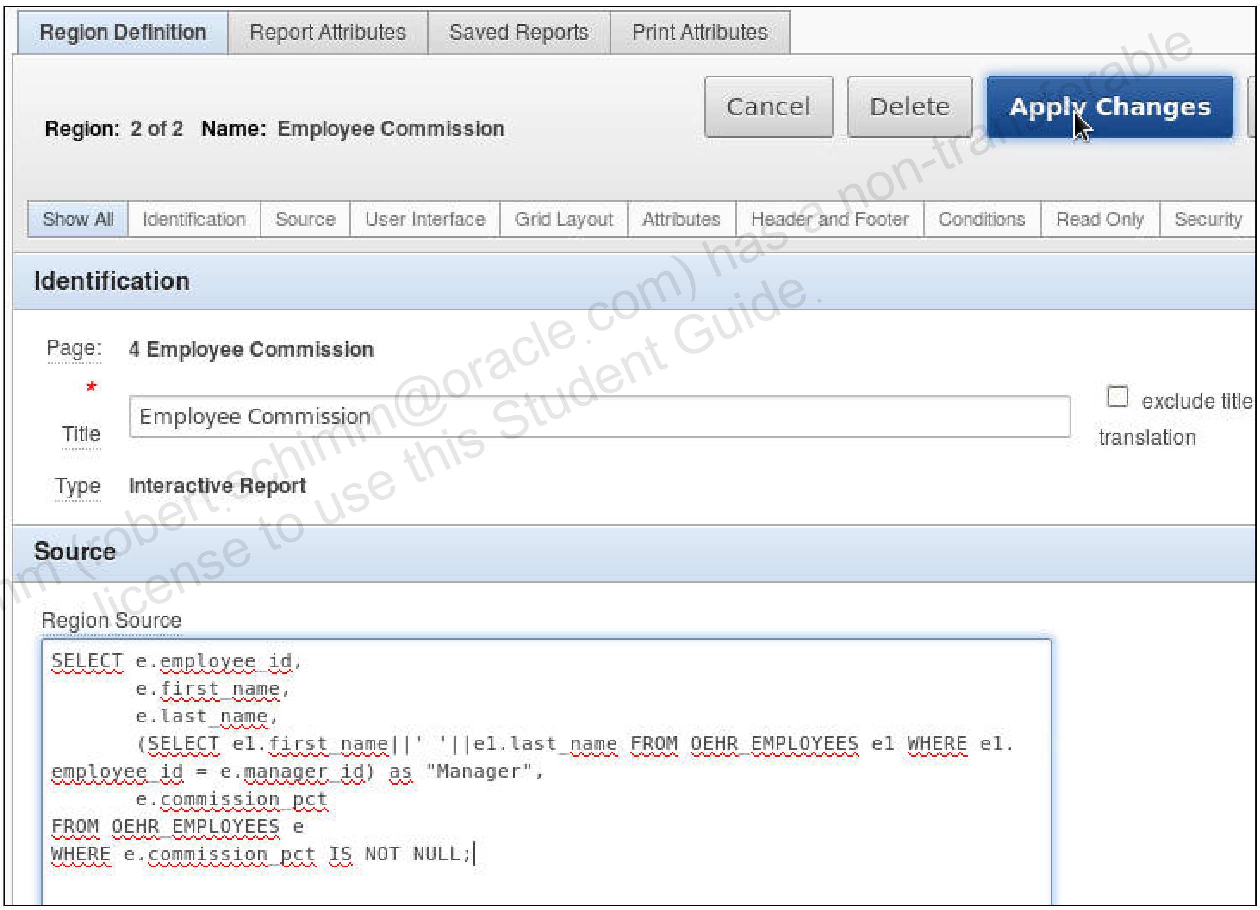


2) Click the **Source** tab.

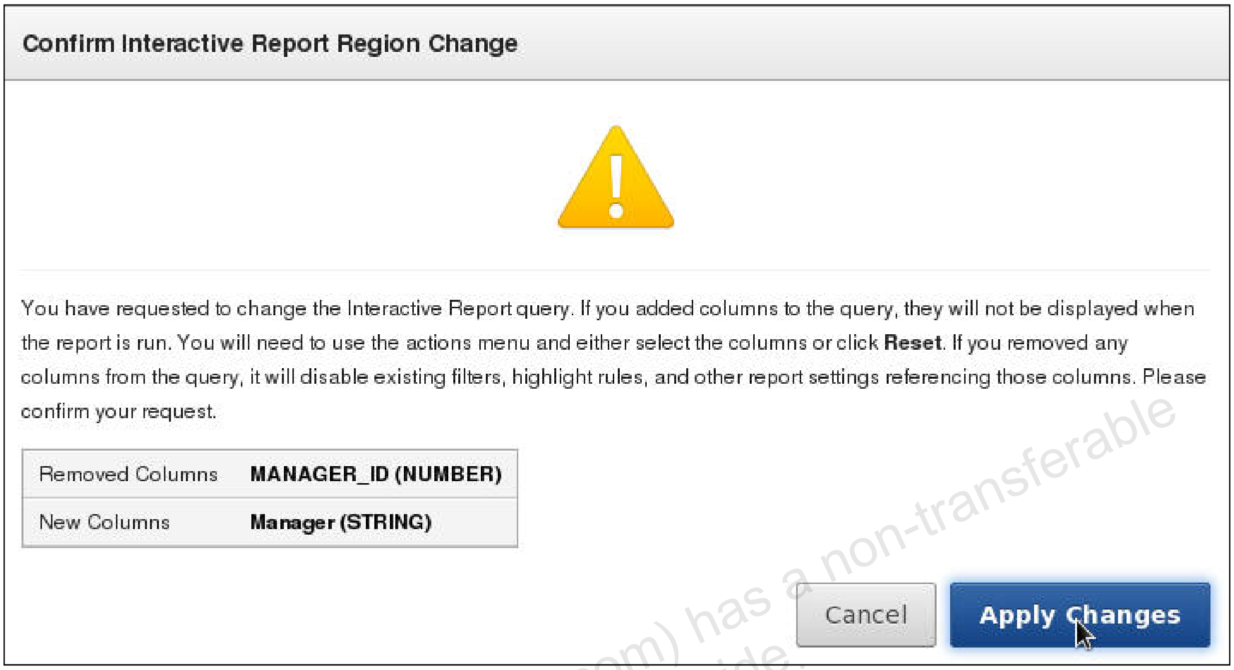


3) Change Region Source to the following query (located in `/home/oracle/labs/files/lab4_2_1.txt`) and click **Apply Changes**:

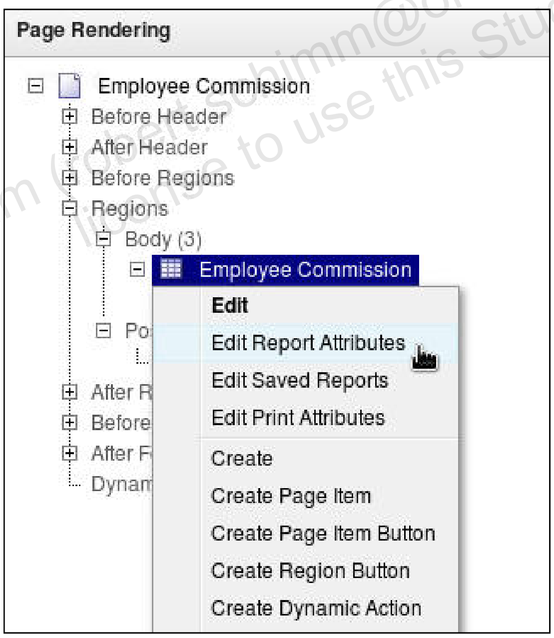
```
SELECT e.employee_id,
       e.first_name,
       e.last_name,
      (SELECT e1.first_name||’ ‘||e1.last_name from
OEHR_EMPLOYEES e1 where e1.employee_id = e.manager_id) as
“Manager”,
       e.commission_pct
 FROM OEHR_EMPLOYEES e
where e.commission_pct IS NOT NULL;
```



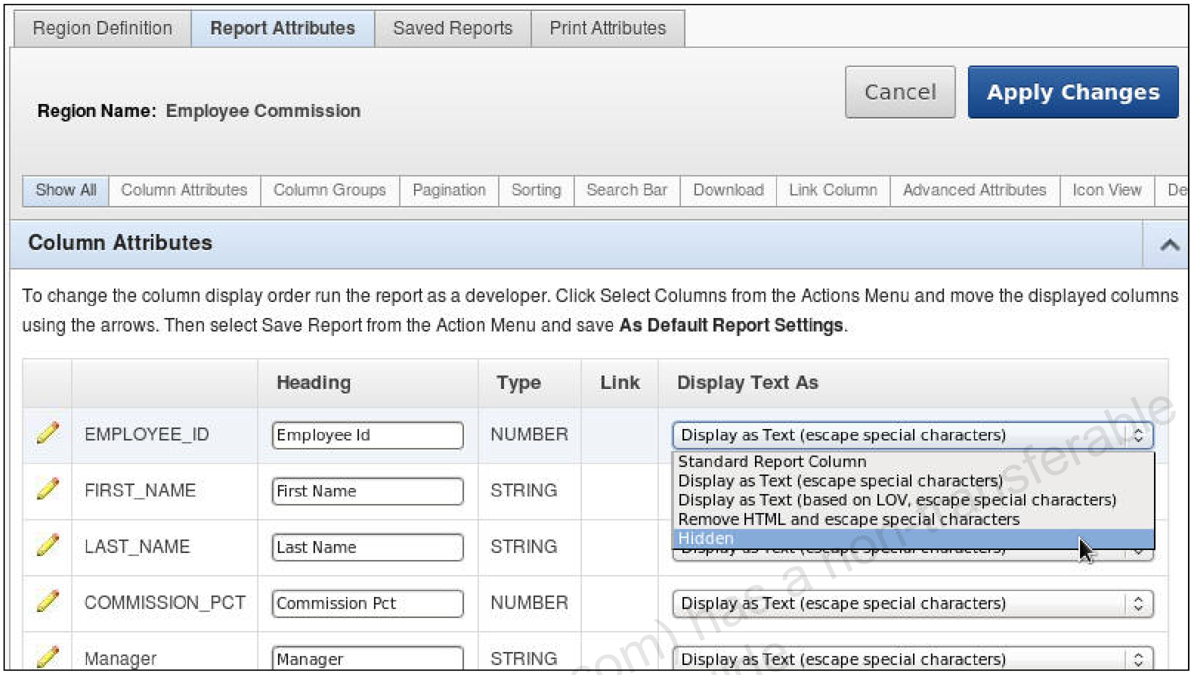
4) A window appears to confirm the changes to the columns in your interactive report. Click **Apply Changes**.



5) In **Region > Body**, right-click **Employee Commission** and select **Edit Report Attributes**.

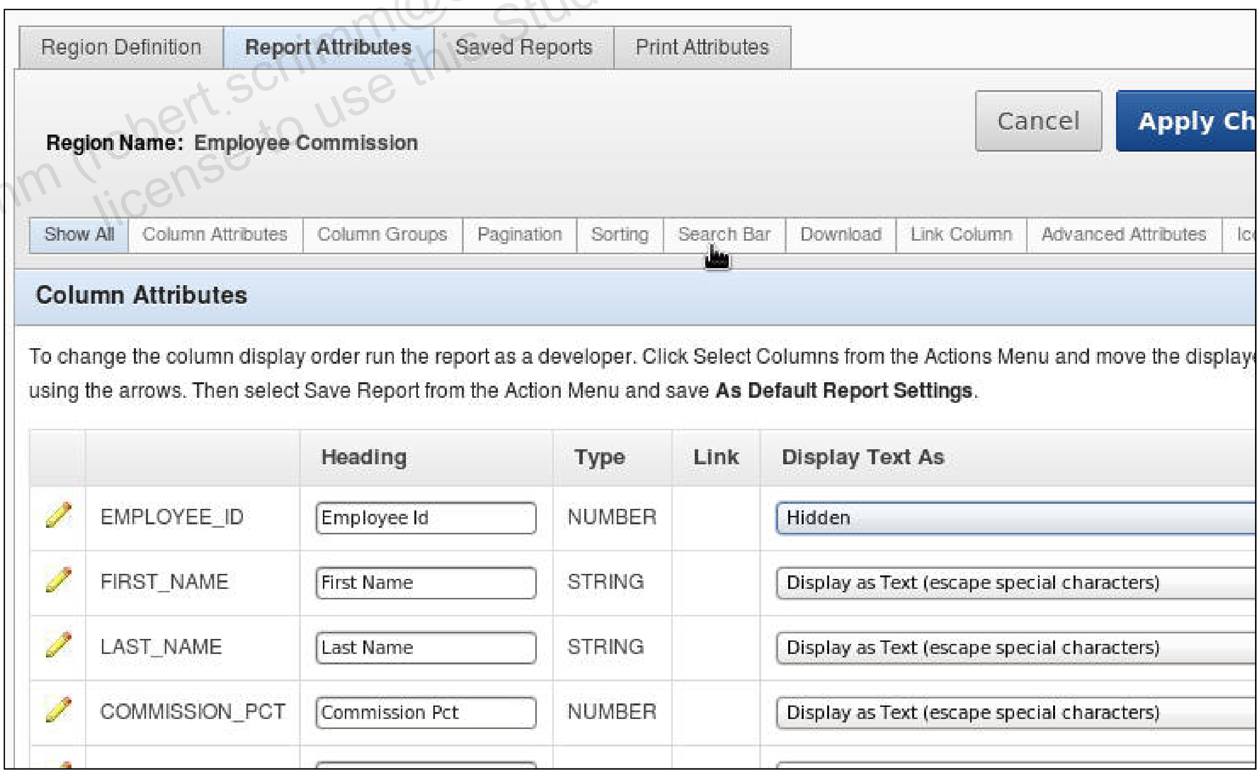


6) Under Column Attributes, select **Hidden** from the **Display Text As** drop-down list for **`EMPLOYEE_ID`**.

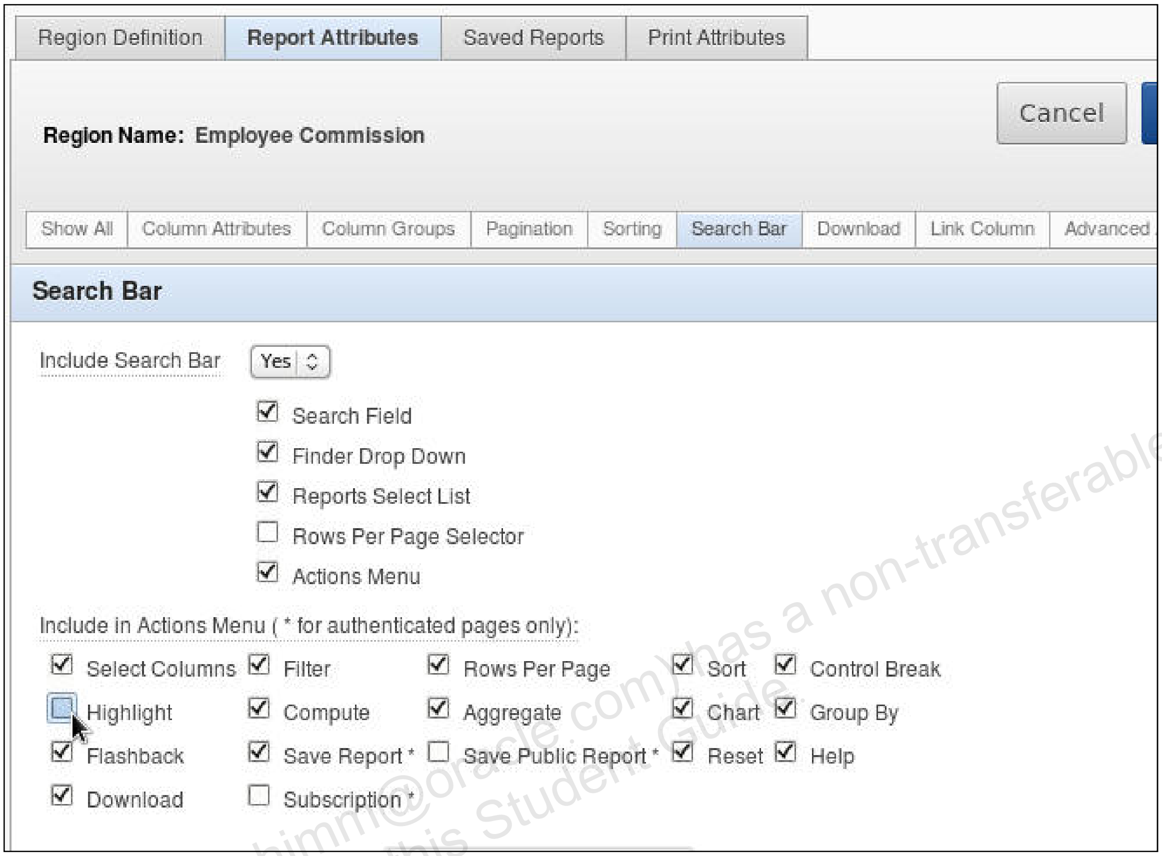


- **Remove the Highlight option from the Actions menu.**

7) Click the **Search Bar** tab.

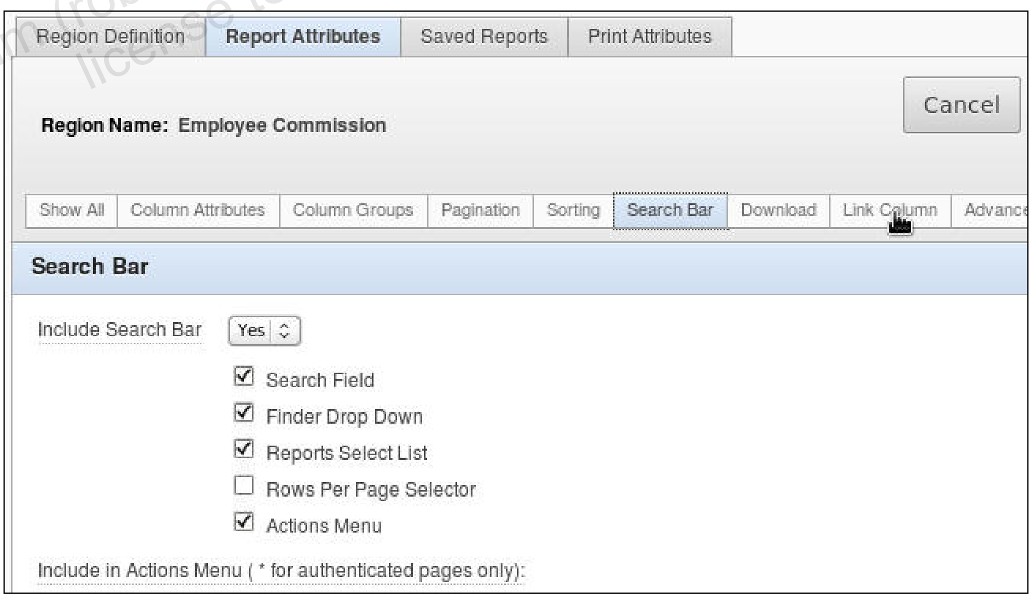


8) Deselect the **Highlight** check box so that it is not displayed in the Actions menu.

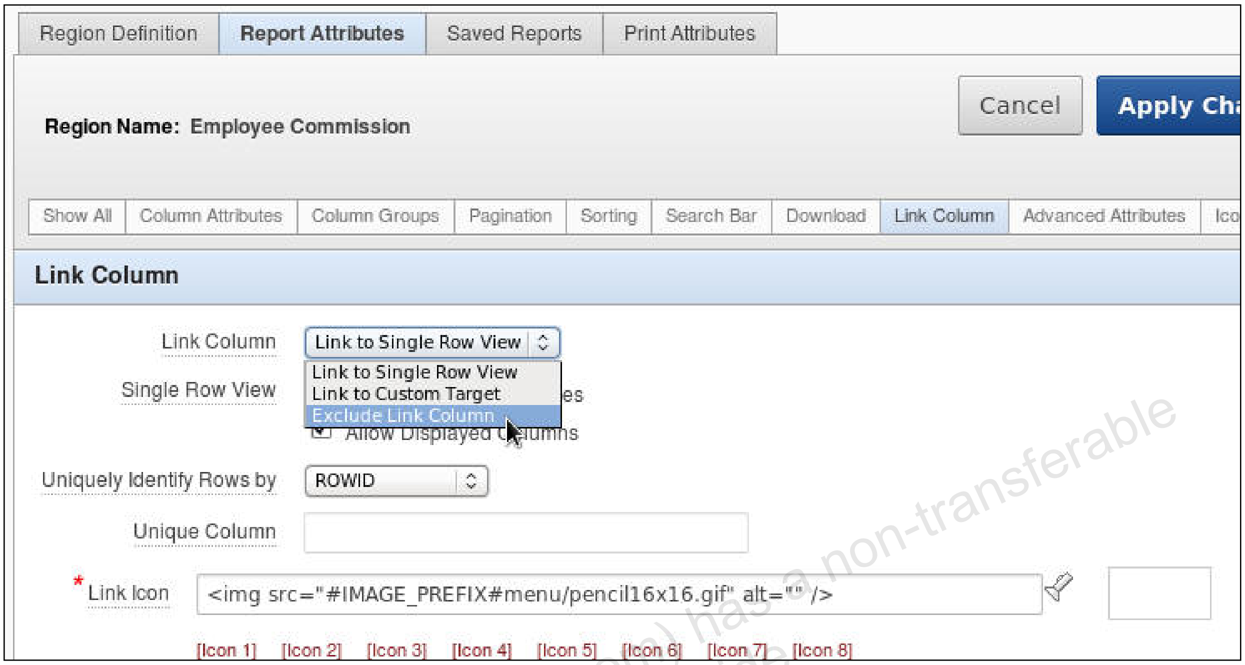


- **Remove the Single Row View icon for each row in the report.**

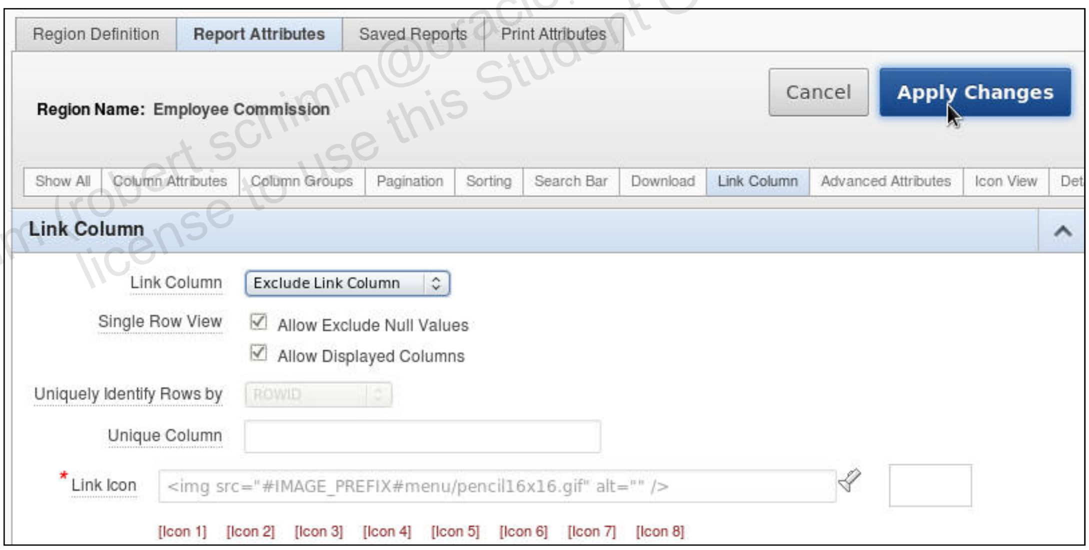
9) Click the **Link Column** tab.



10) To not display the Single Row View, select **Exclude Link Column** from the Link Column drop-down list.

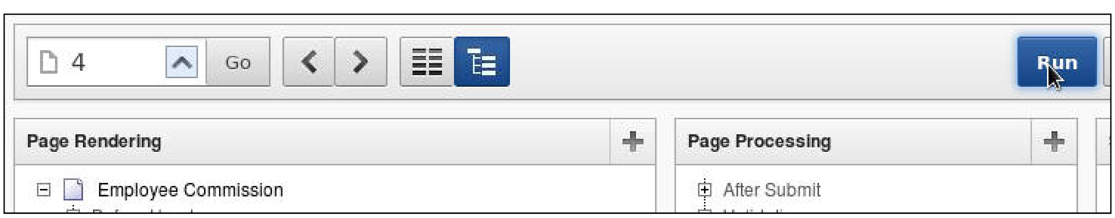


11) Click **Apply Changes**.

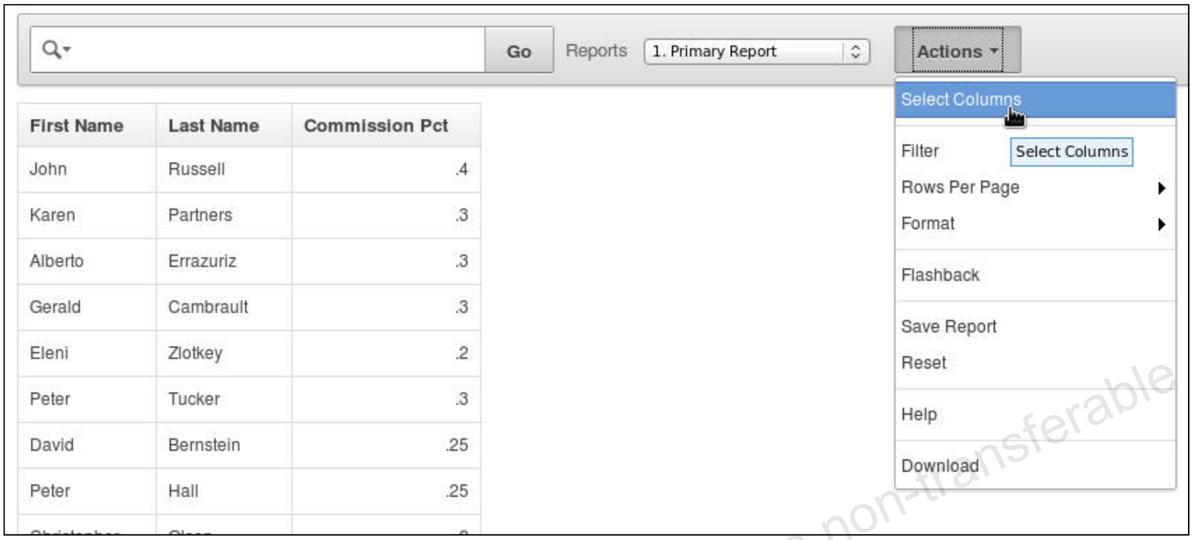


- **Run the report and confirm the changes that you made.**

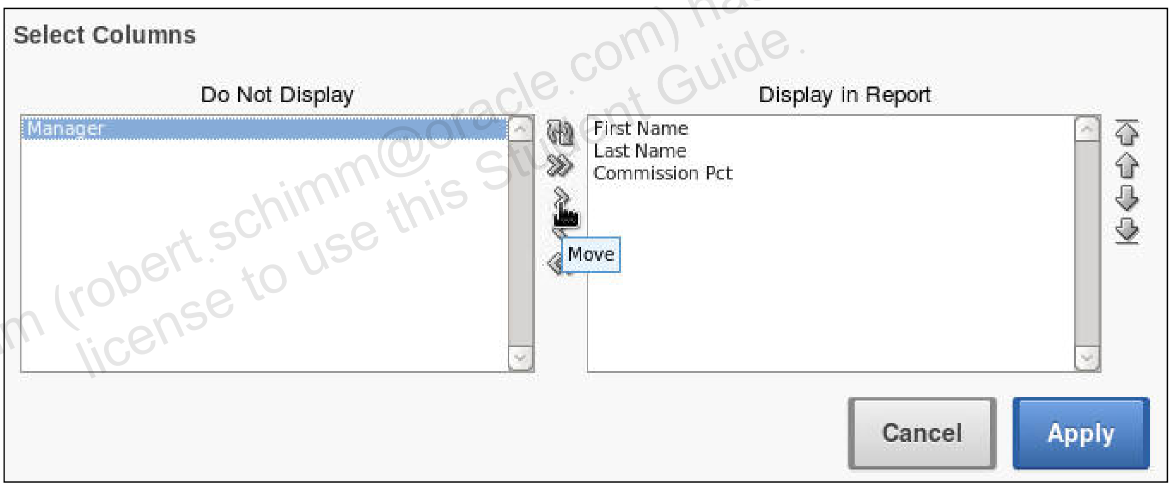
12) Click **Run.**



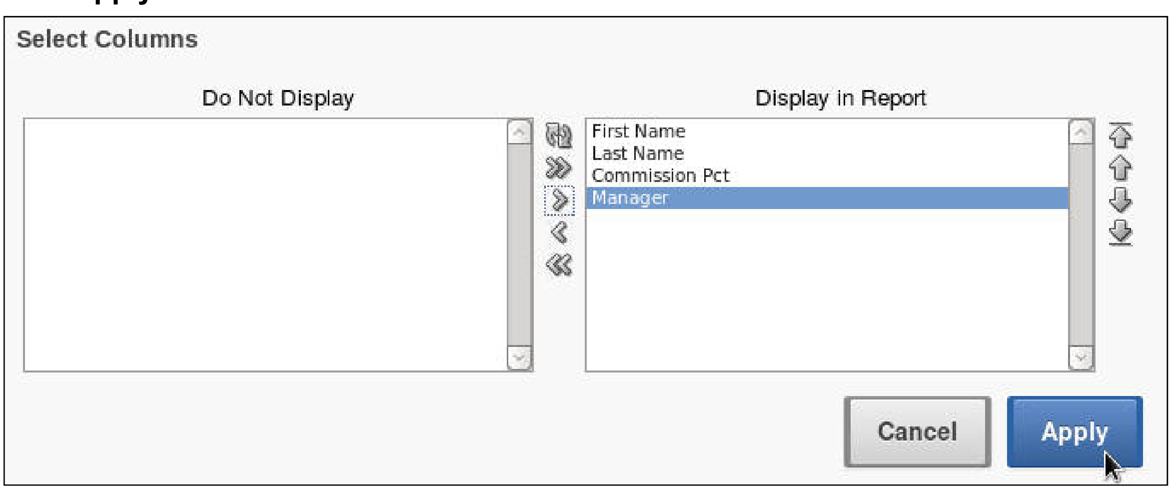
13) Note that Employee ID and the single row view are also excluded from the report. You need to add the Manager column to the report. Click **Actions**, and then **Select Columns**.



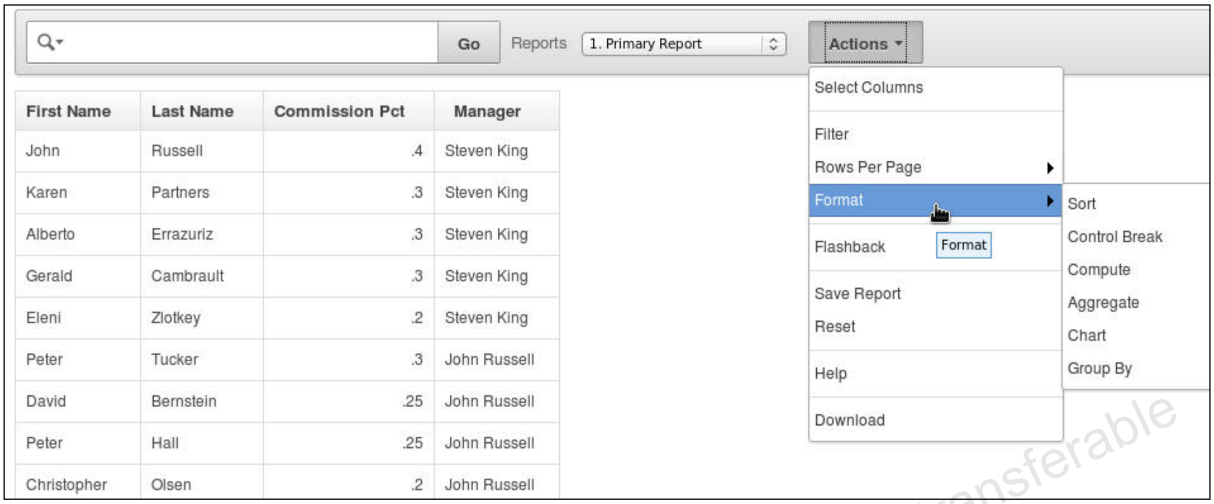
14) Select **Manager** and click the Move **>** icon.



15) Click **Apply**.



16) Note that the Manager column is now displayed. Click **Actions** and select **Format.** Notice that the **Highlight** option is not there.



Practices for Lesson 5: Creating Classic Reports, Wizard Reports, and Reports for Mobile Applications

Chapter 5

Practices for Lesson 5: Overview

Practices Overview

There are two practices for this lesson. In these practices, you create a classic report and a wizard report. You add a page with a List View in your application.

Practice 5-1: Creating Classic and Wizard Reports

Overview

In this practice, you create a classic report and a wizard report and edit the attributes of the reports.

Assumptions

You have performed the previous practices or imported **LAB042_SOLN.sql**.

Tasks

a. On a new page in the Order Management application, create a SQL report. Name the new page and the report Top Tier Salary. The report should display the last name, email, and salary of employees who earn between $5000 and $12000 from the **OEHR_EMPLOYEES** table. The report should contain a search bar.

b. On a new page in the Order Management application, create a wizard report. Name the page and the report Customer Address List. The report should display the address information of the customers, such as the first and last names, address, city, and state from the **OEHR_CUSTOMERS** table.

c. Modify the Customer Address List report with the following requirements:

- Change the report headings for **CUST_FIRST_NAME** and **CUST_LAST_NAME** to First Name and Last Name, respectively.
- Change the Pagination to Row Ranges X to Y of Z (with pagination).
- Review the query definition and add the **OEHR_COUNTRIES.COUNTRY_NAME** column to the report. **Hint:** You will need to create a join.

Practice 5-2: Creating a List View

Overview

In this practice, you create a page with a List View in the Order Management application.

Assumptions

You have performed the previous practices.

Tasks

a. On a new page in the Order Management application, create a List View, which is a report type used for mobile applications. Enter **`Employee List`** as the Page Name and Region Name. Change the Page Number to 205. The list view should select all the columns from the **`OEHR_EMPLOYEES`** table and should display the last names as the text column. The list view should also be enabled to search the last name column with the Search Type "Like & Ignore Case." Open the application on a separate tab to view the list view.

Solution 5-1: Creating Classic and Wizard Reports

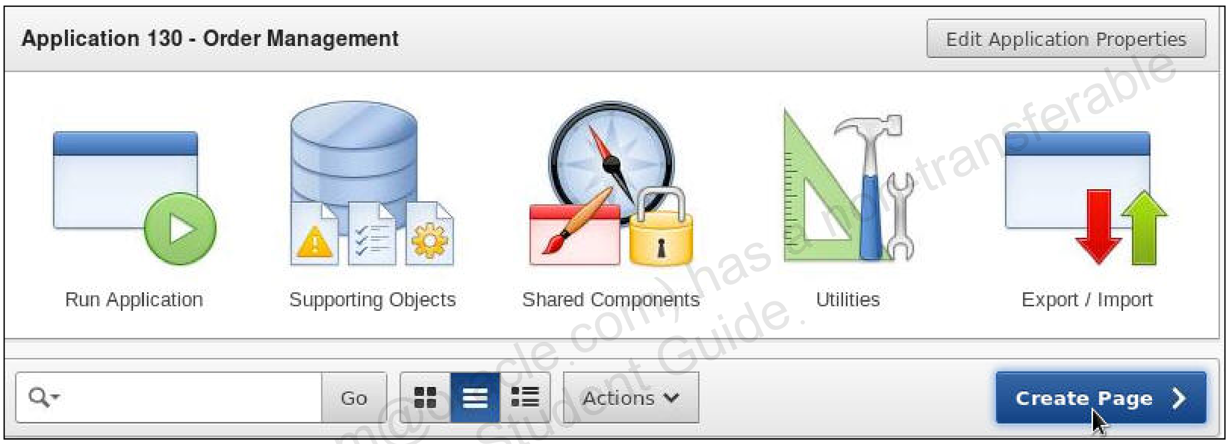
Overview

In this practice, you create two classic reports and edit the attributes of the report.

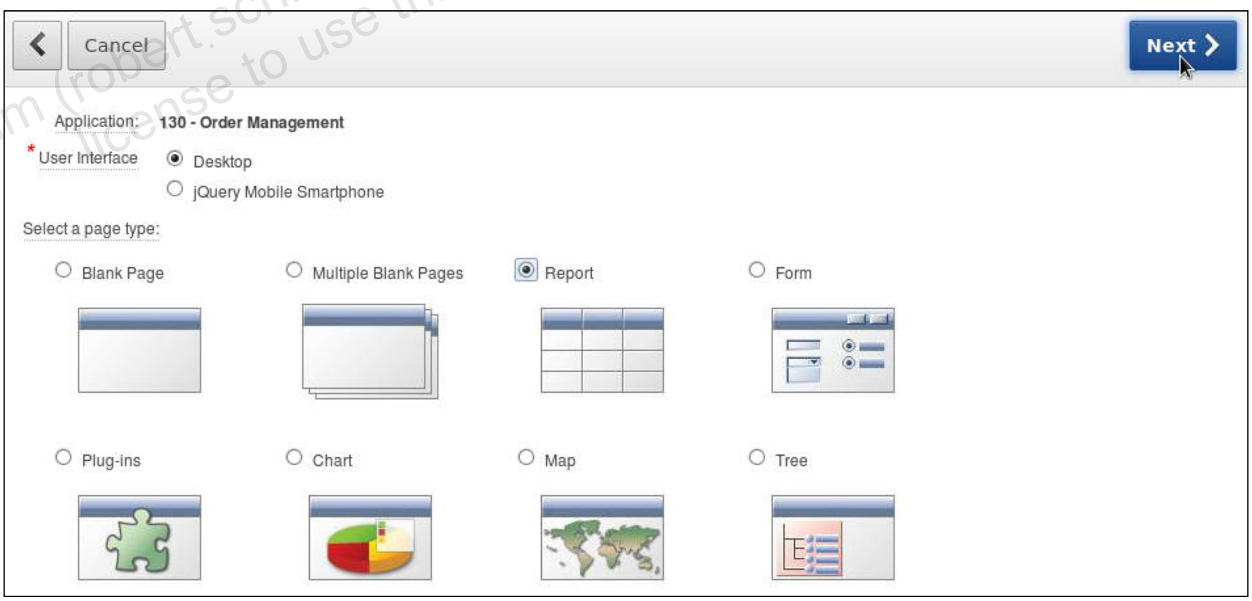
Tasks

a. On a new page in the Order Management application, create a SQL report. Name the new page and the report Top Tier Salary. The report should display the last name, email, and salary of employees who earn between $5000 and $12000 from the **`OEHR_EMPLOYEES`** table. The report should contain a search bar.

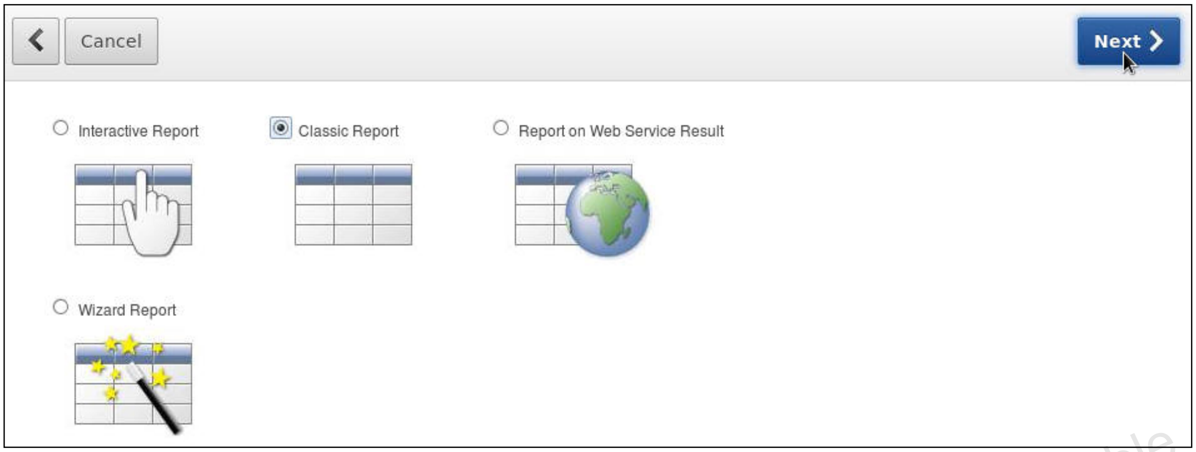
1) Navigate to the Order Management application page and click **Create Page**.



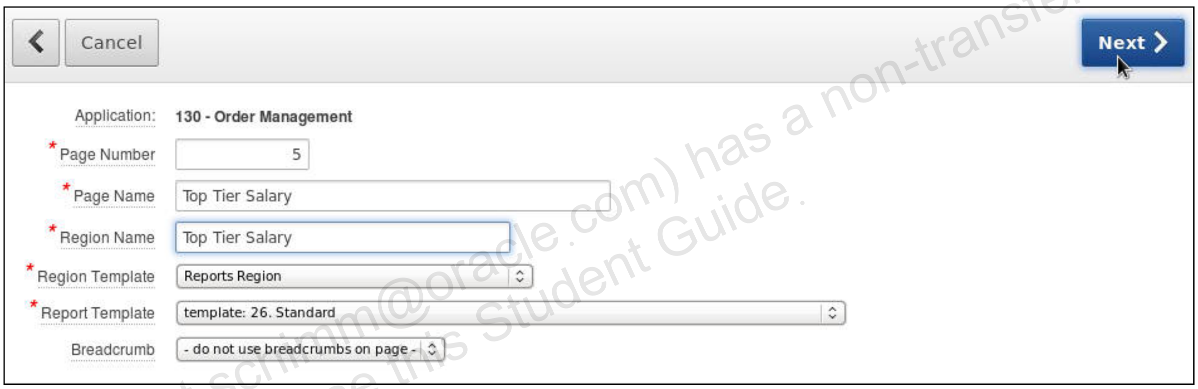
2) Select **Report** and click **Next >**.



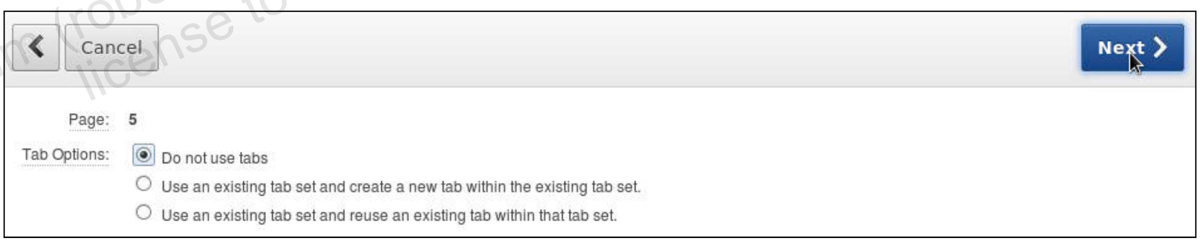
3) Select **Classic Report** and click **Next >**.



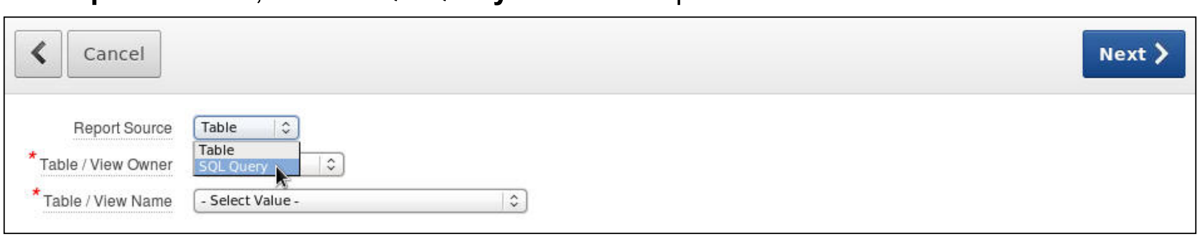
4) Enter `Top Tier Salary` for both Page Name and Region Name. Click **Next >**.



5) Accept the default and click **Next >**.

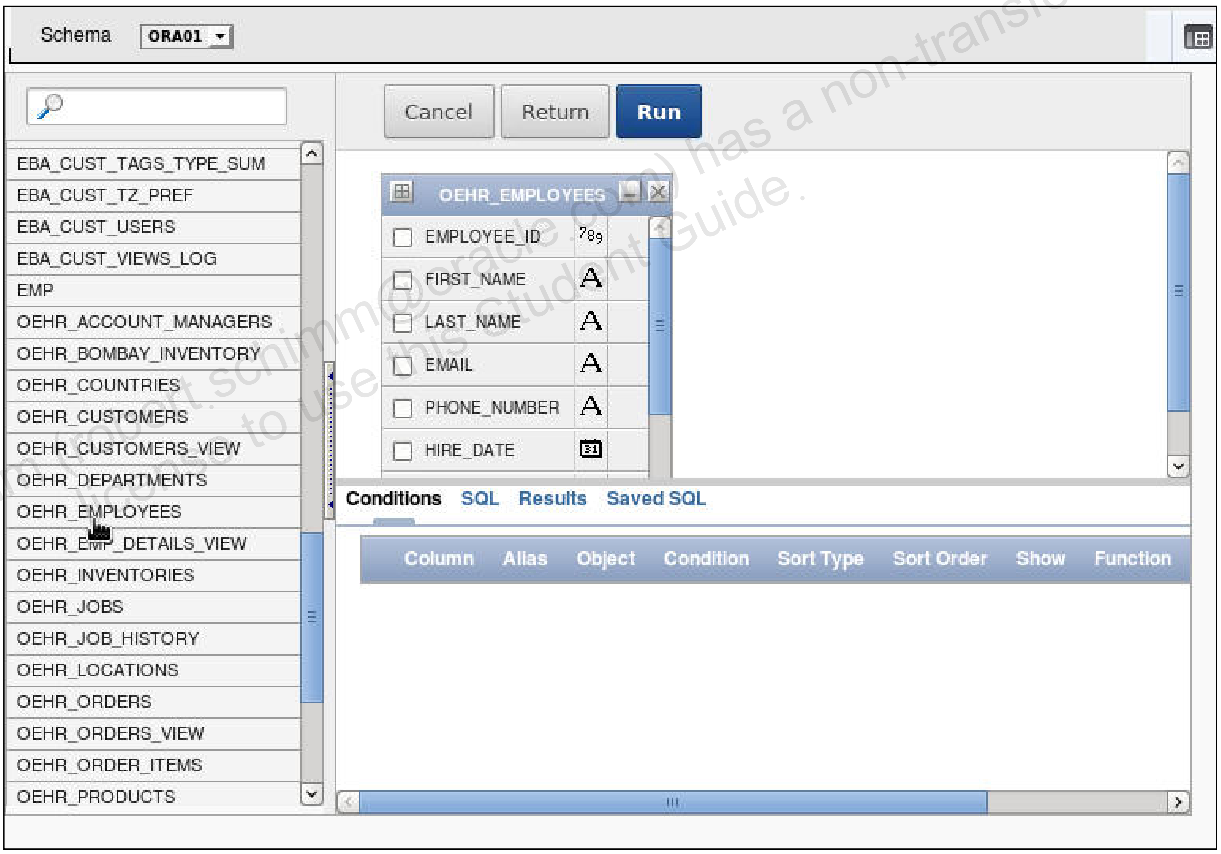


6) For **Report Source**, select **SQL Query** from the drop-down list.

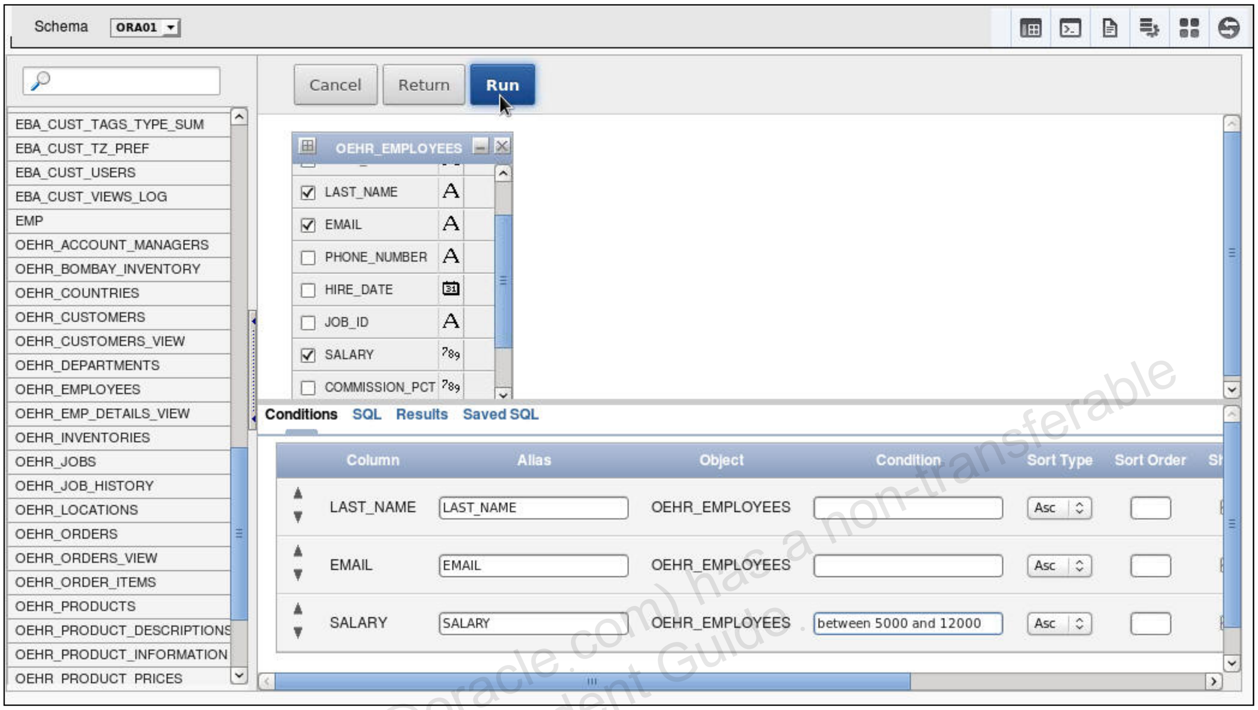


7) You will create the query using the Query Builder. Click **Query Builder**.

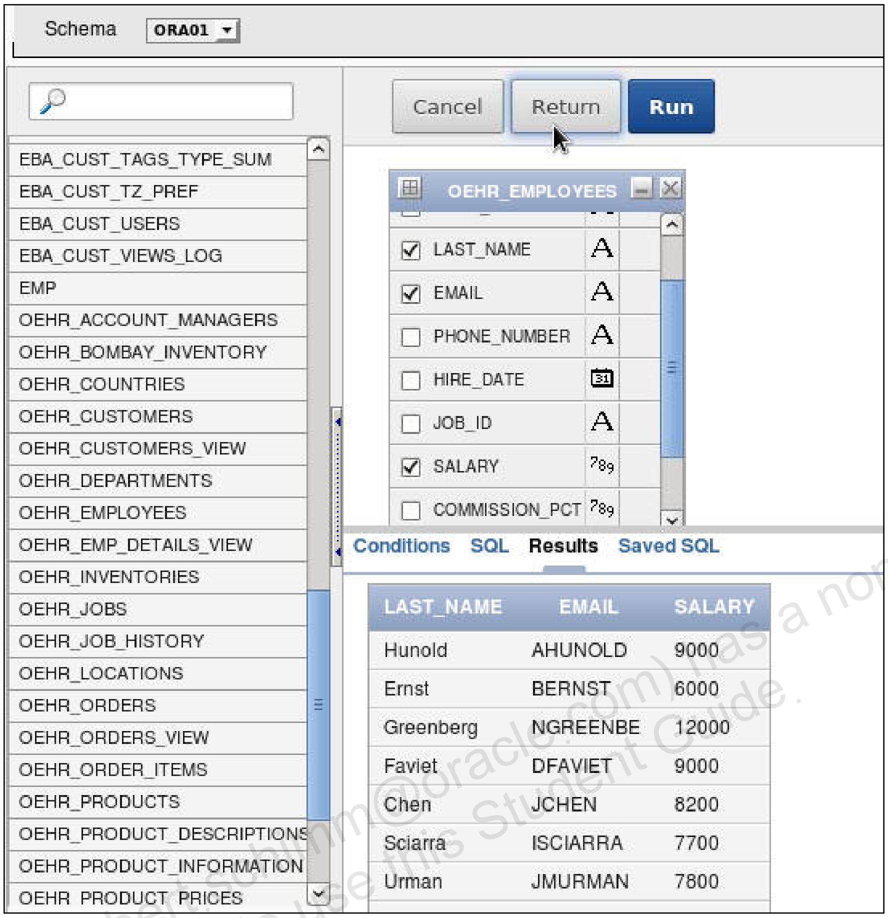
8) From the Object Selection pane, select **`OEHR_EMPLOYEES`**.



9) Select the **`LAST_NAME`**, **`EMAIL`**, **`SALARY`** columns. For the **`SALARY`** column, enter the condition **`BETWEEN 5000 and 12000`**. Click in another field to confirm the condition, and then click **Run**.

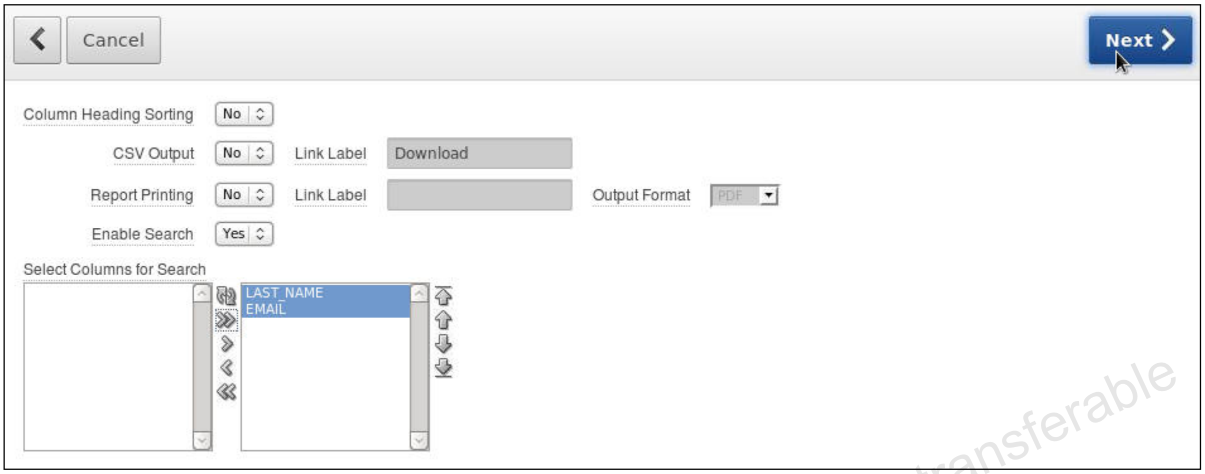


10) Click **Return**.

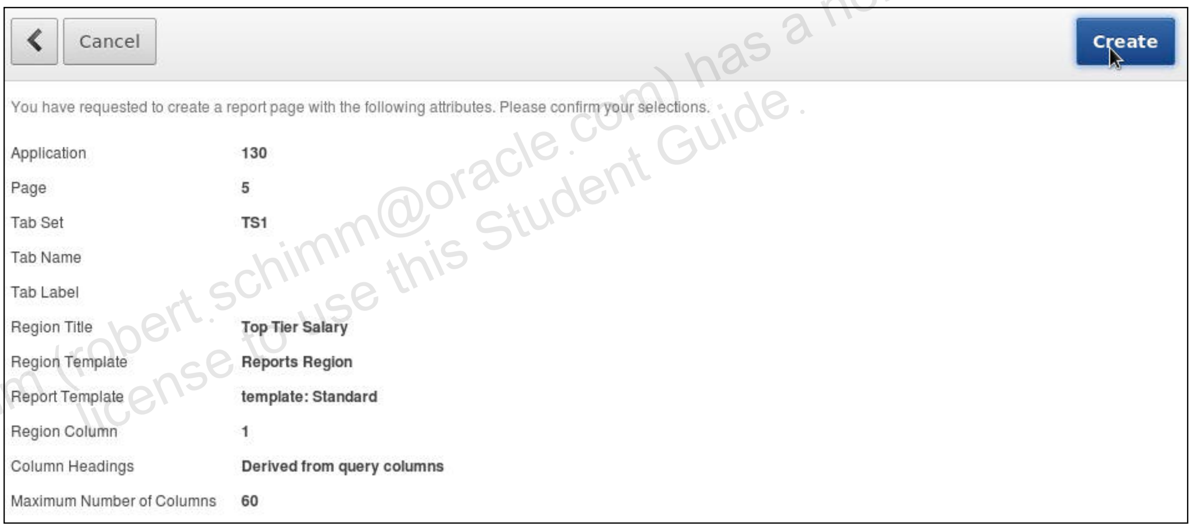


11) Click **Next >**.

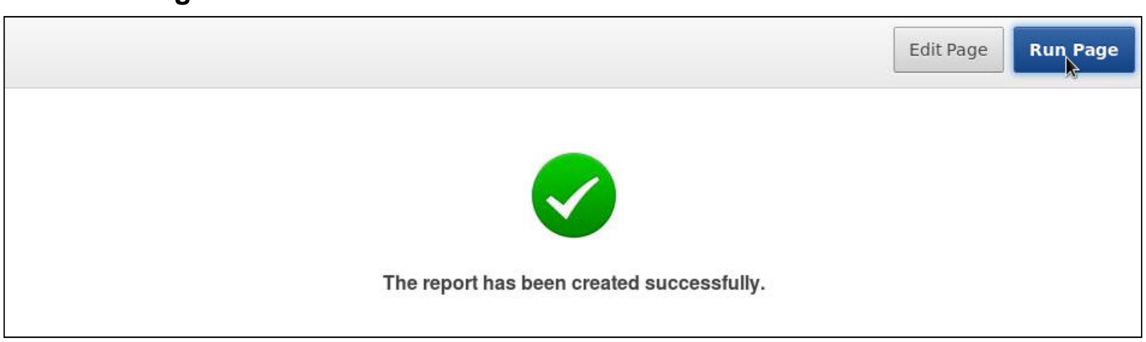
12) Select **No** for **Column Heading Sorting**, select **No** for **CSV Output**, and select **Yes** for **Enable Search**. Select the `LAST_NAME` and `EMAIL` columns and click the double right arrow (**>>**) to search on those columns. Click **Next >**.



13) Click **Create**.

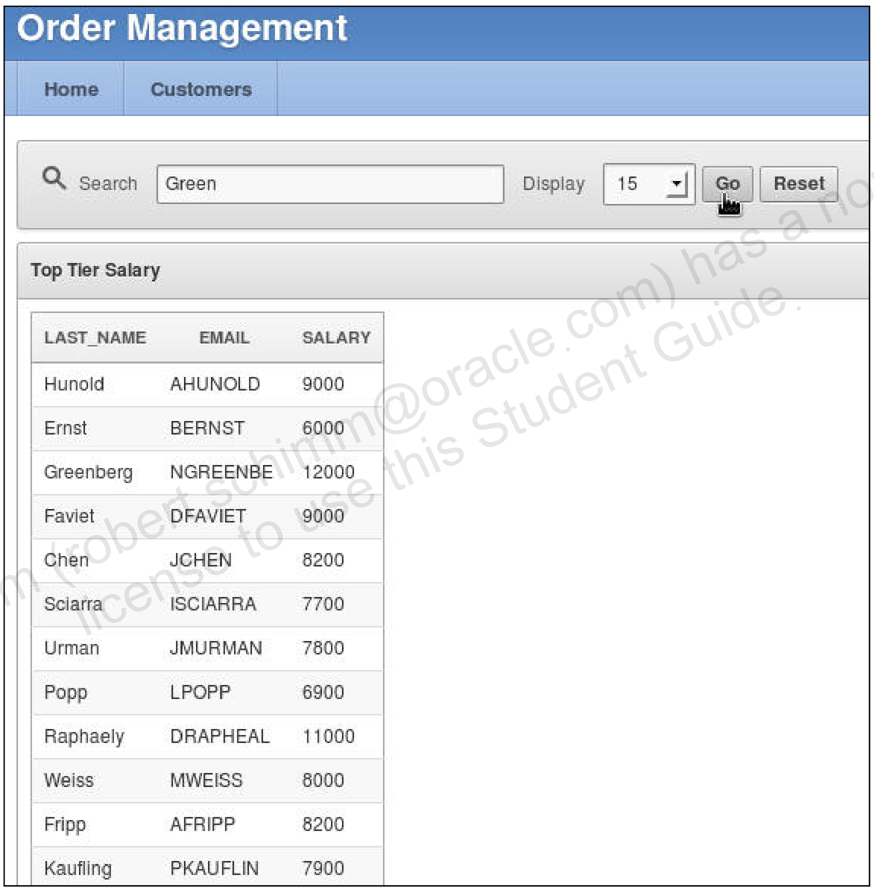


14) Click **Run Page**.

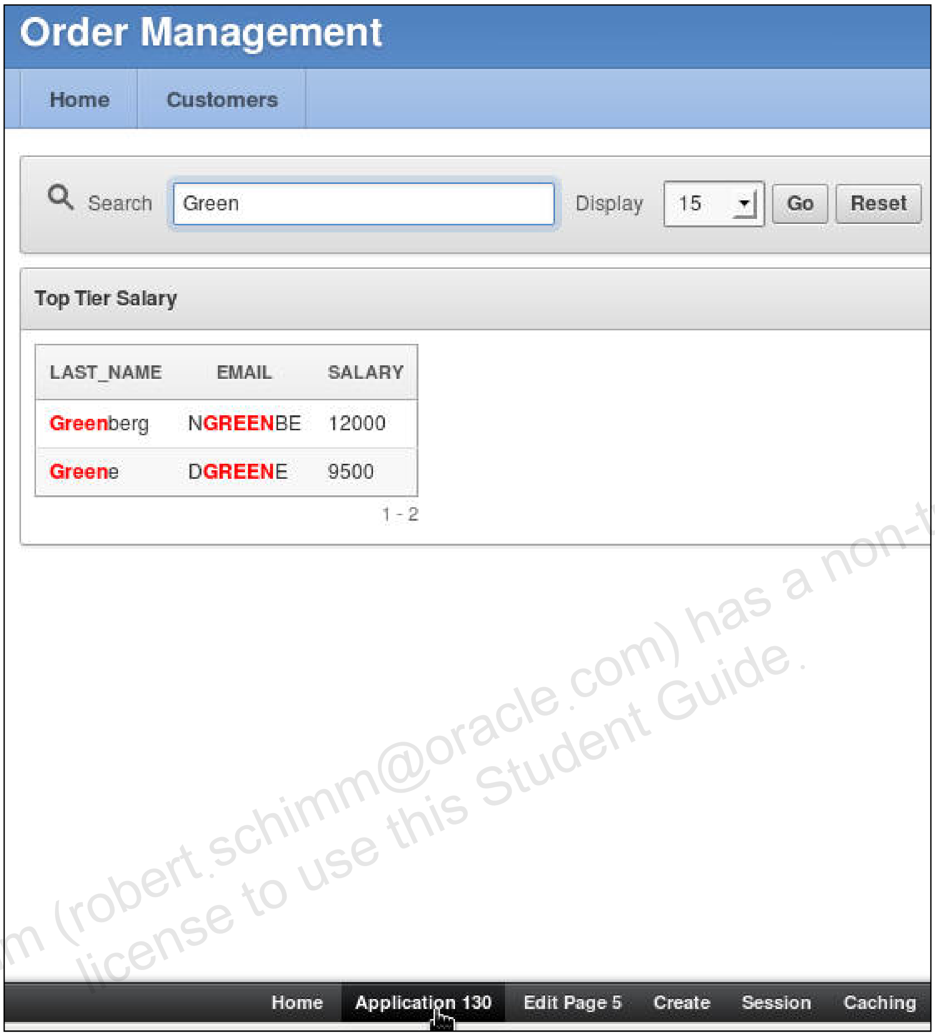


15) If the login window opens, enter `ora<n>` for Username and Password, and click **Login**.

16) Review the report. Enter **Green** in the Search area and click **Go**.

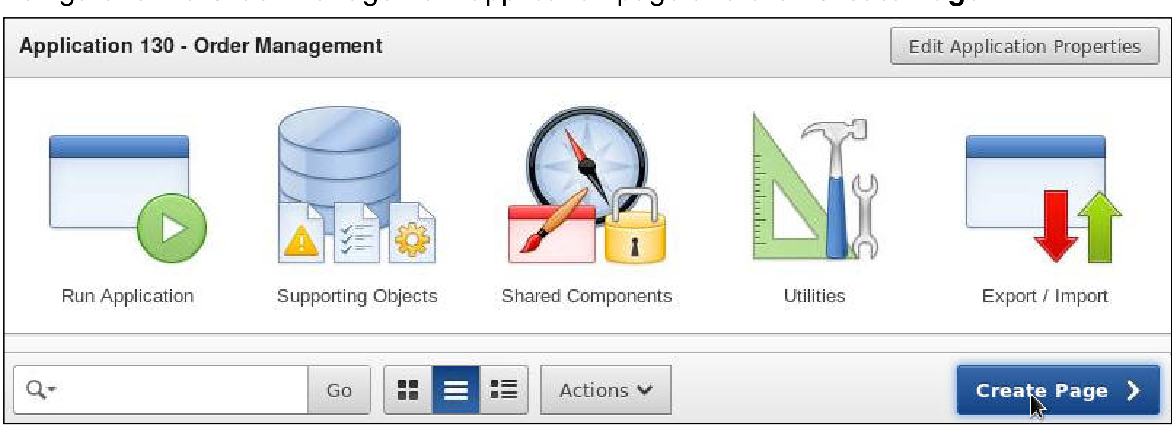


17) Review the search results. Note that you can make changes to the SQL with this report type. Click **Application<n>**.

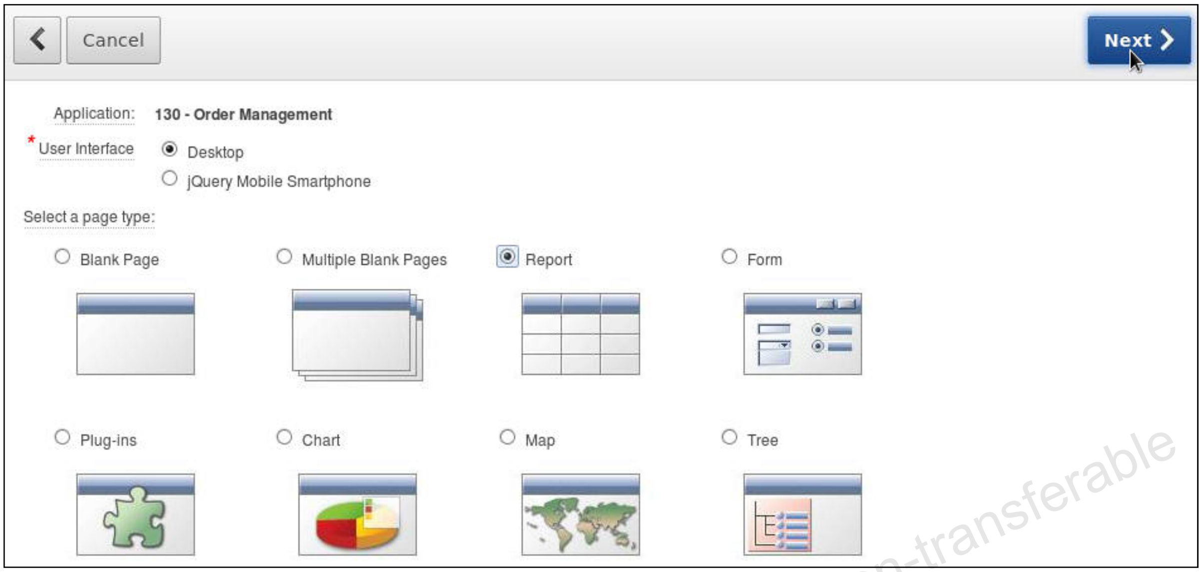


b. On a new page in the Order Management application, create a wizard report. Name the page and the report Customer Address List. The report should display the address information of the customers, such as the first and last names, address, city, and state from the `OEHR_CUSTOMERS` table.

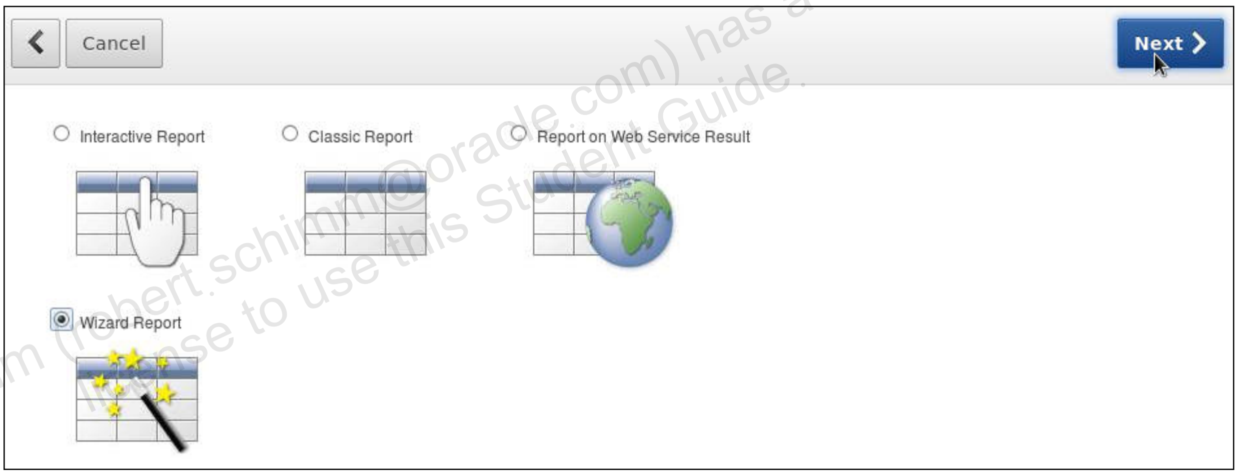
1) Navigate to the Order Management application page and click **Create Page**.



2) Select **Report** and click **Next >**.

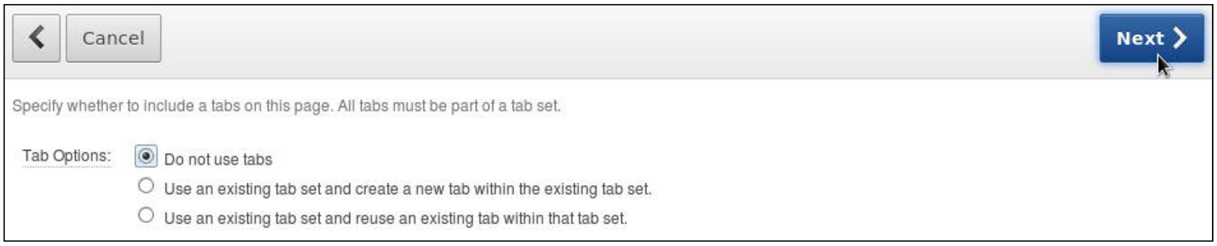


3) Select **Wizard Report** and click **Next >**.

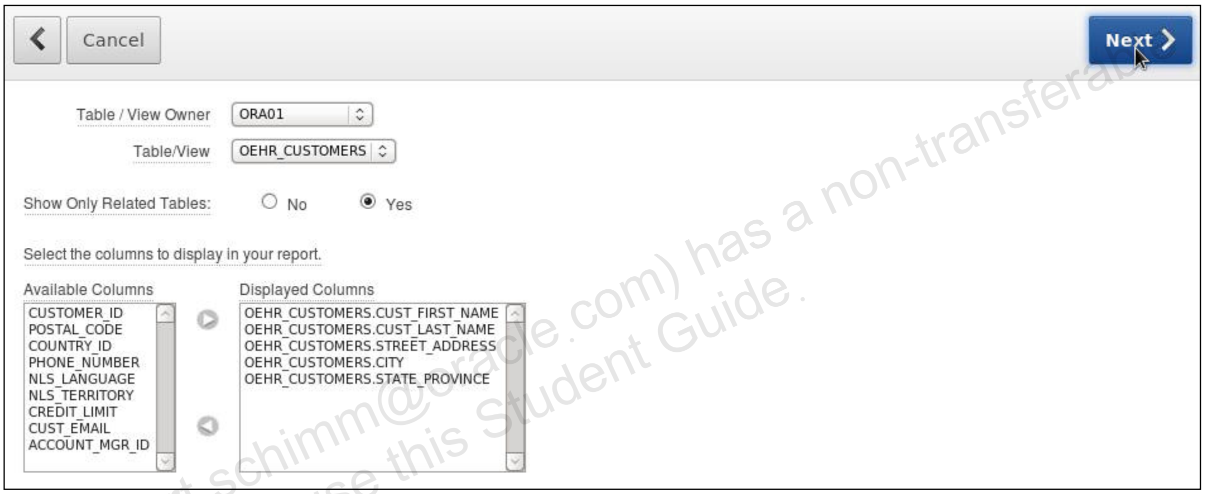


4) Enter `Customer Address List` for Page Title and Region Title and click **Next >**.

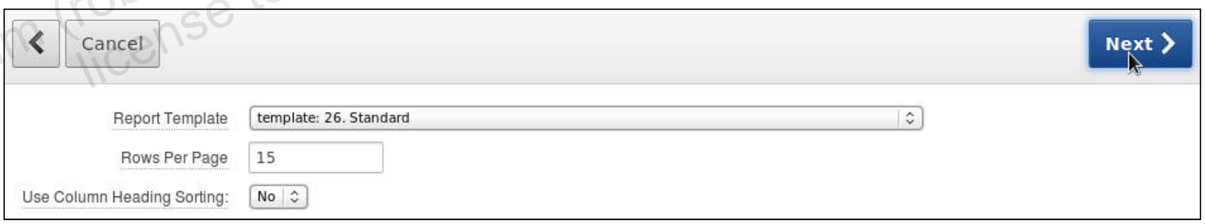
5) Accept the default and click **Next >**.



6) From the Table/View drop-down list, select `OEHR_CUSTOMERS (table)`. Ctrl-click to select **`CUST_FIRST_NAME`**, **`CUST_LAST_NAME`**, **`STREET_ADDRESS`**, **`CITY`**, and **`STATE_PROVINCE`**. Click the right arrow (**>**) to move the columns to the Displayed Columns area. Click **Next >**.

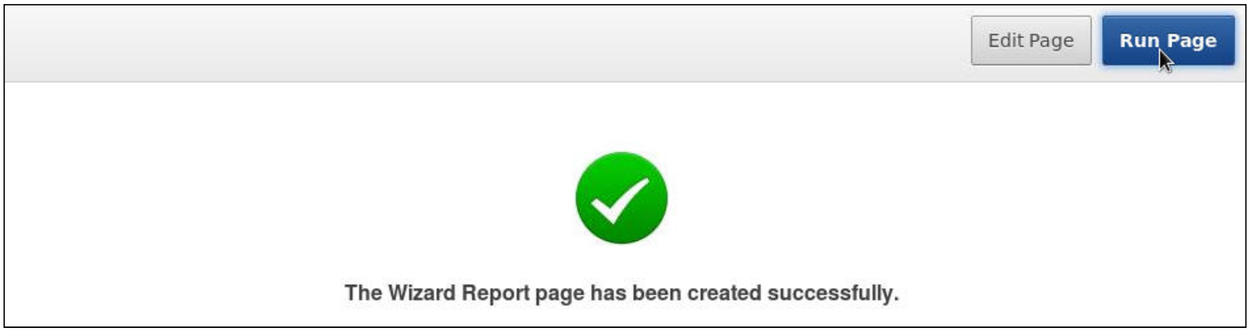


7) Accept the defaults and click **Next >**.

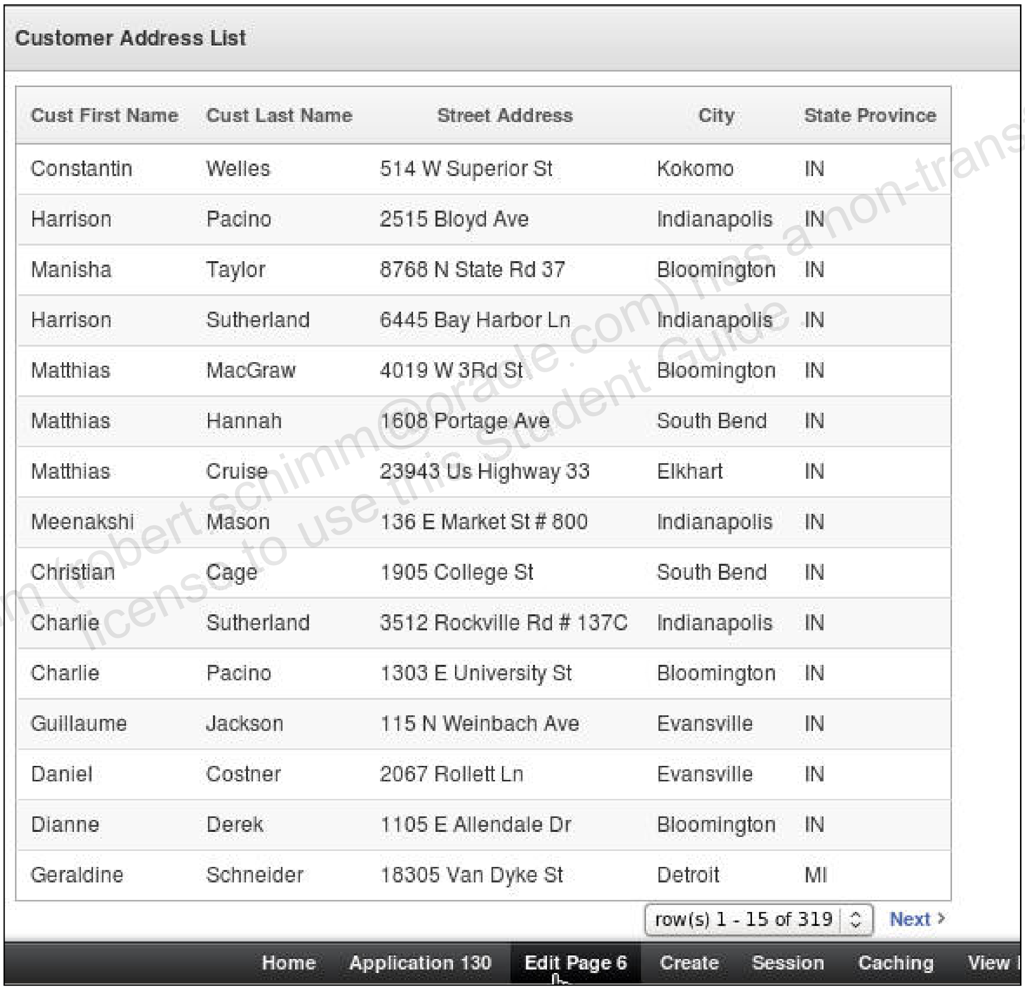


8) Click **Create Report Page**.

9) Click **Run Page**.



10) Review the report. To make changes to the report, click the **Edit Page <n>** link.

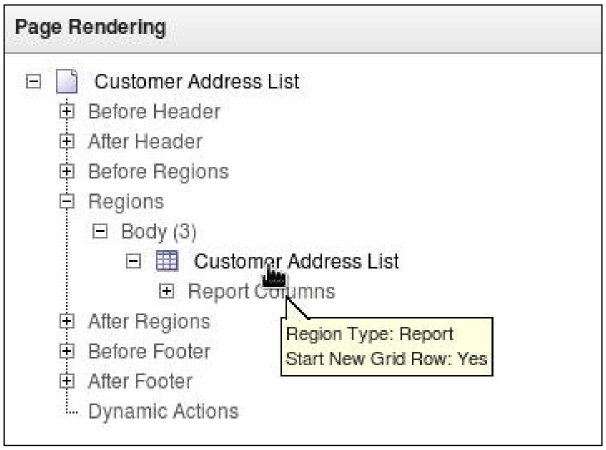


Cust First Name	Cust Last Name	Street Address	City	State Province
Constantin	Welles	514 W Superior St	Kokomo	IN
Harrison	Pacino	2515 Bloyd Ave	Indianapolis	IN
Manisha	Taylor	8768 N State Rd 37	Bloomington	IN
Harrison	Sutherland	6445 Bay Harbor Ln	Indianapolis	IN
Matthias	MacGraw	4019 W 3Rd St	Bloomington	IN
Matthias	Hannah	1608 Portage Ave	South Bend	IN
Matthias	Cruise	23943 Us Highway 33	Elkhart	IN
Meenakshi	Mason	136 E Market St # 800	Indianapolis	IN
Christian	Cage	1905 College St	South Bend	IN
Charlie	Sutherland	3512 Rockville Rd # 137C	Indianapolis	IN
Charlie	Pacino	1303 E University St	Bloomington	IN
Guillaume	Jackson	115 N Weinbach Ave	Evansville	IN
Daniel	Costner	2067 Rollett Ln	Evansville	IN
Dianne	Derek	1105 E Allendale Dr	Bloomington	IN
Geraldine	Schneider	18305 Van Dyke St	Detroit	MI

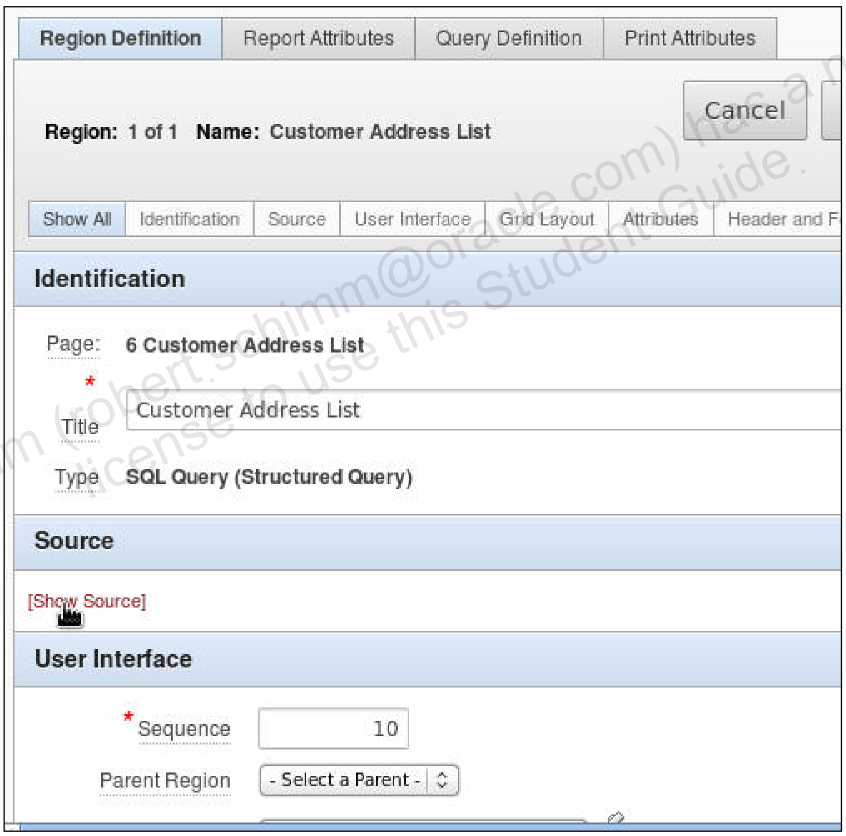
c. Modify the Customer Address List report with the following requirements:

- **Change the report headings for `CUST_FIRST_NAME` and `CUST_LAST_NAME` to First Name and Last Name, respectively.**

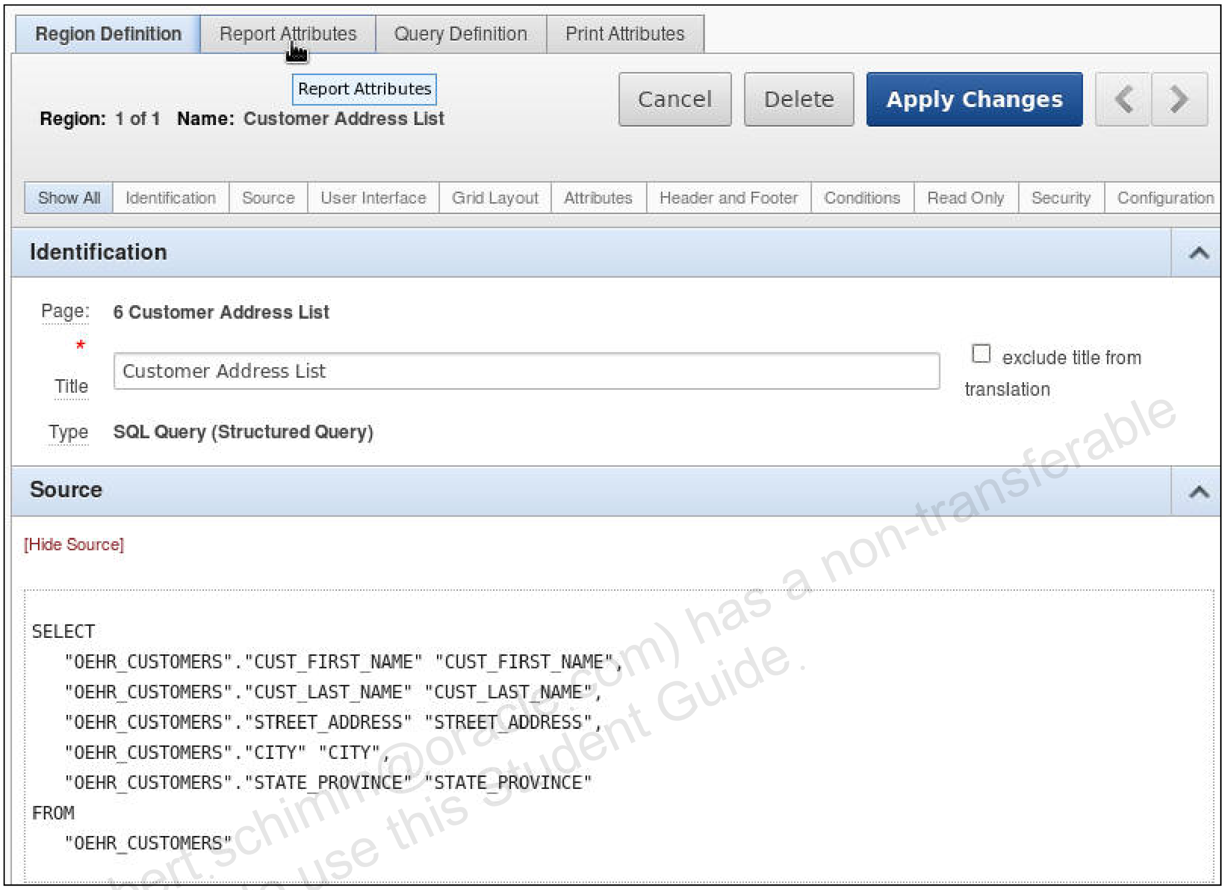
1) Under **Regions > Body**, double-click **Customer Address List** to open the report settings.



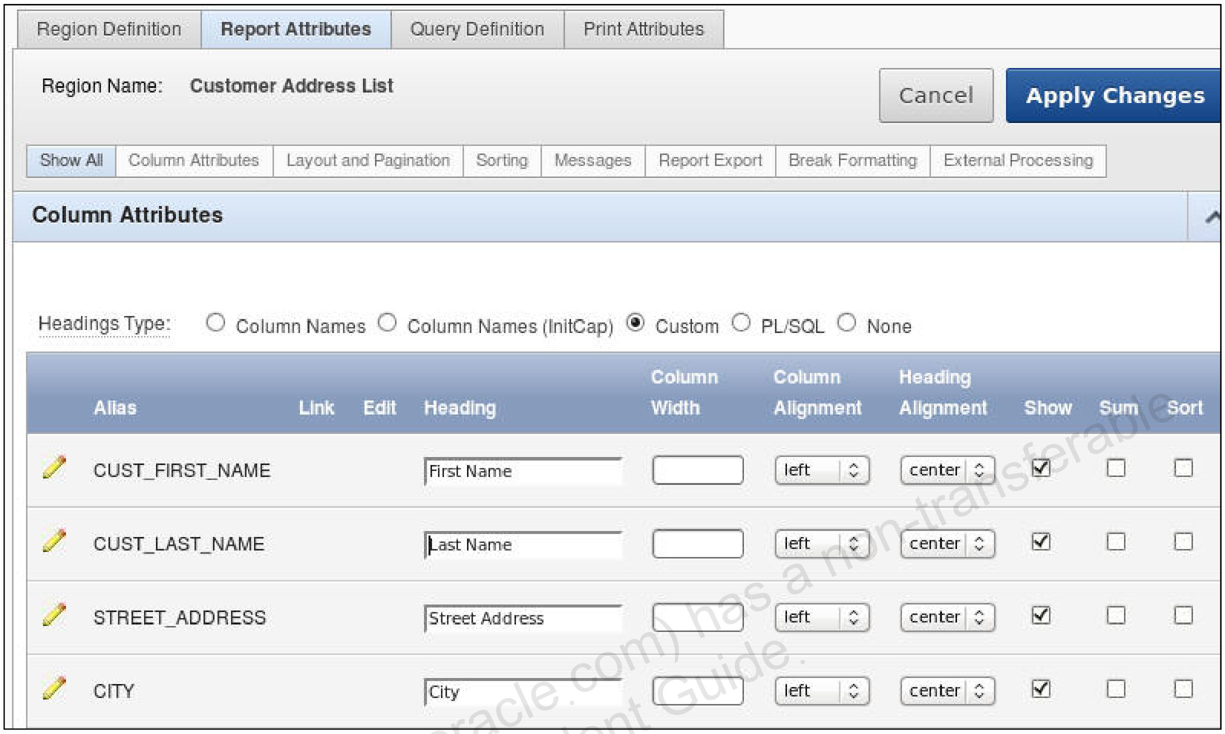
2) Click the **[Show Source]** link.



3) Note that you cannot edit the query definition here. Click the **Report Attributes** tab.

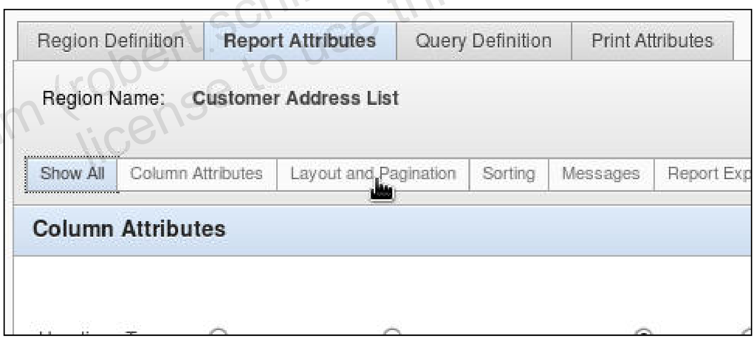


4) Change the Heading for `CUST_FIRST_NAME` to **First Name** and `CUST_LAST_NAME` to **Last Name**.

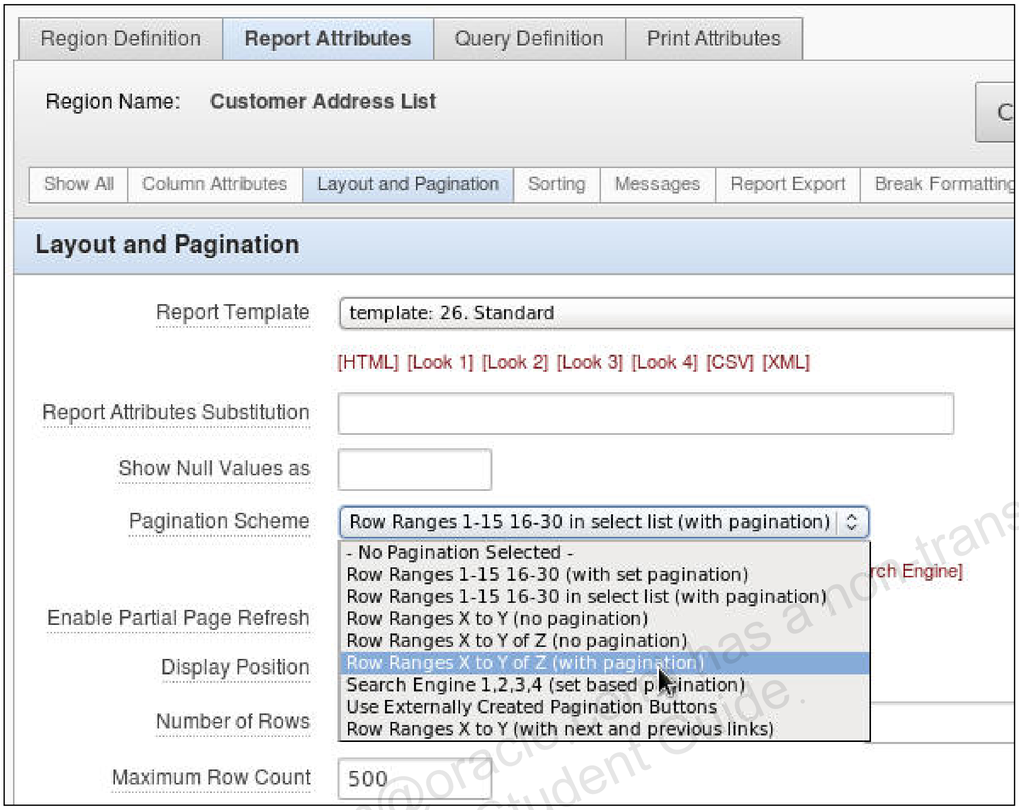


- **Change the Pagination to Row Ranges X to Y of Z (with pagination).**

5) Click the **Layout and Pagination** tab.

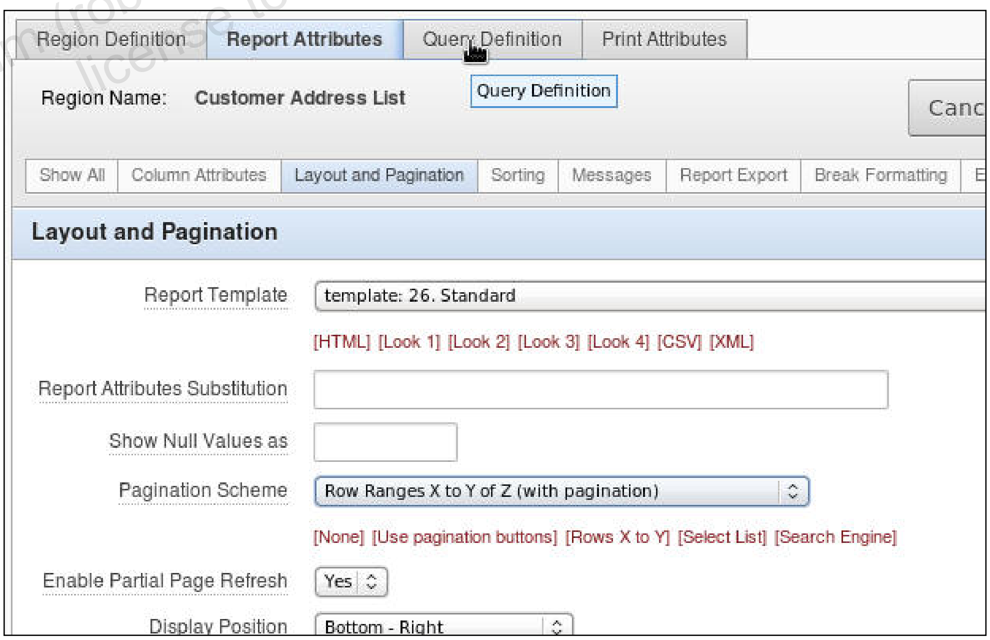


6) Select **Row Ranges X to Y of Z (with pagination)** for Pagination Scheme.

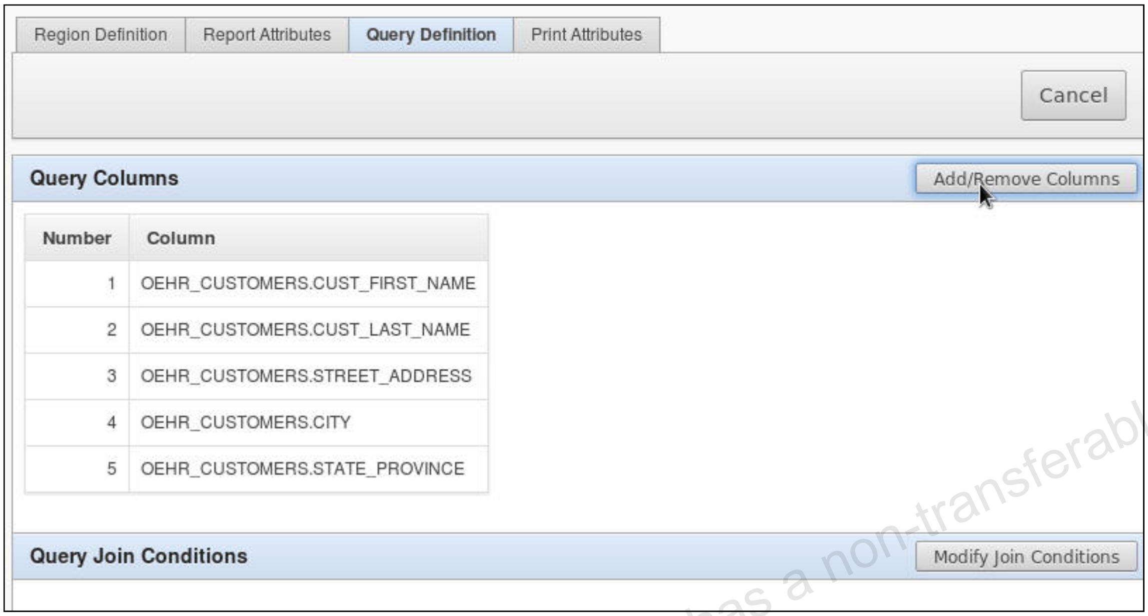


- **Review the query definition and add the `OEHR_COUNTRIES.COUNTRY_NAME` column to the report. Hint: You will need to create a join.**

7) Click the **Query Definition** tab.



8) Note that you can change the query from this tab. You want to add another column to the query. Click **Add/Remove Columns**.

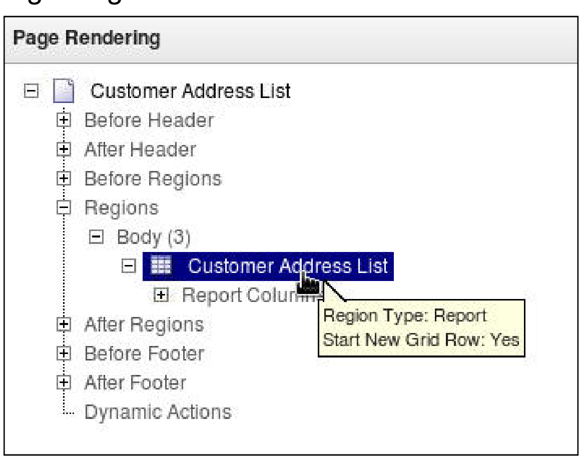


9) You want to add the country name to the report. Select **`OEHR_COUNTRIES(table)`** from the drop-down list for Table / View Name. (Ensure that No is selected for Show Related Tables Only.) Select **`COUNTRY_NAME`** from the Select Columns list and click the right arrow (**>**) to select the column.

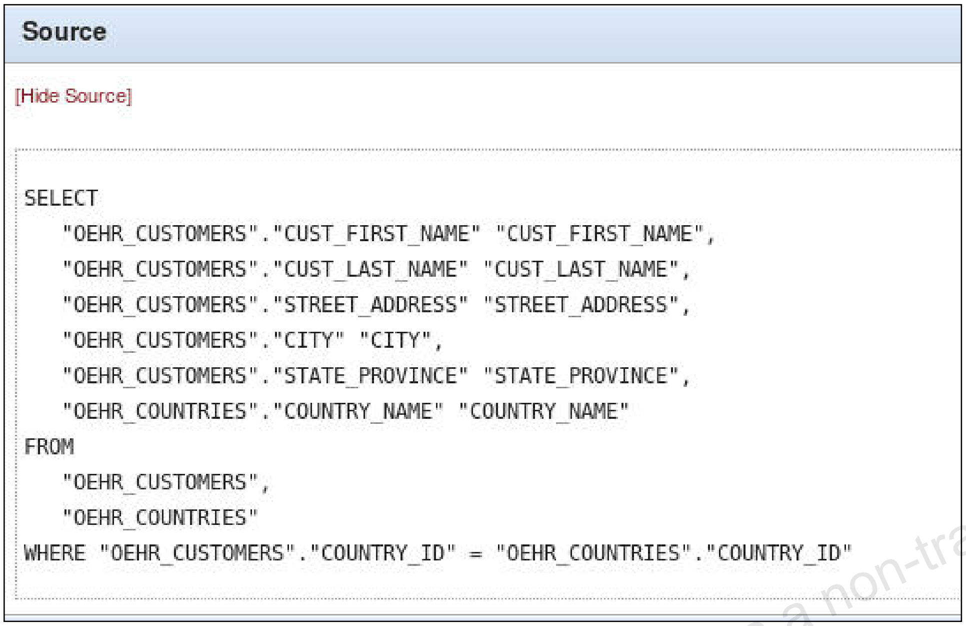
10) Click **Next >**.

11) Because you are selecting a column from a different table, you must specify a join. Enter **`"OEHR_CUSTOMERS"."COUNTRY_ID" = "OEHR_COUNTRIES"."COUNTRY_ID"`** and click **Apply Changes**.

12) You can view the changes in the source. Double-click the **Customer Address List** region again.



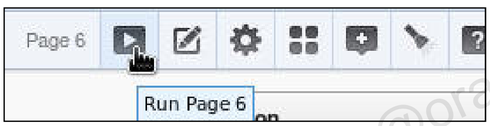
13) Click the **Source** tab and select **[Show Source]**.


Source

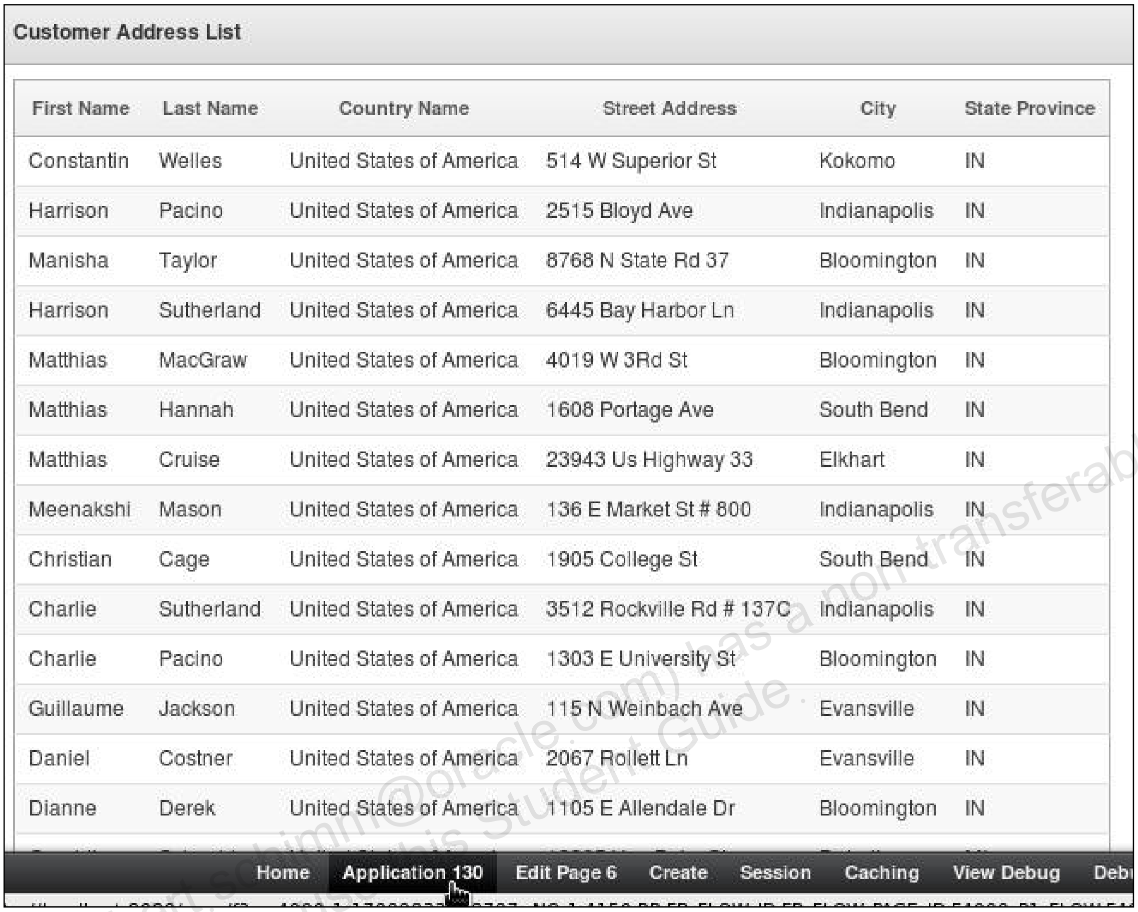
[Hide Source]

```
SELECT
   "OEHR_CUSTOMERS"."CUST_FIRST_NAME" "CUST_FIRST_NAME",
   "OEHR_CUSTOMERS"."CUST_LAST_NAME" "CUST_LAST_NAME",
   "OEHR_CUSTOMERS"."STREET_ADDRESS" "STREET_ADDRESS",
   "OEHR_CUSTOMERS"."CITY" "CITY",
   "OEHR_CUSTOMERS"."STATE_PROVINCE" "STATE_PROVINCE",
   "OEHR_COUNTRIES"."COUNTRY_NAME" "COUNTRY_NAME"
FROM
   "OEHR_CUSTOMERS",
   "OEHR_COUNTRIES"
WHERE "OEHR_CUSTOMERS"."COUNTRY_ID" = "OEHR_COUNTRIES"."COUNTRY_ID"
```

14) Click the **Run Page** icon.



15) Note the changes that you made to the report. Click **Application <*n*>**.



Customer Address List

First Name	Last Name	Country Name	Street Address	City	State Province
Constantin	Welles	United States of America	514 W Superior St	Kokomo	IN
Harrison	Pacino	United States of America	2515 Bloyd Ave	Indianapolis	IN
Manisha	Taylor	United States of America	8768 N State Rd 37	Bloomington	IN
Harrison	Sutherland	United States of America	6445 Bay Harbor Ln	Indianapolis	IN
Matthias	MacGraw	United States of America	4019 W 3Rd St	Bloomington	IN
Matthias	Hannah	United States of America	1608 Portage Ave	South Bend	IN
Matthias	Cruise	United States of America	23943 Us Highway 33	Elkhart	IN
Meenakshi	Mason	United States of America	136 E Market St # 800	Indianapolis	IN
Christian	Cage	United States of America	1905 College St	South Bend	IN
Charlie	Sutherland	United States of America	3512 Rockville Rd # 137C	Indianapolis	IN
Charlie	Pacino	United States of America	1303 E University St	Bloomington	IN
Guillaume	Jackson	United States of America	115 N Weinbach Ave	Evansville	IN
Daniel	Costner	United States of America	2067 Rollett Ln	Evansville	IN
Dianne	Derek	United States of America	1105 E Allendale Dr	Bloomington	IN

Solution 5-2: Creating a List View

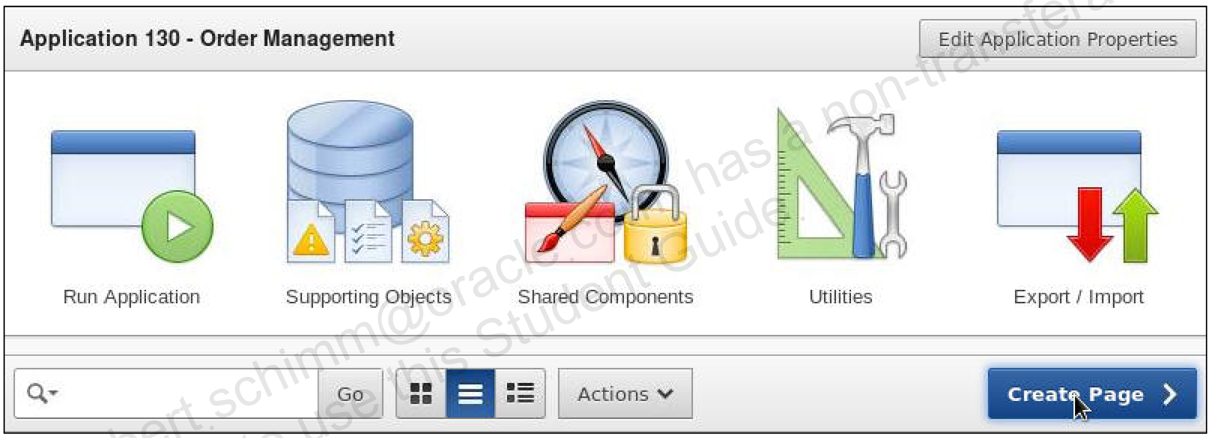
Overview

In this practice, you create a page with a List View in the Order Management application.

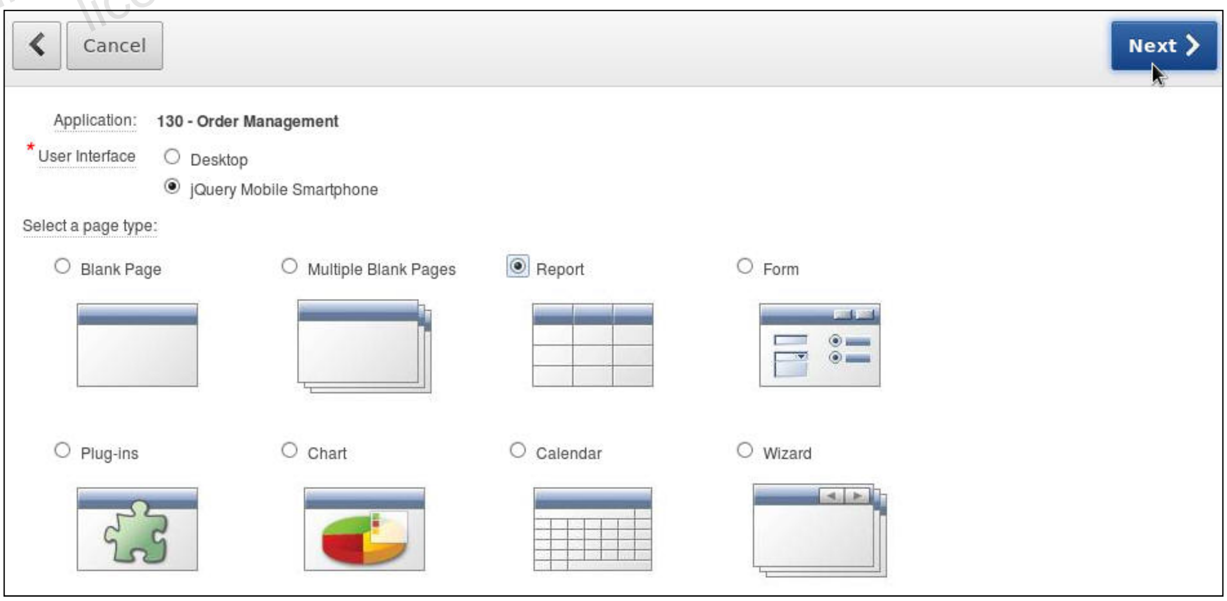
Tasks

a. On a new page in the Order Management application, create a List View, which is a report type used for mobile applications. Enter `Employee List` as the Page Name and Region Name. Change the Page Number to 205. The list view should select all the columns from the `OEHR_EMPLOYEES` table and should display the last names as the text column. The list view should also be enabled to search the last name column with the Search Type "Like & Ignore Case." Open the application on a separate tab to view the list view.

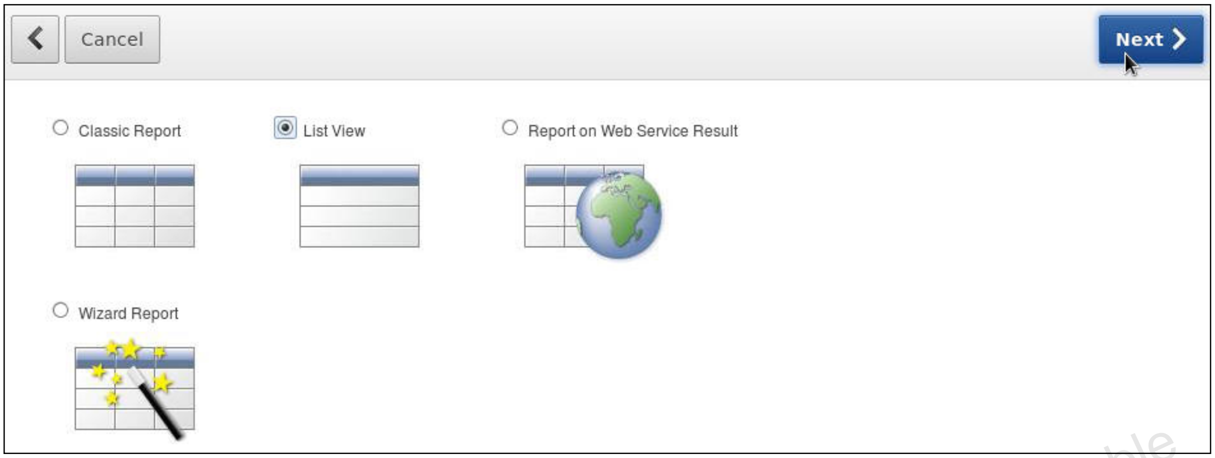
1) Navigate to the Order Management application page and click **Create Page**.



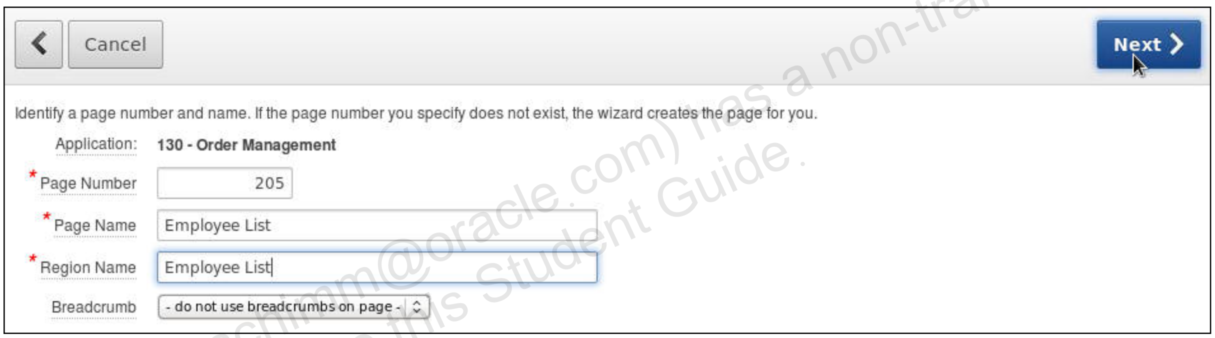
2) Select `jQuery Mobile Smartphone` for **User Interface** and select **Report**. Click **Next**.



3) Select **List View** and click **Next >**.

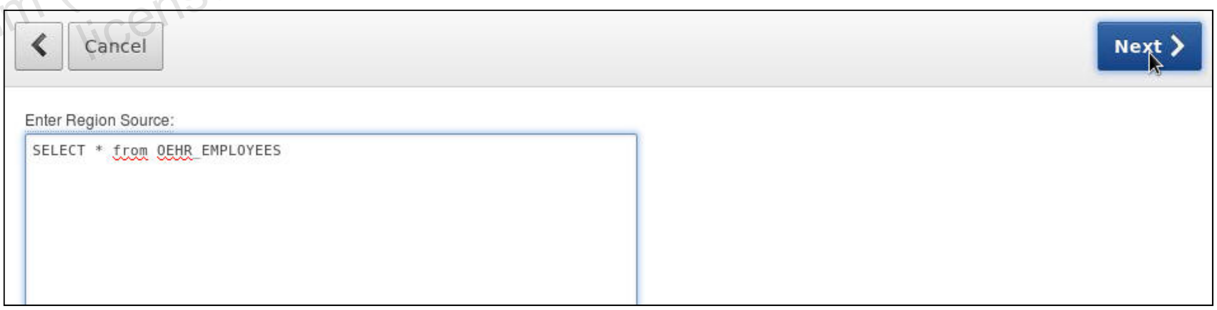


4) Change the Page Number to **205** and enter **Employee List** as the Page Name and Region Name. Click **Next >**.

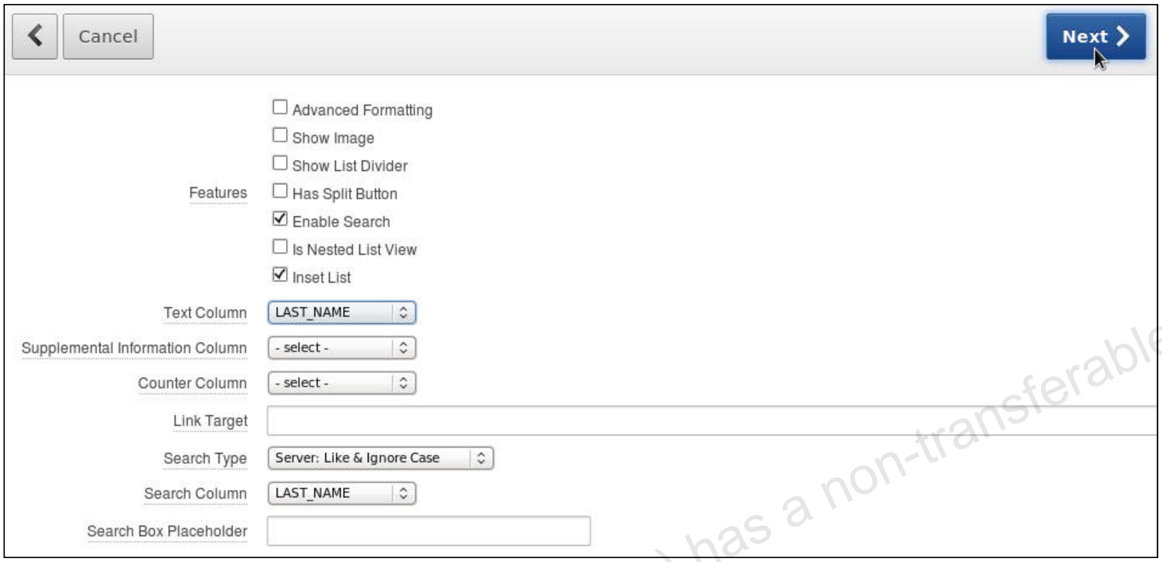


5) In the Region Source, enter the following SQL statement and click **Next >**.

```
SELECT * from OEHR_EMPLOYEES
```

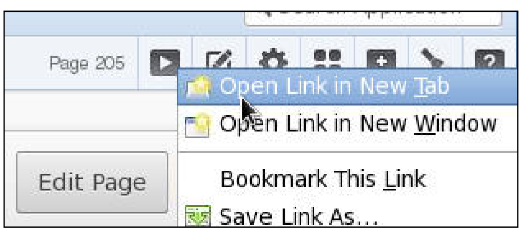


6) To display the last name as the text column, select `LAST_NAME` from the drop-down list for Text Column. To perform a search in the report, select **Enable Search**. For Search Type, select **Server: Like & Ignore Case** and for Search Column select `LAST_NAME`**.** Select the **Inset List** check box. Click **Next >**.

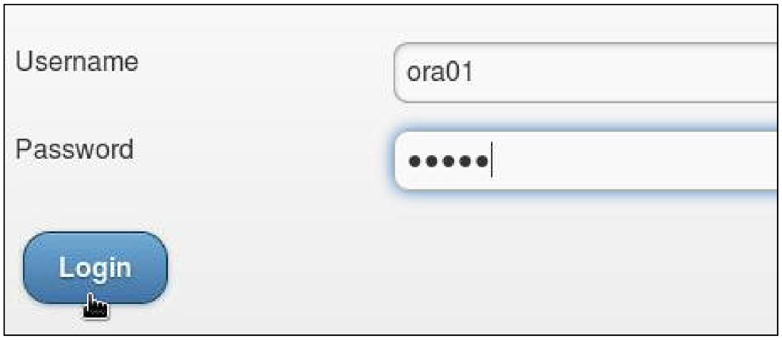


7) Click **Create**.

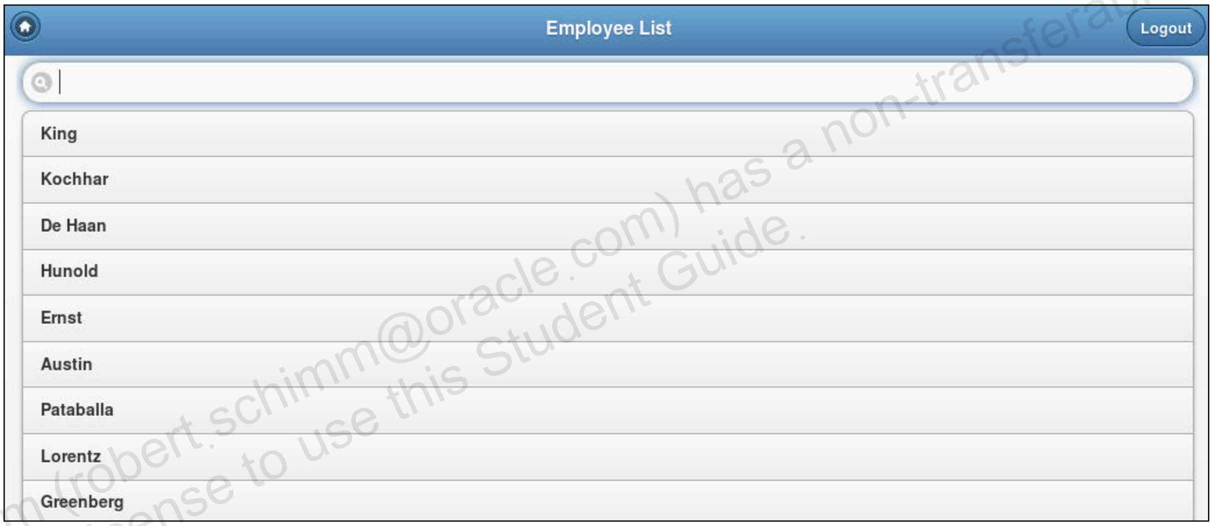
8) Run the page on a new tab. Right-click **Run Page** and select **Open Link in New Tab.**



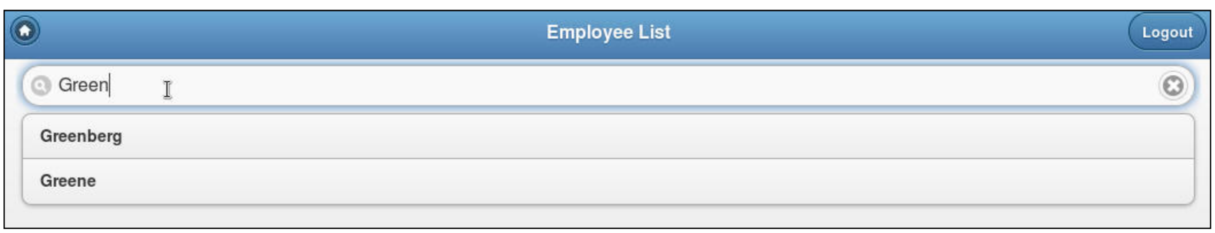
9) If the login window opens, enter `ora<n>` for Username and Password, and click **Login**.



10) Review the **List View Report**.



11) Enter **Green** in the search bar and press the Enter key. Notice that search is performed and the results are displayed.



Practices for Lesson 6: Creating Forms

Chapter 6

Practices for Lesson 6: Overview

Practices Overview

There are four practices for this lesson. In these practices, you create a form on a table, a master detail form, a tabular form, and a form on a table with list view for mobile applications.

Practice 6-1: Creating a Form on a Table

Overview

In this practice, you create a form based on a table, and then link to the form from the Customer Report that was created previously.

Assumptions

You have performed the previous practices or imported **LAB052_SOLN.sql**.

Tasks

a. Create a form based on the **OEHR_CUSTOMERS** table. The form page and region should be titled Customer Details and contain the Customer First Name, Last Name, Email, and Manager ID fields. The following are the other requirements:
   - Ensure that the primary key has the value **CUSTOMER_ID**.
   - The source of the primary key is an existing sequence.
   - The Create, Save, and Delete buttons are required.
   - Branch to the Customers page for both: After Page Submit and Processing, and When Cancel Button Pressed.

   Run the form for verification.

b. Link the Customer Report that was created previously to the newly created Customer Details form. When the Edit icon in the report is clicked, the user should be redirected to the form and the details populated in the form. After you create the link, run the report and verify the changes.

Practice 6-2: Creating a Master Detail Form

Overview

In this practice, you create a master detail form and make some modifications to it.

Assumptions

You have performed the previous practices.

Tasks

a. On a new page called Master Detail Form, create a master detail form based on the `OEHR_ORDERS` and `OEHR_ORDER_ITEMS` tables.
   - Include a report page called List of Orders on the master table.
   - Display the master table and detail table forms on a single page.
   - Exclude the `ORDER_ID` column in the `OEHR_ORDER_ITEMS` table.
   - Use the Existing trigger option as the primary key source for the master and detail tables.
   - Include navigation based on the `ORDER_ID` column.

b. On the Master Detail Form page, change the region name for the master region to Order Master and change the region name for the detail region to Order Details.

c. On the Master Detail page, move the Order Status item to appear before the Customer ID in the Order Master region.

d. On the "List of Orders (master report") page, change the region title to "List of Orders." Do not show the `PROMOTION_ID` column. Change the heading of Sales Rep ID to Sales Rep.

Practice 6-3: Creating a Tabular Form

Overview

In this practice, you create and manipulate a tabular form.

Assumptions

You have performed the previous practices.

Tasks

a. On a new page called Update Employee Information, create a tabular form that displays the **FIRST_NAME**, **LAST_NAME**, **EMAIL**, **JOB_ID**, and **COMMISSION_PCT** from the **OEHR_EMPLOYEES** table. The columns **EMAIL**, **JOB_ID**, and **COMMISSION_PCT** should be updatable columns. Change the element width of the **CUST_EMAIL** column to **40**.

Practice 6-4: Create a Form on a Table for Mobile Applications

Overview

In this practice, you add a form page to the mobile application and link it from a list view page.

Assumptions

You have performed the practice 5-2 that adds a list view page to your mobile application.

Tasks

a. Add a form page called Employee Detail to the application for mobile interface. Link this Employee Detail form page to the existing Employee List list view page.

Solution 6-1: Creating a Form on a Table

Overview

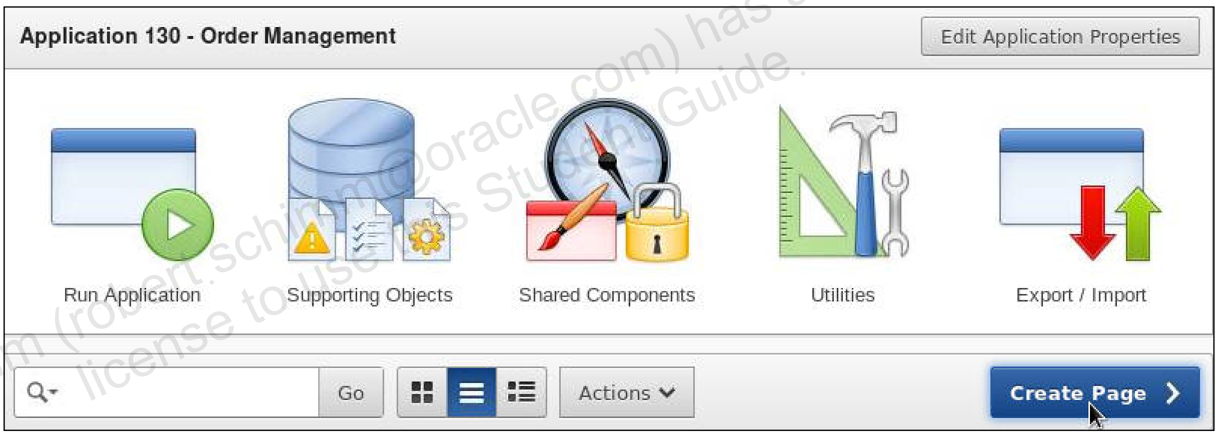
In this practice, you create a form based on a table, and then link this form from the Customer Report that was created previously.

Tasks

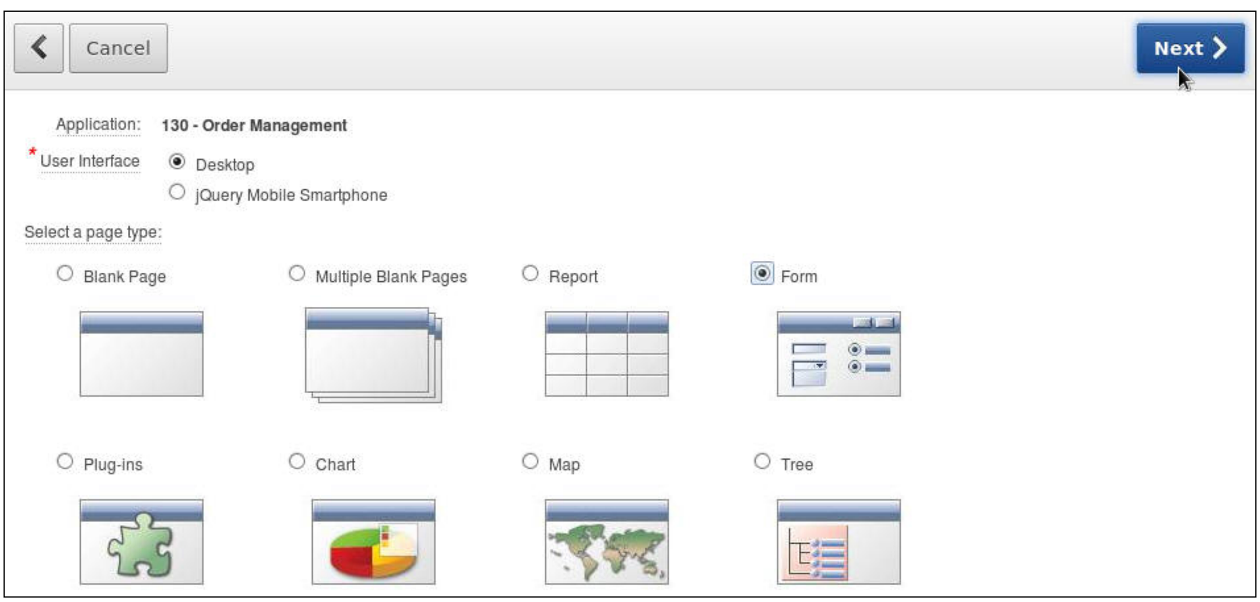
a. Create a form based on the **`OEHR_CUSTOMERS`** table. The form page and region should be titled Customer Details and contain the Customer First Name, Last Name, Email, and Manager ID fields. The following are the other requirements:

- Ensure that the primary key has the value of **`CUSTOMER_ID`**.
- The source of the primary key is an existing sequence.
- The Create, Save, and Delete buttons are required.
- Branch to Customers page for both: After Page Submit and Processing, and When Cancel Button Pressed.

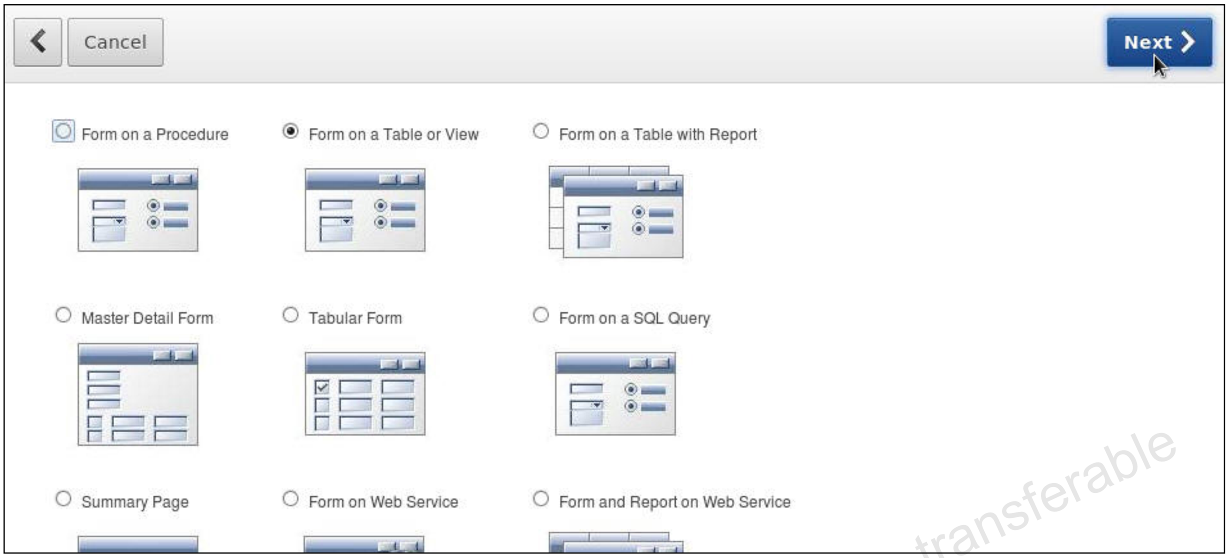
1) On the Order Management application home page, click **Create Page >**.



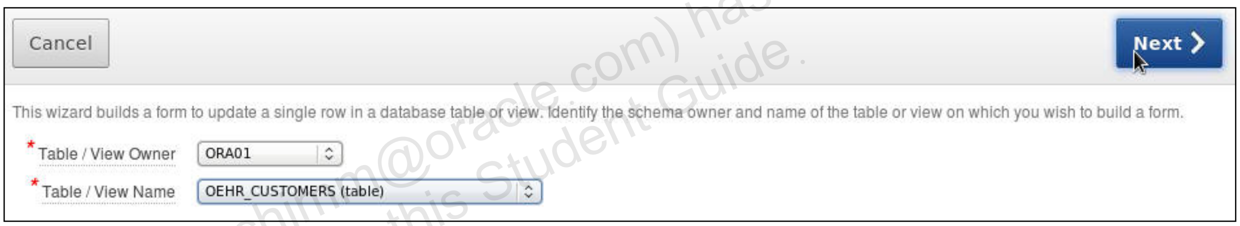
2) Select the **Form** option and click **Next >**.



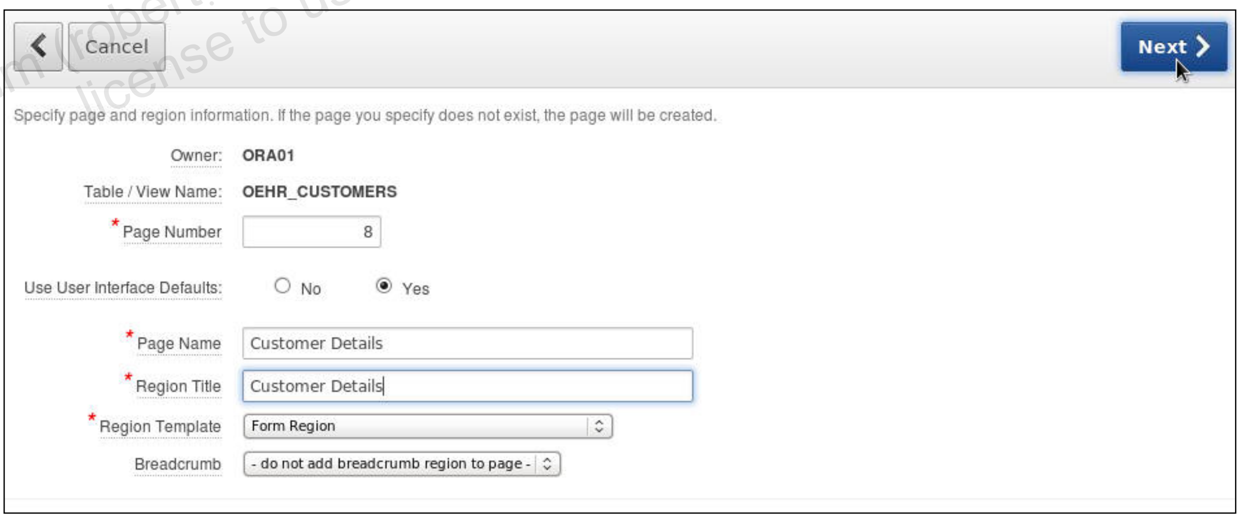
3) Accept the default **Form on a Table or View** option and click **Next >**.



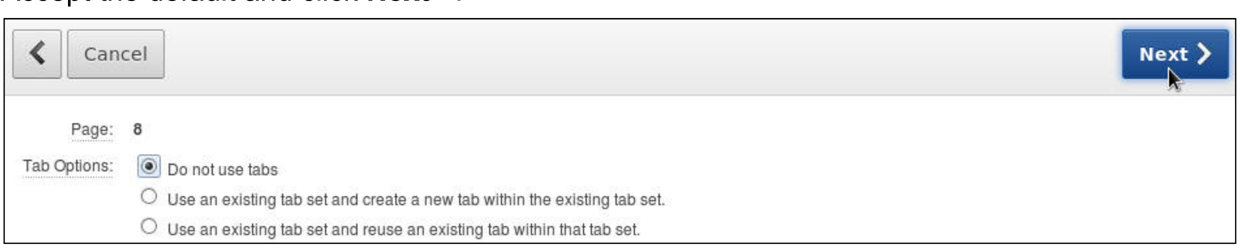
4) Ensure that your schema is selected. From the list of tables, select `OEHR_CUSTOMERS(table)`. Click **Next >**.



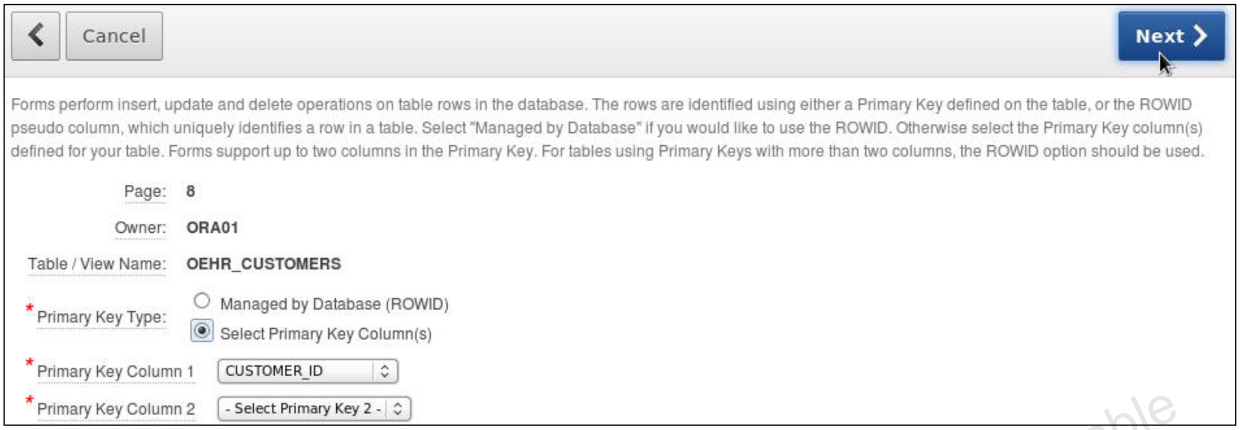
5) For Page Name and Region Title, enter **Customer Details** and click **Next >**.



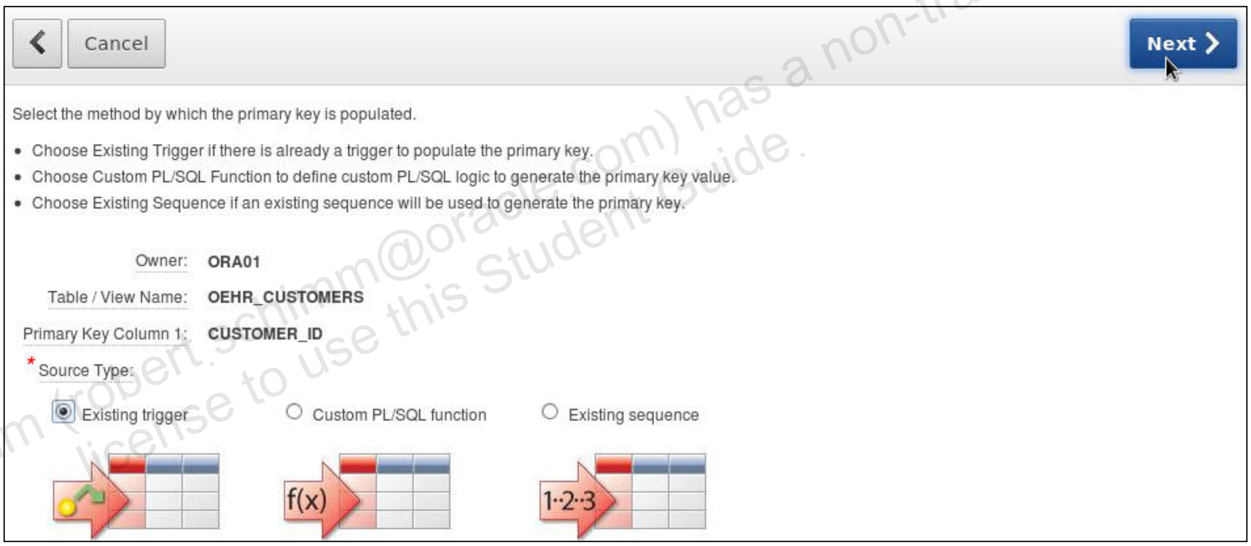
6) Accept the default and click **Next >**.



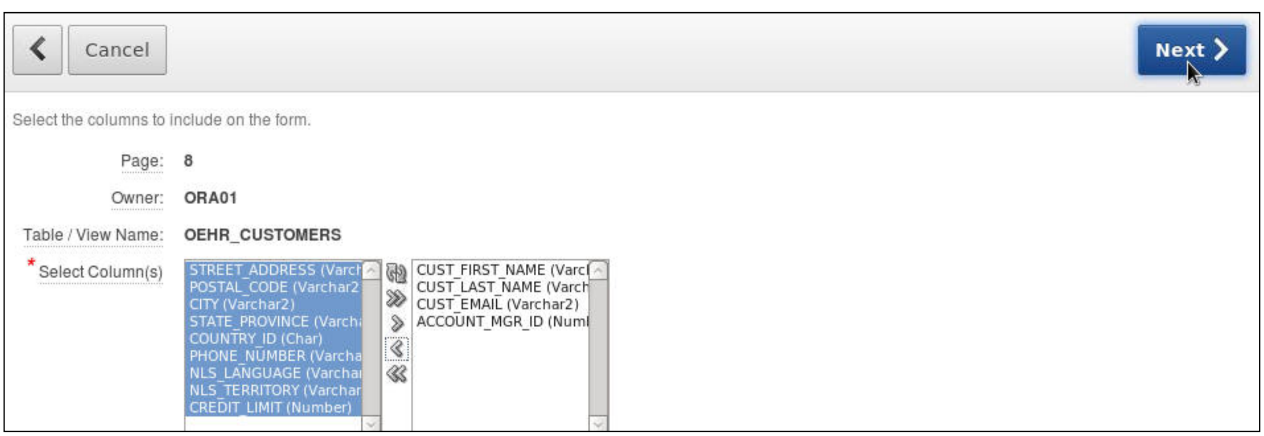
7) For Primary Key Type, select Primary Key Column(s). Ensure that the primary key has a value of `CUSTOMER_ID` and click **Next >**.



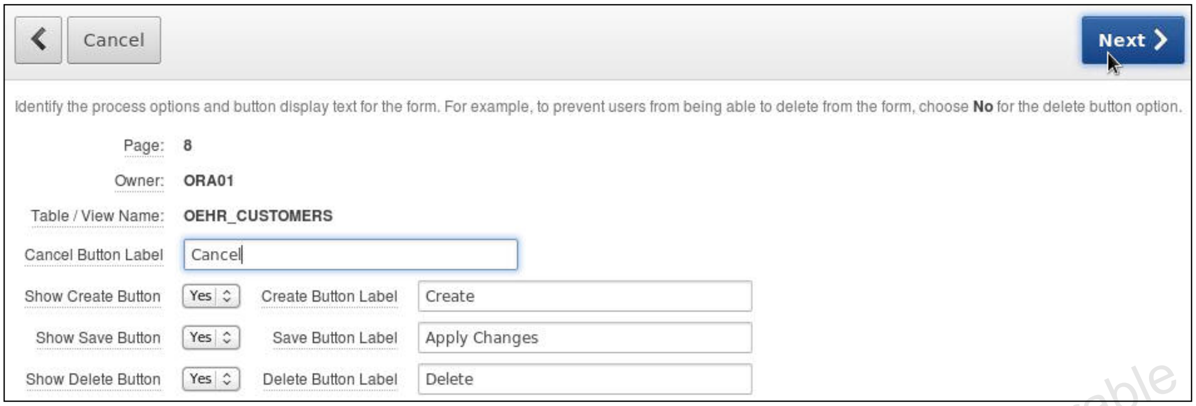
8) Because the source of the primary key is an existing sequence, select the **Existing trigger** option and click **Next >**.



9) Make sure `CUST_FIRST_NAME`, `CUST_LAST_NAME`, `CUST_EMAIL`, and `ACCOUNT_MGR_ID` are on the right and ensure that the rest of the columns are on the left. Use the right arrow (**>**) and left arrow (**<**) to move the columns. Click **Next >**.

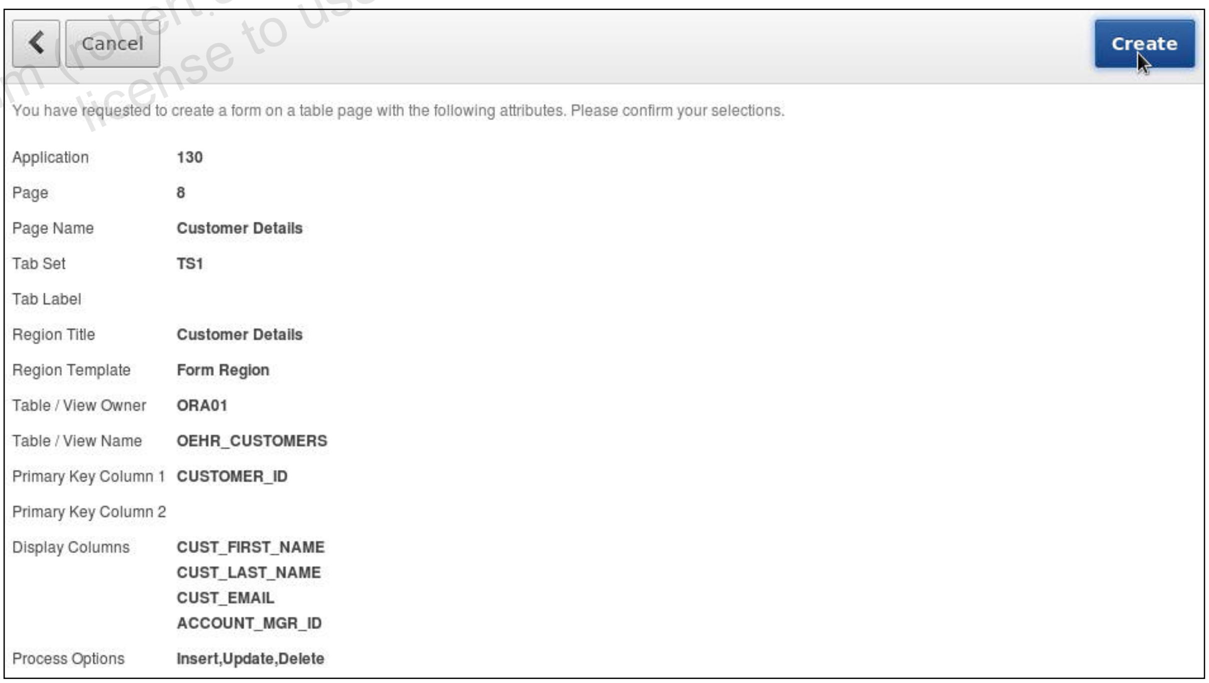


10) You want to be able to cancel, create, save, and delete. Accept the default values and click **Next >**.



11) Click the arrow icon to the right of both the boxes and select the **Customers** page in both cases. Then click **Next >**.

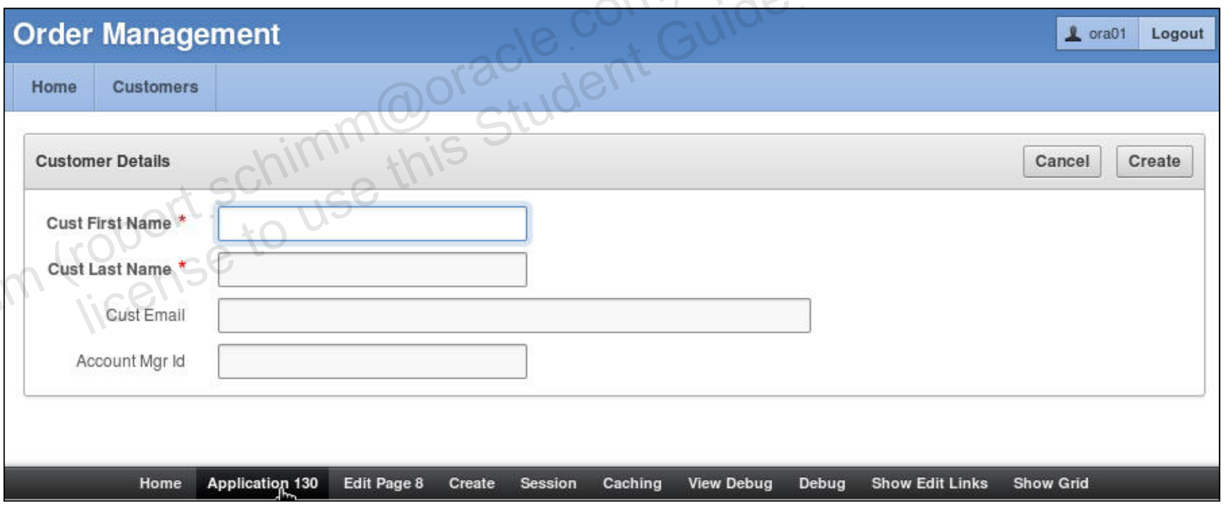
12) Review the details and click **Create**.



13) Click **Run Page**.

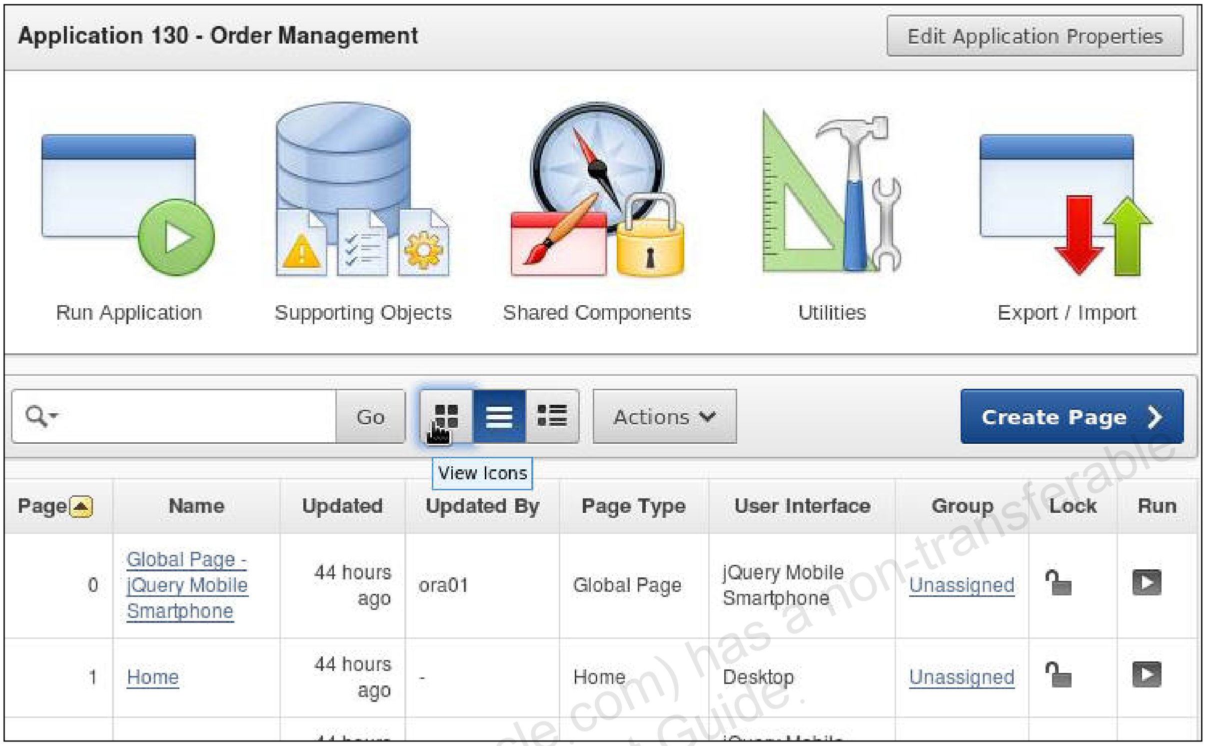
14) If the Login page appears, enter your login credentials and click **Login**.

15) Review the form. You will link this form from the Customer Report. To return to the application home page, click the **Application <*n*>** link on the Developer toolbar.

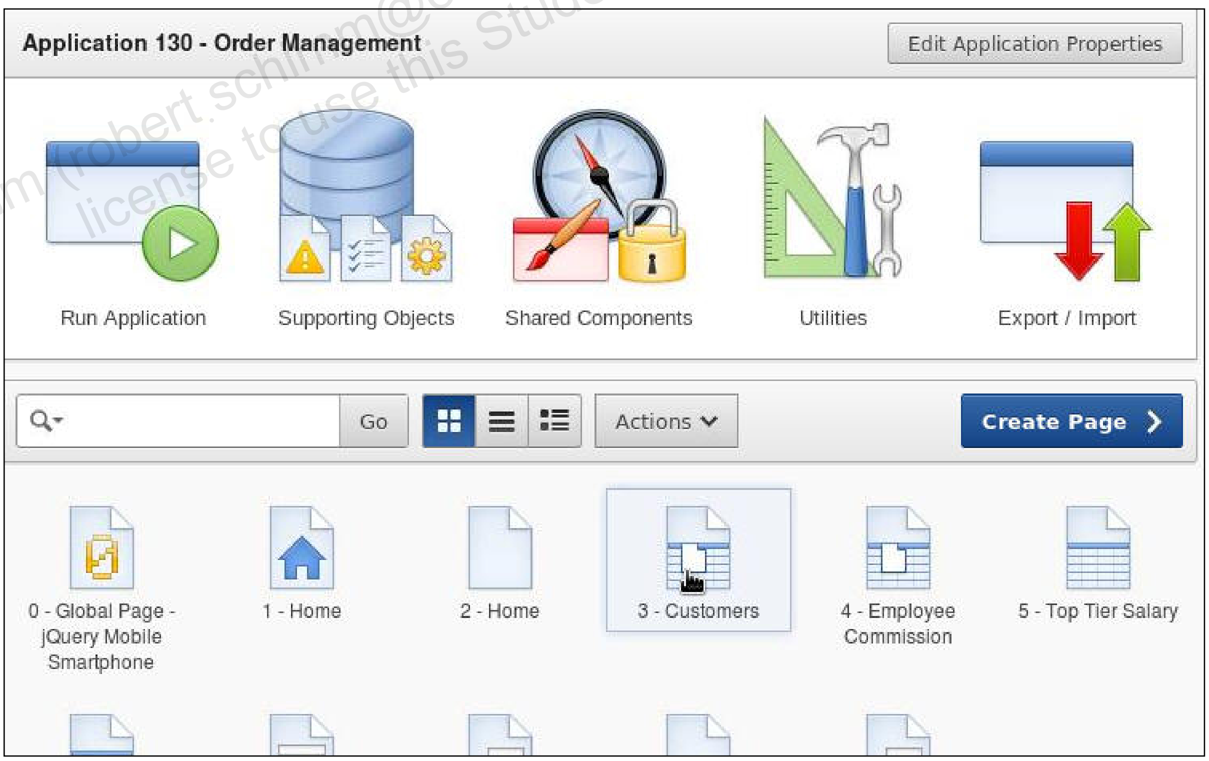


b. Link the Customer Report that was created previously to the newly created Customer Details form. When the Edit icon in the report is clicked, the user should be redirected to the form and the details populated in the form. After you create the link, run the report and verify the changes.

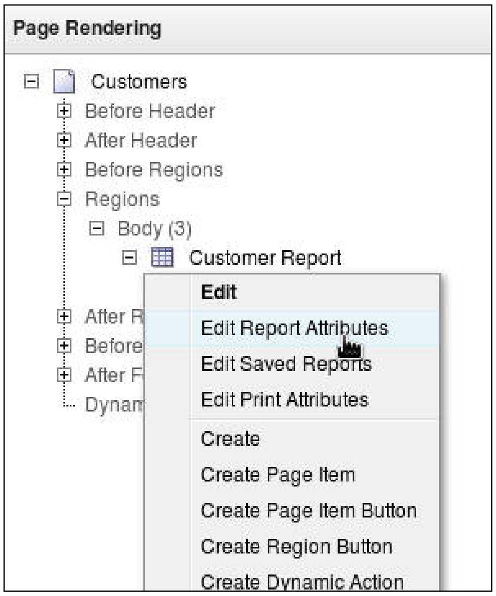
1) On the Order Management application home page, click the **View Icons** icon.



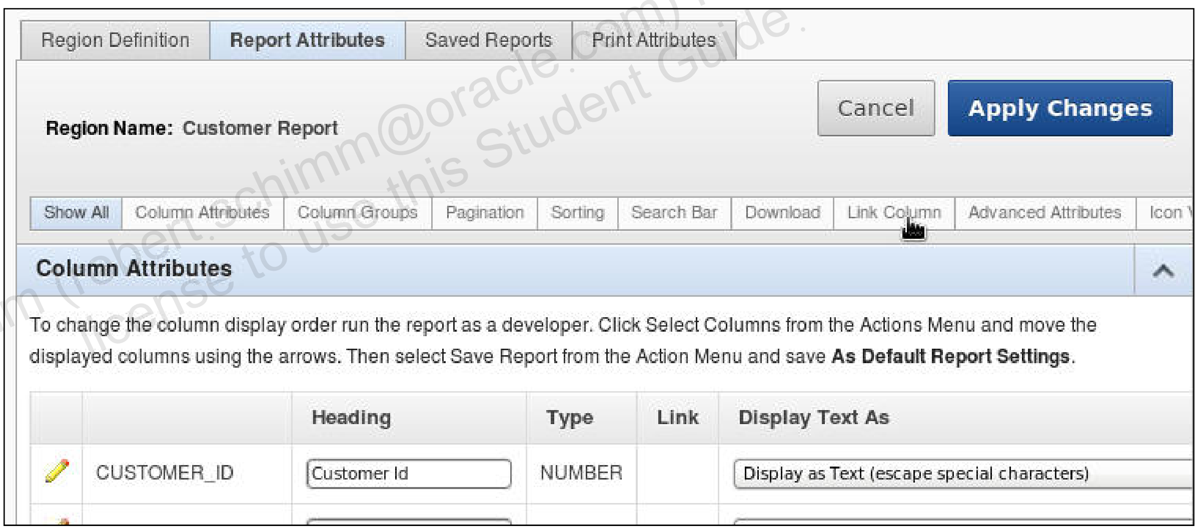
2) Click the **Customers** icon.



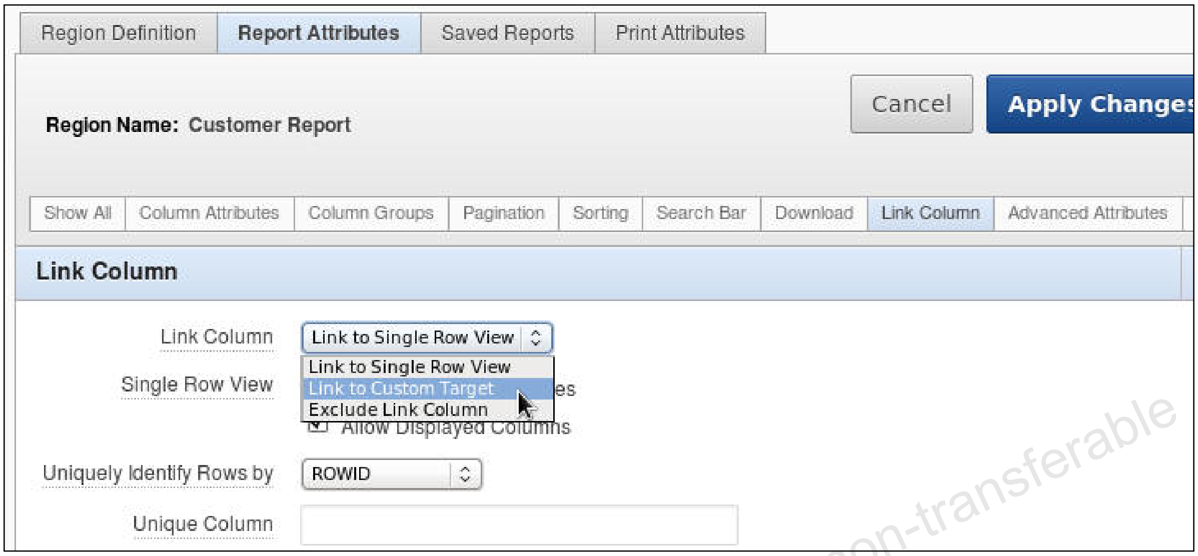
3) Under Regions, right-click the **Customer Report** subregion and select **Edit Report Attributes**.



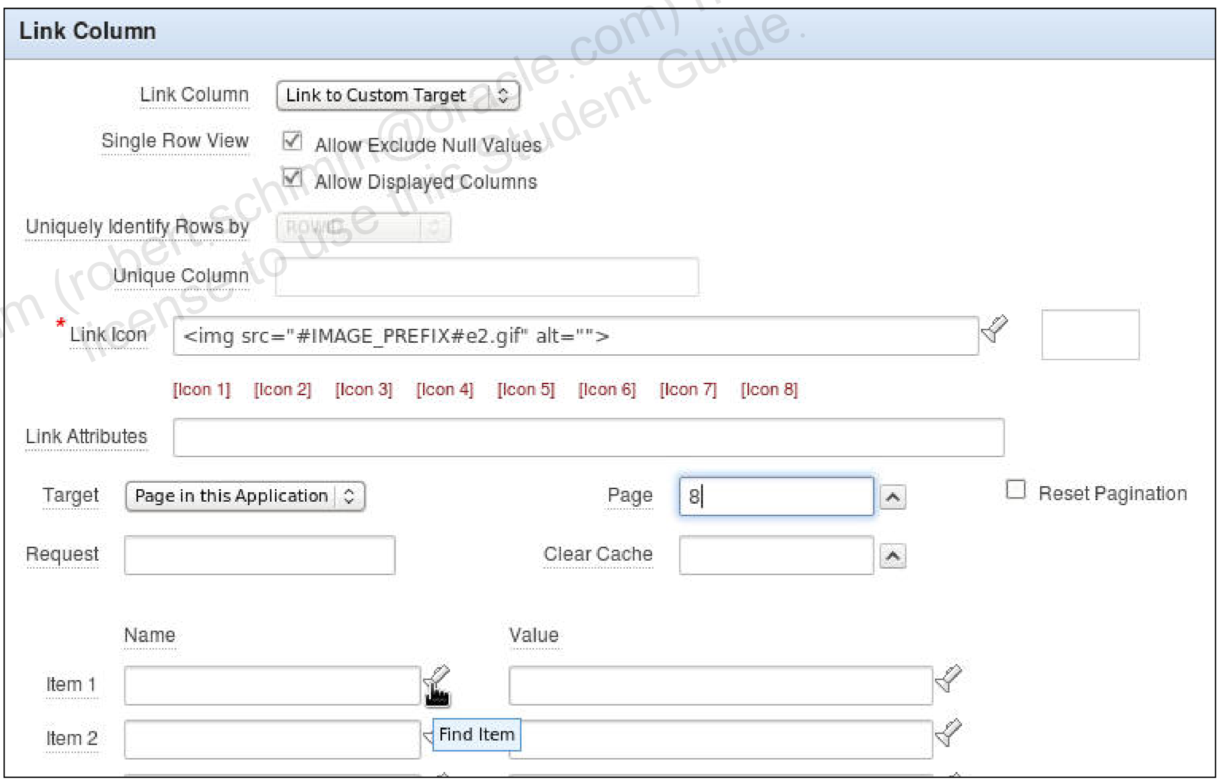
4) Click the **Link Column** subtab.



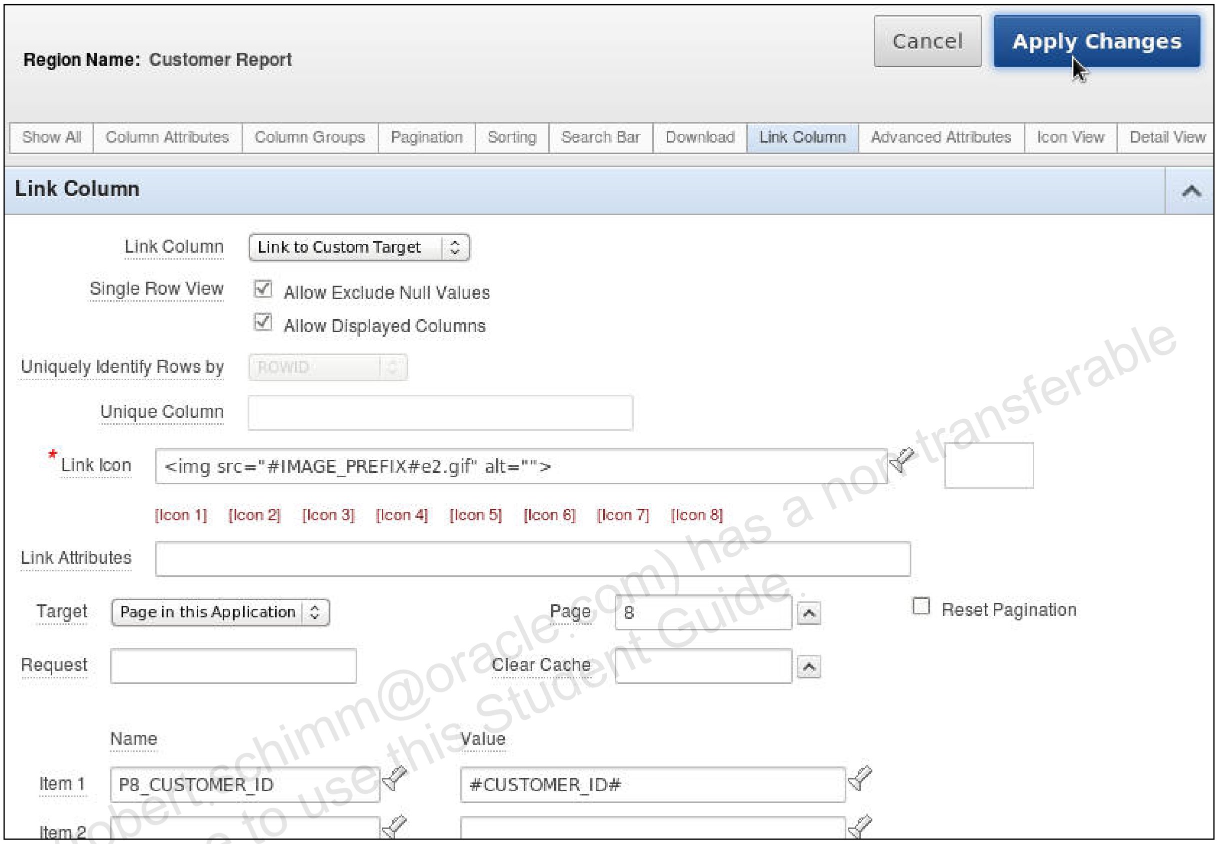
5) Instead of linking to a single row view, you want to link to a custom target page. Select **Link to Custom Target** for Link Column.



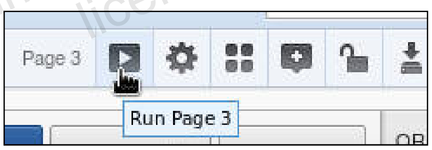
6) Click the **[Icon 6]** quick pick for Link icon. Click the up arrow to the right of Page and select **Customer Details**. Click the icon to the right of **Item 1 Name**.



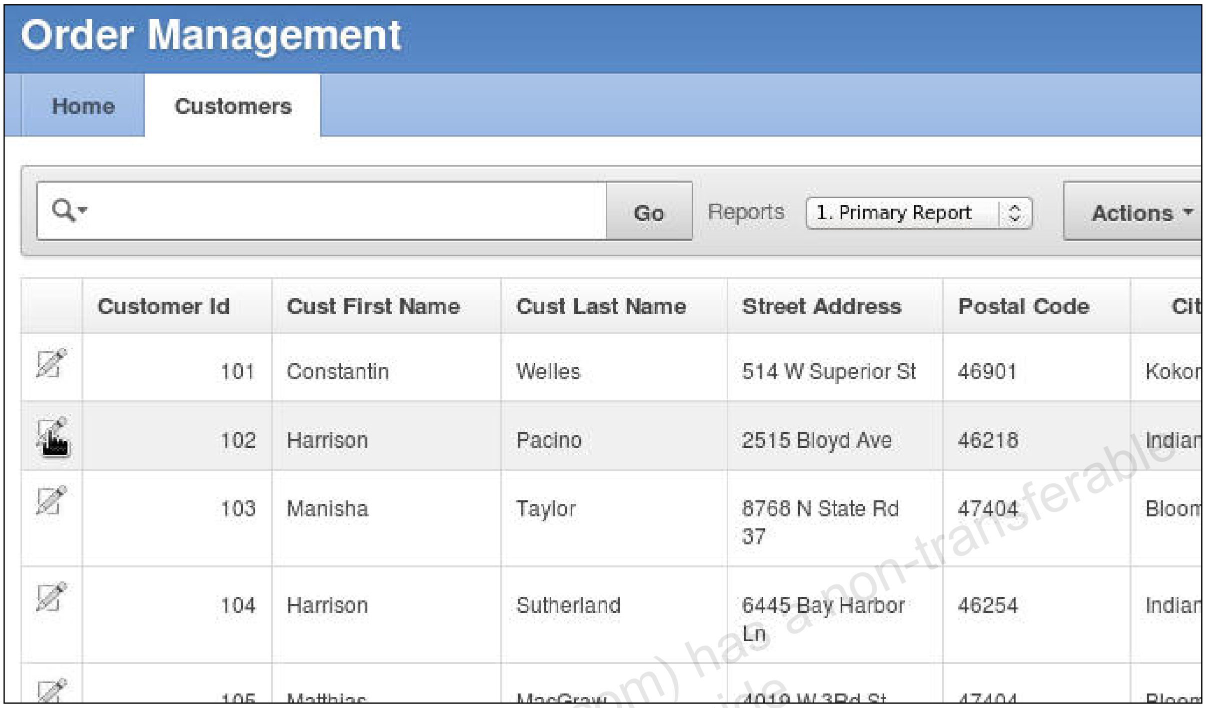
7) From the list in the pop-up window, click the link corresponding to **P<*n*>_CUSTOMER_ID**. Similarly, click the icon to the right of the Item 1 Value box. From the list in the pop-up window, click the **#CUSTOMER_ID#** link. When you have finished, click Apply Changes.



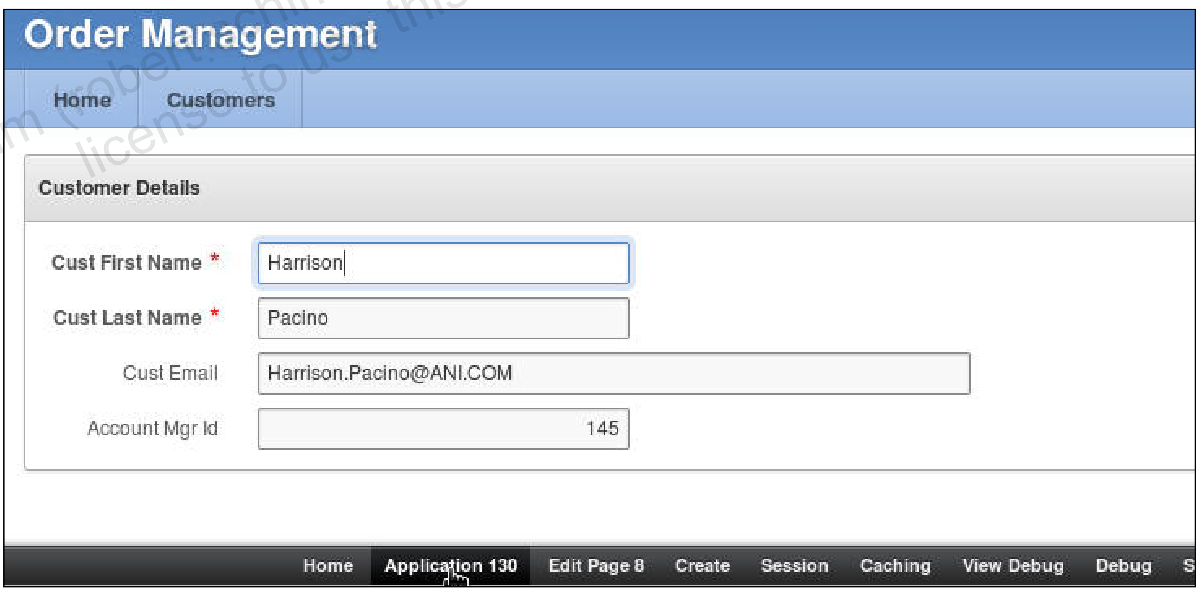
8) Click the **Run** icon.



9) Click the **Edit** icon for any one of the rows.



10) Note that you are redirected to the Customer Details form and that the values are automatically populated in the form. You can make changes and delete the active record by using this form. To return to the application home page, click the **Application <*n*>** link on the Developer toolbar.



Solution 6-2: Creating a Master Detail Form

Overview

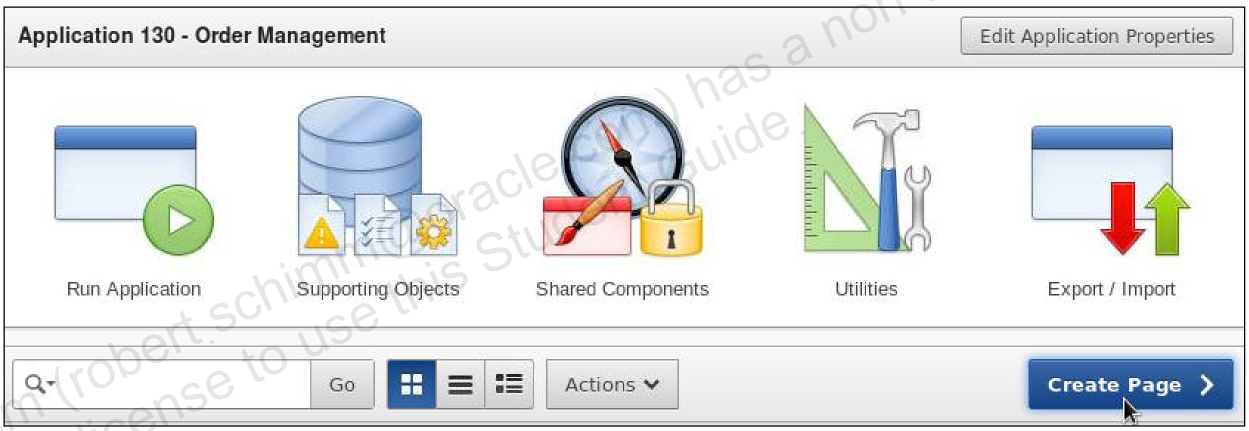
In this practice, you create a master detail form and make some modifications to it.

Tasks

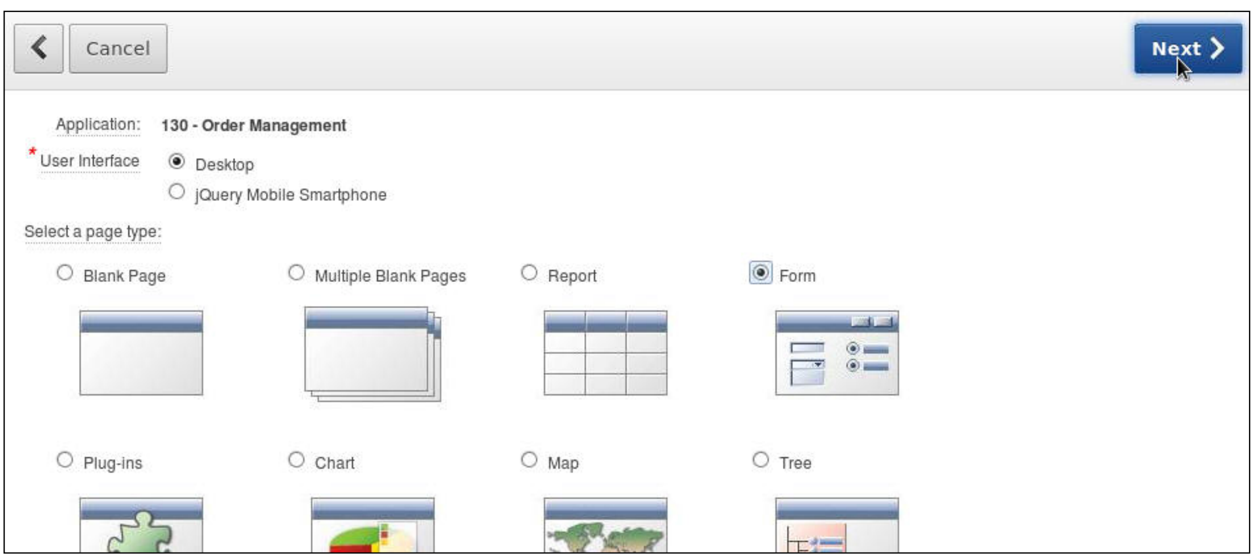
a. On a new page called Master Detail Form, create a master detail form based on the `OEHR_ORDERS` and `OEHR_ORDER_ITEMS` tables.

- Include a report page called List of Orders on the master table.
- Display the master table and detail table forms on a single page.
- Exclude the `ORDER_ID` column in the `OEHR_ORDER_ITEMS` table.
- Use the Existing trigger option as the primary key source for the master and detail tables.
- Include navigation based on the `ORDER_ID` column.

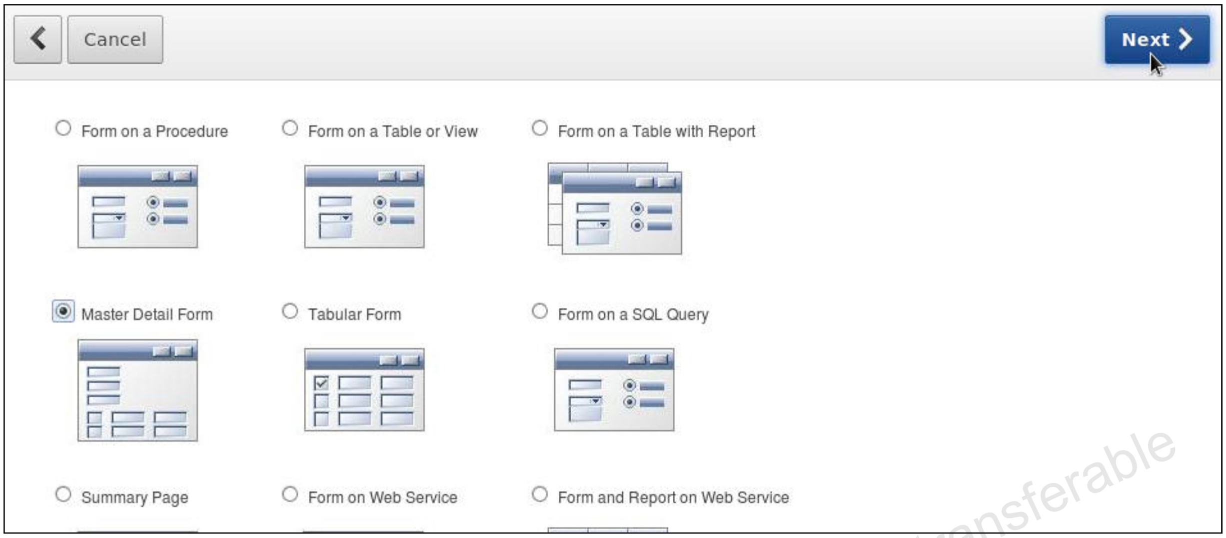
1) On the Order Management application home page, click **Create Page >**.



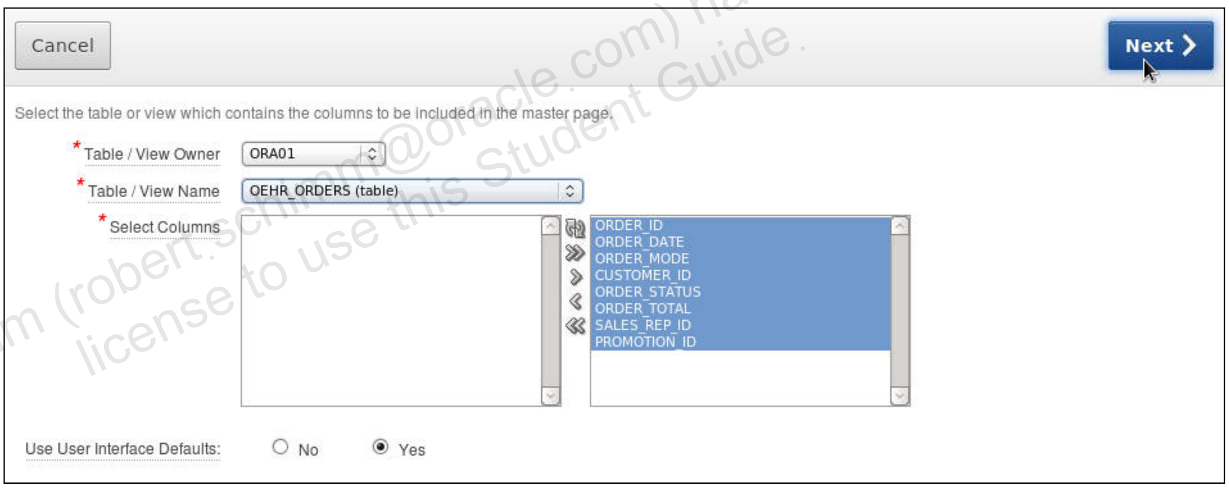
2) Select the **Form** option and click **Next >**.



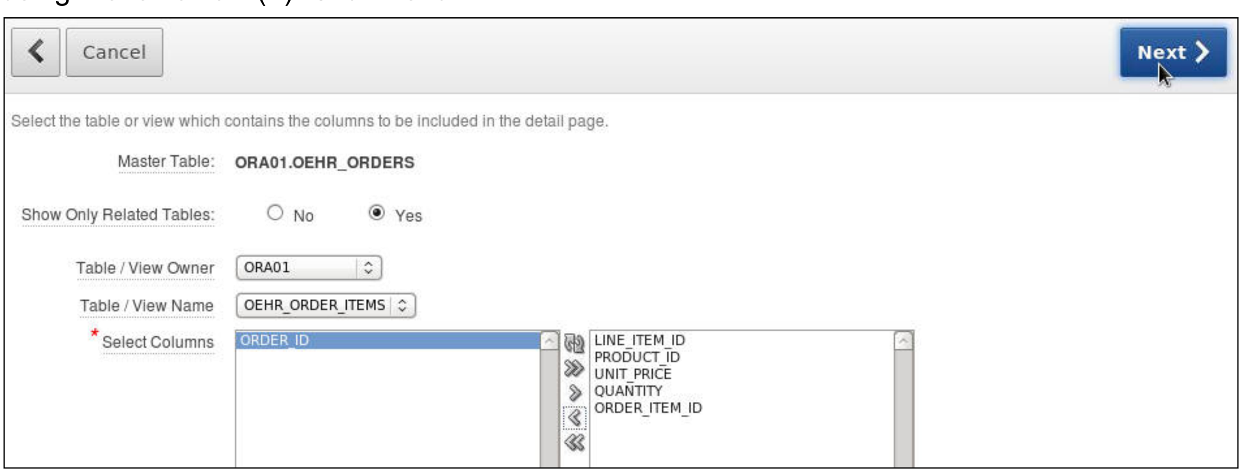
3) Select the **Master Detail Form** option and click **Next >**.



4) Ensure that your schema is selected. From the Table / View Name drop-down list, select `OEHR_ORDERS (table)`. Select all the columns in the `OEHR_ORDERS` table and **Next >**.

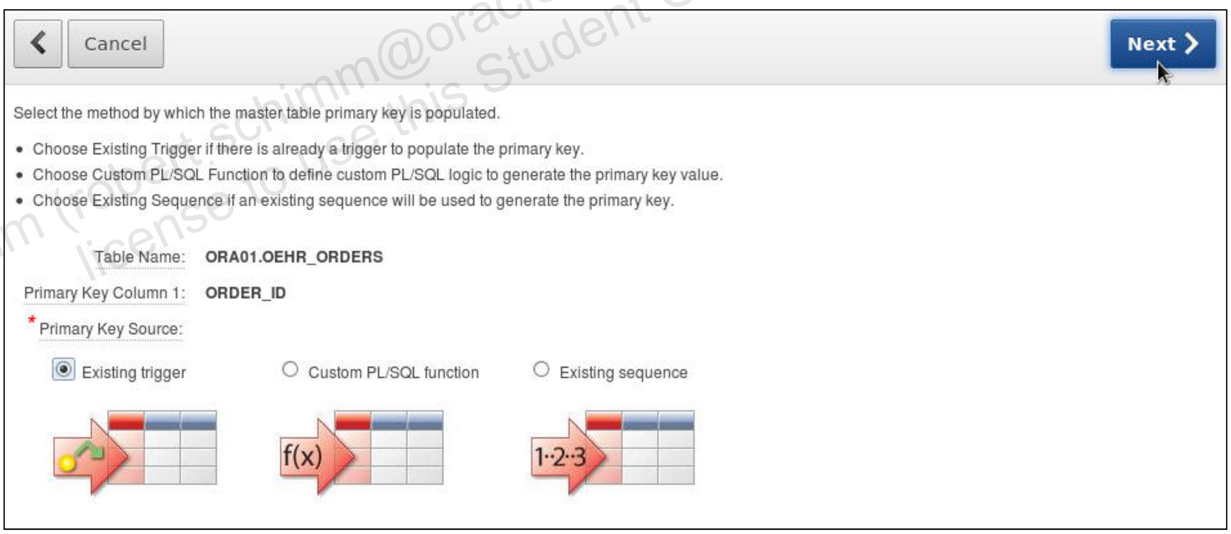


5) Ensure that your schema is selected. From the Table / View Name list, select `OEHR_ORDER_ITEMS`. Select the `ORDER_ID` column and move it to the left by using the left arrow (**<**). Click **Next >**.

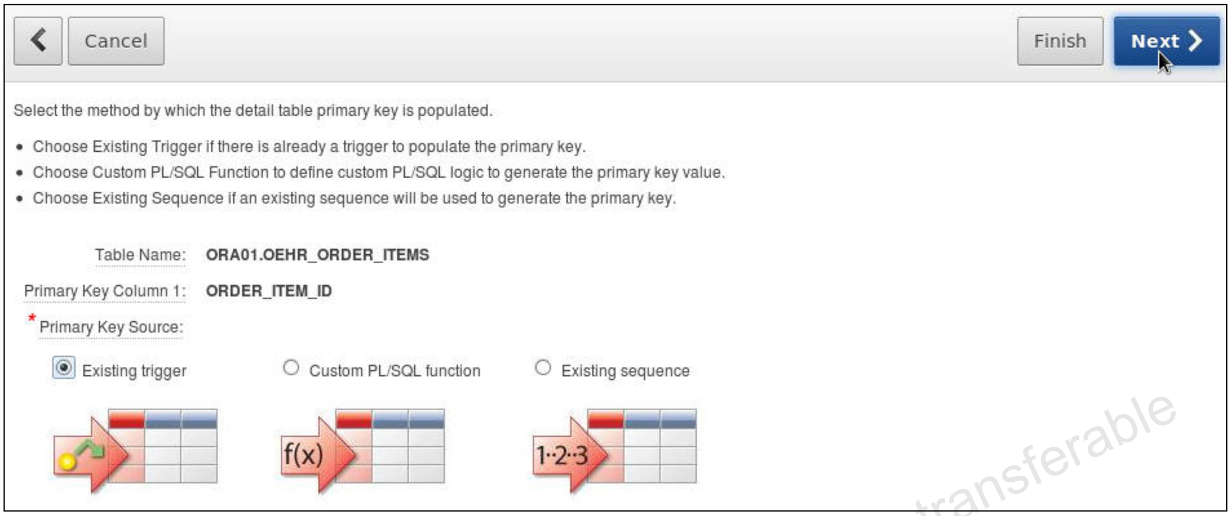


6) For both the tables, select Select Primary Key Column(s) for Primary Key Type. Select `ORDER_ID` and `ORDER_ITEM_ID` as the primary keys for the respective tables. Click **Next >**.

7) For the Primary Key Source of the `OEHR_ORDERS` table, accept the default value of **Existing trigger**. Click **Next >**.

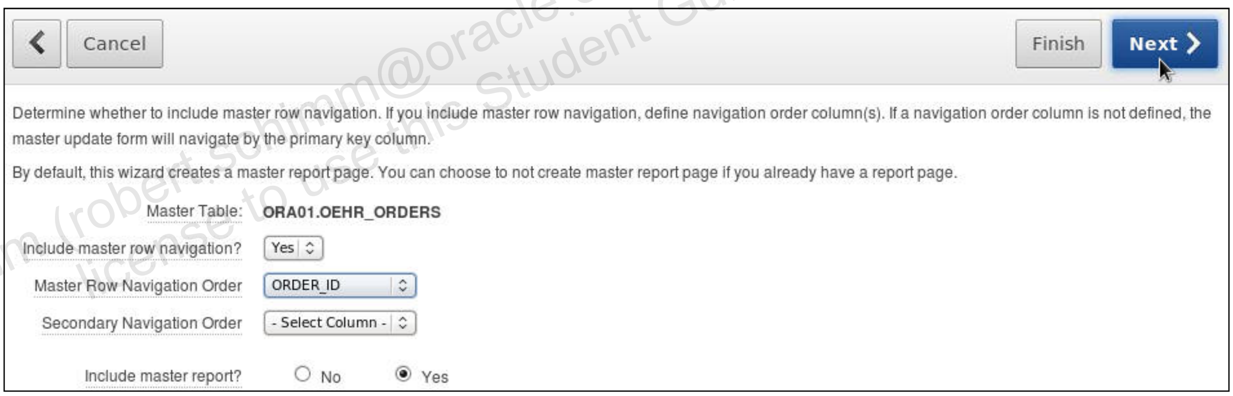


8) For the Primary Key Source of the `OEHR_ORDER_ITEMS` table, accept the default value of **Existing trigger** and click **Next >**.

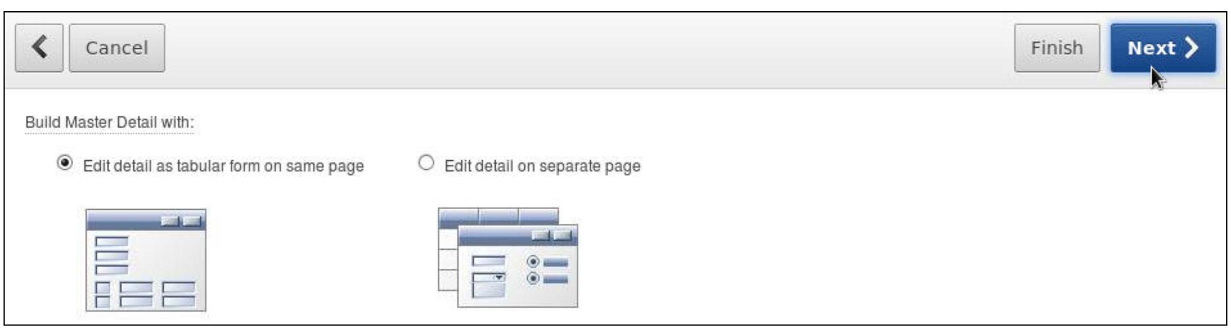


9) Select the following values and click **Next >**.

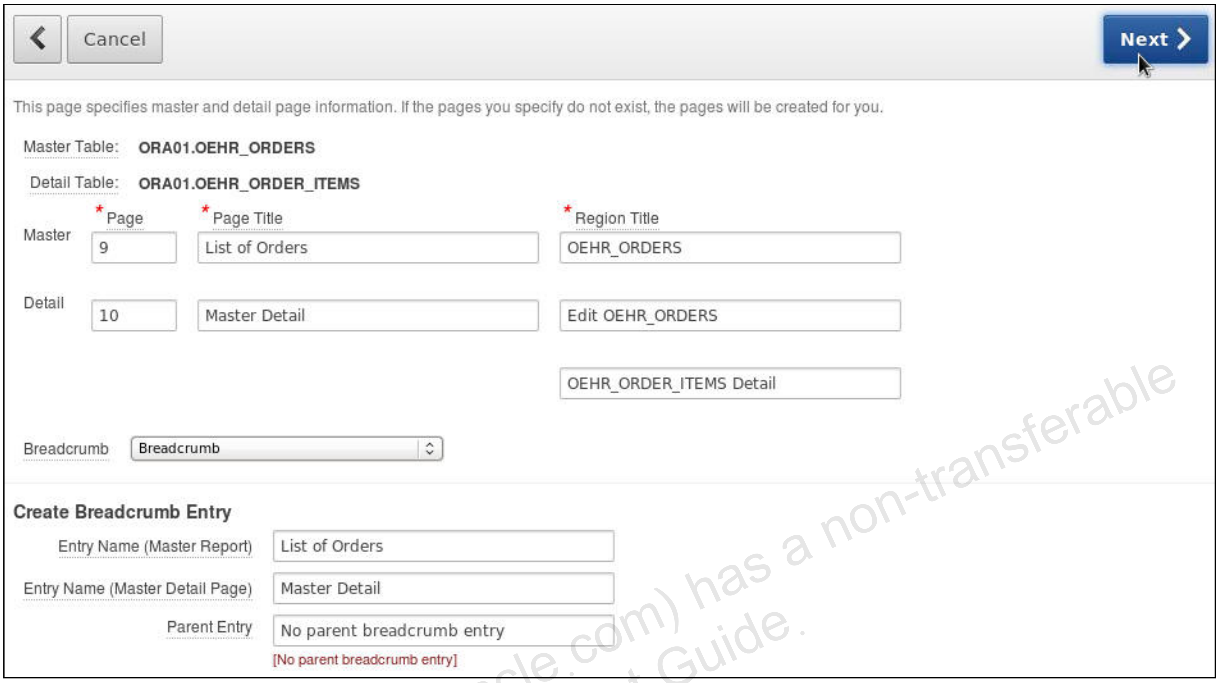
- Include master row navigation?: **Yes**
- Master Row Navigation Order: **`ORDER_ID`**
- Include master report?: **Yes**



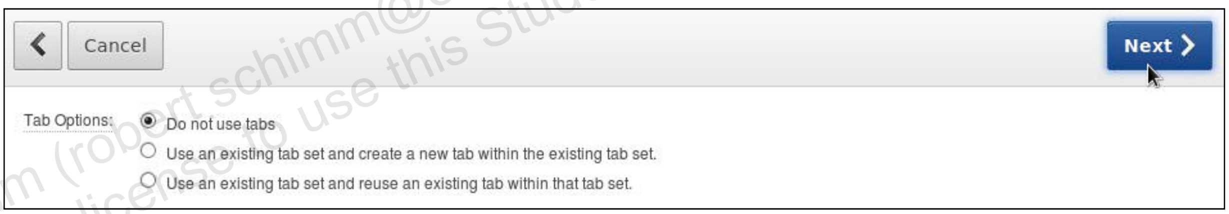
10) Ensure that "**Edit detail as tabular form on same page**" is selected. Click **Next >**.



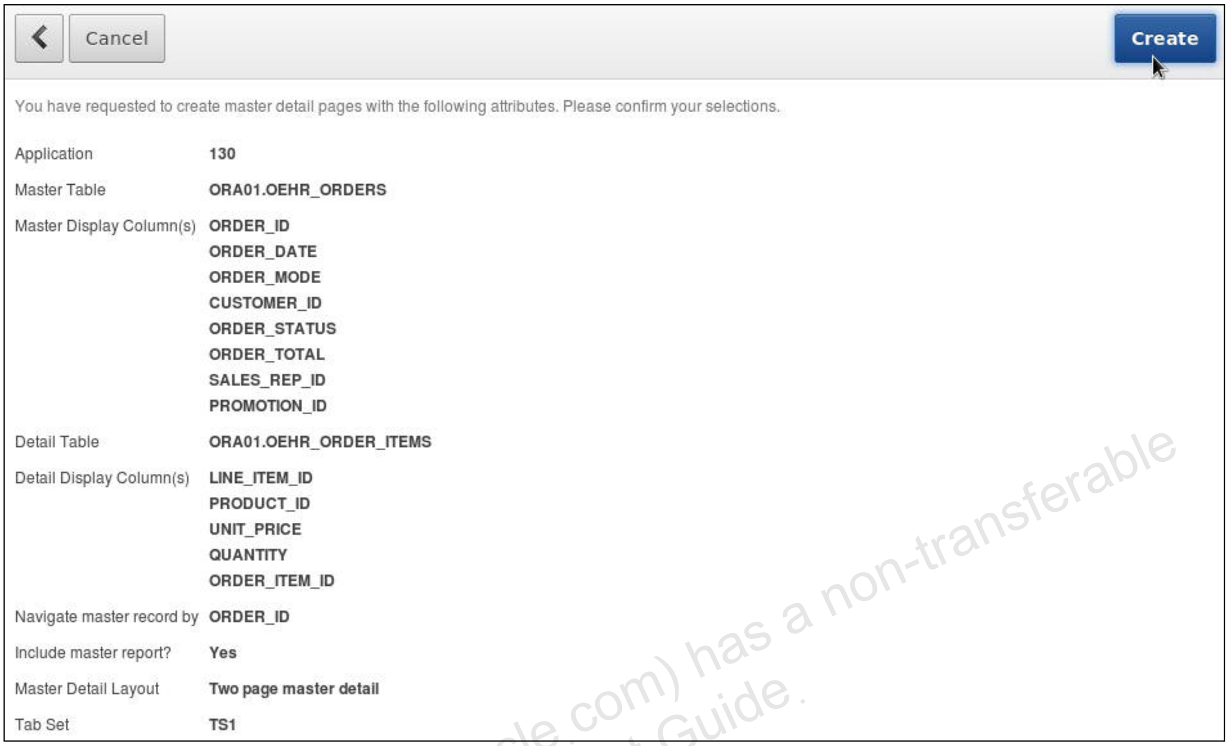
11) For Page Attributes, change the Page Title for OEHR_ORDERS on the master page to **List of Orders**, select **Breadcrumb** from the Breadcrumb drop-down list, and click **Next >**.



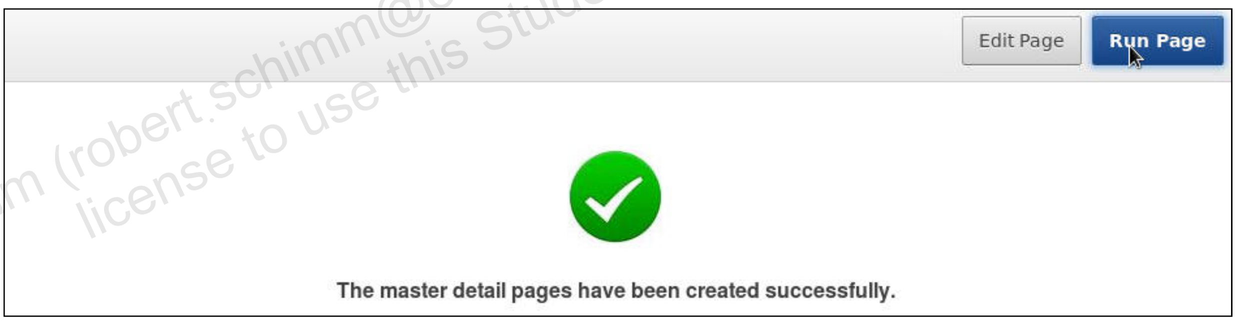
12) Accept the default and click **Next >**.



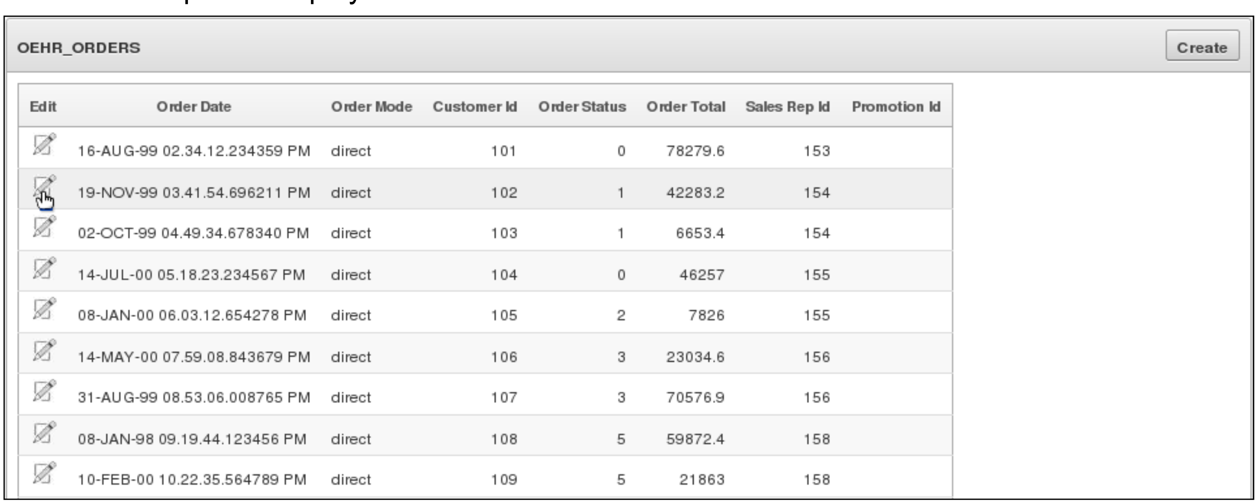
13) Click **Create**.



14) To view the master detail form, click the **Run Page** button.

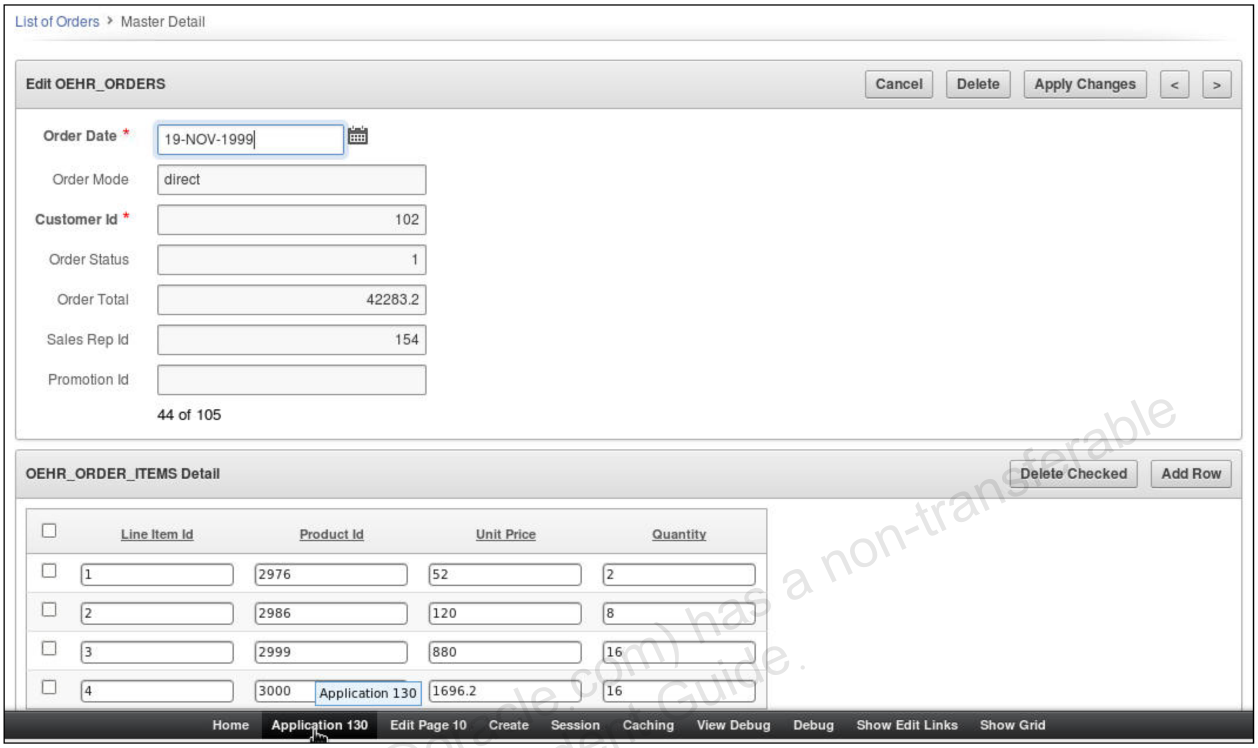


15) The master report is displayed. Click the **Edit** icon next to one of the rows.



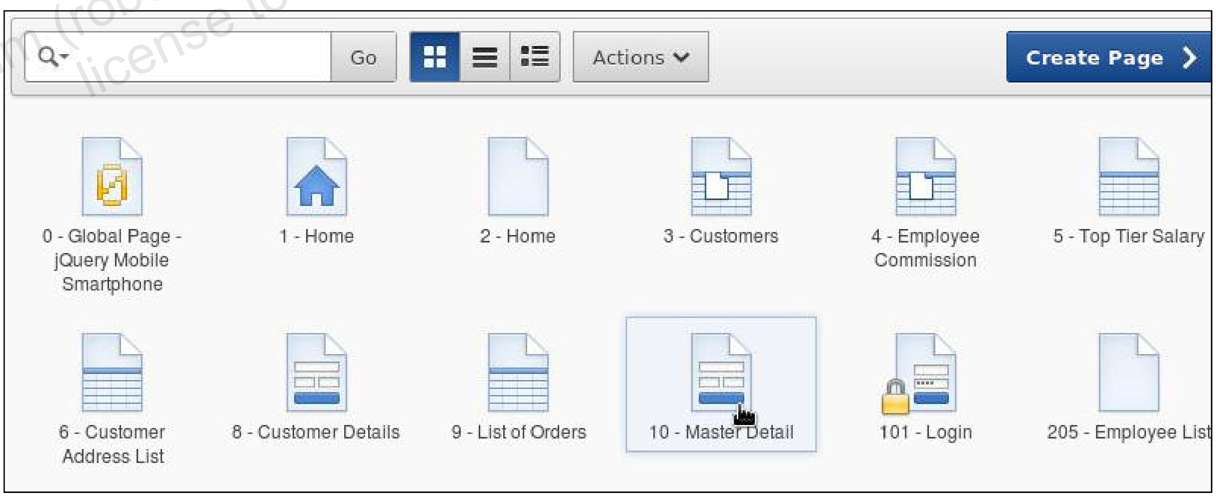
Edit	Order Date	Order Mode	Customer Id	Order Status	Order Total	Sales Rep Id	Promotion Id
	16-AUG-99 02.34.12.234359 PM	direct	101	0	78279.6	153	
	19-NOV-99 03.41.54.696211 PM	direct	102	1	42283.2	154	
	02-OCT-99 04.49.34.678340 PM	direct	103	1	6653.4	154	
	14-JUL-00 05.18.23.234567 PM	direct	104	0	46257	155	
	08-JAN-00 06.03.12.654278 PM	direct	105	2	7826	155	
	14-MAY-00 07.59.08.843679 PM	direct	106	3	23034.6	156	
	31-AUG-99 08.53.06.008765 PM	direct	107	3	70576.9	156	
	08-JAN-98 09.19.44.123456 PM	direct	108	5	59872.4	158	
	10-FEB-00 10.22.35.564789 PM	direct	109	5	21863	158	

16) The Master detail form is displayed. Review the information. Click **Application *<n>*** on the Developer toolbar.

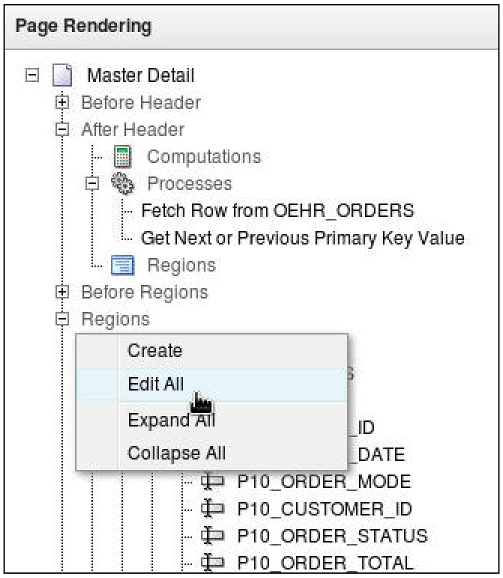


b. On the Master Detail Form page, change the region name for the master region to Order Master and change the region name for the detail region to Order Details.

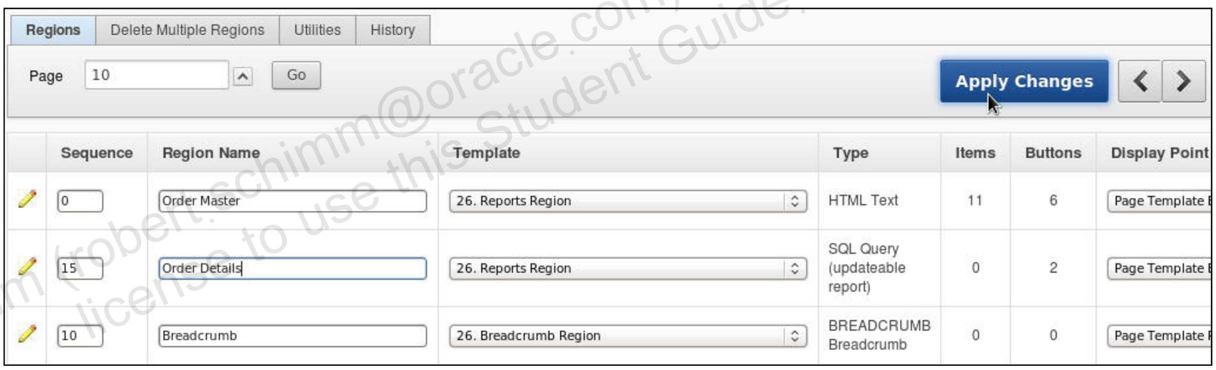
1) You want to make some changes to the master detail form. On the Order Management application page, click the **Master Detail** page.



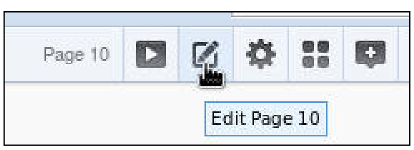
2) Right-click **Regions** and select **Edit All**.



3) Change the Region Name for the Oehr Orders region to **Order Master** and the Region Name for Oehr Order Items details to **Order Details**, and click **Apply Changes**.

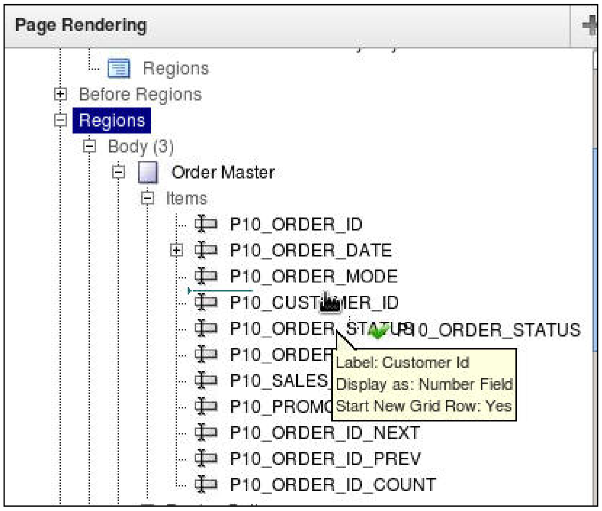


4) Click the **Edit Page** icon in the top-right corner of the window.

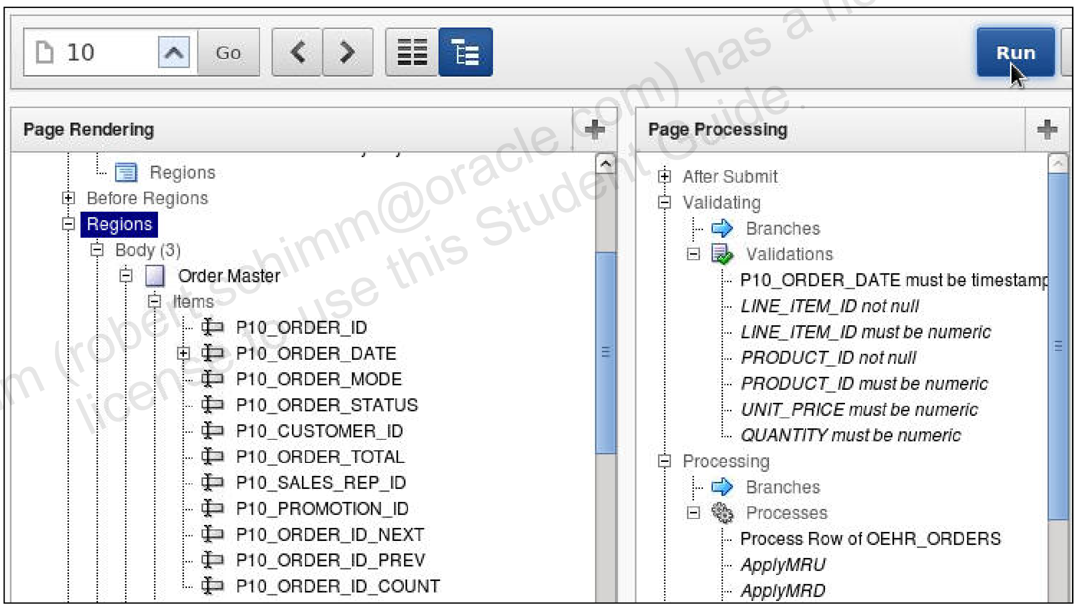


c. On the Master Detail page, move the Order Status item to appear before the Customer ID in the Order Master region.

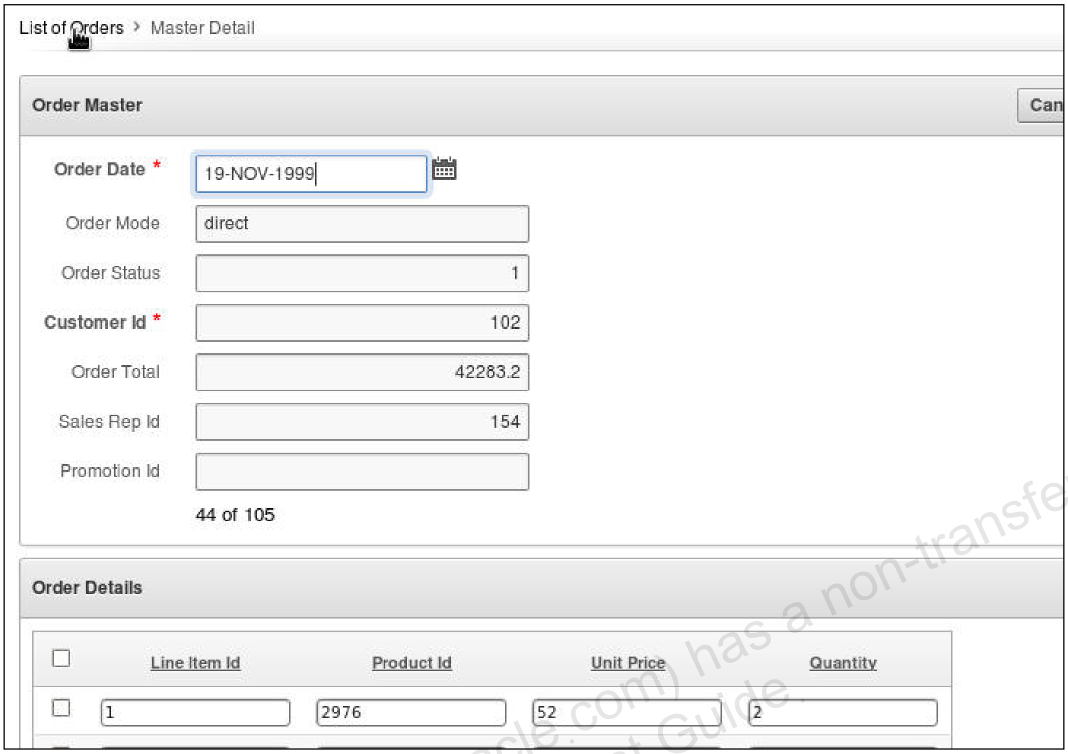
1) You can reorder items very easily by dragging them. Drag **`P<n>_ORDER_STATUS`** to above **`P<n>_CUSTOMER_ID`**.



2) Notice that the item is moved. Click the **Run Page** icon.

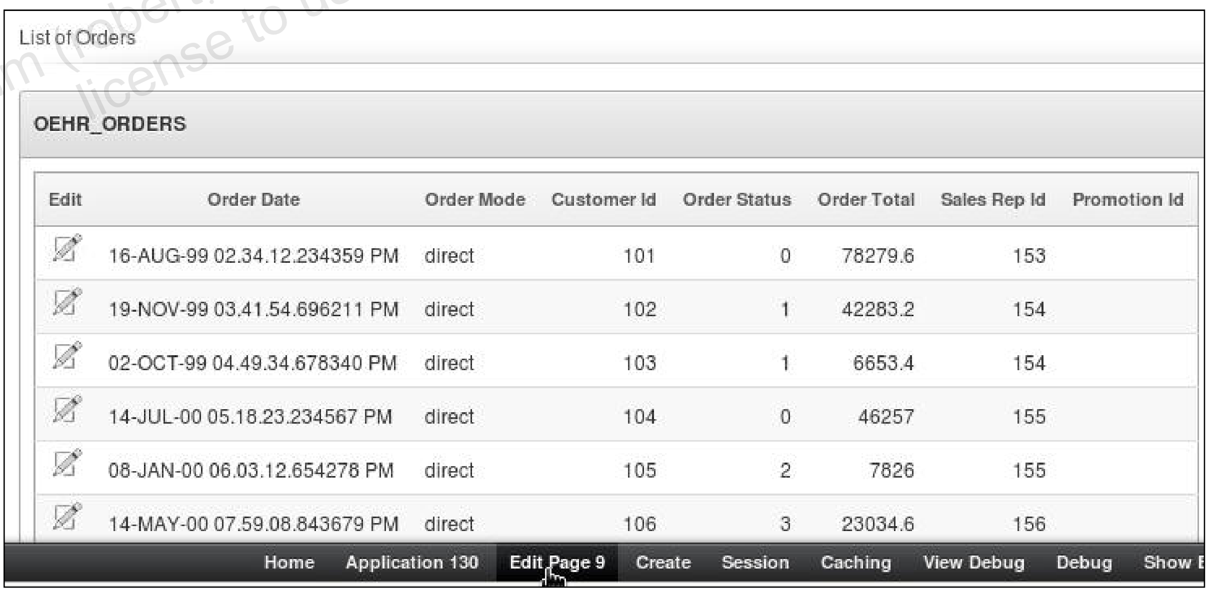


3) Click the **List of Orders** breadcrumb to return to the master report.

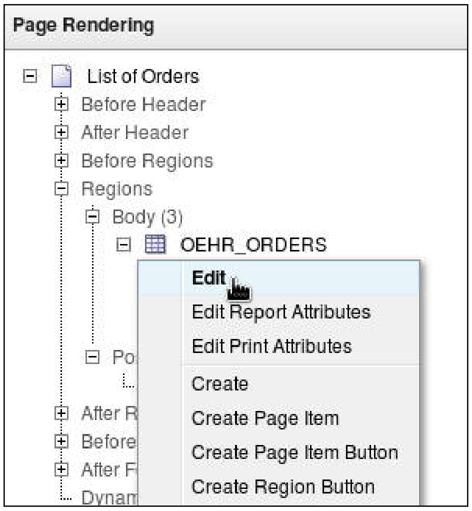


d. On the List of Orders (master report) page, change the region title to List of Orders. Do not show the **PROMOTION_ID** column. Change the heading of Sales Rep ID to Sales Rep.

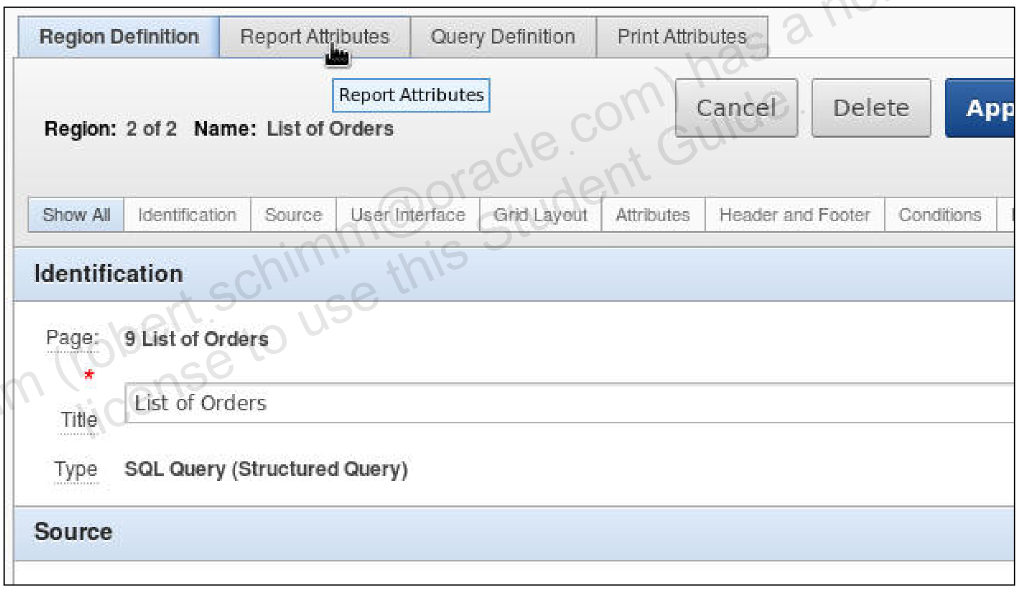
1) Click the **Edit Page <*n*>** link on the Developer toolbar.



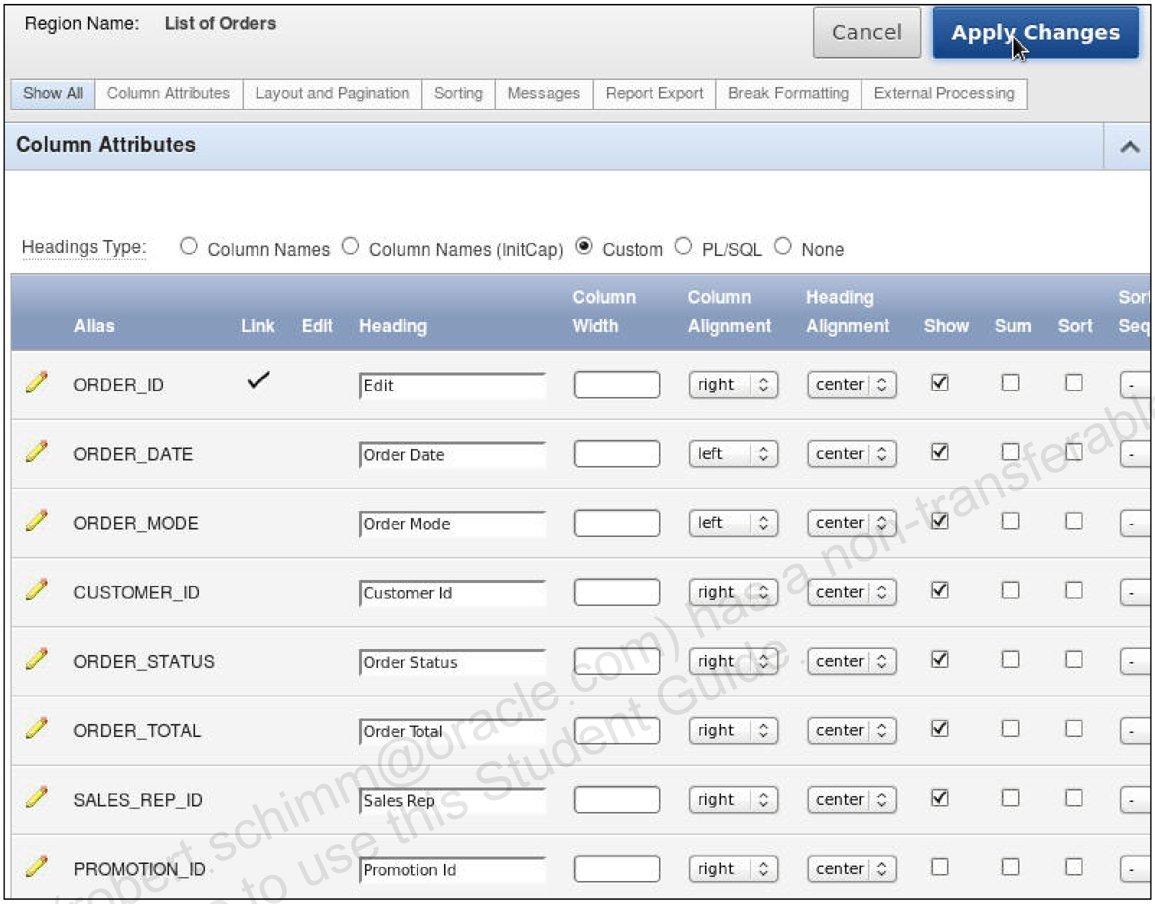
2) Under Regions, right-click **OEHR_ORDERS** and select **Edit**.



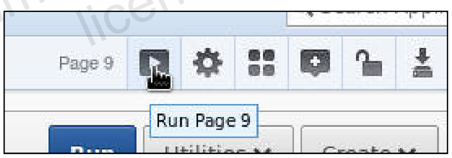
3) Click the Show All tab if not already selected. Change the Title to **List of Orders** and click the **Report Attributes** tab.



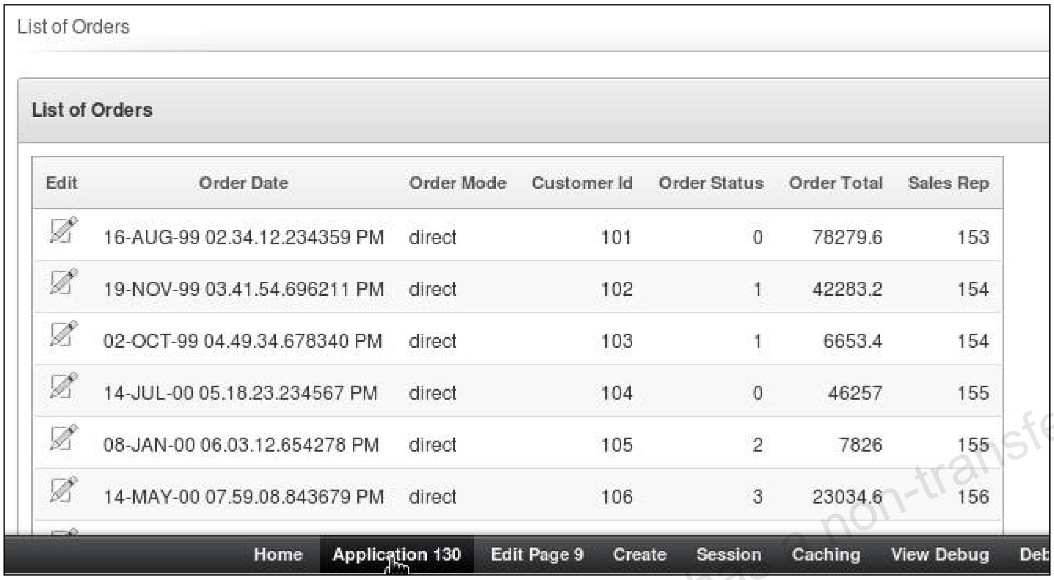
4) For the `PROMOTION_ID` column, deselect the Show check box. Change the Heading for `SALES_REP_ID` to `Sales Rep`, and click **Apply Changes**.



5) To run the page, click the **Run** button.



6) Review the report. Note that **PROMOTION_ID** is no longer shown, the headings for Sales Rep have changed, and the region title has changed to List of Orders. Click the **Application <*n*>** link on the Developer toolbar.



Solution 6-3: Creating a Tabular Form

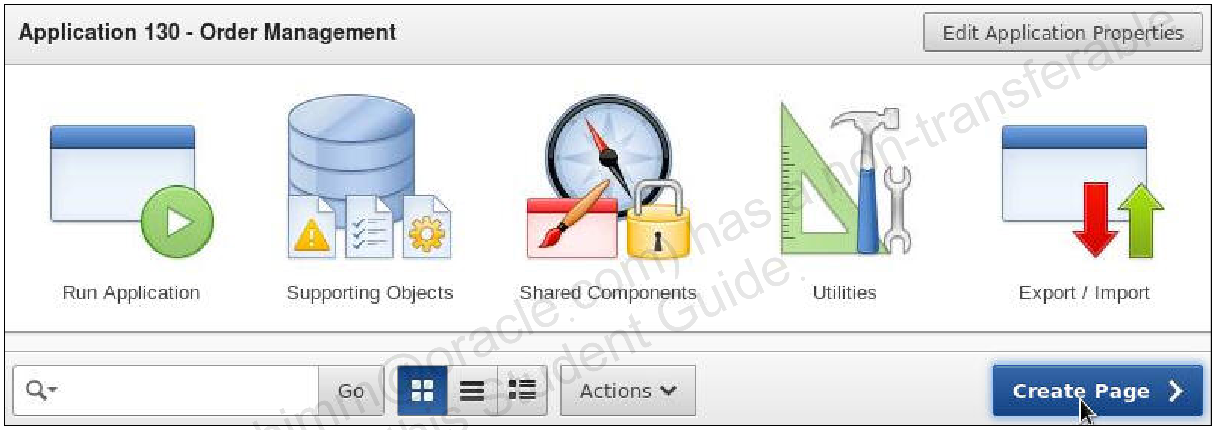
Overview

In this solution, you create and manipulate a tabular form.

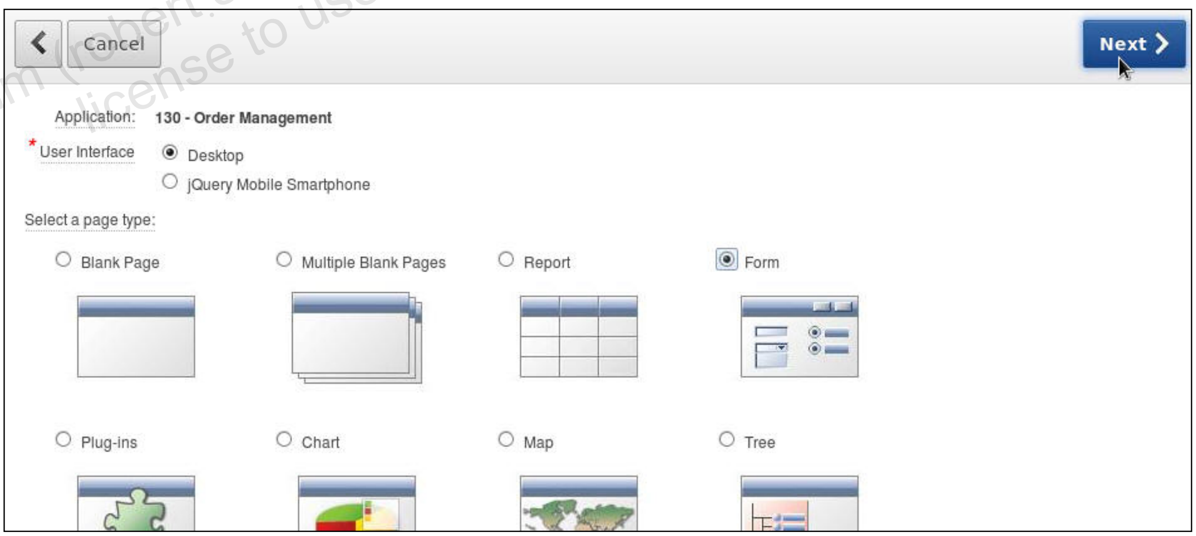
Tasks

a. On a new page called Update Employee Information, create a tabular form that displays the `FIRST_NAME`, `LAST_NAME`, `EMAIL`, `JOB_ID`, and `COMMISSION_PCT` columns from the `OEHR_EMPLOYEES` table. The `EMAIL`, `JOB_ID`, and `COMMISSION_PCT` columns should be updatable columns. Change the element width of the `CUST_EMAIL` column to `40`.

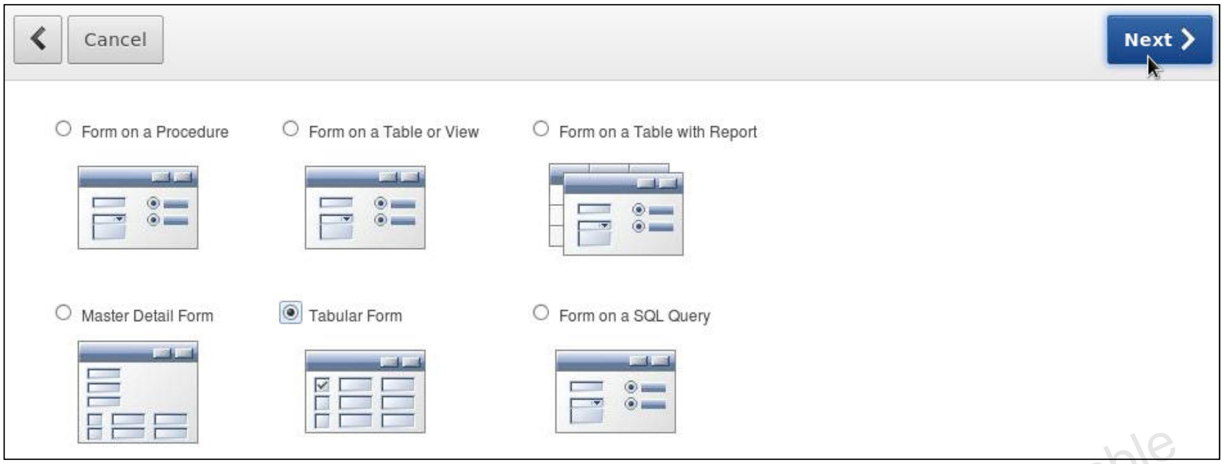
1) From the Order Management application home page, click **Create Page >**.



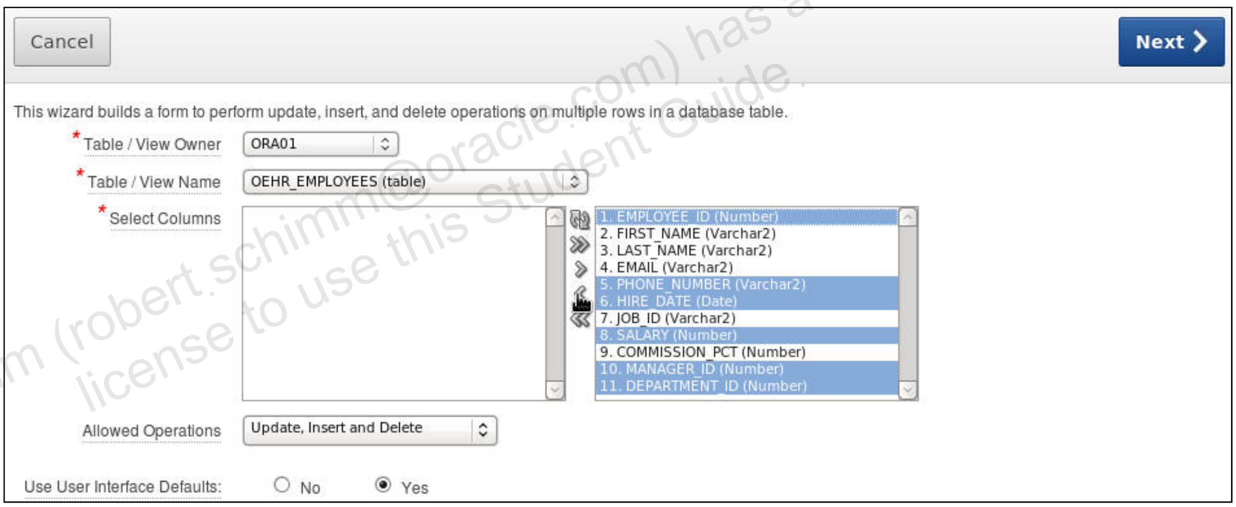
2) For the page type, select the **Form** option and click **Next >**.



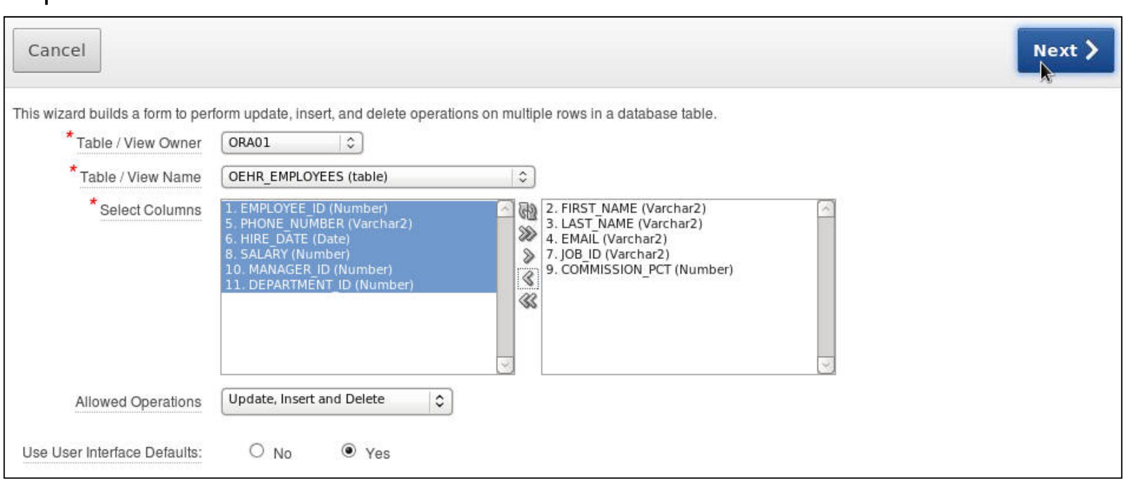
3) Select the **Tabular Form** option and click **Next >**.



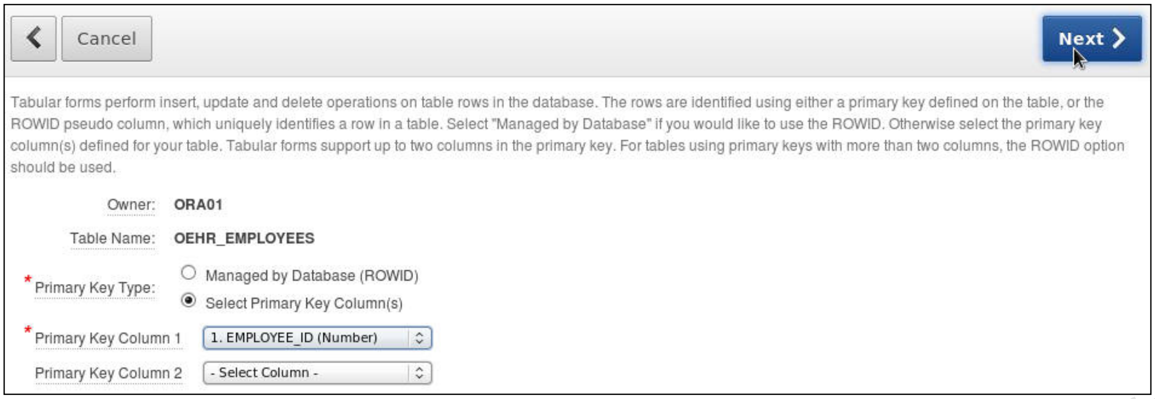
4) Ensure that your schema is selected in the Table / View Owner field. For the Table / View Name field, select `OEHR_EMPLOYEES (table)` from the drop-down list. Select all columns, except `FIRST_NAME`, `LAST_NAME`, `EMAIL`, `JOB_ID`, and `COMMISSION_PCT` from the right and click the left arrow (**<**).



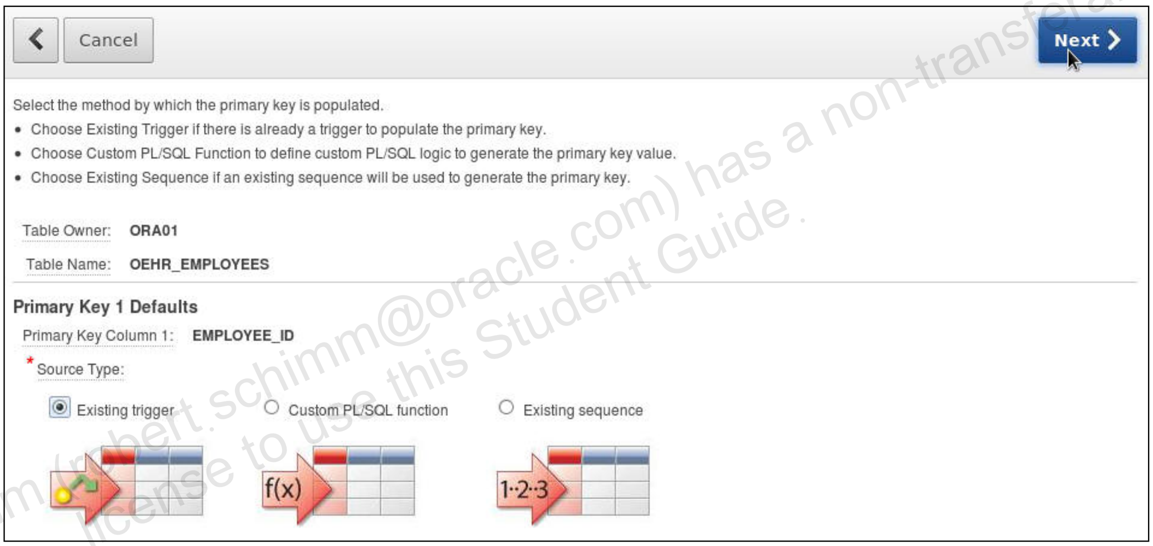
5) Ensure that **Update, Insert and Delete** is selected in the Allowed Operations drop-down list. Click **Next >**.



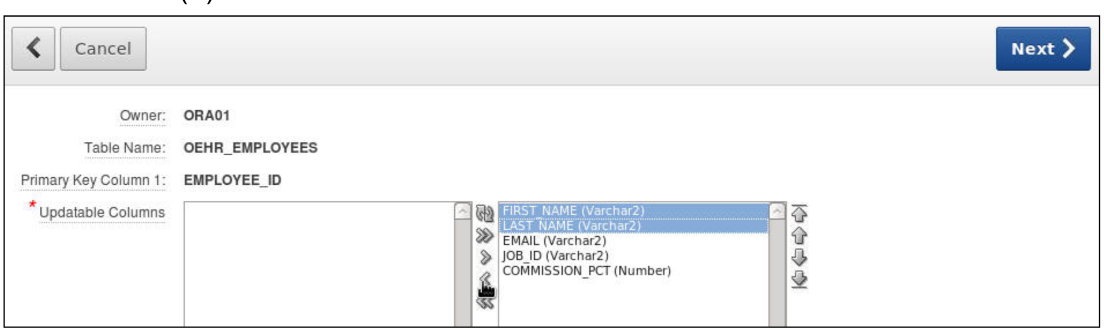
6) For Primary Key Type, select **Select Primary Key Column(s)**. Select **`EMPLOYEE_ID`** for Primary Key Column 1 and click **Next >**.



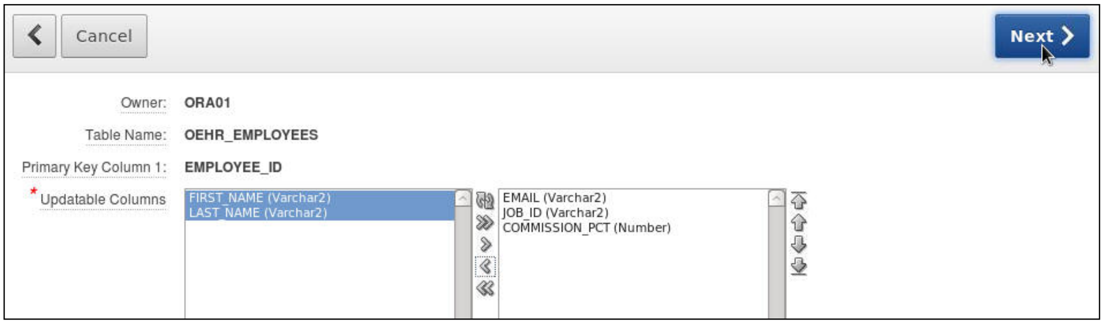
7) For Source Type, accept the default **Existing trigger** and click **Next >**.



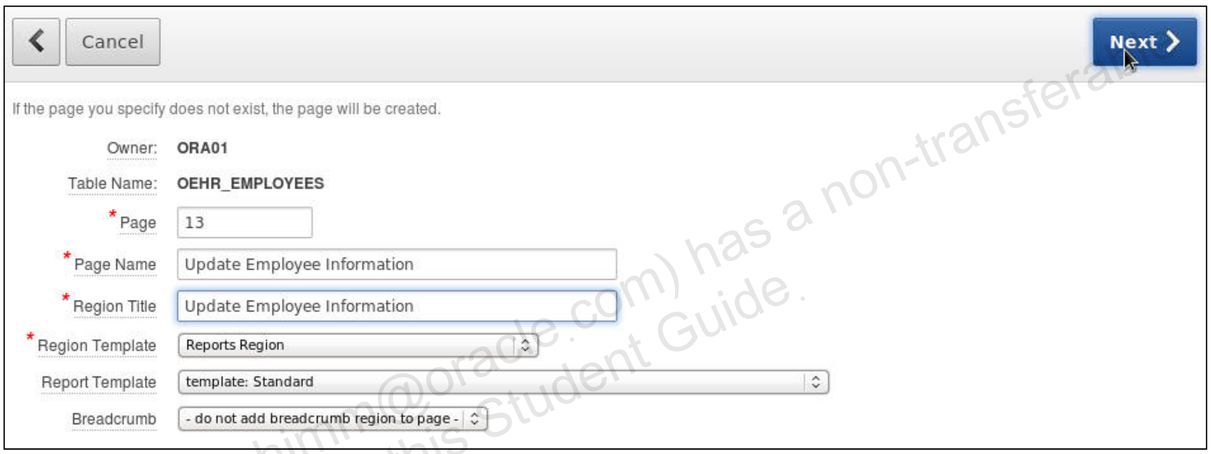
8) For Updatable Columns, you want all the columns to be updatable except FIRST_NAME and LAST_NAME. Select **`FIRST_NAME`** and **`LAST_NAME`**, and click the left arrow (**<**).



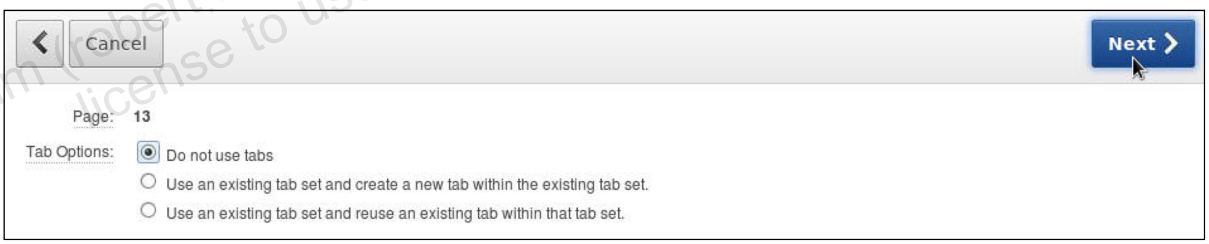
9) Click **Next >**.



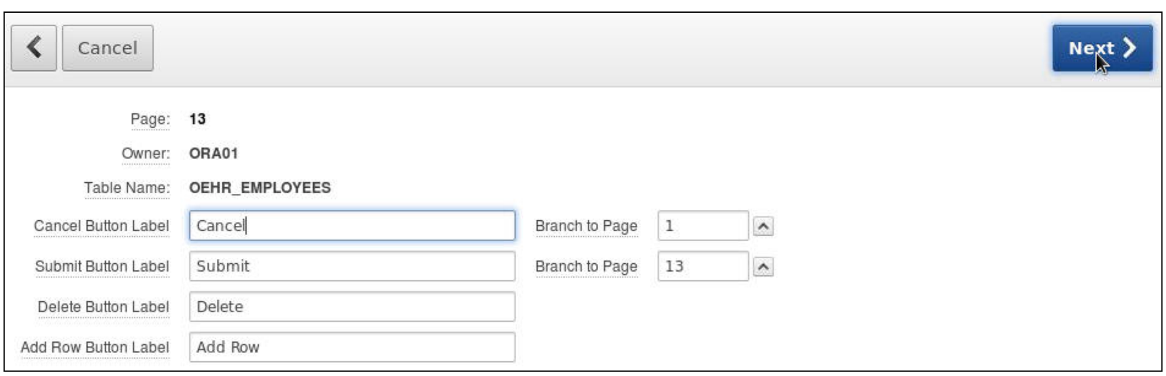
10) On the “Identify page and Region Attributes” page, enter **Update Employee Information** for both Page Name and Region Title. Click **Next >**.



11) Ensure that the **Do not use tabs** option is selected and click **Next >**.

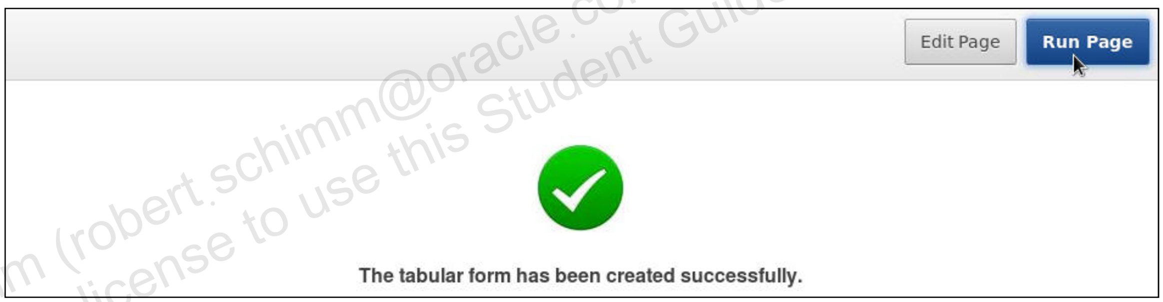


12) For Button Labels and Branches, accept the defaults and click **Next >**.

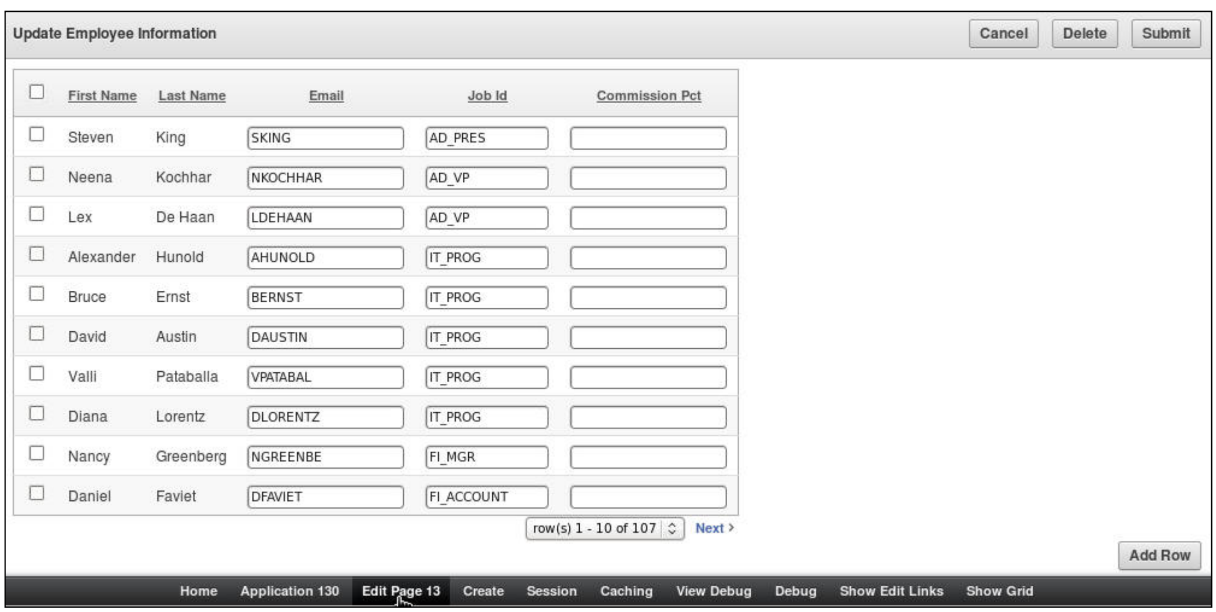


13) Click **Create**.

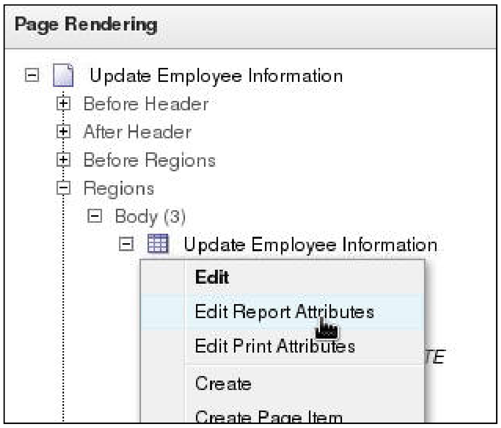
14) Click **Run Page** to view your new form.



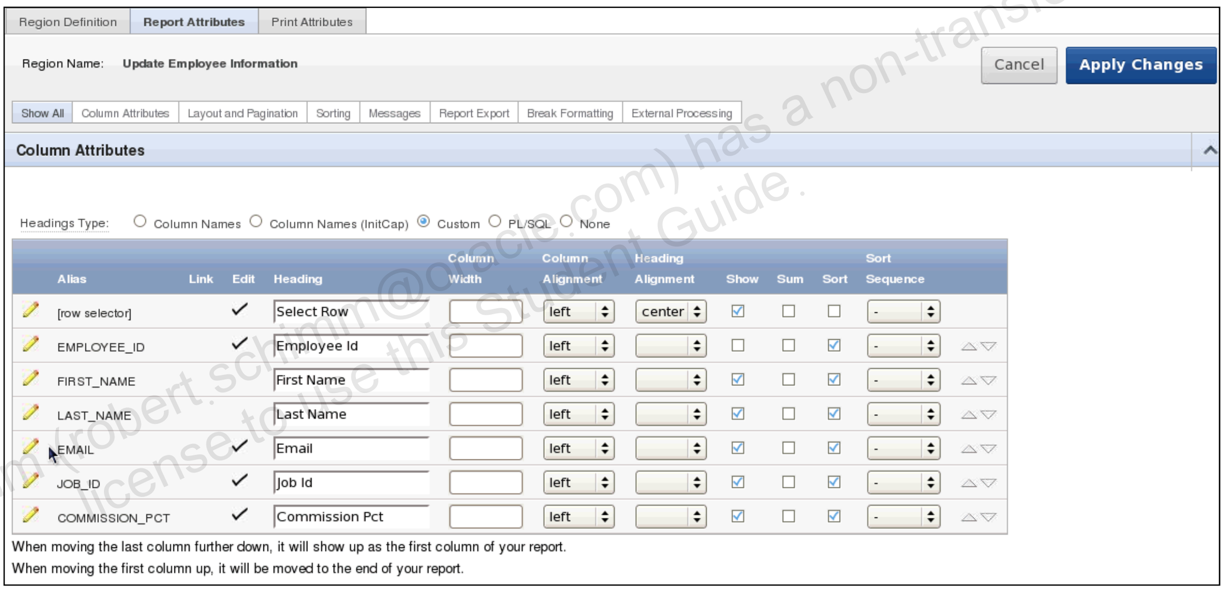
15) You notice that the email field is smaller than required. Click the **Edit Page <*n*>** link on the Developer toolbar.



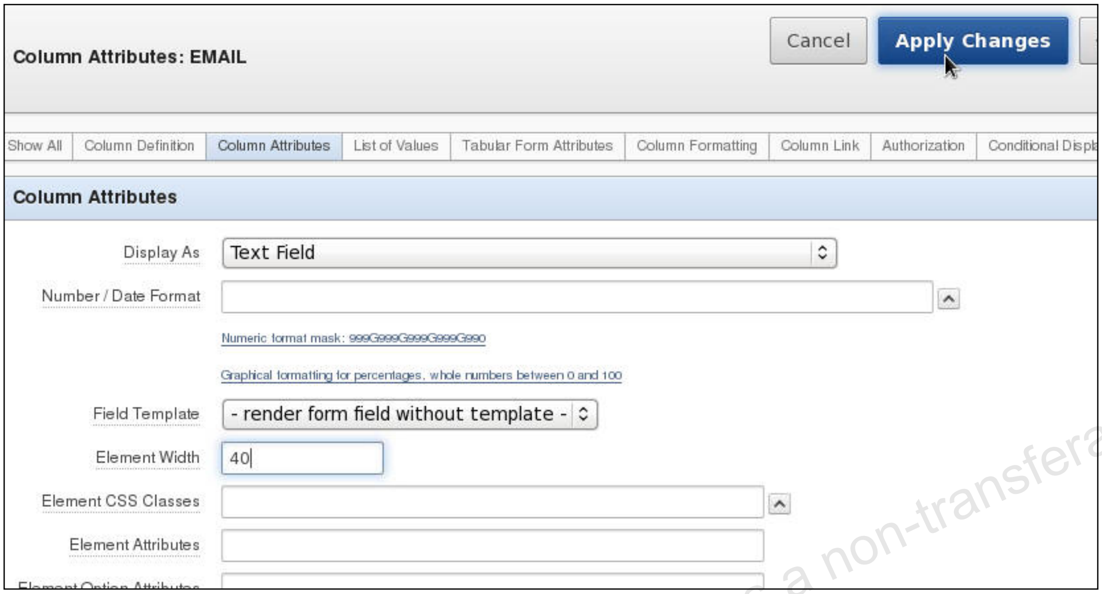
16) Under Regions, right-click **Update Employee Information** and select **Edit Report Attributes**.



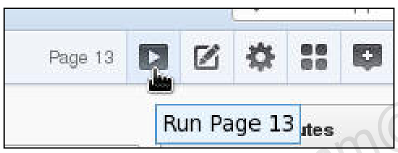
17) Click the Edit icon to the left of **`EMAIL`**.



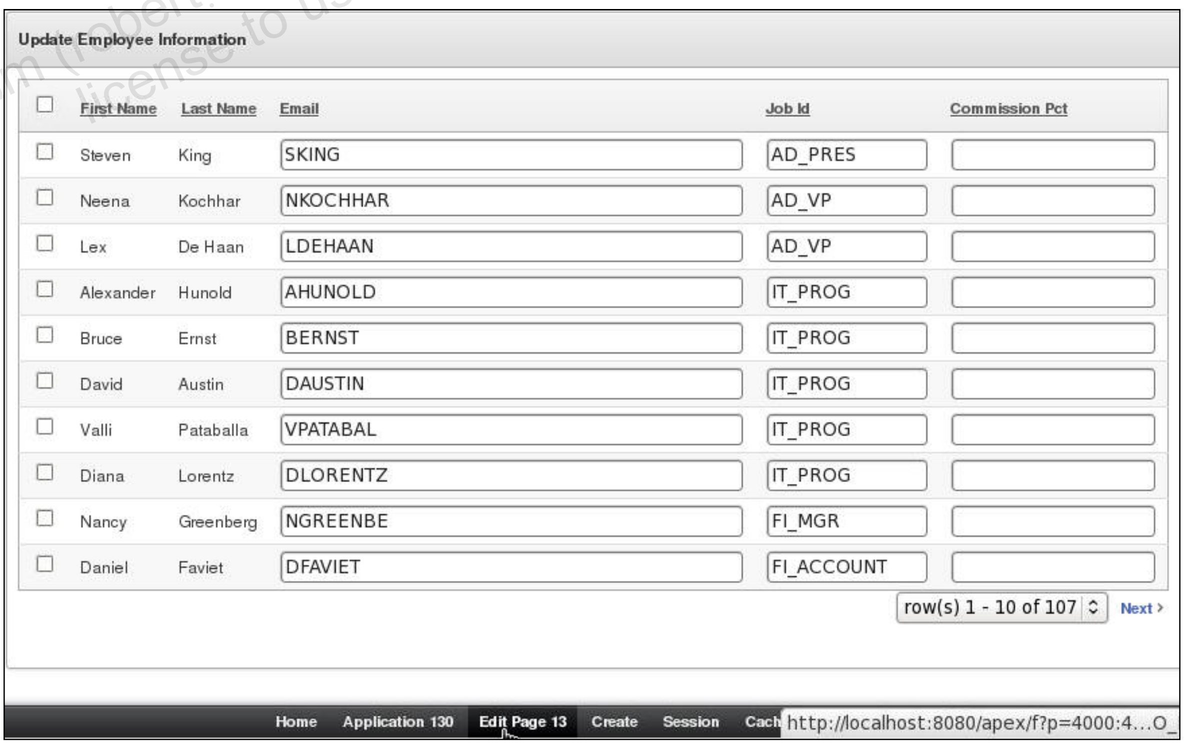
18) Select the **Column Attributes** subtab and enter `40` for element width and click **Apply Changes**.



19) Run the form to see the results.



20) Notice that the length of the Cust Email column has changed. Click **Application <*n*>** on the Developer toolbar.



Solution 6-4: Create a Form on a Table for Mobile Applications

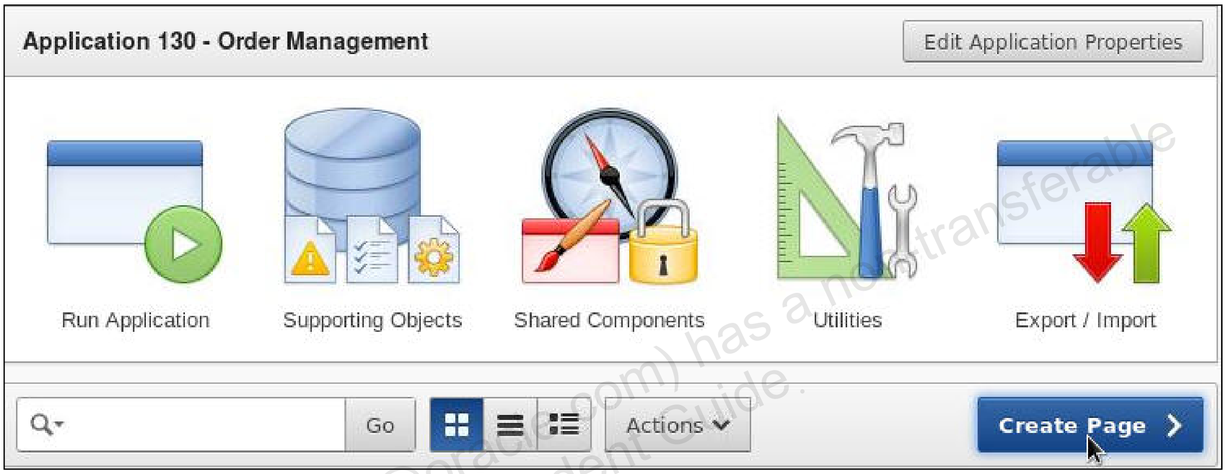
Overview

In this solution, you add a form page to the mobile application and link it from a list view page.

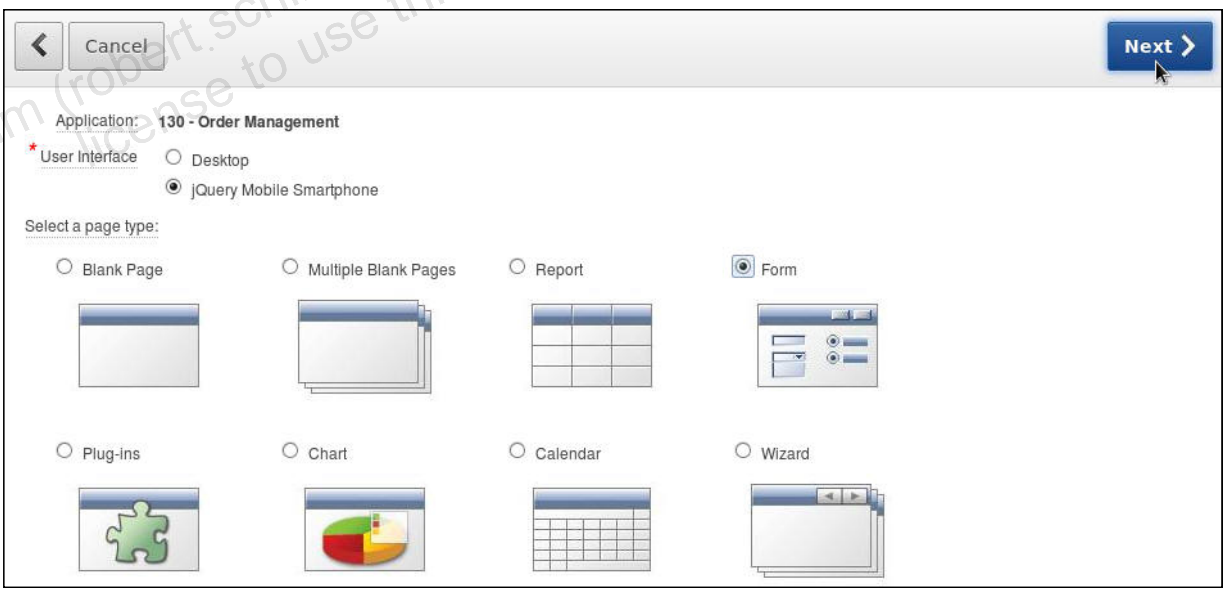
Tasks

a. Add a form page called Employee Detail to the application for mobile interface. Link this Employee Detail form page to the existing Employee List list view page.

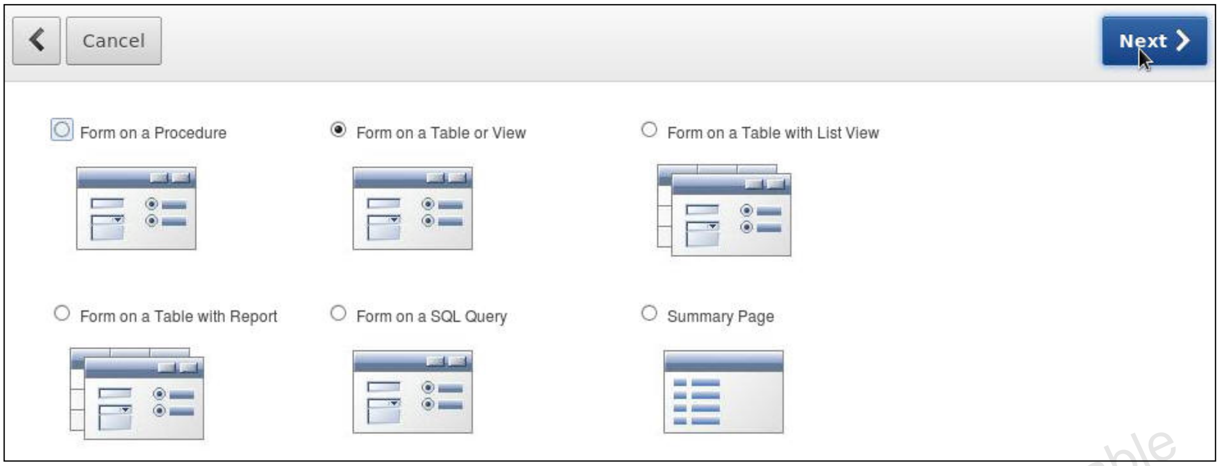
1) Navigate to the Application Builder Home page and click **Create Page >**.



2) Select **jQuery Mobile Smartphone** for **User Interface**. Select **Form** and click **Next >**.

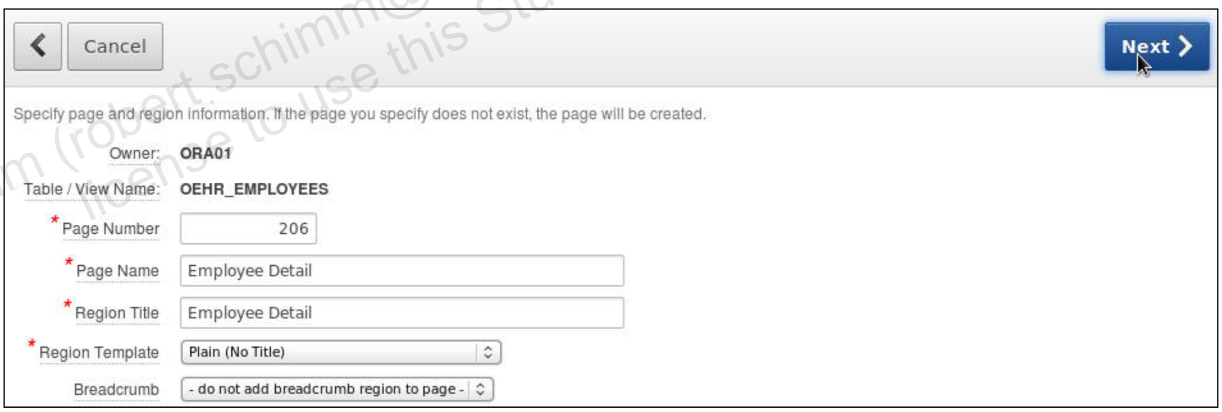


3) Select the default and click **Next >**.

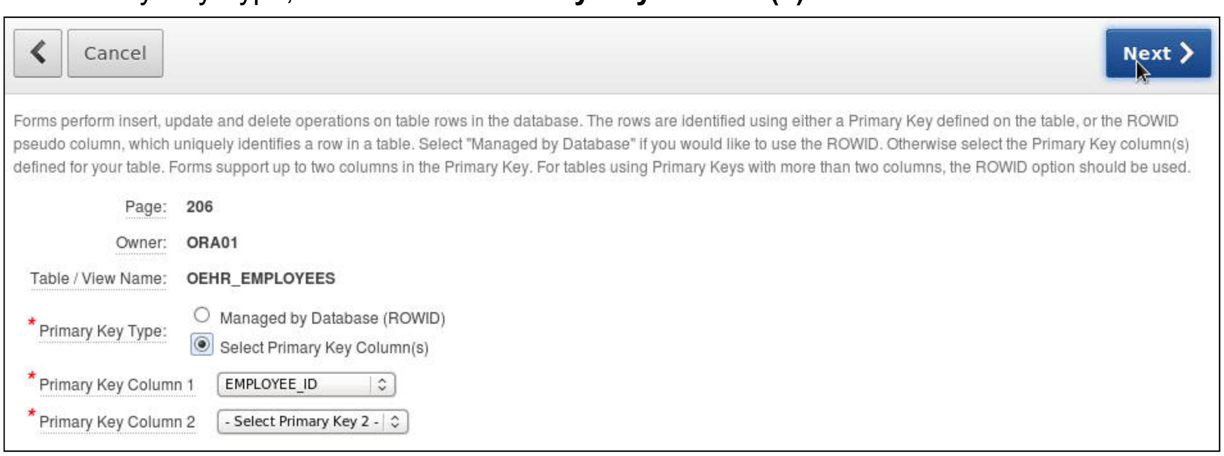


4) Select **`OEHR_EMPLOYEES`** for Table / View Name and click **Next >**.

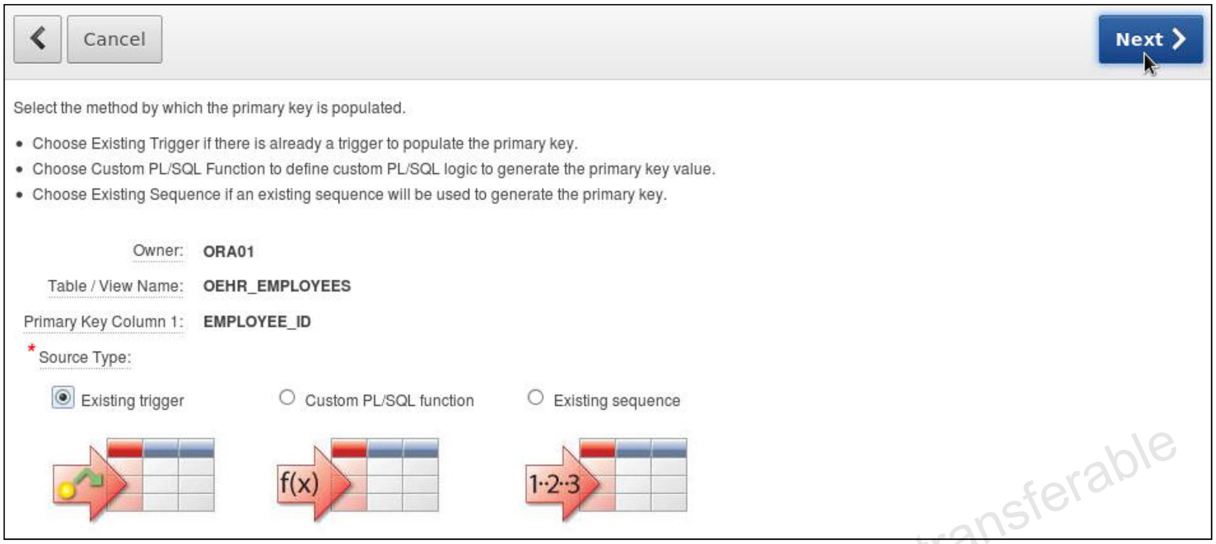
5) Change the Page Number to **206** and enter the Page Name and Region Name as **Employee Detail**. Click **Next >**.



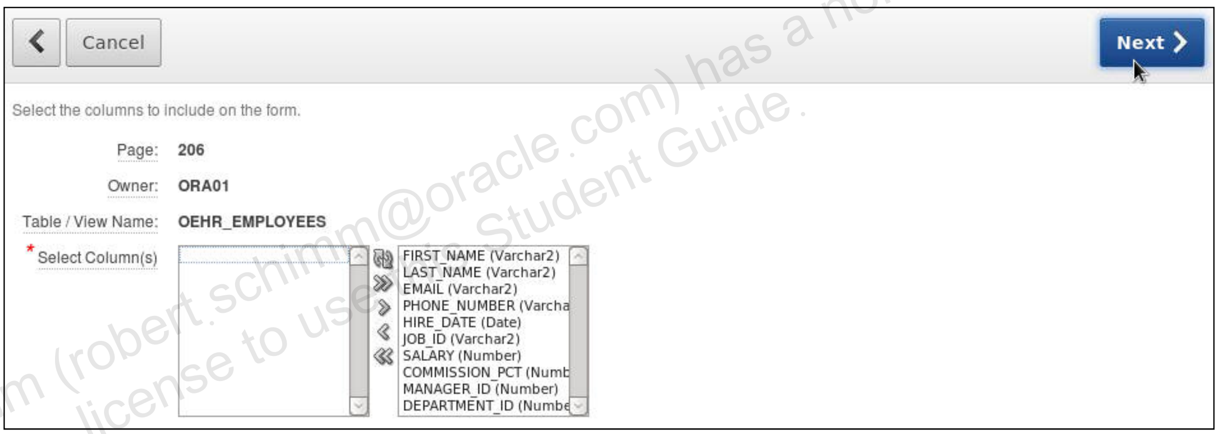
6) For Primary Key Type, select **Select Primary Key Column(s)**. Click **Next >**.



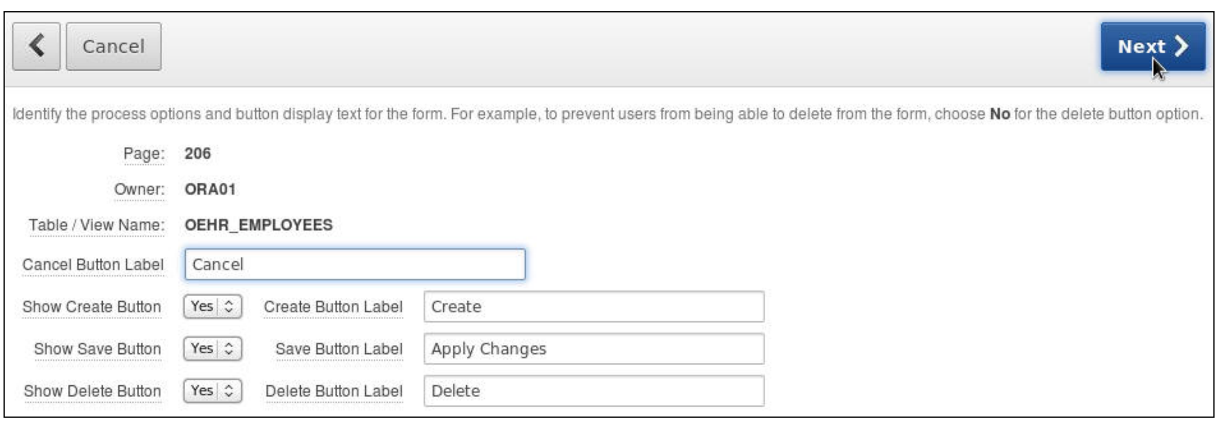
7) For Source Type, accept the default **Existing trigger** and click **Next >**.



8) Click **Next >**.

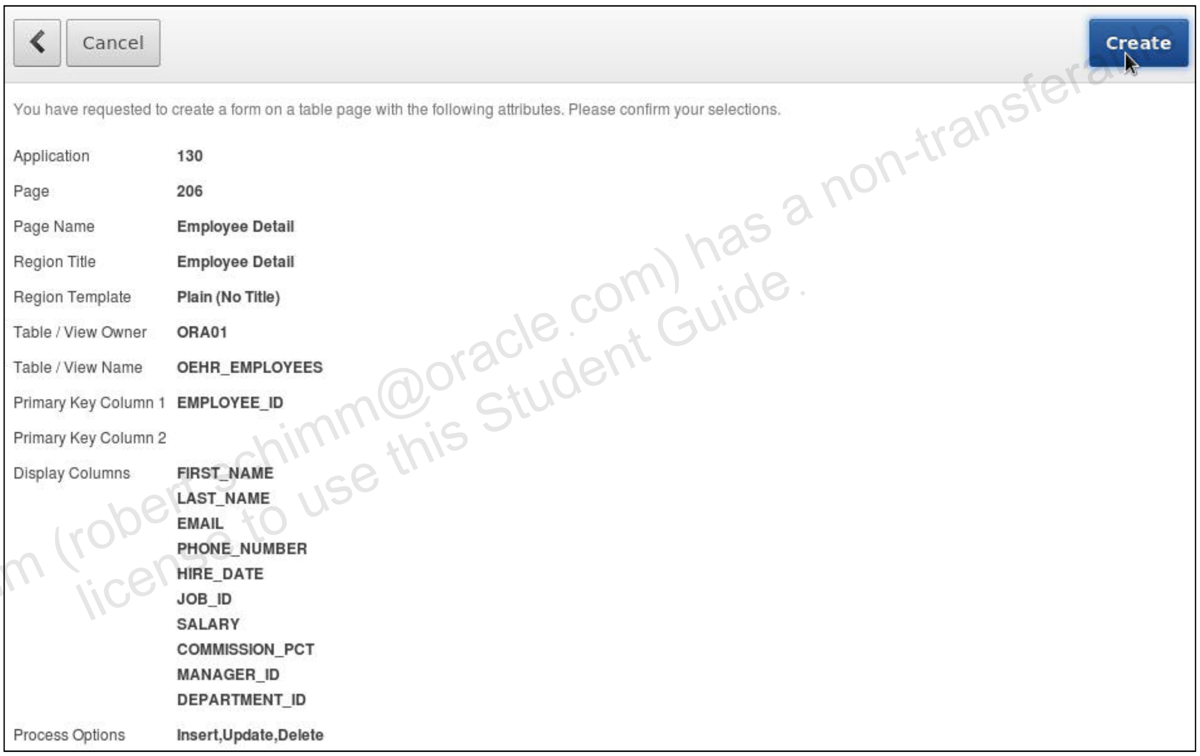


9) Accept the default for Buttons and click **Next >**.

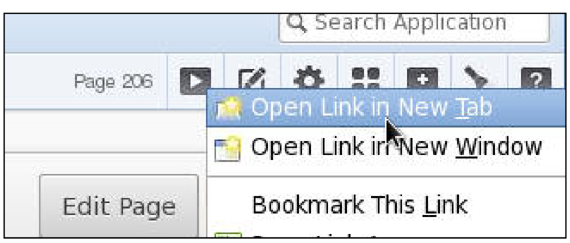


10) Select the **Employee List** list view page for both “After Page Submit and Processing Branch to Page” and “When Cancel Button Pressed Branch to this Page,” and click **Next >**.

11) Click **Create**.

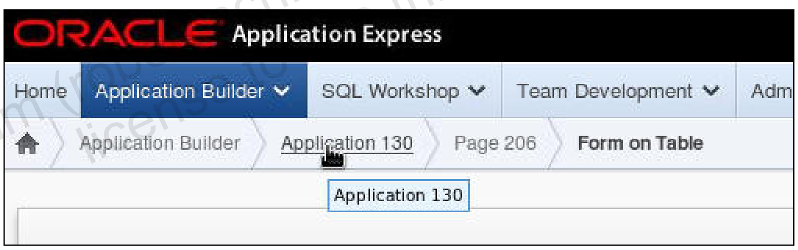


12) To run the page on a new tab, right-click the **Run** icon and select **Open Link in New Tab**.

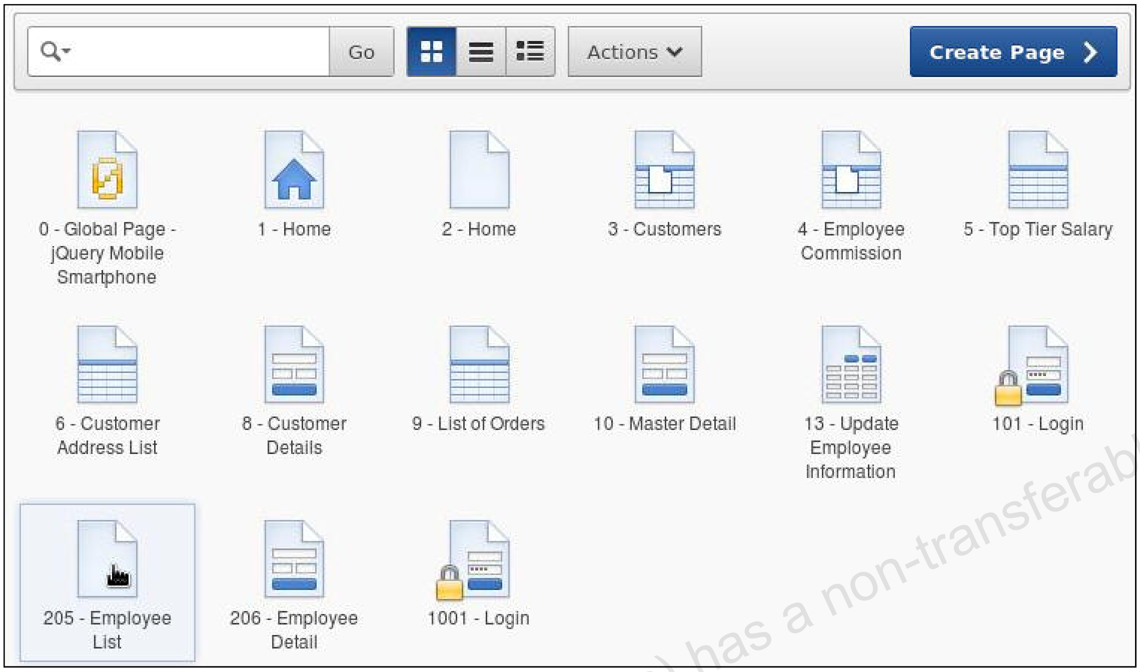


13) You will notice that there is no data on the Employee Detail page. You will have to link the **Employee List** list view page to the **Employee Detail** form.

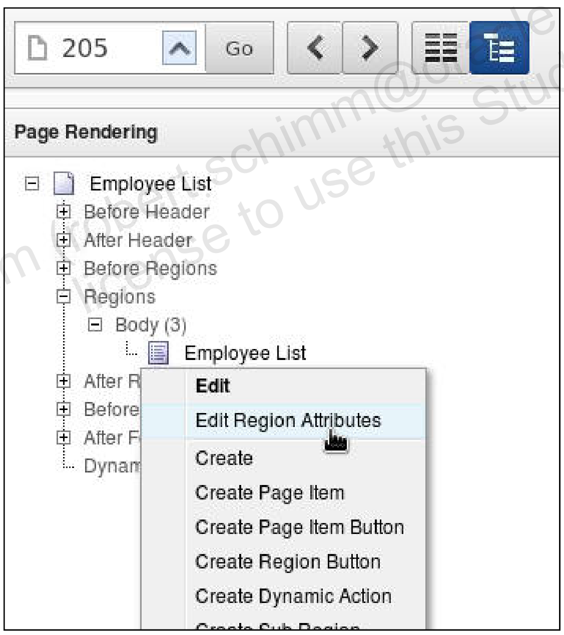
14) Go back to the **Create Form on Table** tab and click the **Application <*n*>** breadcrumb.



15) Click the **Employee List** page.



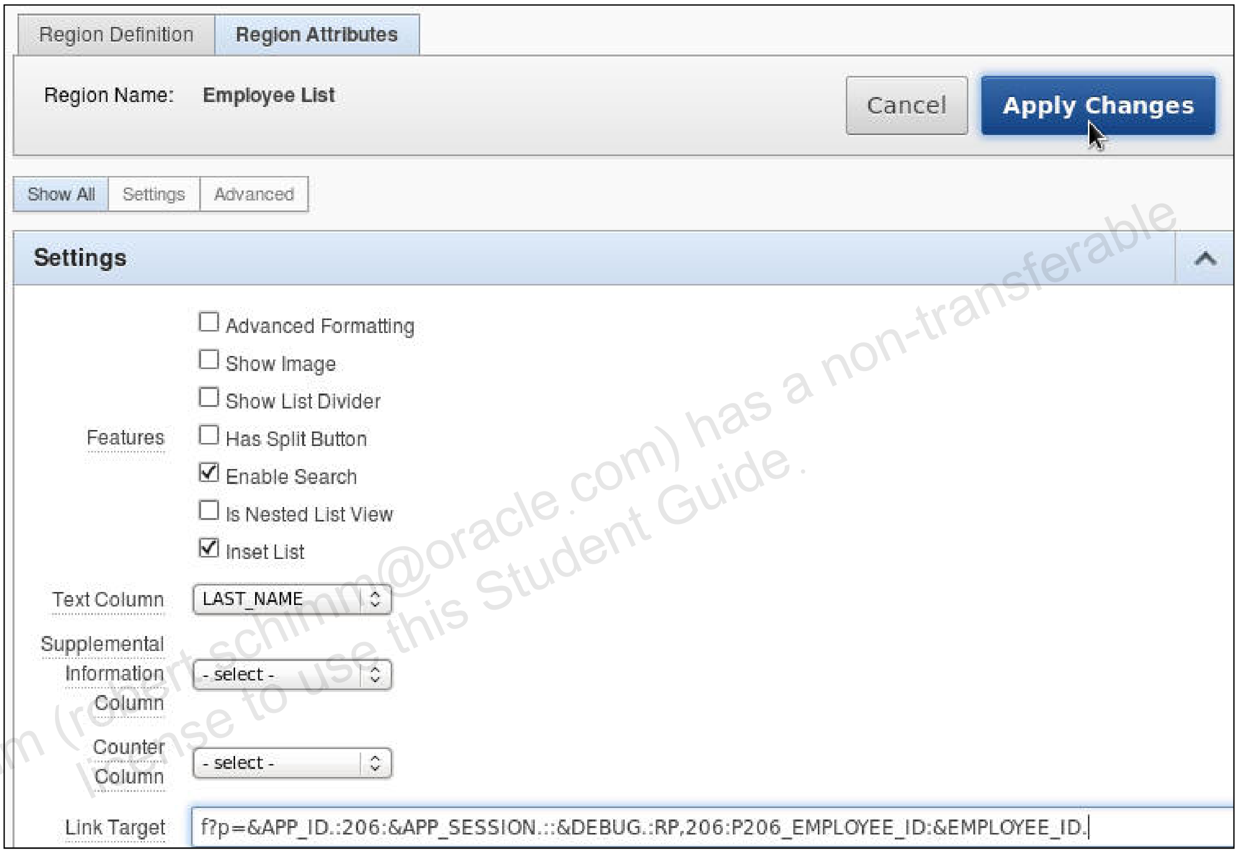
16) Under Regions, right-click **Employee List** and select **Edit Region Attributes**.



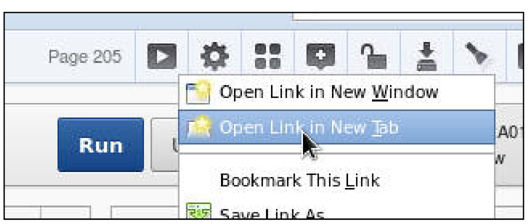
17) For Link Target, enter the following code (also located in `/home/oracle/labs/files/lab6_4.txt`) and click **Apply Changes**.

```
f?p=&APP_ID.:<n>:&APP_SESSION.::&DEBUG.:RP,<n>:P<n>_EMPLOYEE_ID:&EM
PLOYEE_ID.
```

This specifies the URL to the target page (change <*n*> to the page number of your form) and set **P<*n*>_EMPLOYEE_ID** to the **EMPLOYEE_ID** value of the **EMPLOYEE_LIST** list view entry.



18) Right-click **Run Page** on the Employee List page and select **Open Link in New Tab**.



19) On the Employee List page, click any **Employee Name** and note that it is linked to the Employee Detail page and the employee details are populated.

20) Click **Cancel** and you will be redirected to the **Employee List** page.

Practices for Lesson 7: Working with Pages and Regions

Chapter 7

Practices for Lesson 7: Overview

Practices Overview

In these practices, you create a report region on a Products page and modify the attributes of the report. You create a side bar region and a footer to the Customer Details page. Finally, you create a Global page for the desktop application, add a Static HTML region to the Global page, and run it. You also modify the Home region on the Mobile Home page.

Practice 7-1: Creating and Modifying Pages and Regions

Overview

In this practice, you create a report region on a Products page and modify the attributes of the report. You create a sidebar region, and add a footer to the Customer Details page.

Assumptions

You have performed the previous practices or imported the **`LAB064_SOLN.sql`** packaged application.

Tasks

a. Create a blank page called Products with a region called Products. Create a new tab called Products by using the existing tab set for this page.

b. Create a new report region called List of Products on the Products page. Use a Classic Report and display all the rows in the `OEHR_PRODUCTS_INFORMATION` table. Run the report after it is created.

c. Change the Page Template so there is no sidebar.

d. Modify the report so that it is a subregion under the Product region parent and displays only the Product ID, Product Name, Product Status, Category ID, and List Price columns in the report. Also, you want to display only 10 rows at a time and show the pagination in a select list. After you have performed these tasks, run the report.

e. Create a Hint sidebar region on the right side of the Customer Details page that includes the following HTML code (located in `/home/oracle/labs/files/lab7_1_1.txt`):

```
Use this page to enter and <br> maintain customer information.
```

f. Add a footer to the Customer Details region on the Customer Details page so that the following message (located in `/home/oracle/labs/files/lab7_1_2.txt`) appears at the bottom of the region when a user enters this page:

```
<i>The record created or modified in this form is reflected in
the Customer Report.</i>
```

Practice 7-2: Creating a Global Page and Adding a Region

Overview

In this practice, you create a Global desktop page for the Order Management application and review the page. You also add a Static HTML region to the Global Desktop page.

Assumptions

You should have completed the previous practices.

Tasks

a. Create a Global desktop page in the Order Management application and review it in the Application Properties.

b. Add a Static HTML region to the Global Desktop page. Call the region as “In the News” on the Global page with the following code (located in `/home/oracle/labs/files/lab7_2.txt`):

Practice 7-3: Modify the Mobile Home Page

Overview

In this practice, you modify the Home region on the Mobile Home page.

Assumptions

You should have completed the previous practices.

Tasks

a. Modify the Home region on the Mobile Home page.

Solution 7-1: Creating and Modifying Pages and Regions

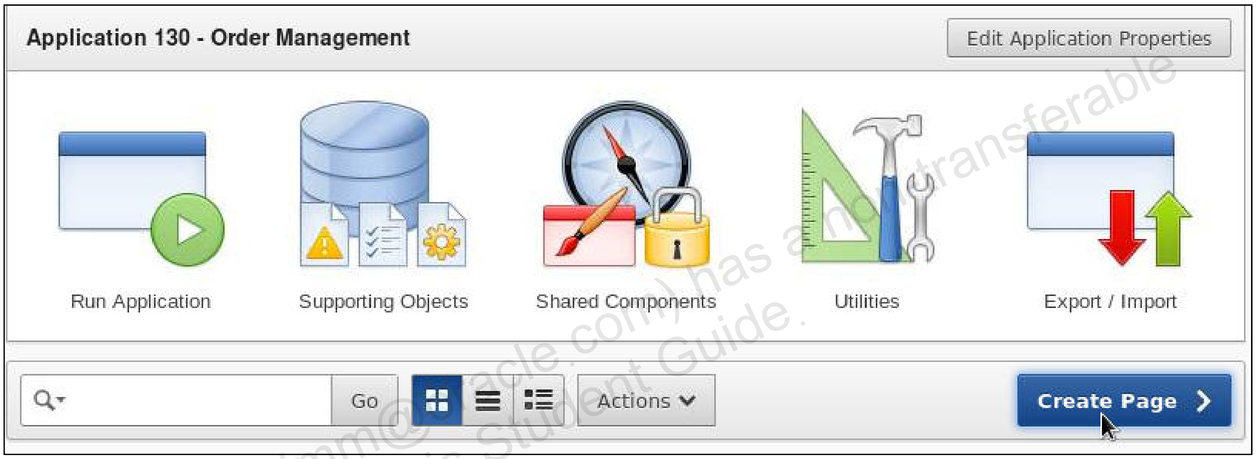
Overview

In this practice, you create a report region on a Products page, and modify the attributes of the report. You create a sidebar region, and add a footer to the Customer Details page.

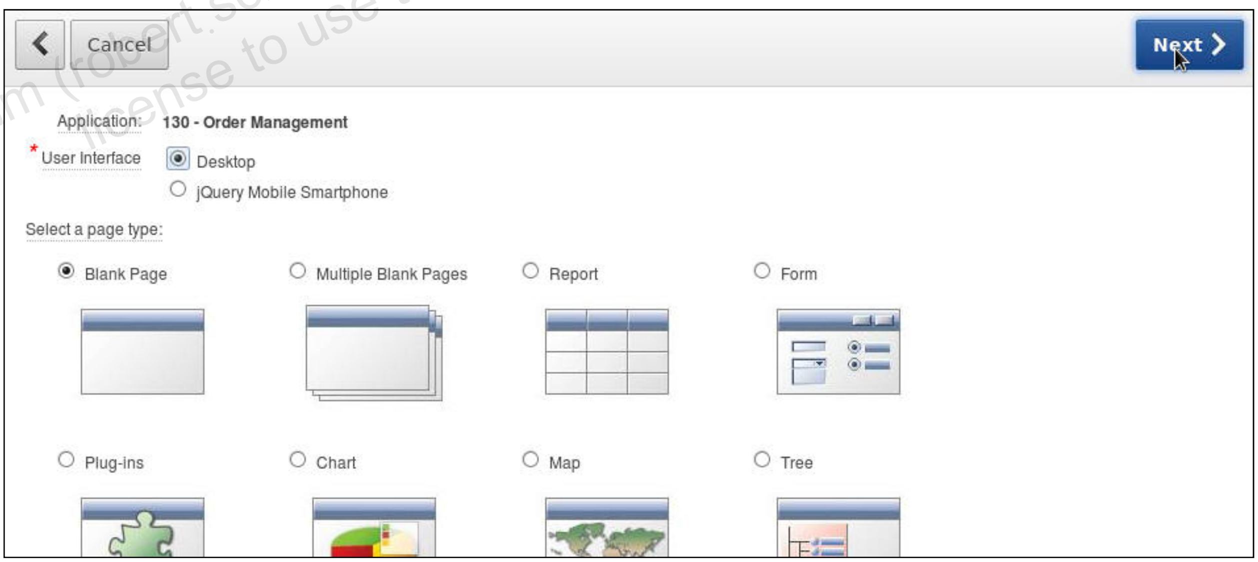
Steps

a. Create a blank page called Products with a region called Products. Create a new tab called Products by using the existing tab set for this page.

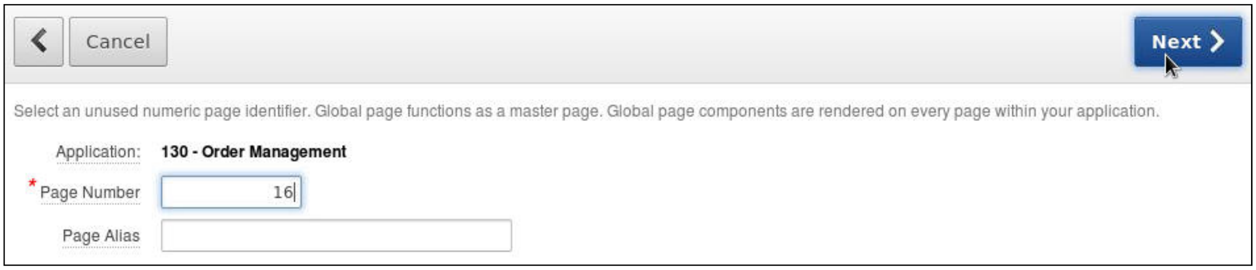
1) Navigate to the **Order Management** application home page and click **Create Page >**.



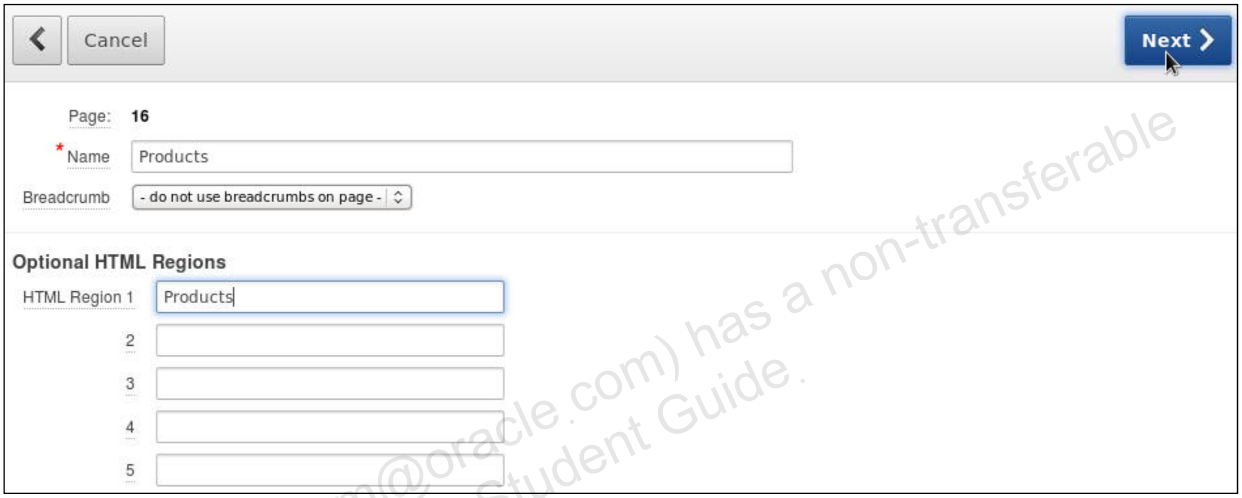
2) Select **Blank Page** and click **Next >**.



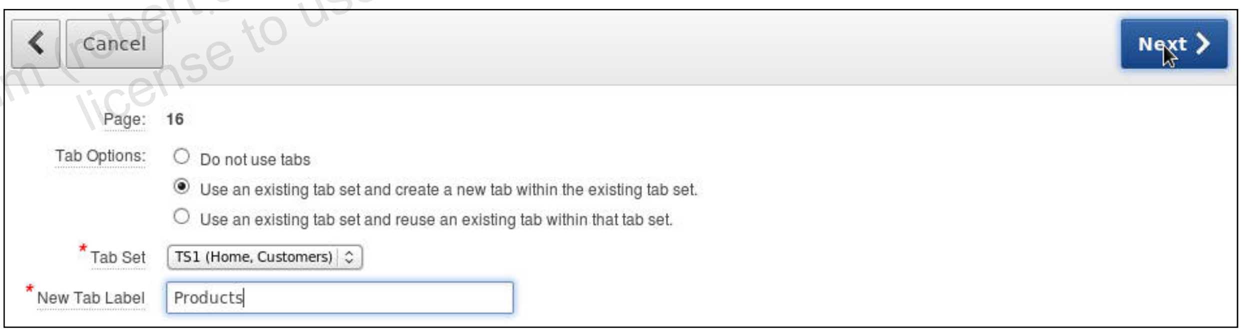
3) Accept the default number and click **Next >**.



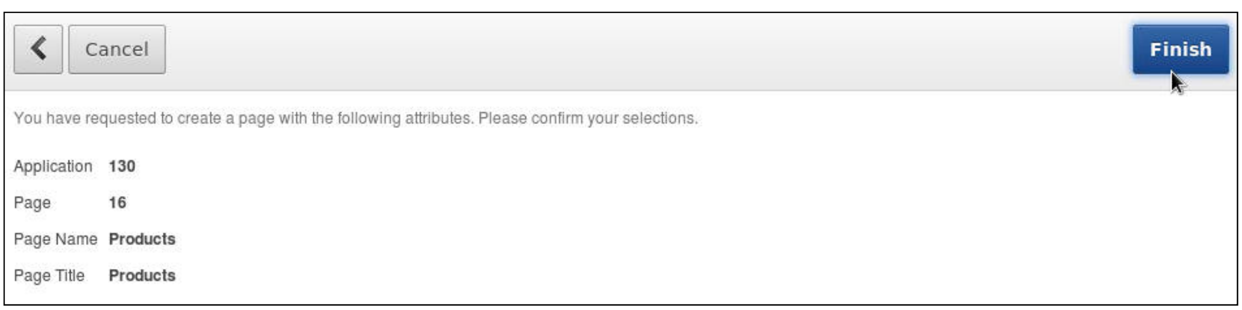
4) Enter `Products` for Name and HTML Region 1. Click **Next >**.



5) Select **Use an existing tab set and create a new tab within the existing tab set** option. Enter `Products` for New Tab Label and click **Next >**.



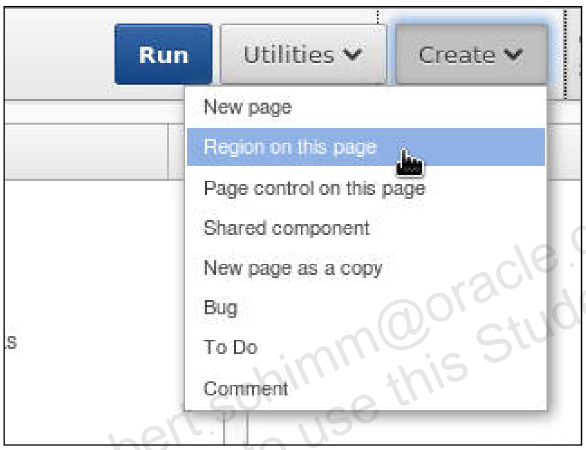
6) Click **Finish**.



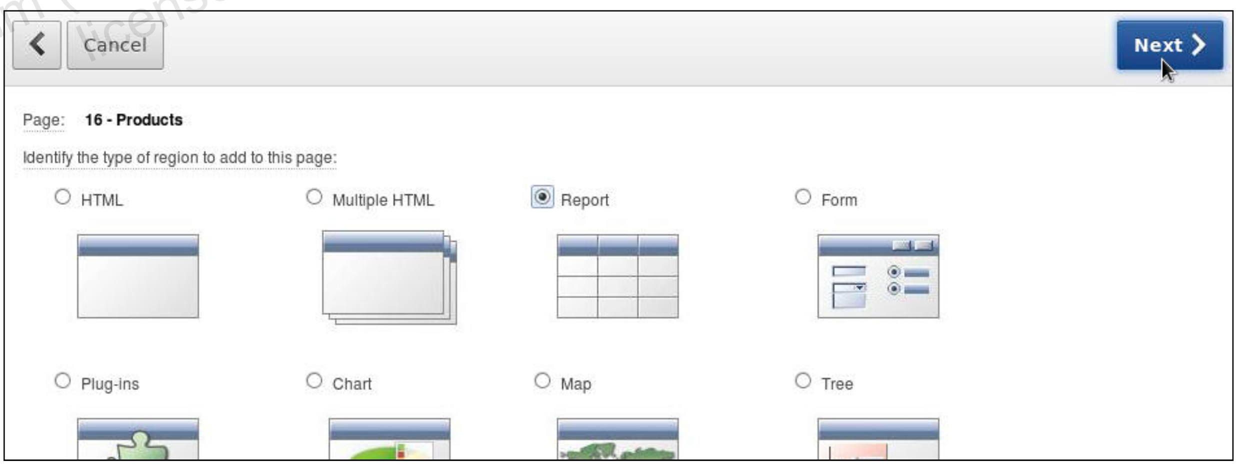
7) Click the **Edit Page** icon.

b. Create a new report region called List of Products on the Products page. Use a Classic report and display all the rows in the `OEHR_PRODUCTS_INFORMATION` table. Run the report after it is created.

1) On the Page Definition page, click **Create** and select **Region on this page**.

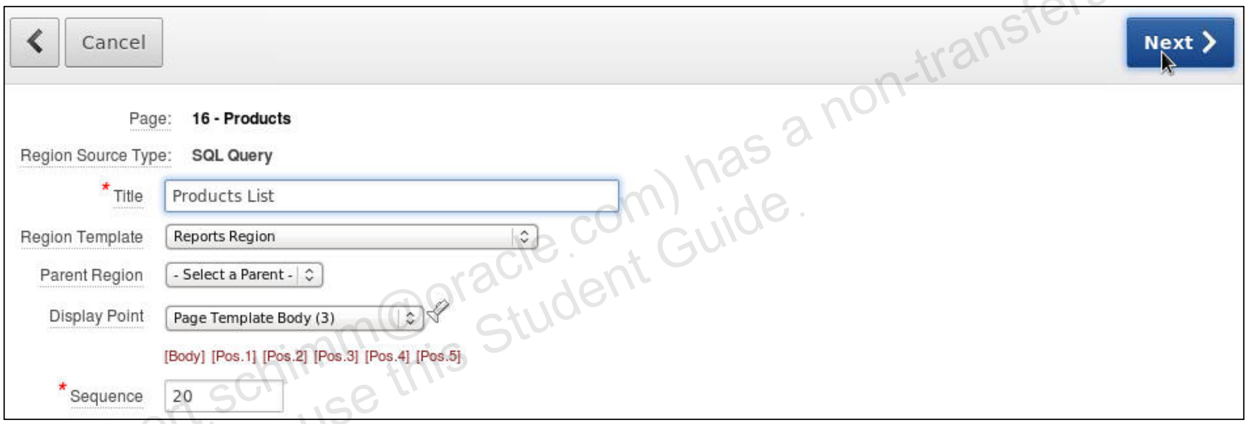


2) Select the **Report** option, and click **Next >**.



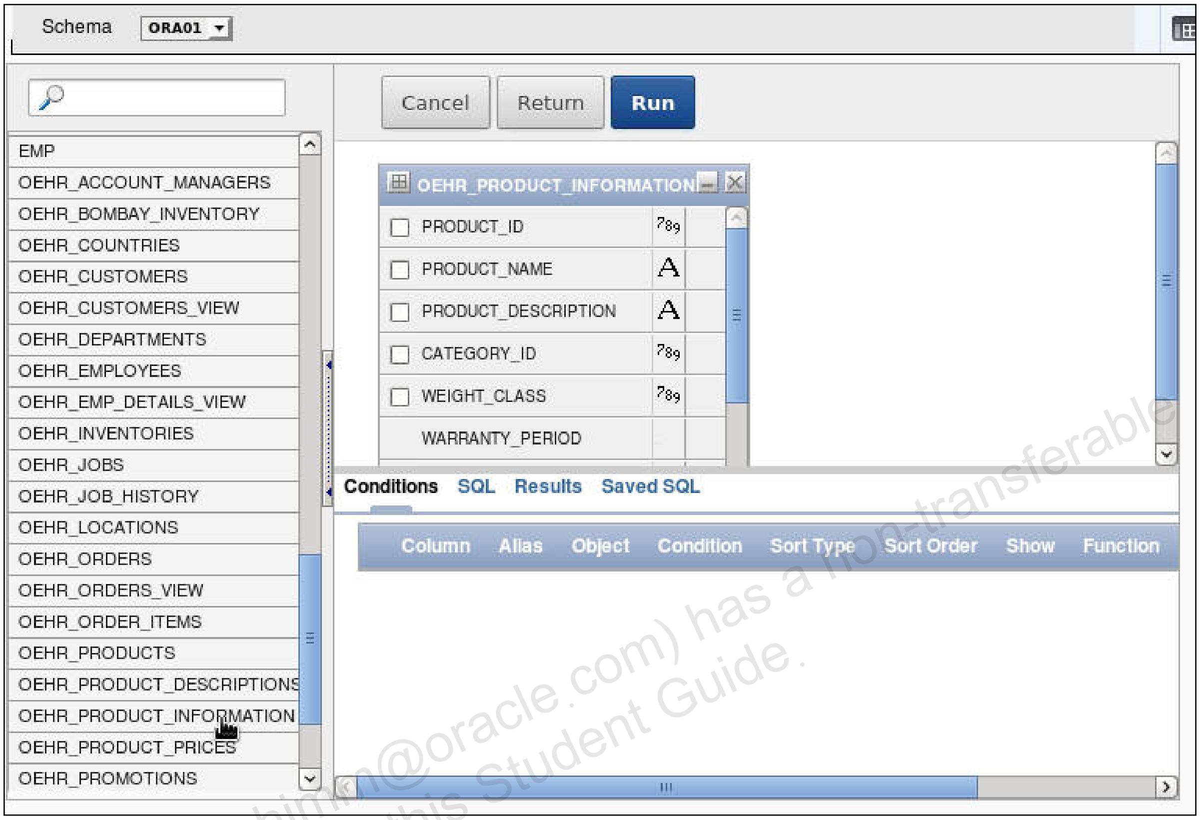
3) Select the **Classic Report** option and click **Next >**.

4) Enter `Products List` for **Title** and click **Next >**.

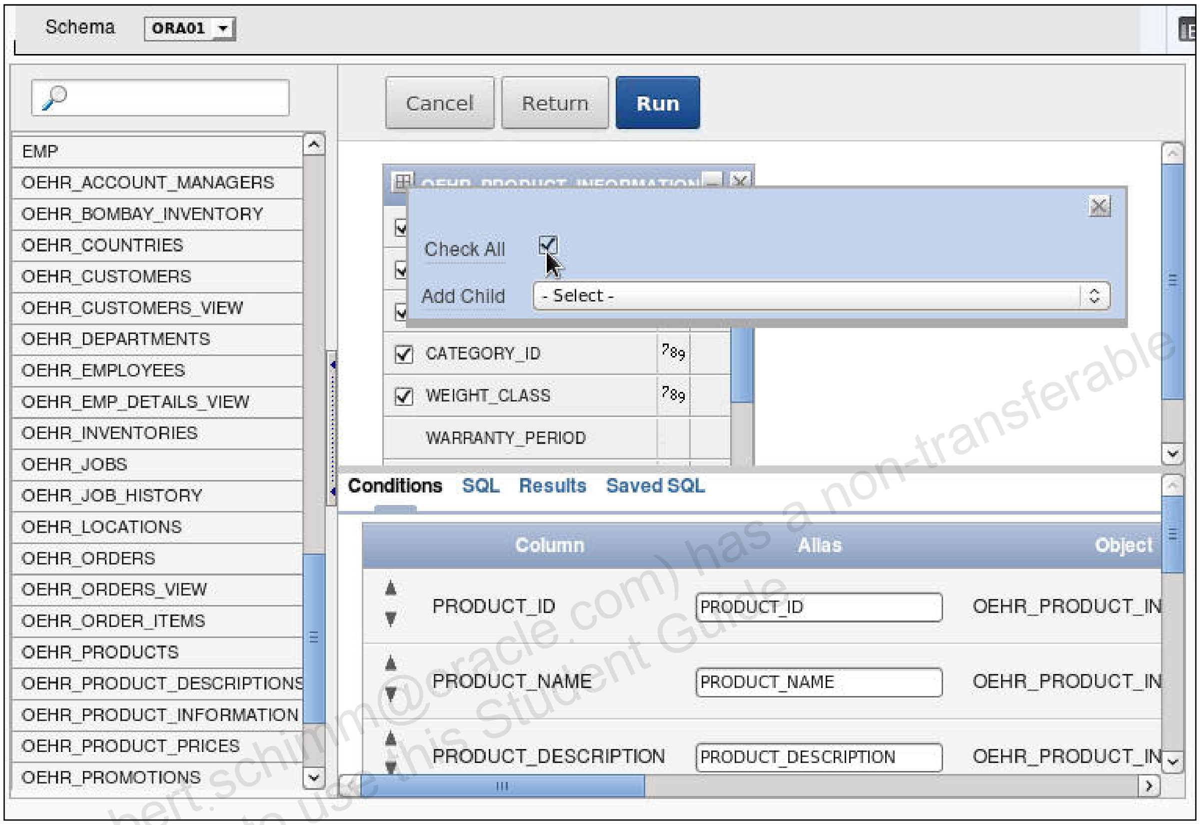


5) Click the **Query Builder** button.

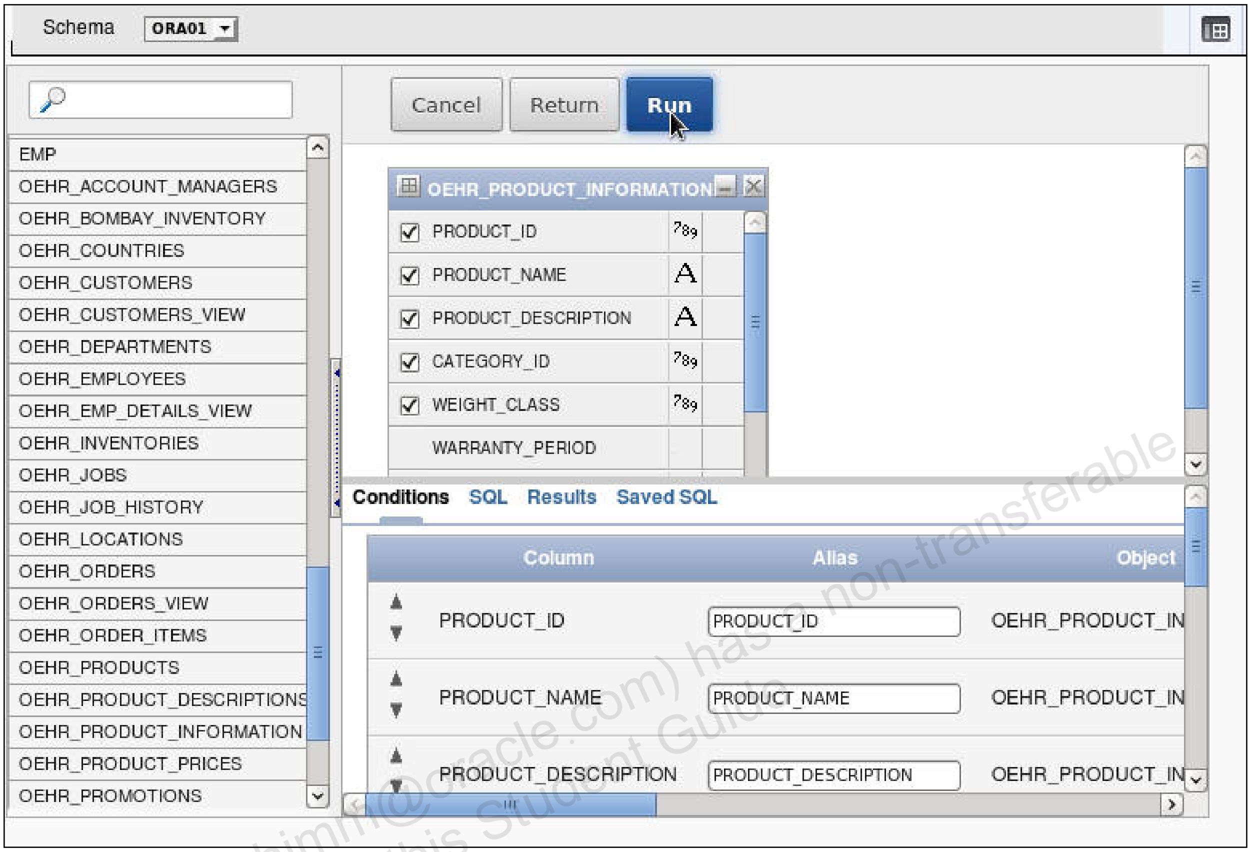
6) Scroll down and select **`OEHR_PRODUCT_INFORMATION`** from the Object Selection pane.



7) The selected object appears in the Design pane. Click the **Table Actions** icon in the top-left corner of the `OEHR_PRODUCT_INFORMATION` table and select the **Check All** check box. This enables you to select all the columns for your query. Notice that all the columns are listed in the bottom pane.

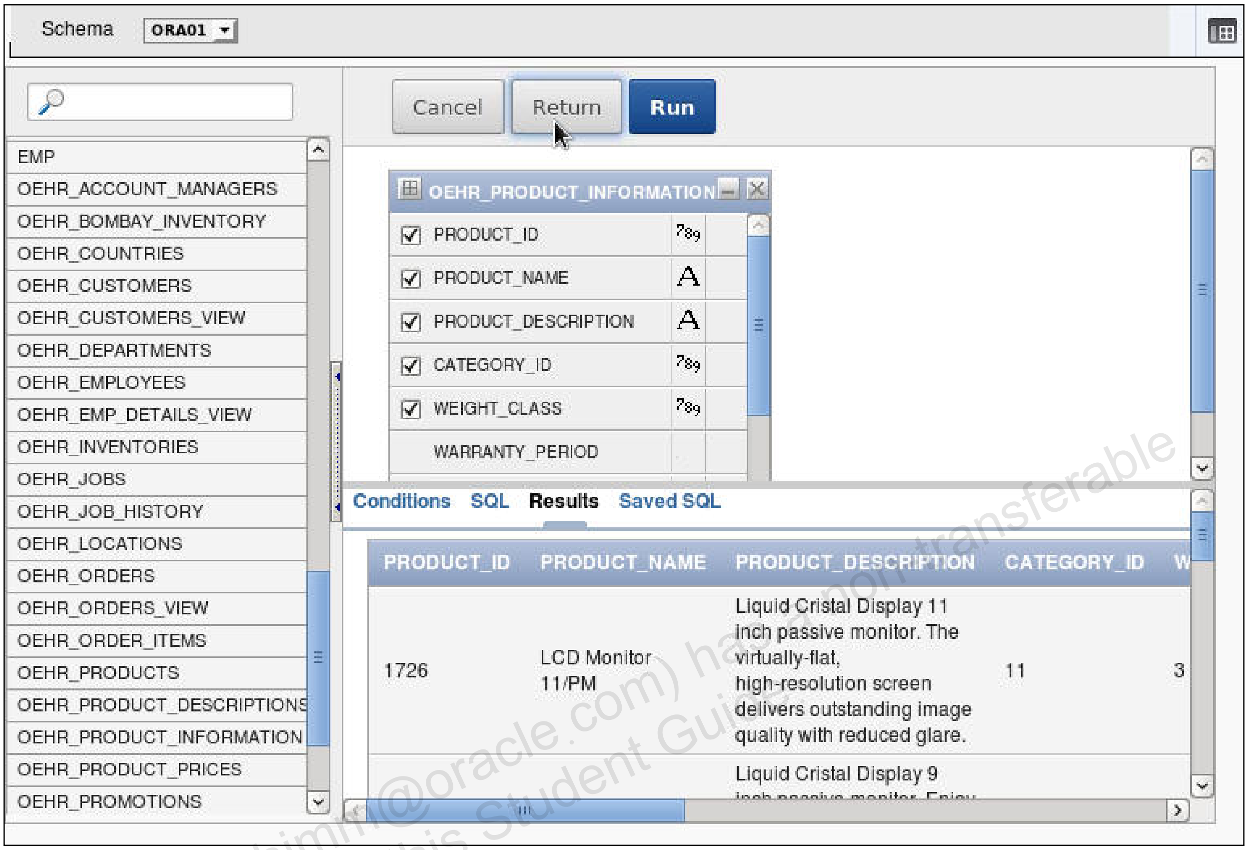


8) Click **Run**.

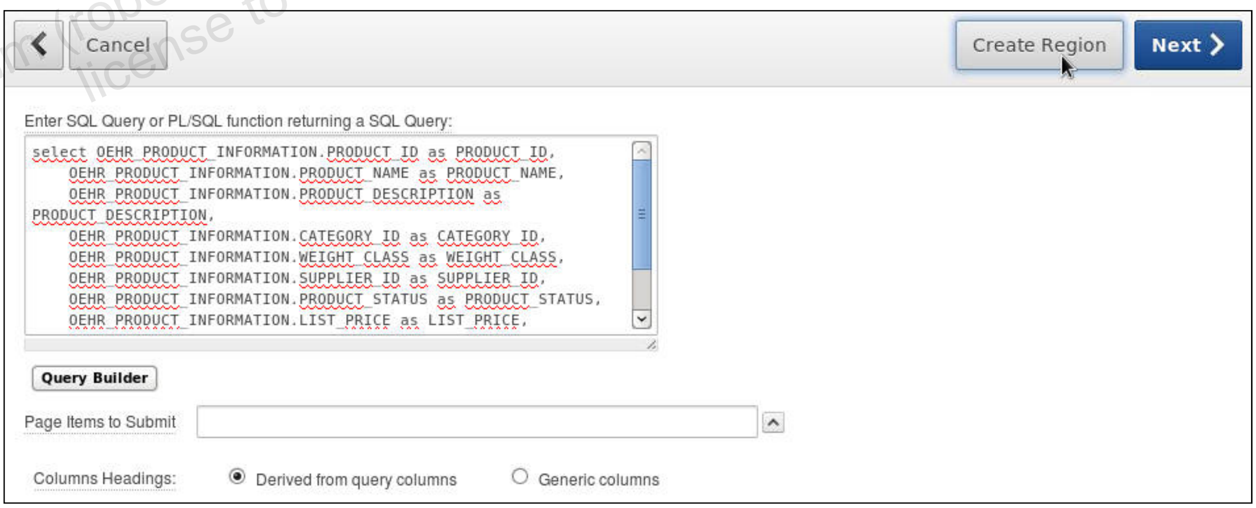


Schema
ORA01
Cancel
Return
Run
EMP
OEHR_ACCOUNT_MANAGERS
OEHR_BOMBAY_INVENTORY
OEHR_COUNTRIES
OEHR_CUSTOMERS
OEHR_CUSTOMERS_VIEW
OEHR_DEPARTMENTS
OEHR_EMPLOYEES
OEHR_EMP_DETAILS_VIEW
OEHR_INVENTORIES
OEHR_JOBS
OEHR_JOB_HISTORY
OEHR_LOCATIONS
OEHR_ORDERS
OEHR_ORDERS_VIEW
OEHR_ORDER_ITEMS
OEHR_PRODUCTS
OEHR_PRODUCT_DESCRIPTIONS
OEHR_PRODUCT_INFORMATION
OEHR_PRODUCT_PRICES
OEHR_PROMOTIONS
OEHR_PRODUCT_INFORMATION
PRODUCT_ID
PRODUCT_NAME
PRODUCT_DESCRIPTION
CATEGORY_ID
WEIGHT_CLASS
WARRANTY_PERIOD
Conditions
SQL
Results
Saved SQL
Column
Alias
Object
PRODUCT_ID
PRODUCT_ID
OEHR_PRODUCT_IN
PRODUCT_NAME
PRODUCT_NAME
OEHR_PRODUCT_IN
PRODUCT_DESCRIPTION
PRODUCT_DESCRIPTION
OEHR_PRODUCT_IN

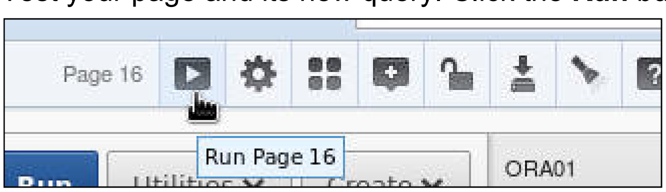
9) Click **Return**.



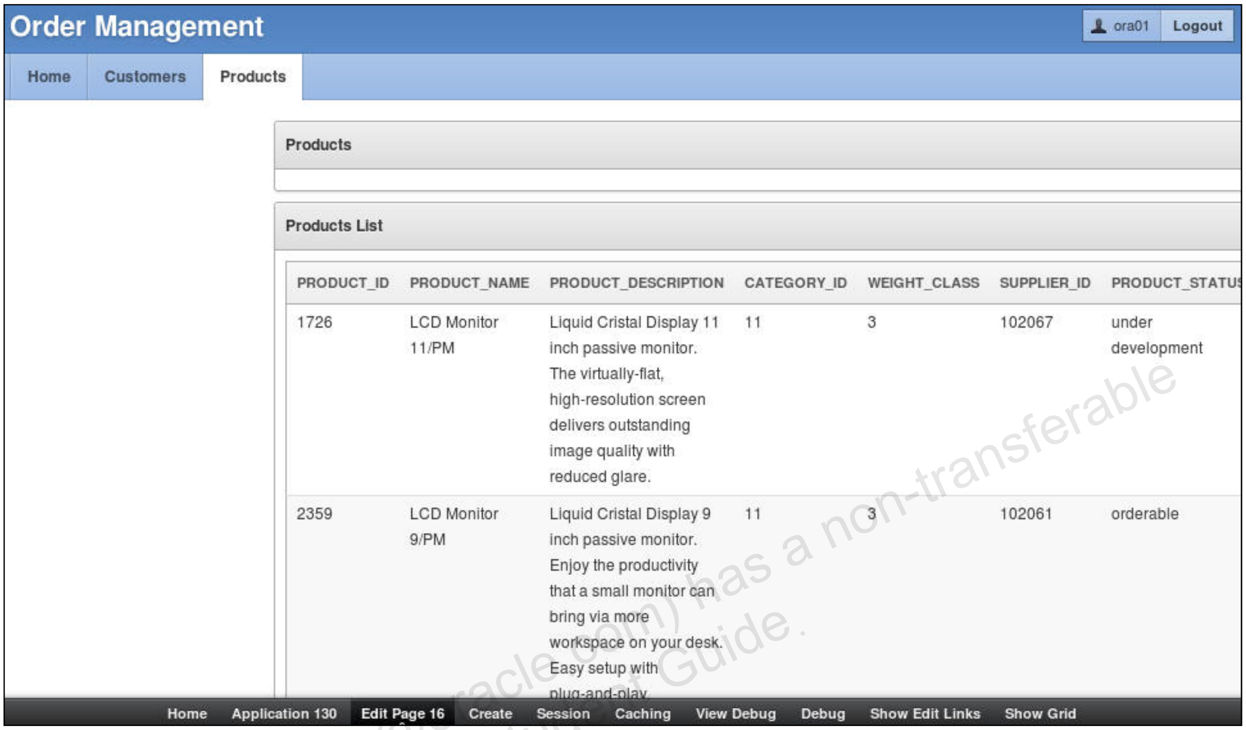
10) Notice that a query is built that contains all the columns in the `OEHR_PRODUCT_INFORMATION` table. Click the **Create Region** button.



11) Test your page and its new query. Click the **Run** button.

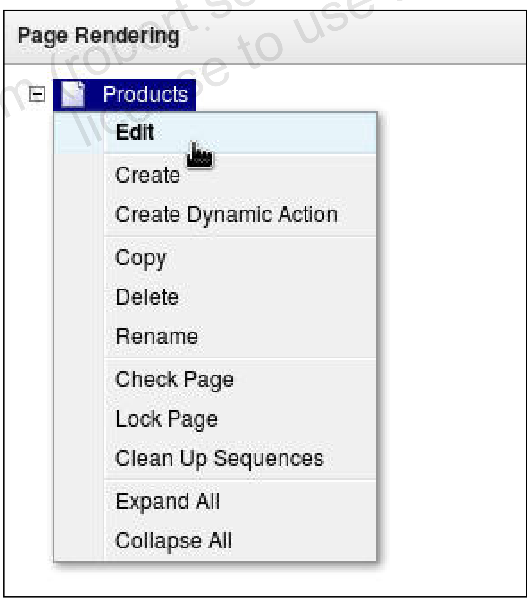


12) The report is displayed. (**Note:** If you had to re-login, the Home page is displayed. Click the **Products** tab to view the report.) Click the **Edit Page** link on the Developer toolbar.

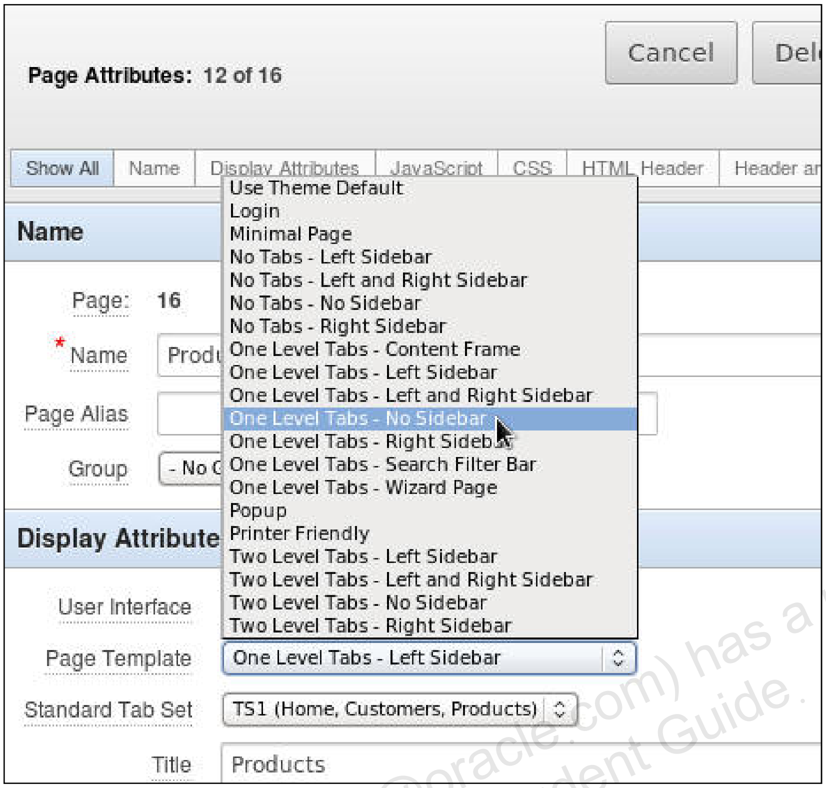


c. Change the Page Template so there is no sidebar.

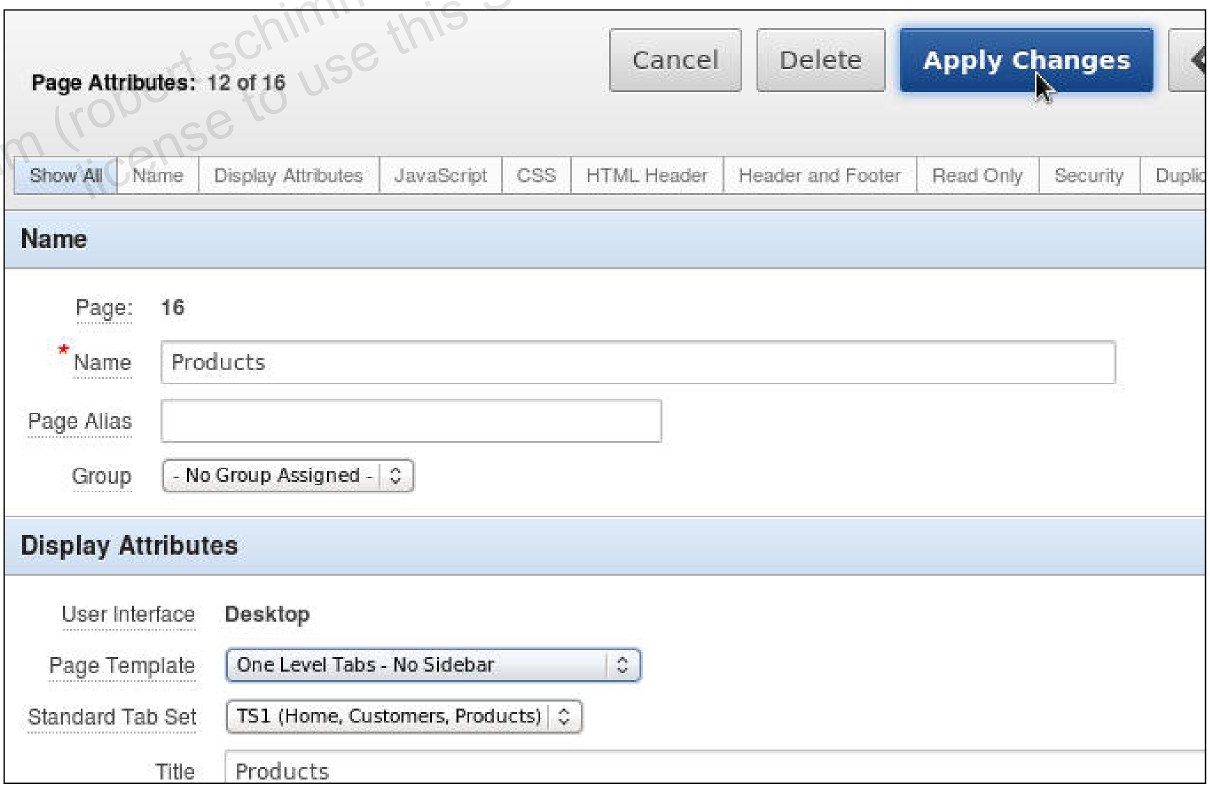
1) Right-click the **Products** page definition and select **Edit**.



2) Select **One Level Tabs – No Sidebar** for Page Template.

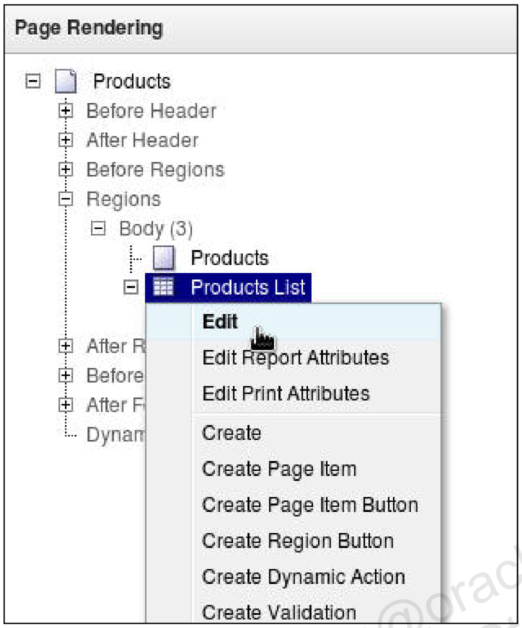


3) Click **Apply Changes**.

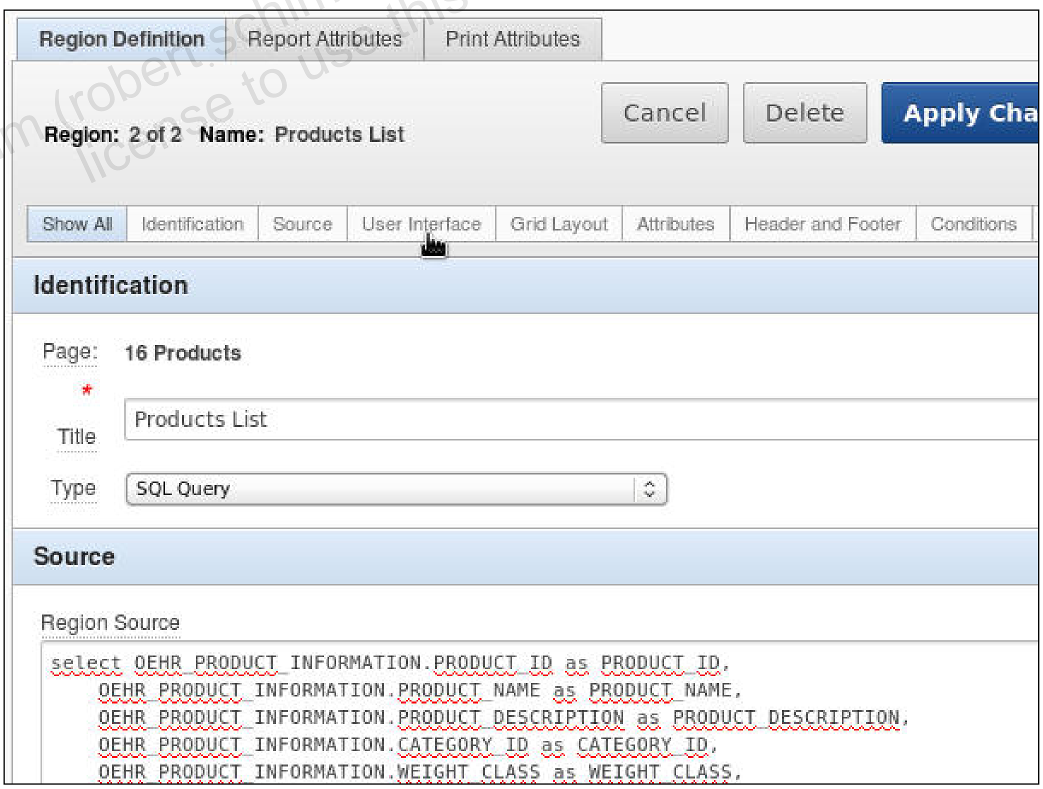


d. Modify the report so that it is a subregion under the Product region parent and displays only the Product ID, Product Name, Product Status, Category ID, and List Price columns in the report. Also, you want to display only 10 rows at a time and show the pagination in a select list. After you have performed these tasks, run the report.

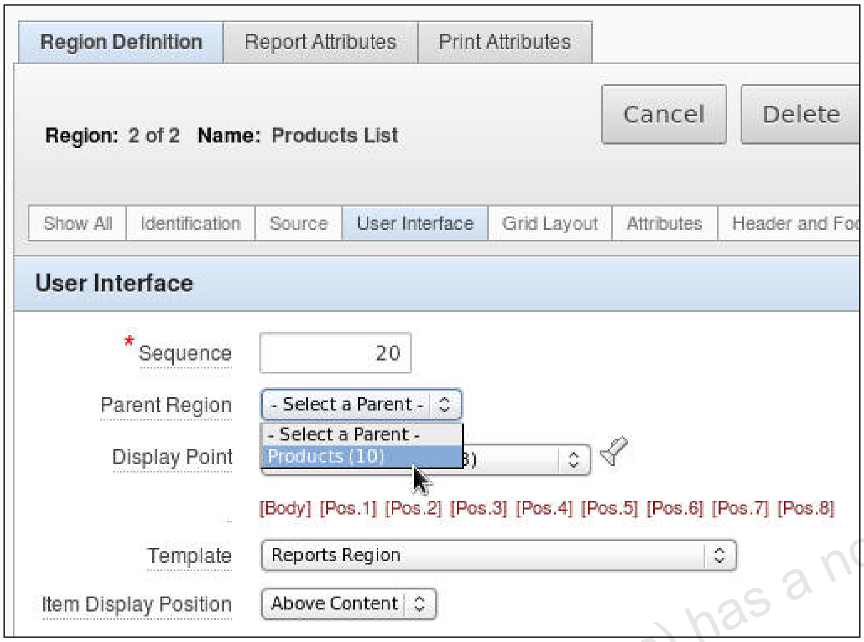
1) You want to make a few changes to the report. Right-click **Products List** and select **Edit**.



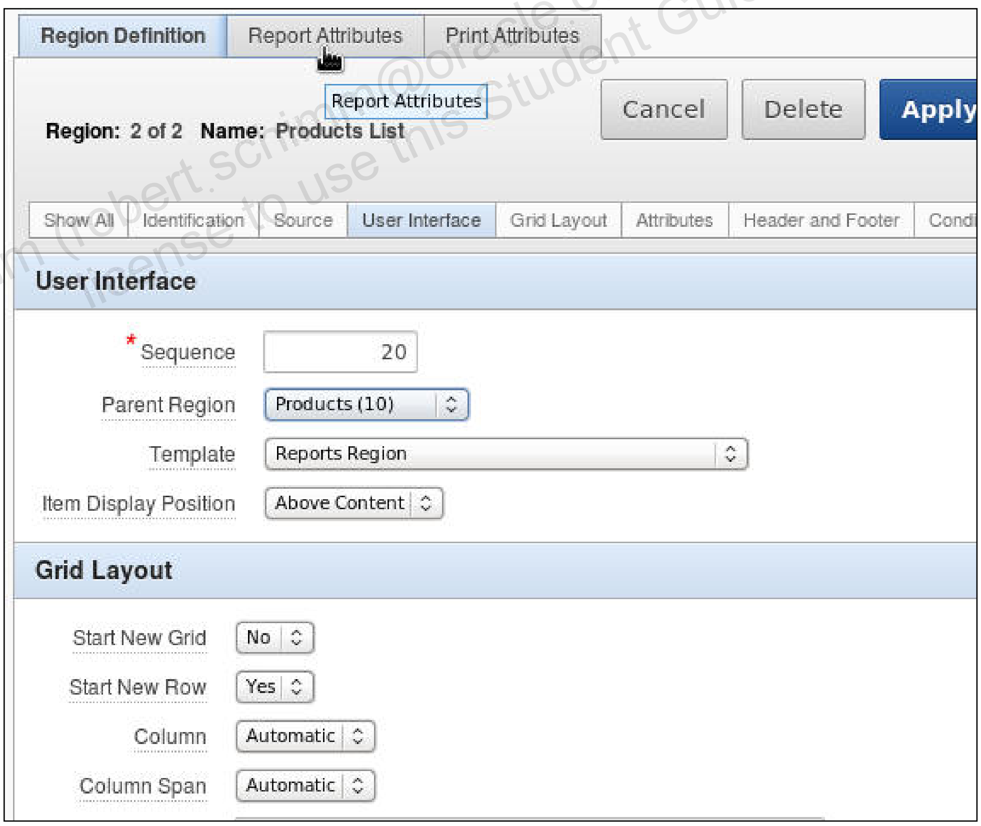
2) Click the **User Interface** subtab.



3) Select **Products** for Parent Region so that this region becomes a subregion of the Products parent.



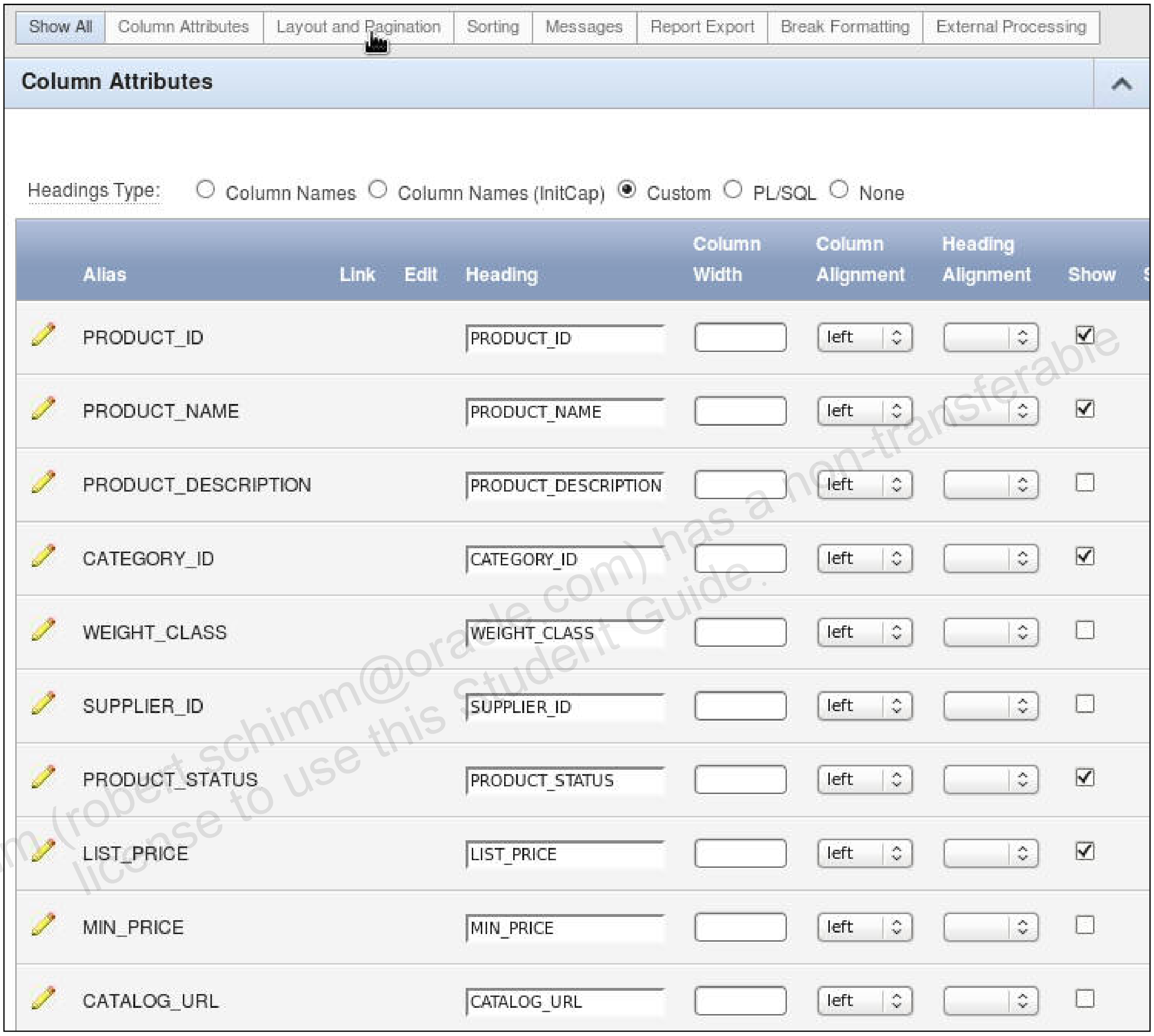
4) Click the **Report Attributes** tab.



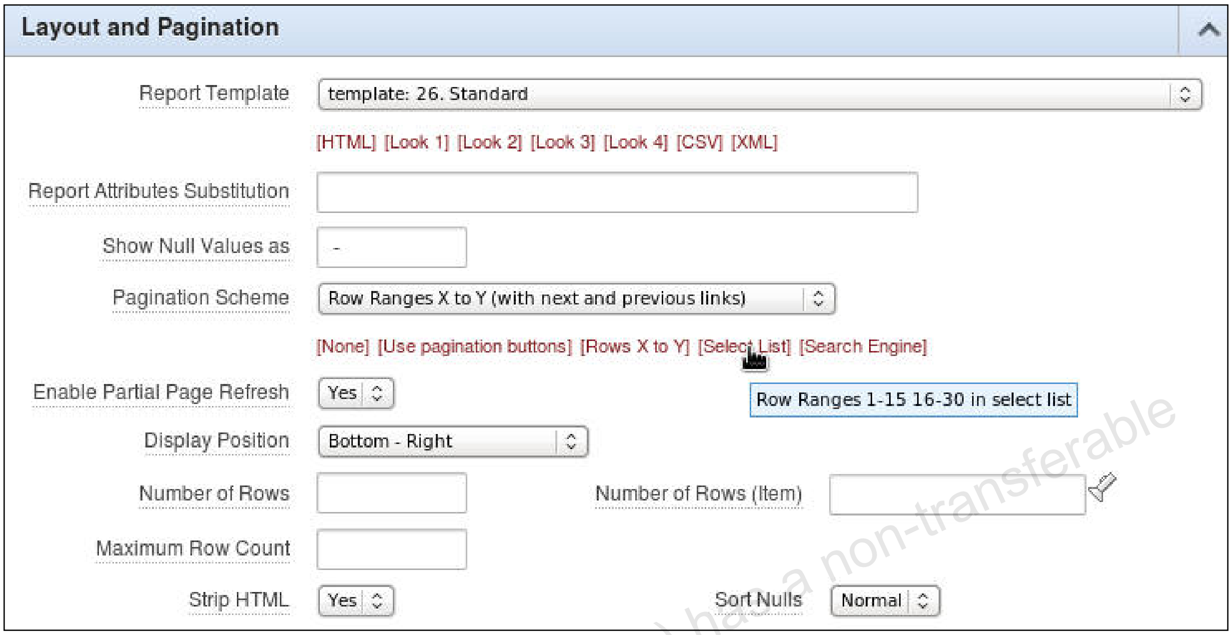
5) On the Report Attributes page, **deselect** the check boxes in the `Show` column that correspond to the following, and then click the **Layout and Pagination** tab.

- `PRODUCT_DESCRIPTION`
- `WEIGHT_CLASS`

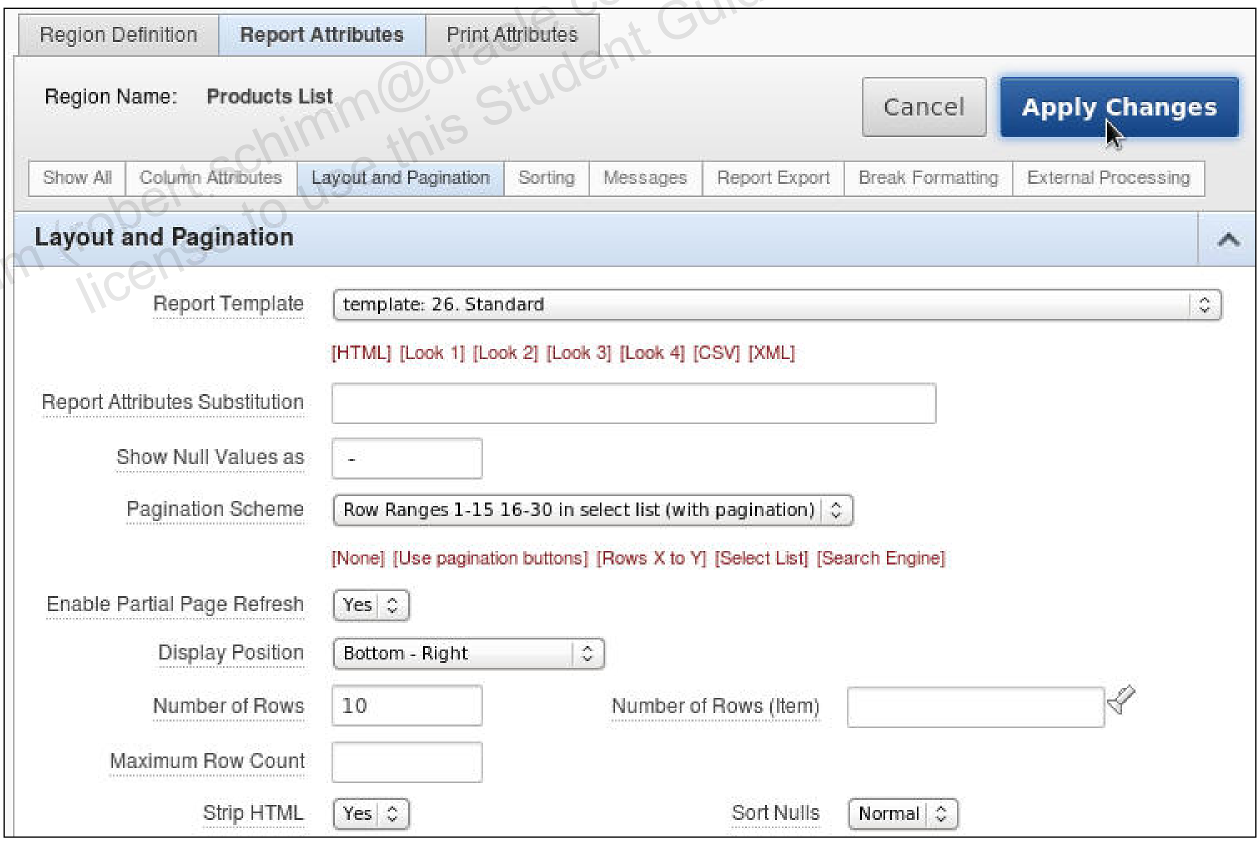
- `SUPPLIER_ID`
- `MIN_PRICE`
- `CATALOG_URL`



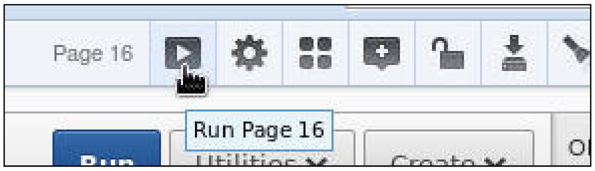
6) From the list of links displayed below the Pagination Scheme select list, click **[Select List]**.



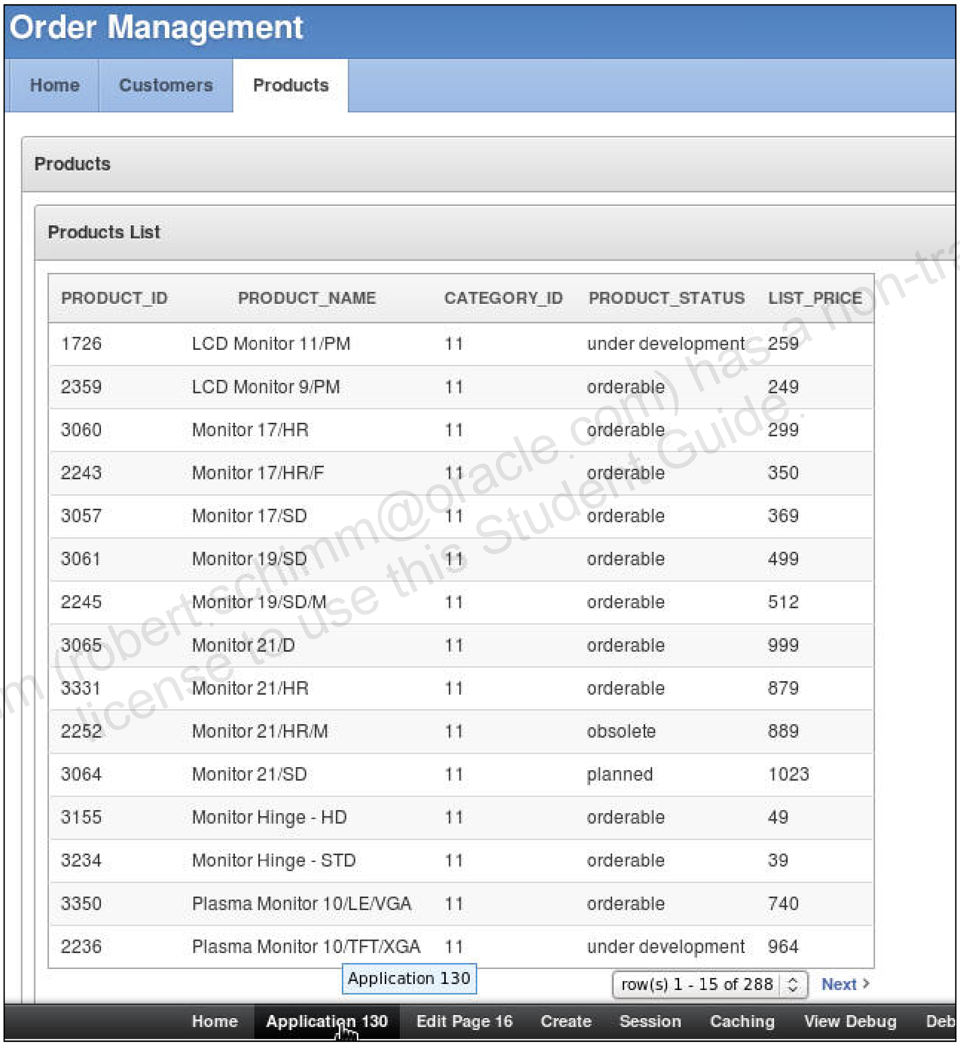
7) In the Number of Rows column, enter `10` and click **Apply Changes**.



8) Run the page to view your changes. Click the **Run** button.



9) Notice that the List of Products region is now contained within the Products parent region, that only the columns that you specified are shown, and that the pagination is now in a select list. Click the **Application <*n*>** link on the Developer toolbar.

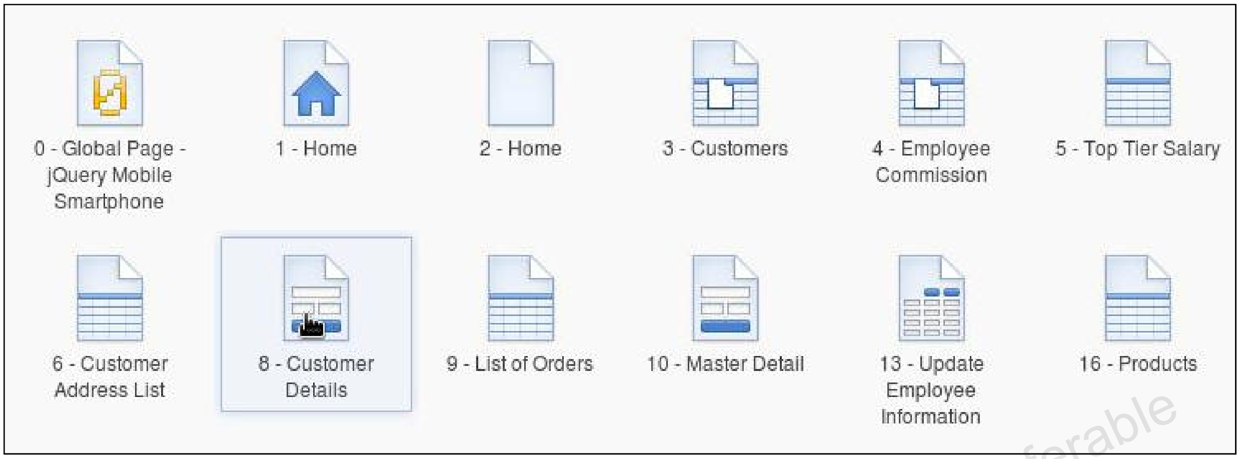


PRODUCT_ID	PRODUCT_NAME	CATEGORY_ID	PRODUCT_STATUS	LIST_PRICE
1726	LCD Monitor 11/PM	11	under development	259
2359	LCD Monitor 9/PM	11	orderable	249
3060	Monitor 17/HR	11	orderable	299
2243	Monitor 17/HR/F	11	orderable	350
3057	Monitor 17/SD	11	orderable	369
3061	Monitor 19/SD	11	orderable	499
2245	Monitor 19/SD/M	11	orderable	512
3065	Monitor 21/D	11	orderable	999
3331	Monitor 21/HR	11	orderable	879
2252	Monitor 21/HR/M	11	obsolete	889
3064	Monitor 21/SD	11	planned	1023
3155	Monitor Hinge - HD	11	orderable	49
3234	Monitor Hinge - STD	11	orderable	39
3350	Plasma Monitor 10/LE/VGA	11	orderable	740
2236	Plasma Monitor 10/TFT/XGA	11	under development	964

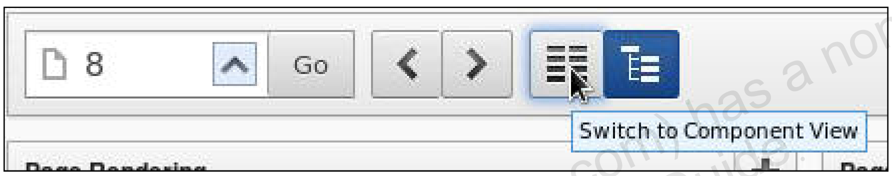
e. Create a Hint sidebar region on the right side of the Customer Details page that includes the following HTML code (located in `/home/oracle/labs/files/lab7_1_1.txt`):

```
Use this page to enter and <br> maintain customer information.
```

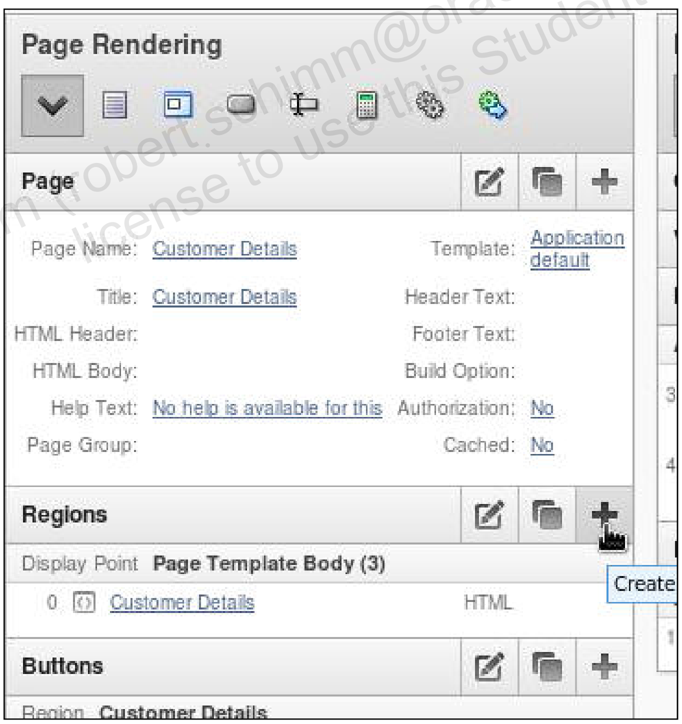
1) You want to make some changes to the Customer Details page. Click the **Customer Details** page.



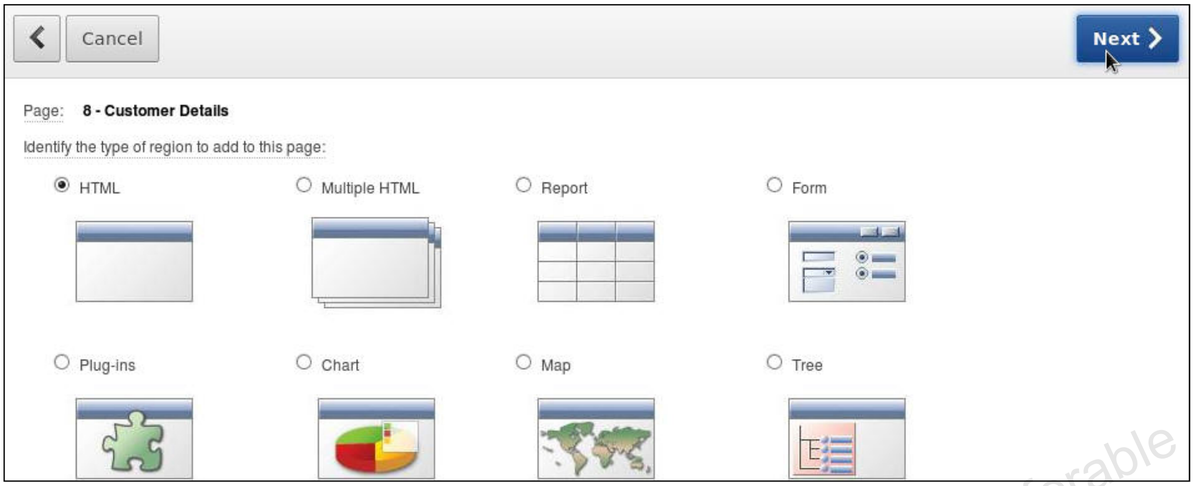
2) Switch to the Component View by clicking the **Component View** icon.



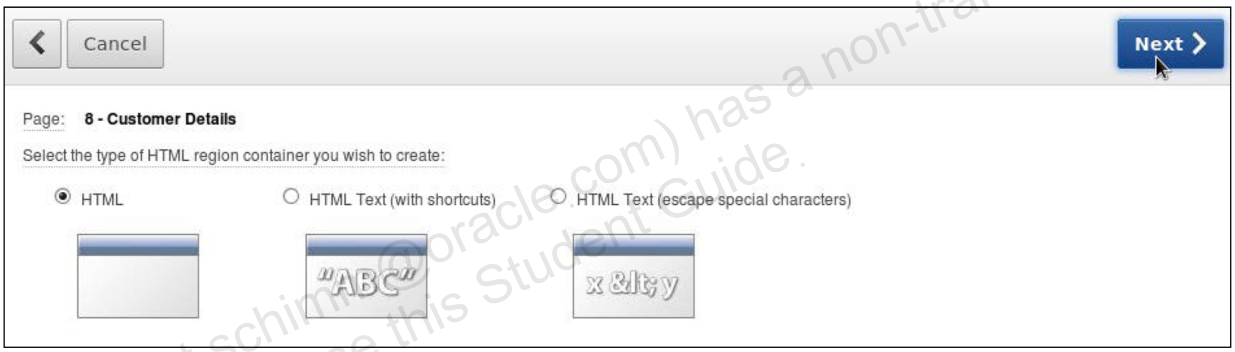
3) Under Regions, click the **Create** icon.



4) For the region type, select the **HTML** option and click **Next >**.



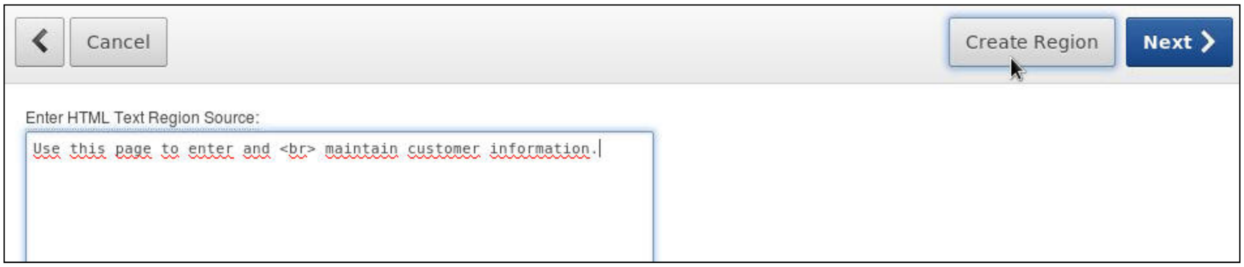
5) Select **HTML** again and click **Next >**.



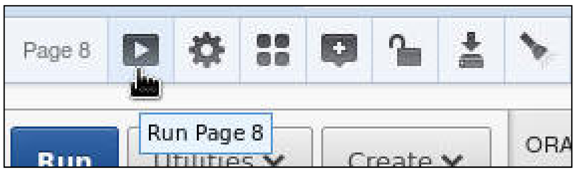
6) For Display Attributes, enter **Hint** for Title, select **Sidebar Region** for Region Template, and select **Page Template Region Position 3** for Display Point. Then click **Next >**.

7) In **Enter HTML Text Region Source**, enter the following (located in `/home/oracle/labs/files/lab7_1_1.txt`) and click **Create Region**.

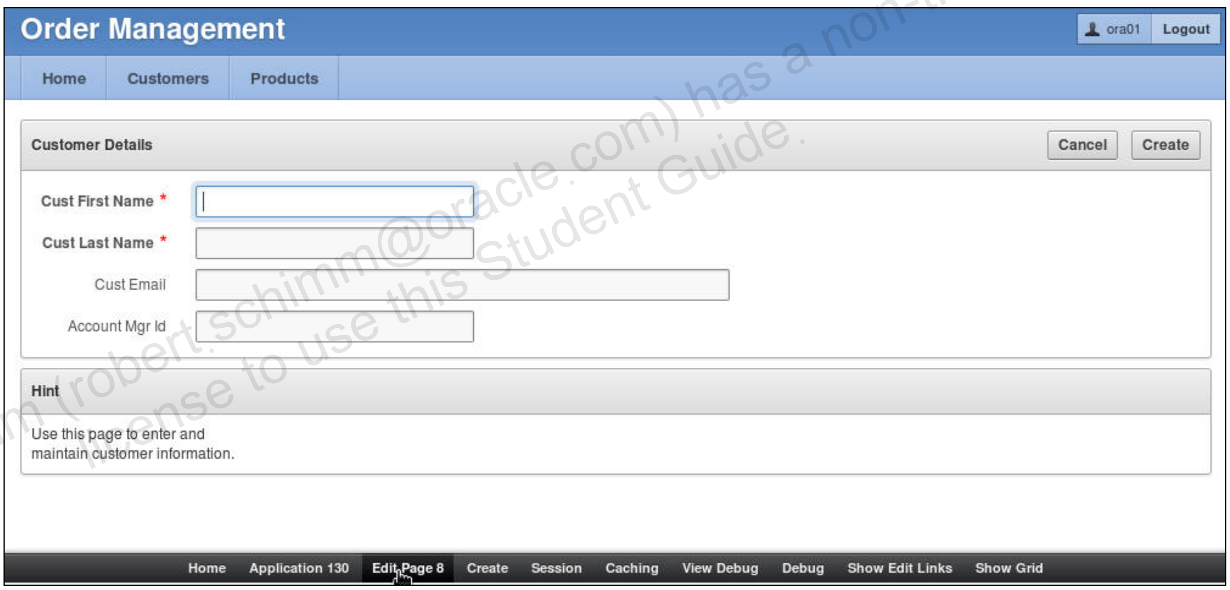
```
Use this page to enter and <br> maintain customer
information.
```



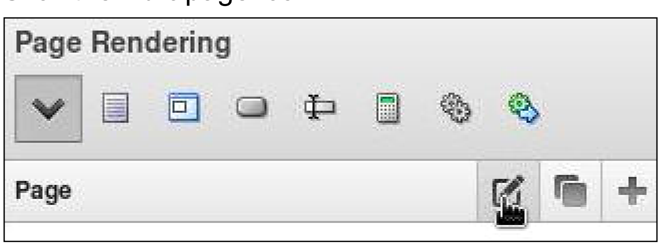
8) Run the page by clicking the **Run Page** icon.



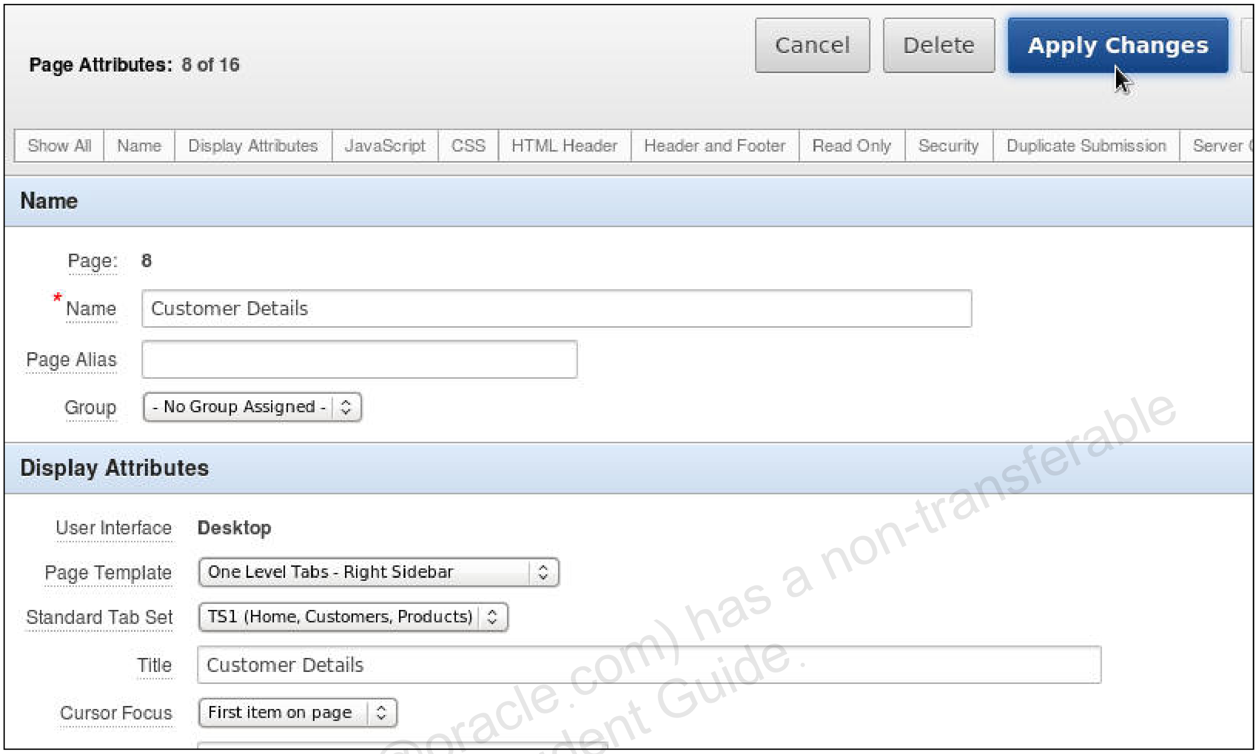
9) Note that the Hint region is not displayed as a sidebar region on the right side of the page. You need to change the page template so that a sidebar is provided. Click the **Edit Page** link on the Developer toolbar.



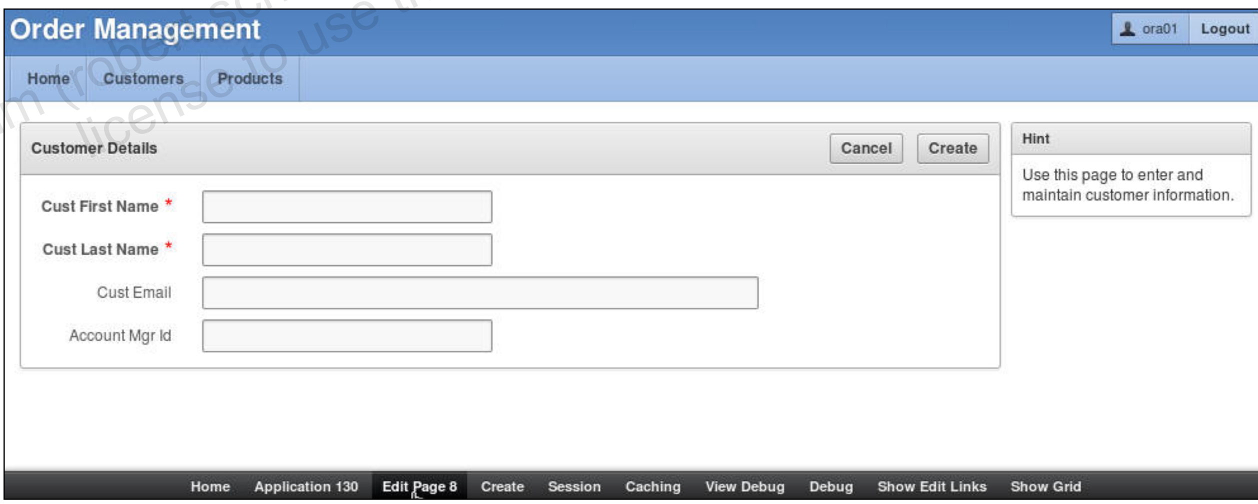
10) Click the **Edit** page icon.



11) Select **One Level Tabs – Right Sidebar** for Page Template and click **Apply Changes**.



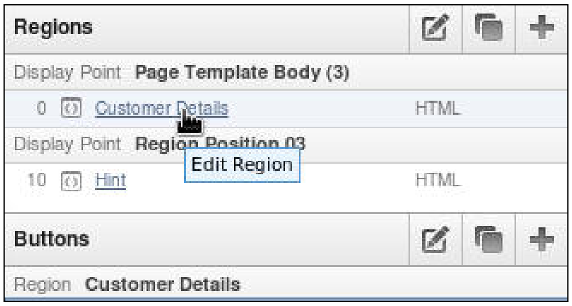
12) Run the page again and you see that the Hint is now displayed in the right sidebar area. Click the **Edit Page** link on the Developer toolbar.



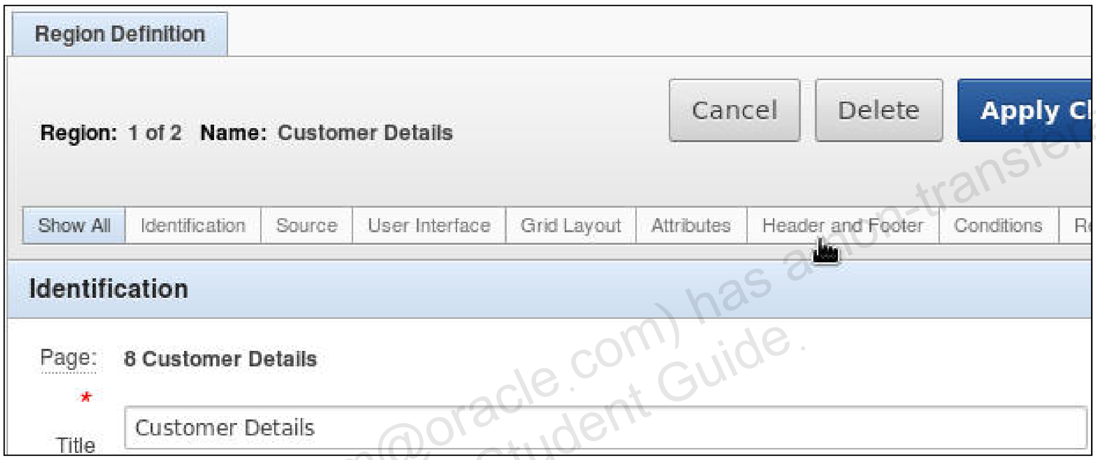
f. Add a footer to the Customer Details region on the Customer Details page so that the following message (located in `/home/oracle/labs/files/lab7_1_2.txt`) appears at the bottom of the region when a user enters this page:

```
<i>The record created or modified in this form is reflected in
the Customer Report.</i>
```

1) Under Regions, select **Customer Details**.

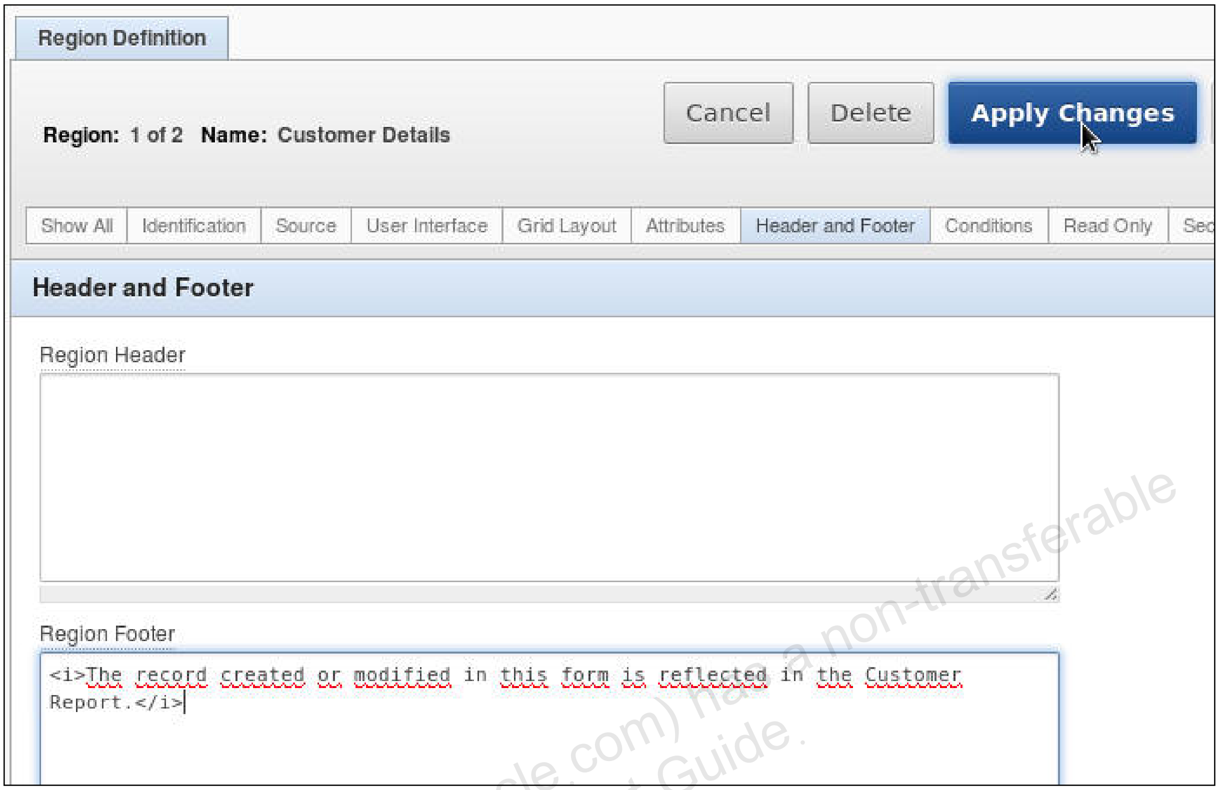


2) Click the **Header and Footer** tab from the list of links at the top of the page.



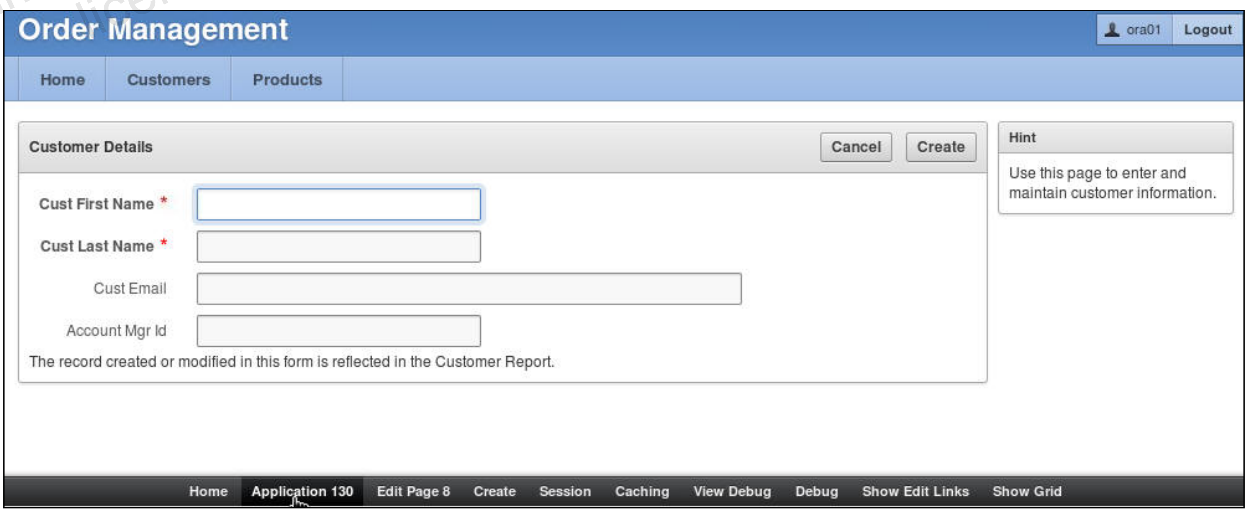
3) Enter the following (located in `/home/oracle/labs/files/lab7_1_2.txt`) in the Region Footer field and click **Apply Changes**.

```
<i>The record created or modified in this form is reflected
in the Customer Report.</i>
```



4) Test the page by clicking the **Run Page** icon in the top-right corner.

5) The footer text is displayed. Click the **Application <*n*>** link on the Developer toolbar.



Solution 7-2: Creating a Global Page and Adding a Region

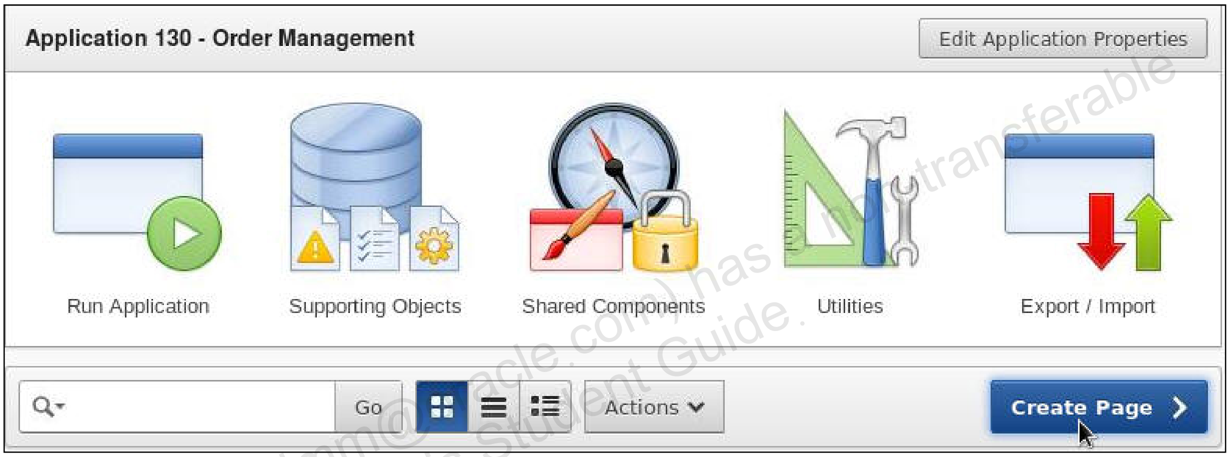
Overview

In this solution, you create a Global desktop page for the Order Management application and review the page. You also add a Static HTML region to the Global Desktop page.

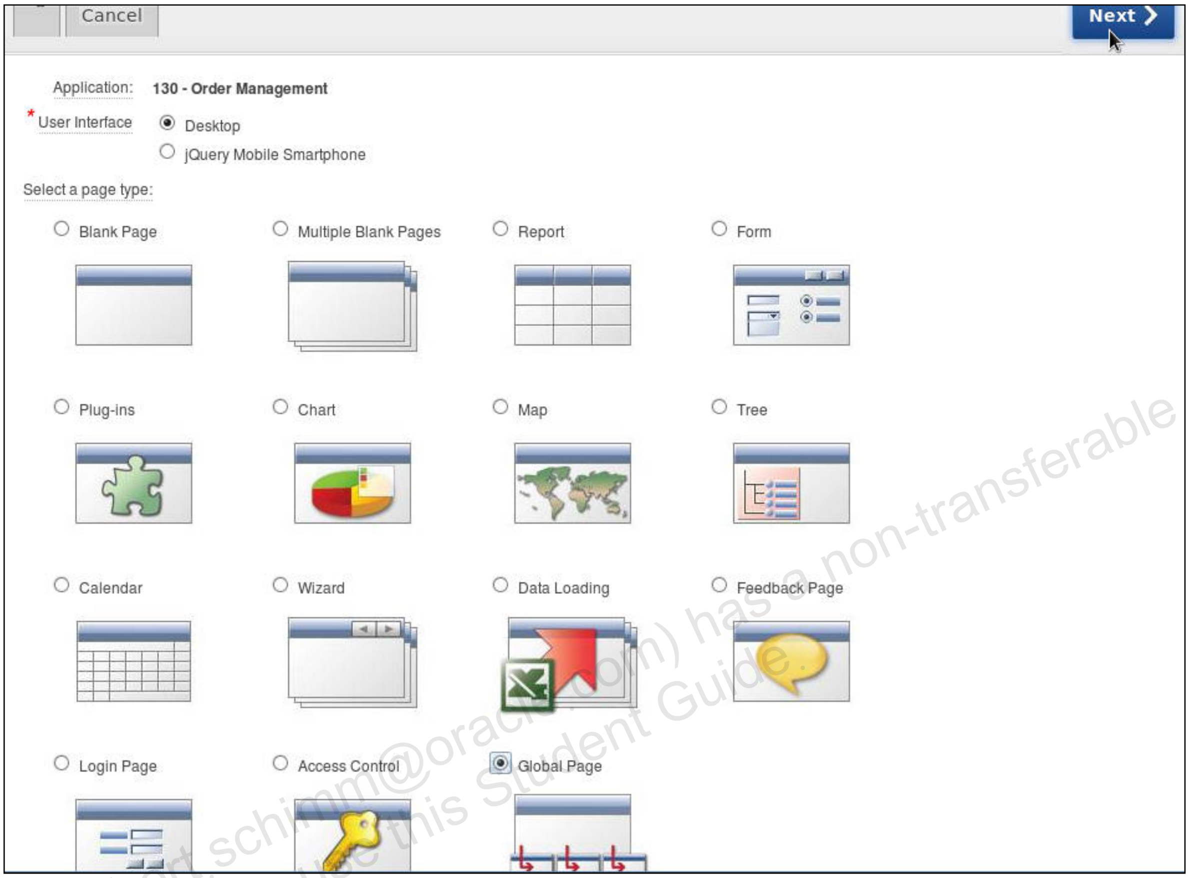
Tasks

a. Create a Global desktop page to the Order Management application and review it in Application Properties.

1) Navigate to the **Order Management** application home page and click **Create Page >**.

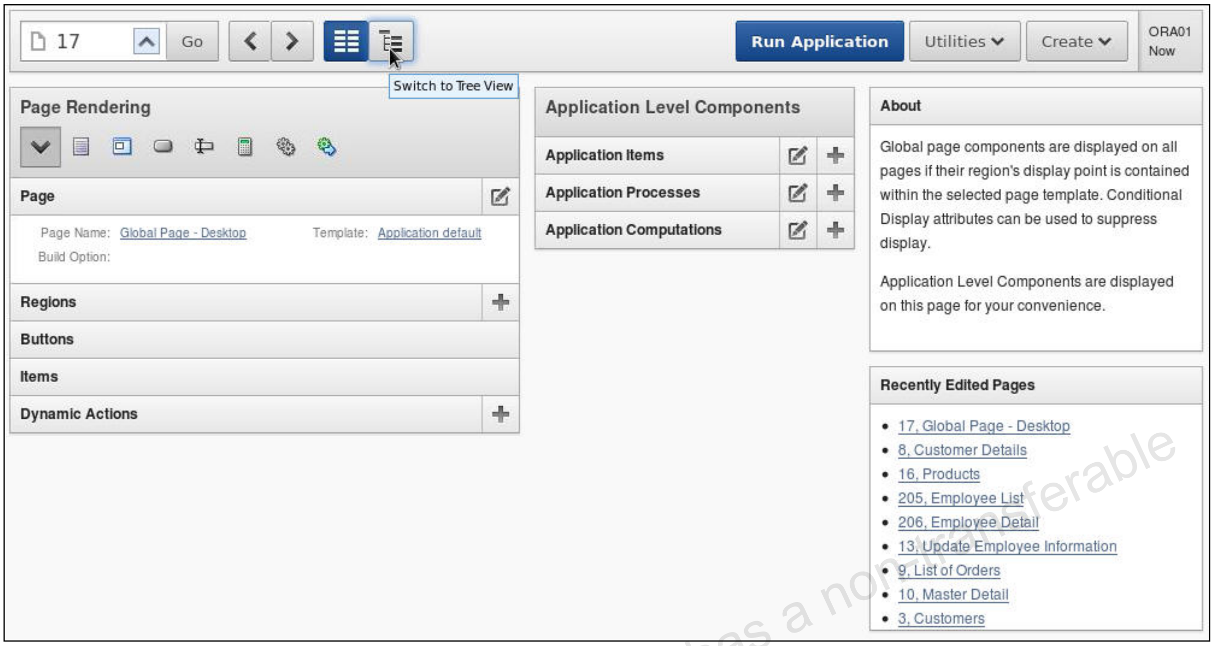


2) Select **Global Page** and click **Next >**. Make sure you have selected **Desktop** for User Interface.



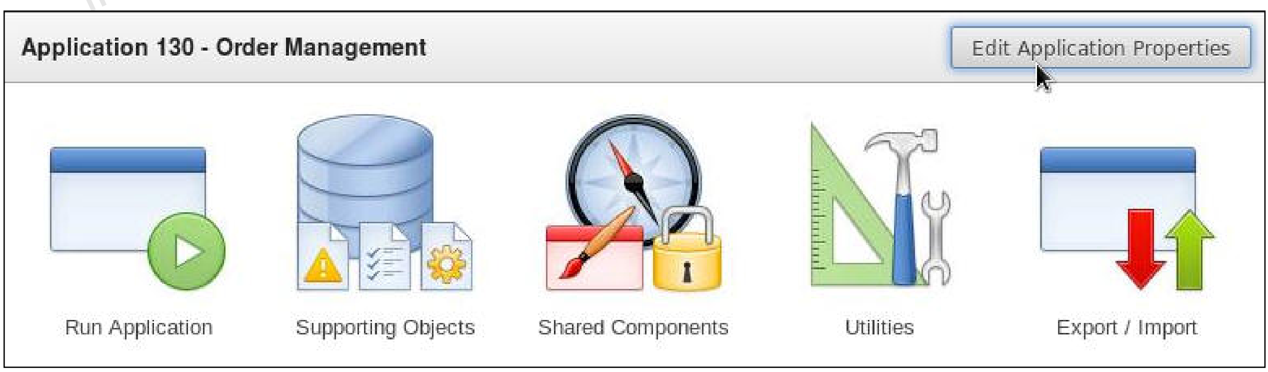
3) Click **Finish**.

4) Click the “Switch to Tree View” icon.

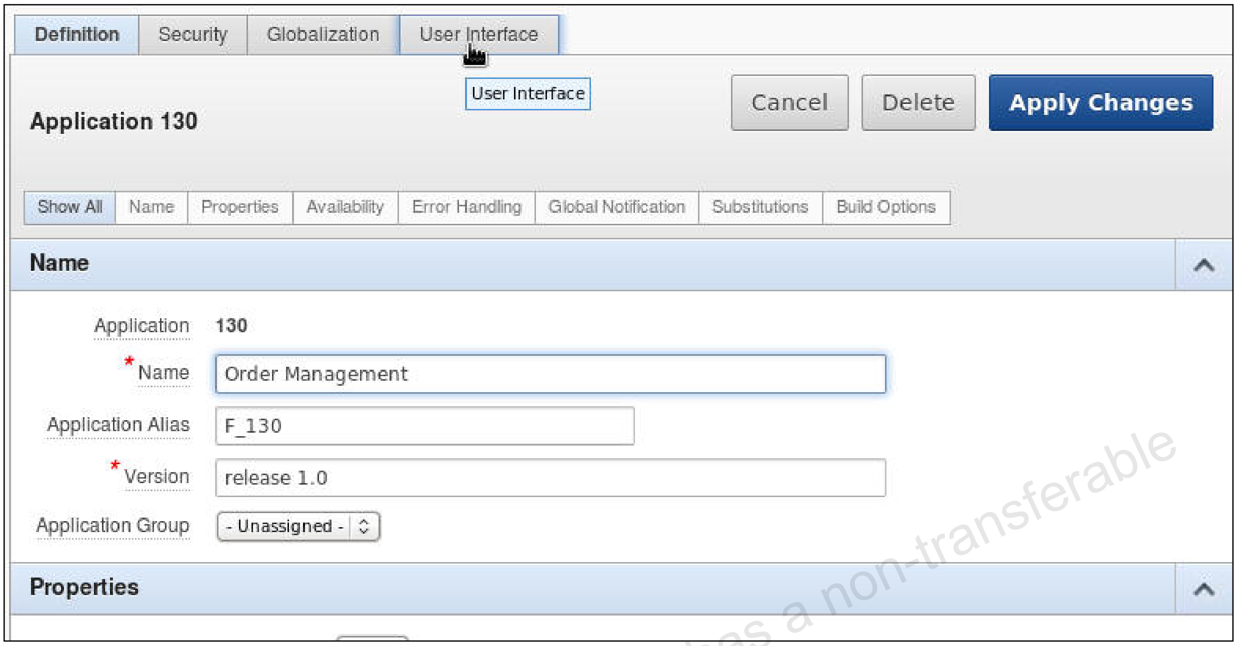


5) To review if the Global Page was added for the desktop user interface, click the **Application <*n*>** breadcrumb. You are taken to the Order Management application home page.

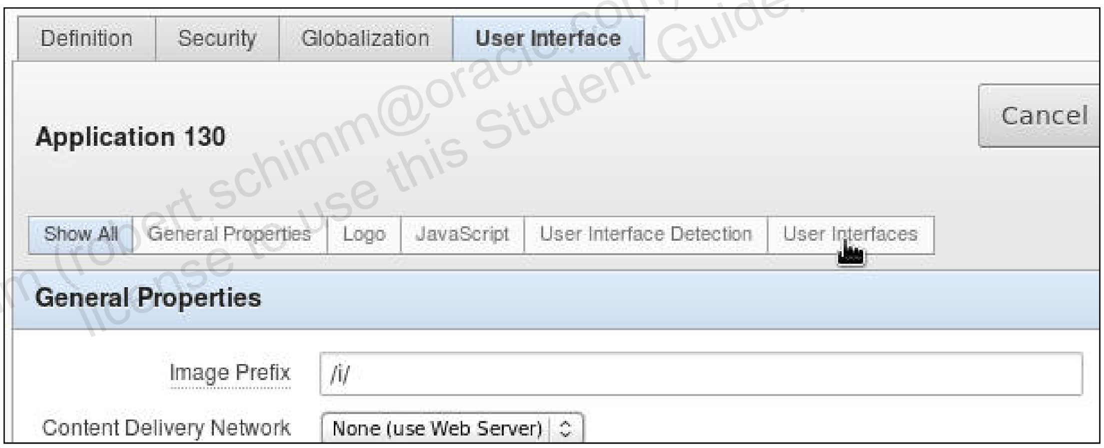
6) Click **Edit Application Properties**.



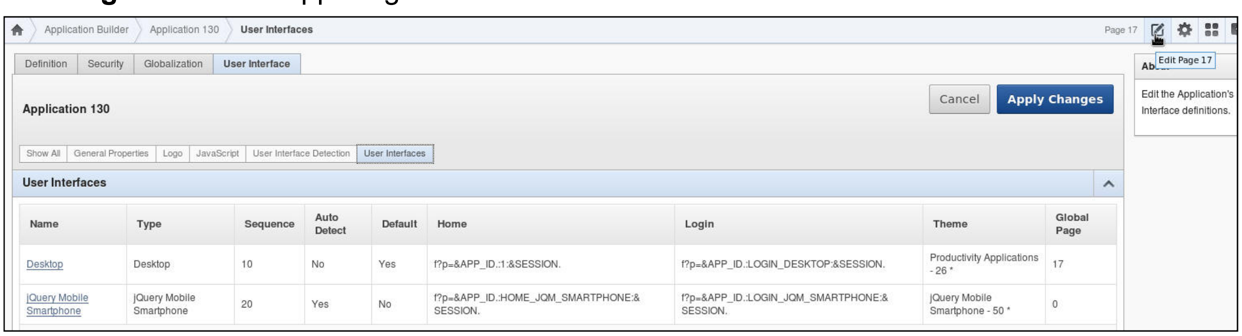
7) Click the **User Interface** tab.



8) Click the **User Interfaces** subtab.



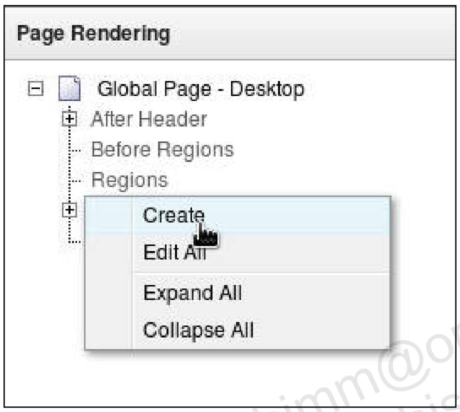
9) Your Global desktop page has been assigned to the Desktop interface. Click the **Edit Page** icon in the upper right corner.



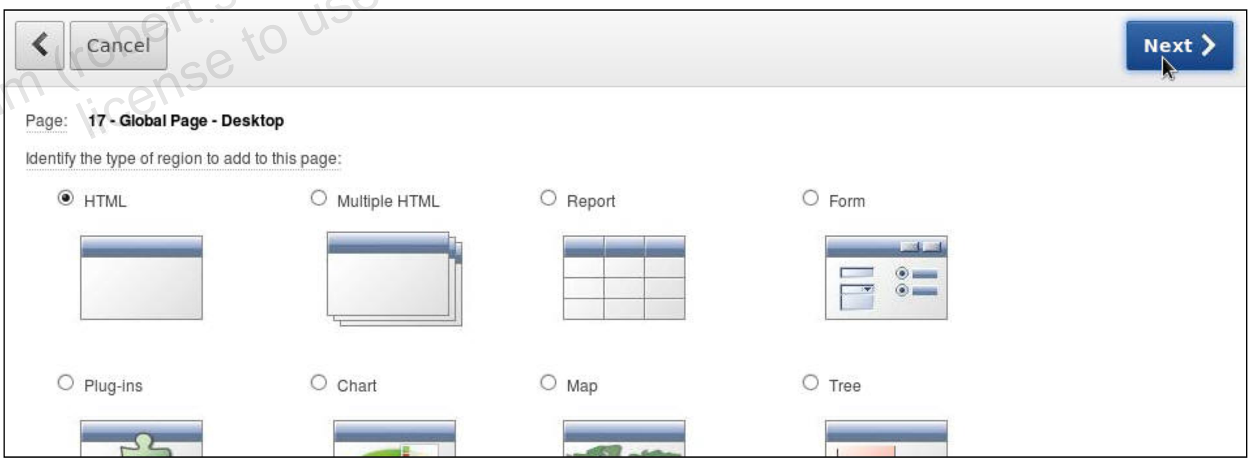
b. Add a Static HTML region to the Global Desktop page. Call the region as “In the News” on the Global page with the following code (located in `/home/oracle/labs/files/lab7_2.txt`):

```
<html><body>
<table width="179" border="1">
<tr>
<td><p><strong>News and Events</strong></p>
<p> Visit us at  <a href="http://www.oracle.com">
www.oracle.com</a></p>
</td>
</tr>
</table></body></html>
```

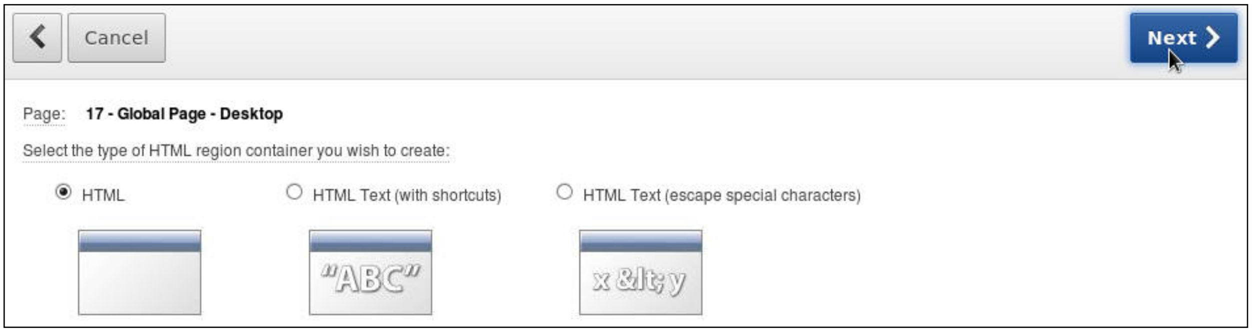
1) Right-click the **Regions** node and click **Create**.



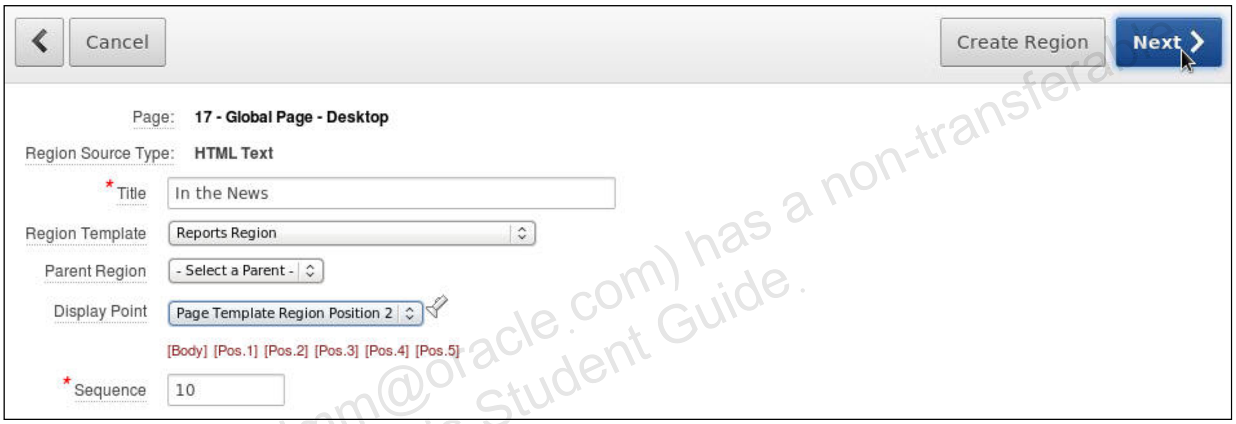
2) Select **HTML** and click **Next >**.



3) Select **HTML** again and click **Next >**.



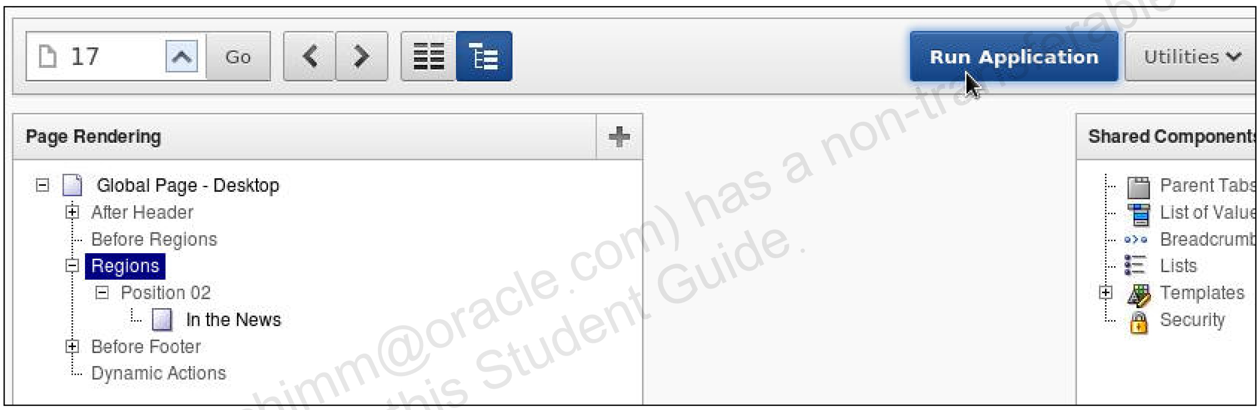
4) For Title, enter **In the News**. For Display Point, select **Page Template Region Position 2** and click **Next >**.



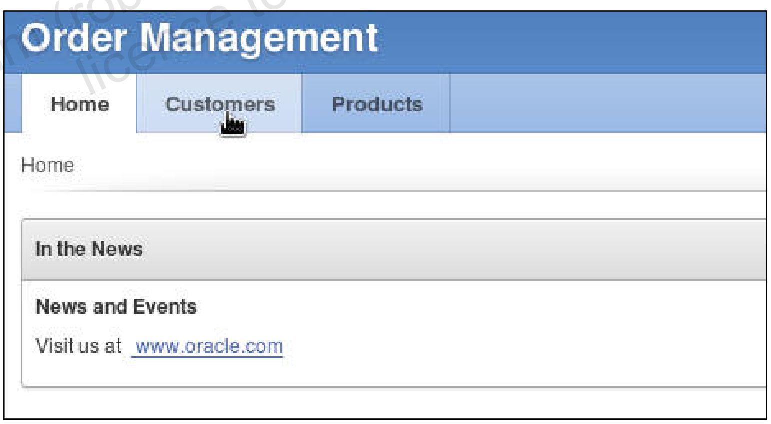
5) In the **Enter HTML Text Region Source** field, enter the following code and click **Create Region**. You can copy and paste the code from **`/home/oracle/labs/files/lab7_2.txt`**.

```
<html><body>
<table width="179" border="1">
<tr>
<td><p><strong>News and Events</strong></p>
<p> Visit us at  <a href="http://www.oracle.com">
www.oracle.com</a></p>
</td>
</tr>
</table>
</body></html>
```

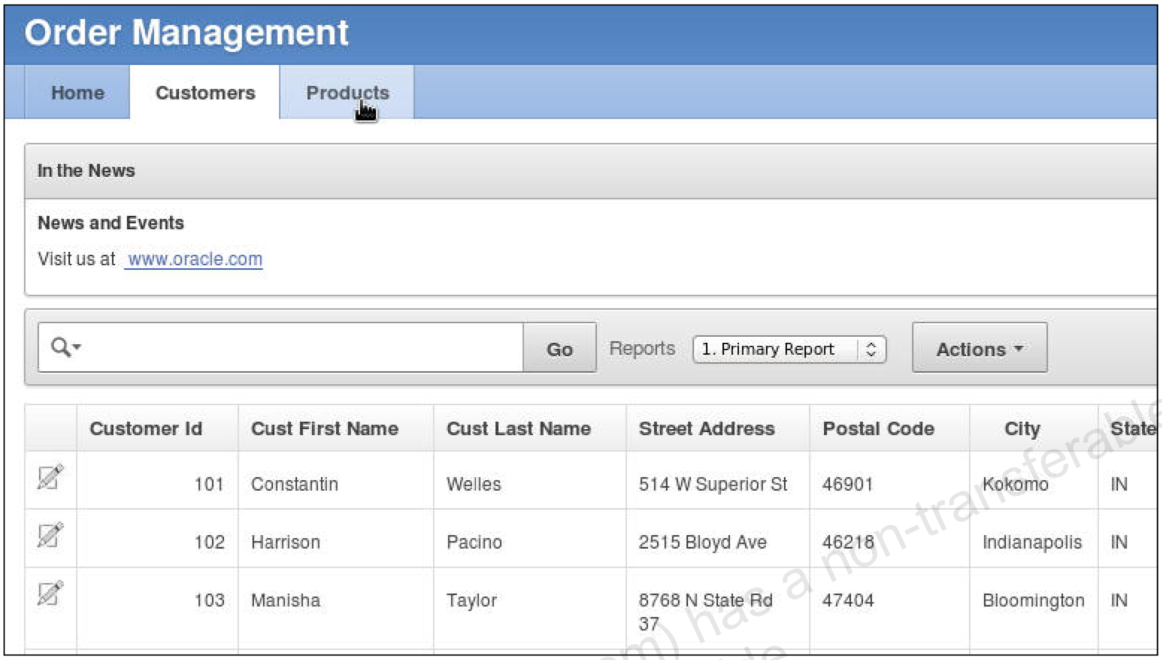
6) Click the **Run Application** button.



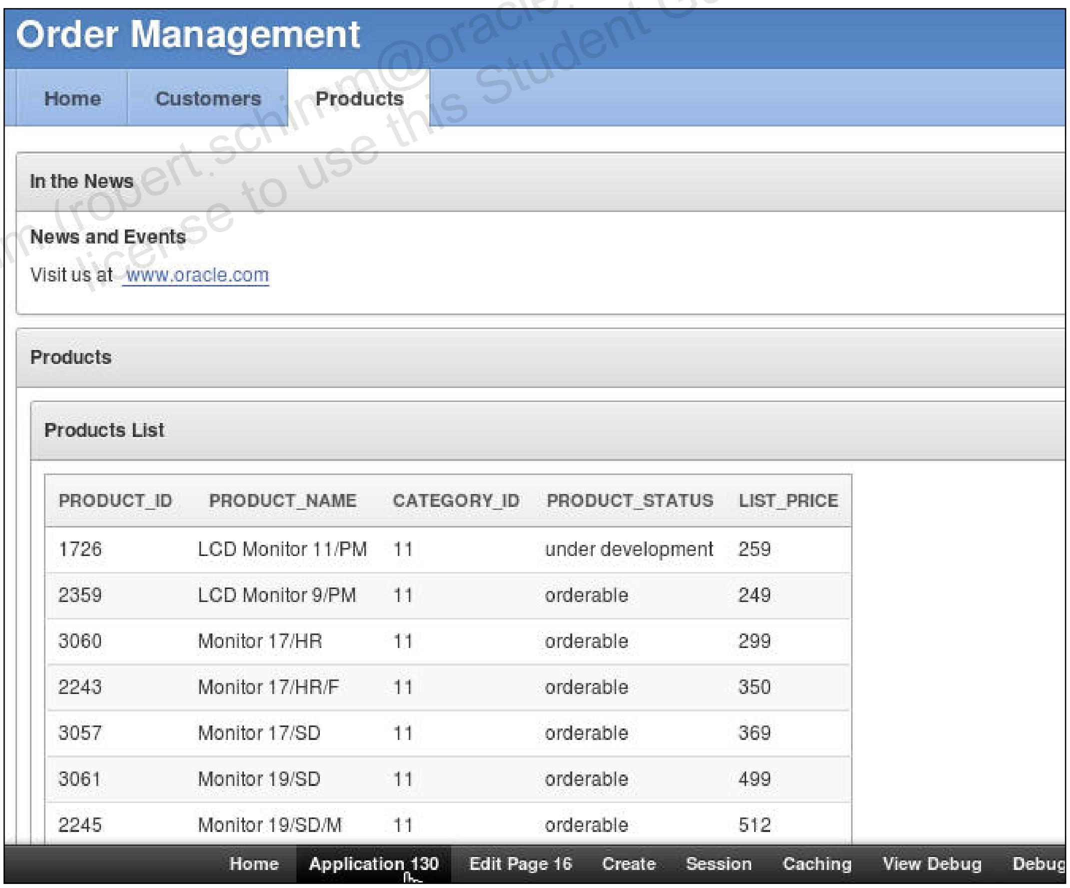
7) The home page is displayed with the “In the News” region. Click the **Customers** tab.



8) Note that the “In the News” region appears on this page too. Click the **Products** tab.



9) The region appears on this page too.



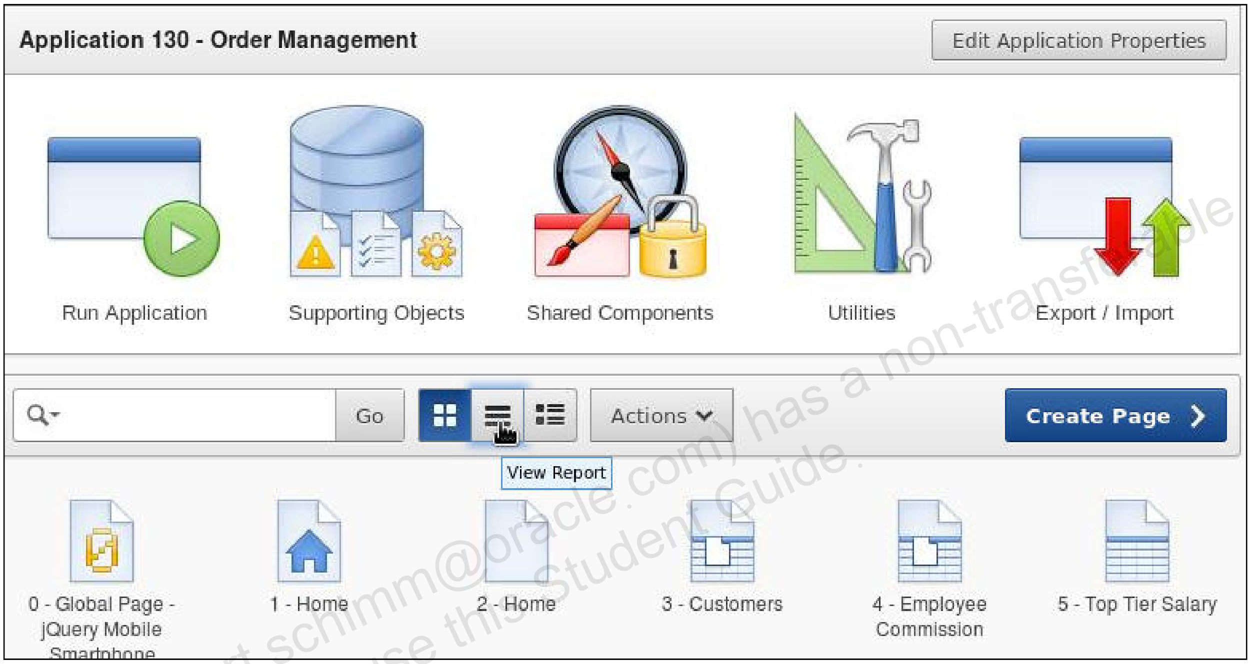
Solution 7-3: Modify the Mobile Home Page

Overview

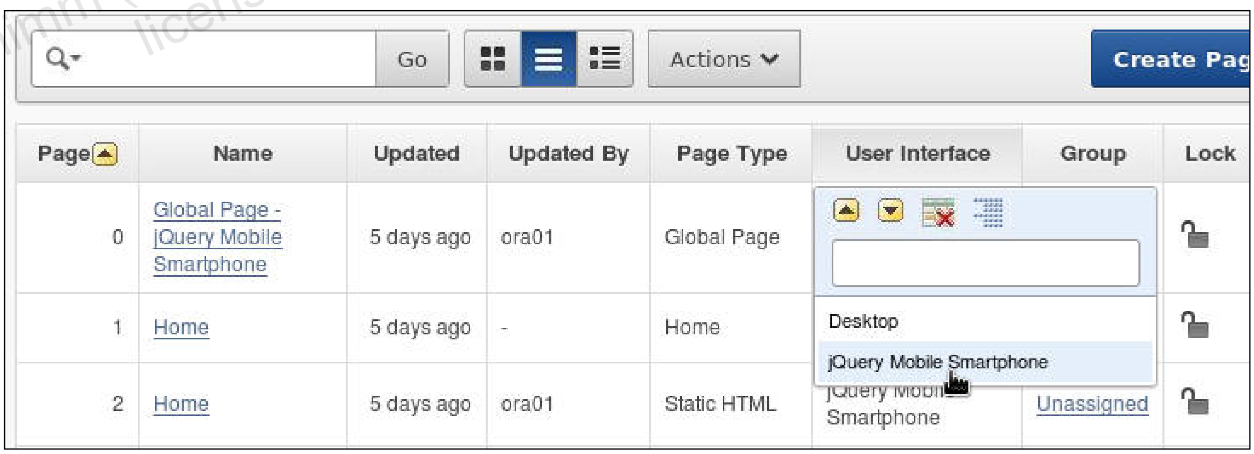
In this solution, you modify the Mobile Home page.

Tasks

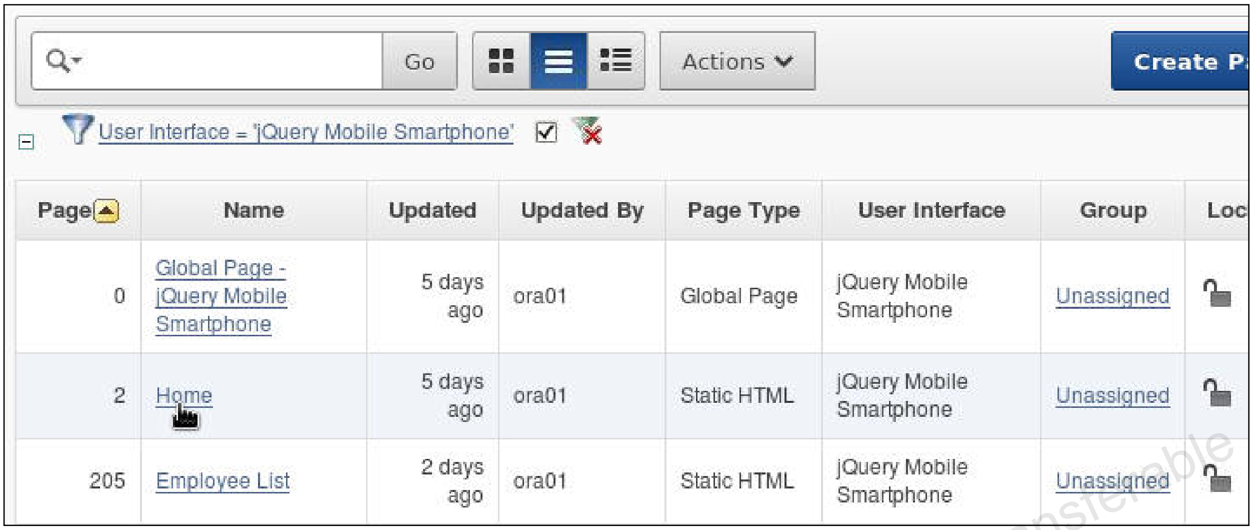
1) Navigate to the Order Management application home page and click **View Report**.



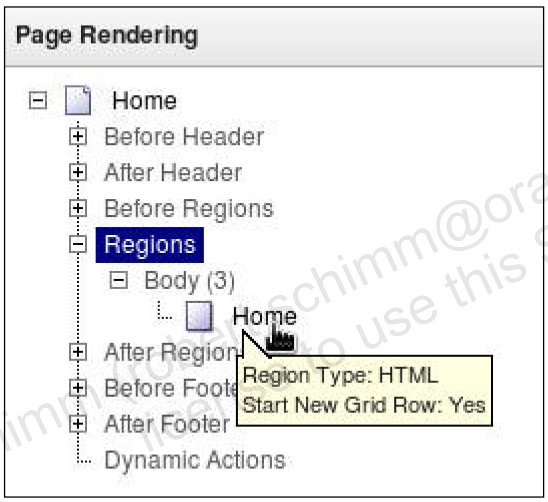
2) Select **User Interface** and select **jQuery Mobile Smartphone** to create a filter that will only display the mobile pages.



3) Select the **Home** page.



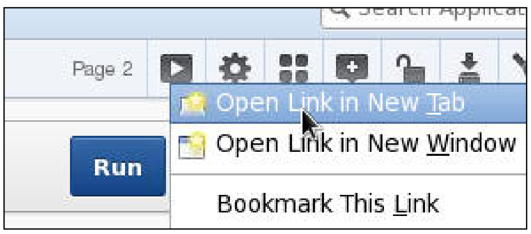
4) Double-click the **Home** region.



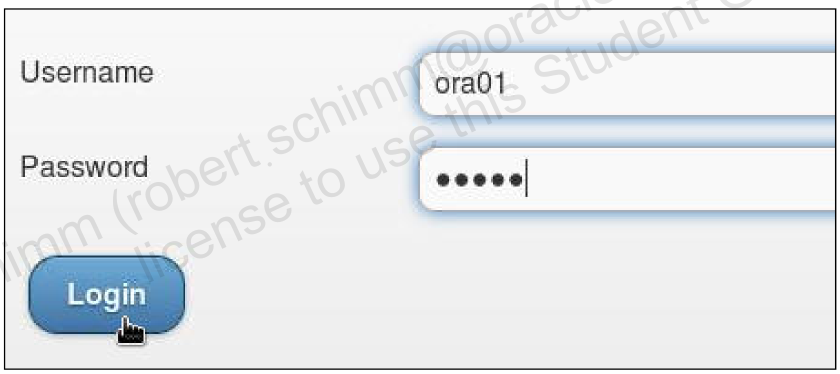
5) Click the **Source** subtab. Enter the following code in the Region Source area and click **Apply Changes**. You can copy and paste the code from **`/home/oracle/labs/files/lab7_3.txt`**. Make sure that you change the reference to the page number of the employee list page, in this case, 205.

```
<ul>
<li><a href="f?p=&APP_ID.:<employee_list page number>:&APP_SESSION.">Employee
List</li>
</ul>
```

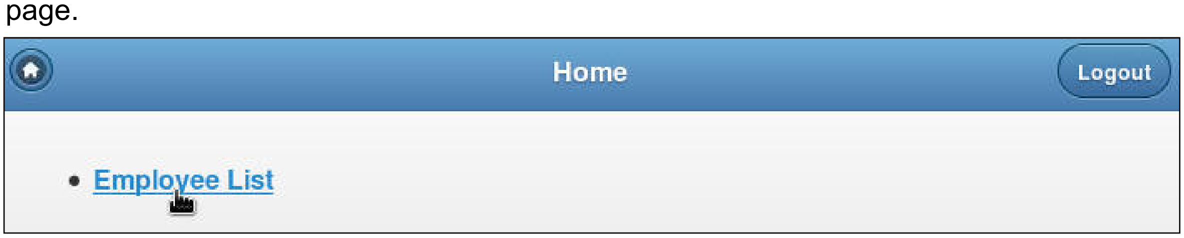
6) Right-click the **Run Page** icon and select **Open Link in New Tab**.



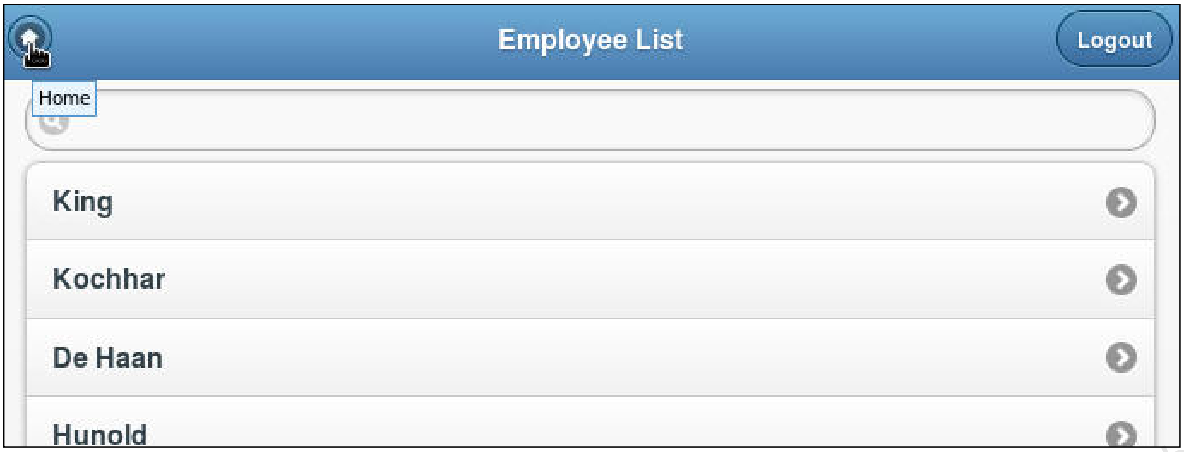
7) Enter **ora<*n*>** for Username and Password, and click **Login**.



8) The Home page is displayed. Click the **Employee List** link to go to the Employee List page.



9) The Employee List page is displayed. Click the **Home** icon to return to the Home page.



Practices for Lesson 8: Adding Items and Buttons

Chapter 8

Practices for Lesson 8: Overview

Practices Overview

There are two practices for this lesson. In these practices, you create a variety of items, manipulate the way they work, and change the layout on the page.

Practice 8-1: Adding Items and Buttons

Overview

In this practice, you create a Customer Feedback form that contains some items and two buttons. You create a button on the Customers page to link to the feedback form.

Assumptions

You have performed the previous practices or imported the **`LAB073_SOLN.sql`** packaged application.

Tasks

a. Create a blank page called Customer Feedback.

b. Add the following items to the form:

Customer ID	Text Field
Feedback	Text Area
Added On	Date Picker

c. Add a button on the Customers page to redirect to the Customer Feedback page.

d. Add an Apply button on the Customer Feedback page.

e. Add a Cancel button on the Customer Feedback page to redirect to the Customers page.

Practice 8-2: Manipulating Items

Overview

In this practice, you add some additional item types (select list and cascading LOV) and modify the way the fields in the Customer Details form are displayed.

Assumptions

You have performed the previous practices.

Tasks

Modify the Customer Details page as follows:

a. Modify the Account Manager item to be a select list with the following query (located in `/home/oracle/labs/files/lab8_2_1.txt`):

```
select LAST_NAME||', '||FIRST_NAME display_value, EMPLOYEE_ID
return_value
from OEHR_EMPLOYEES
where DEPARTMENT_ID=80
order by 1
```

b. Add a quick pick list to the Account Manager item with the following labels and values:

Label	Value
Bates, Elizabeth	172
Russell, John	145
Cambrault, Gerald	148

c. Add a select list item called Country that contains the following query (located in `/home/oracle/labs/files/lab8_2_2.txt`). This item should allow nulls.

```
select COUNTRY_NAME display_value, COUNTRY_ID return_value
from OEHR_COUNTRIES
order by 1
```

d. Add another item, City, based on the Country item that you just created with the following query (located in `/home/oracle/labs/files/lab8_2_3.txt`). Select the Country item as the cascading LOV.
Note: You may need to change the query so that you do not have multiple rows.

```
select CITY display_value, CITY return_value
from OEHR_LOCATIONS
where country_id = :P<n>_COUNTRY_ID
order by 1
```

e. Change the Account Manager of an existing customer record.
   Note: You must navigate to the customer report and edit one of the records.

f. Modify the Employee Detail mobile form page to take advantage of some of the new HTML5 item types.

Solution 8-1: Adding Items and Buttons

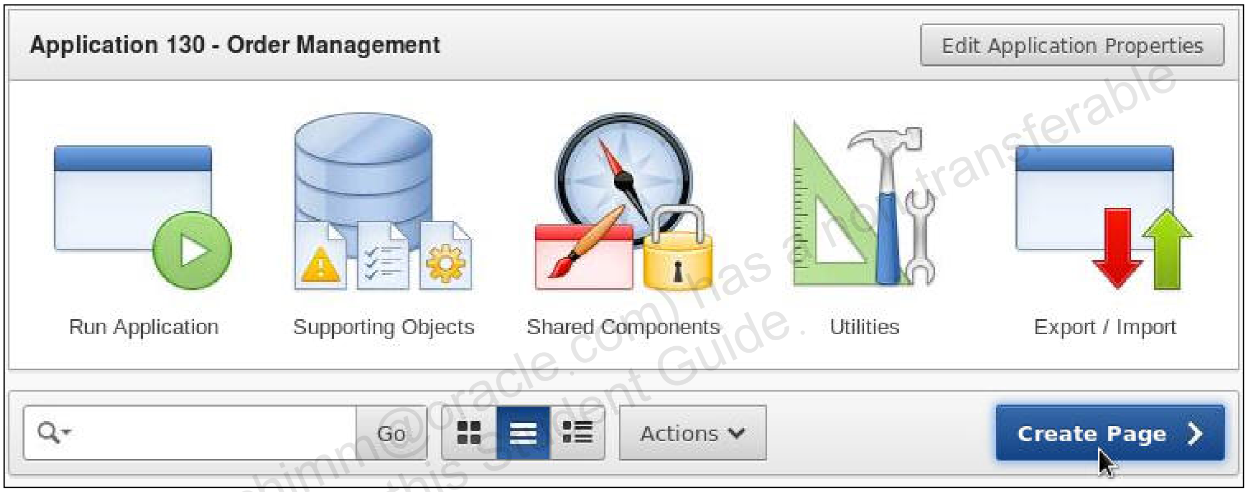
Overview

In this practice, you create a Customer Feedback form that contains some items and two buttons. You create a button on the Customers report to link to the feedback form.

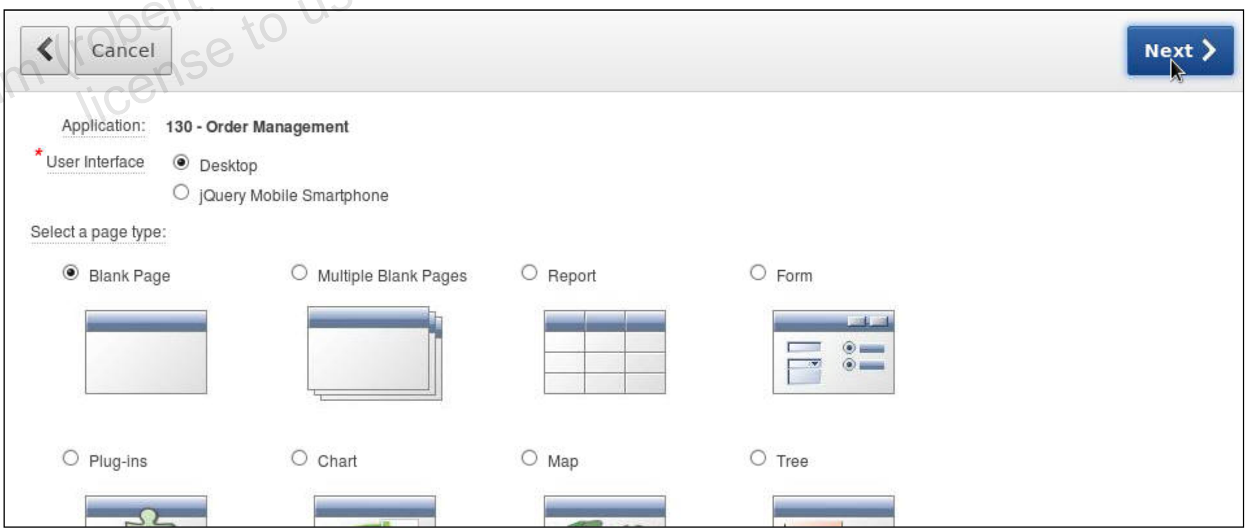
Tasks

a. Create a blank page called Customer Feedback.

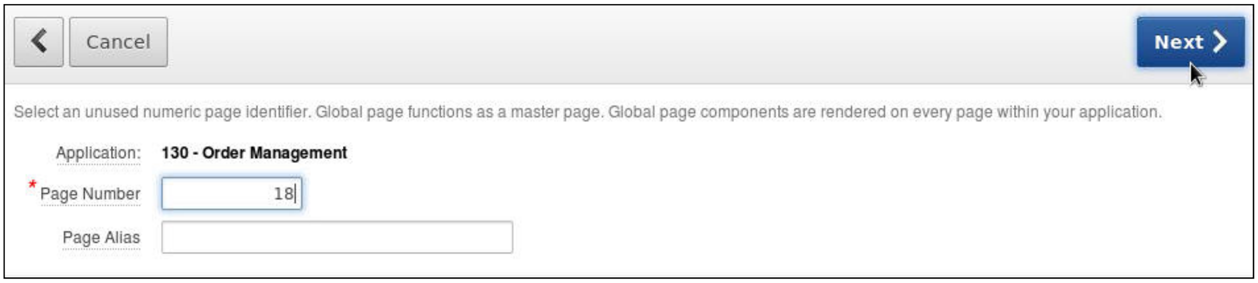
1) Navigate to the Order Management application home page and click **Create Page >**.



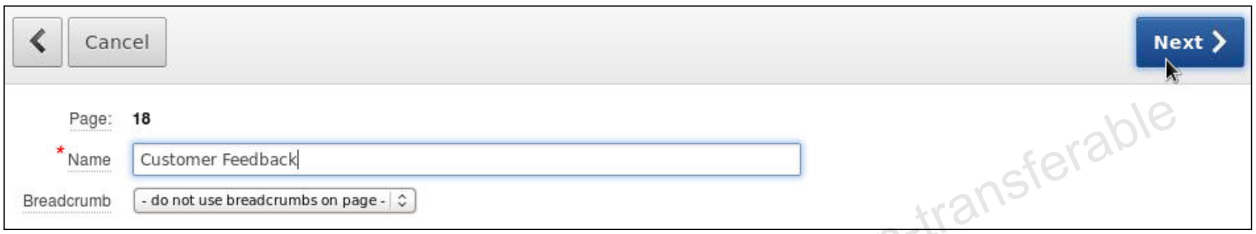
2) Select **Blank Page** and click **Next >**.



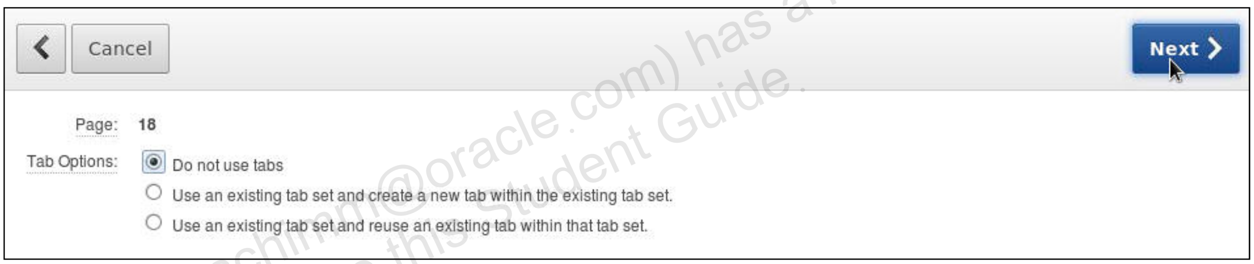
3) Accept the default and click **Next >**.



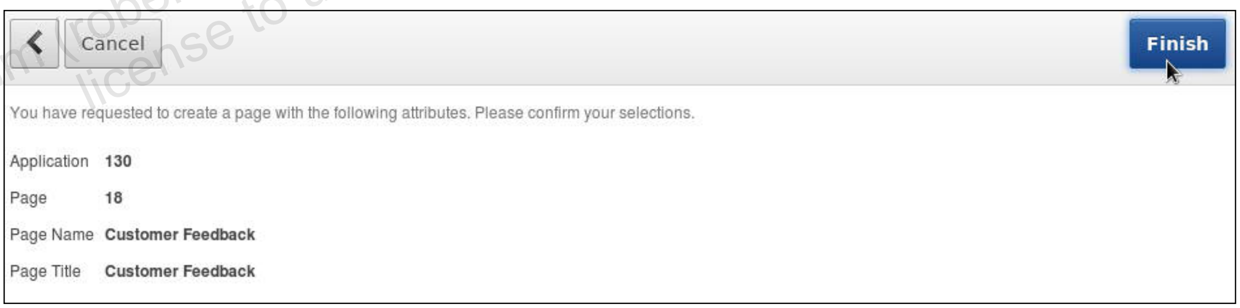
4) In the Name field, enter `Customer Feedback`. Click **Next >**.



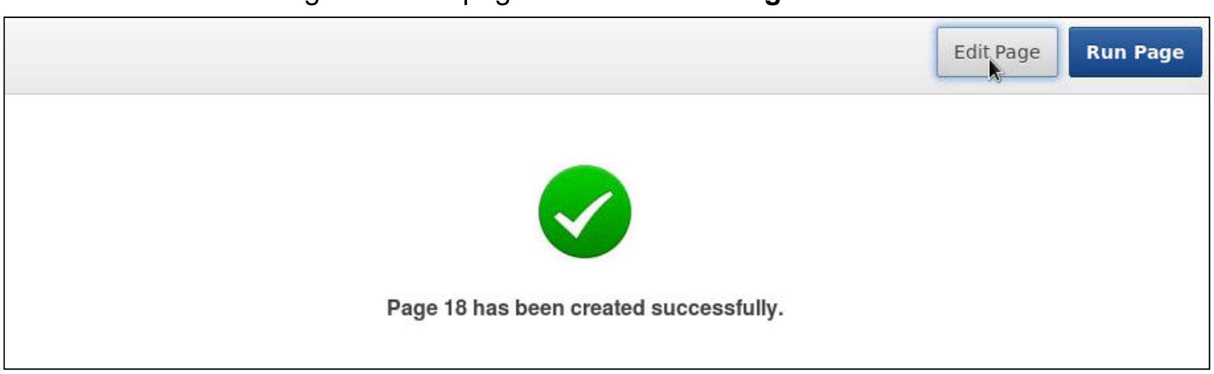
5) Accept the default and click **Next >**.



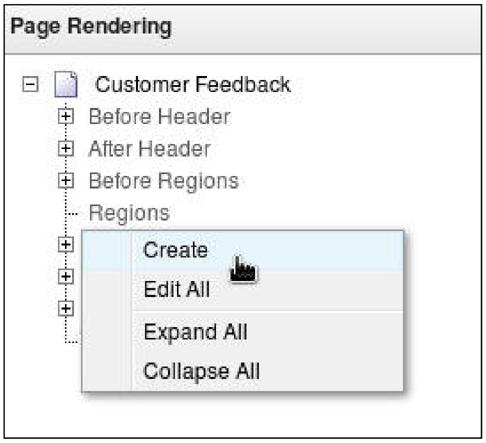
6) Click **Finish**.



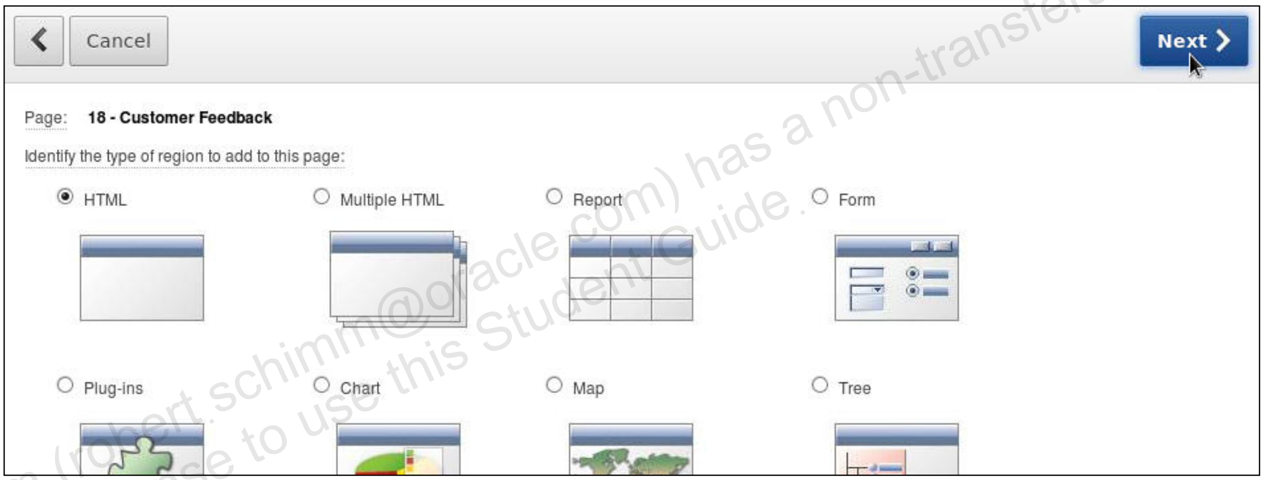
7) You want to create a region on this page. Click the **Edit Page** icon.



8) Right-click **Regions** and select **Create**.



9) Select the **HTML** region type and click **Next >**.



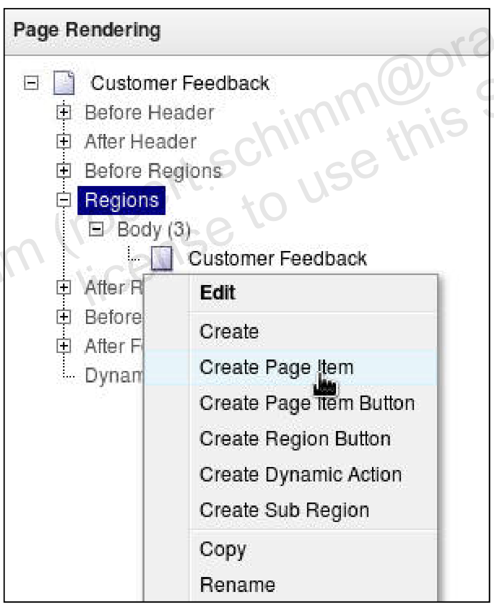
10) Select **HTML** again and click **Next >**.

11) For Title, enter **Customer Feedback**, accept the defaults for other fields, and click **Create Region**.

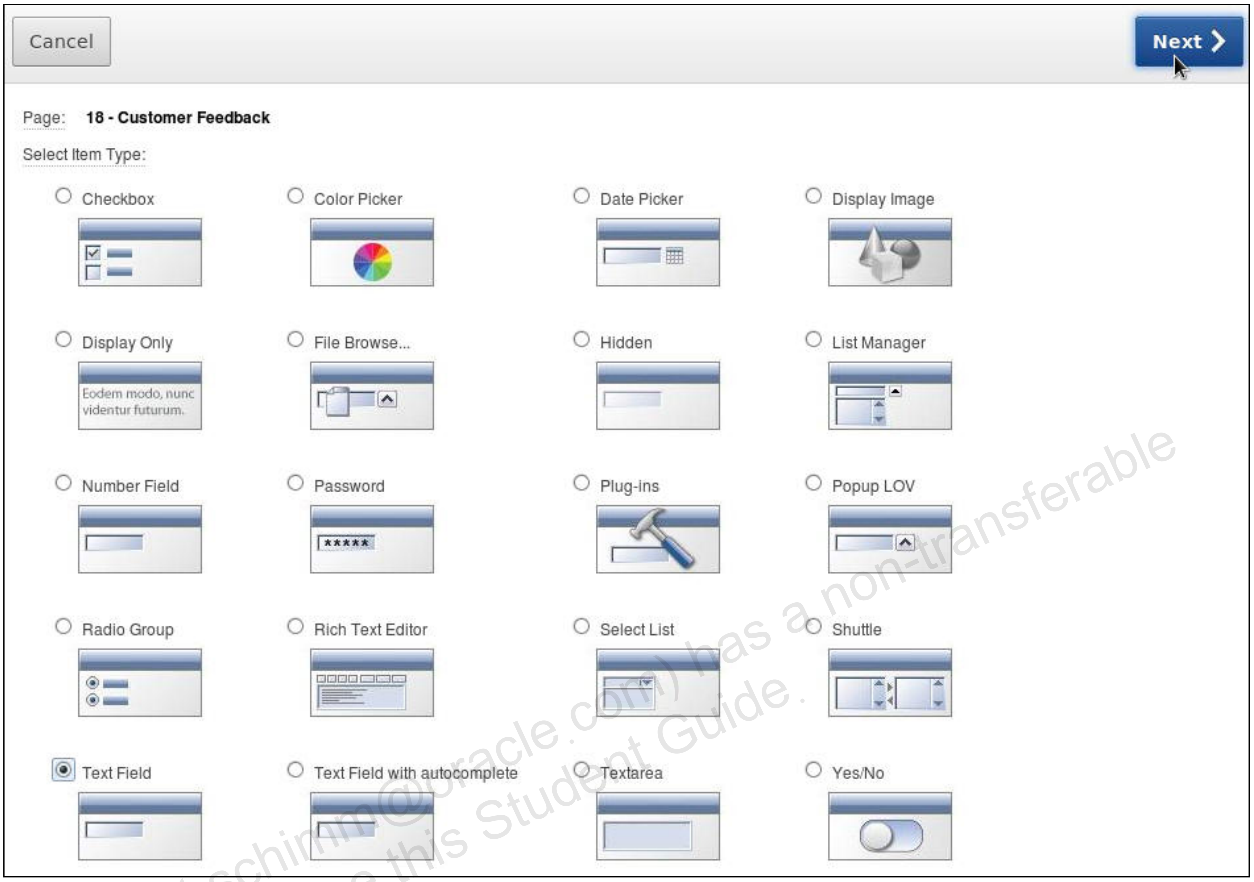
b. Add the following items to the form:

Customer ID	Text Field
Feedback	Text Area
Added On	Date Picker

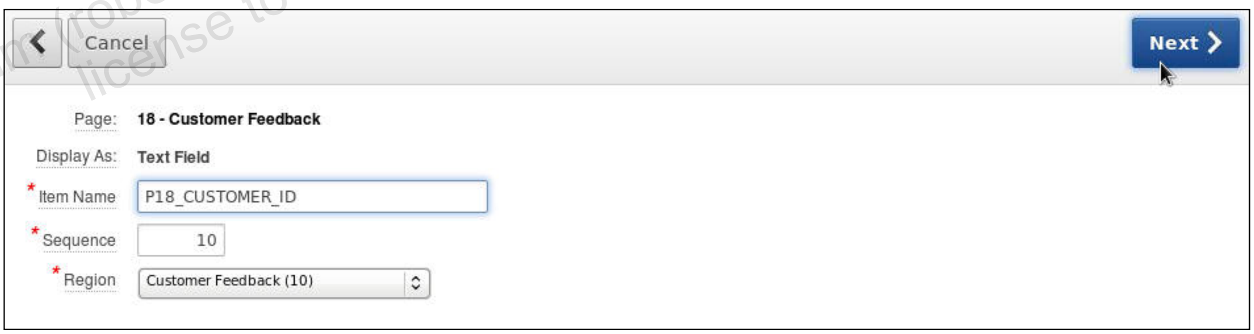
1) You want to create some page items in the **Customer Feedback** region. Right-click **Customer Feedback** and select **Create Page Item**.



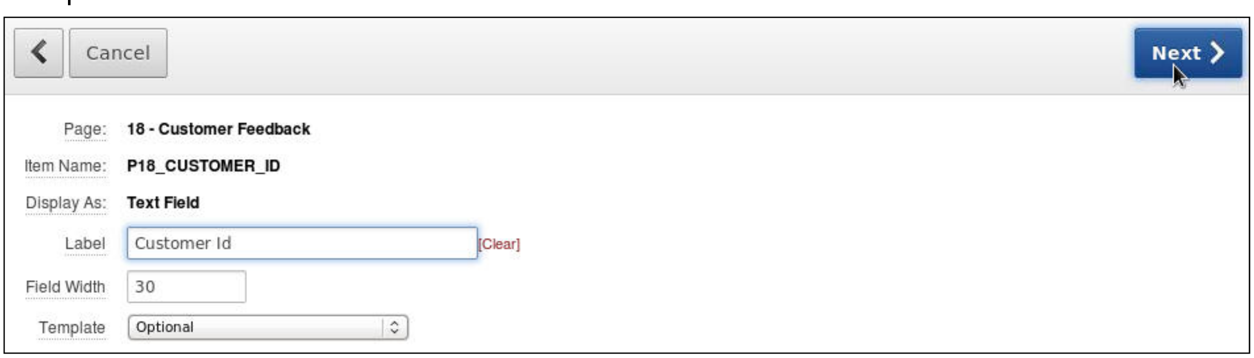
2) Select **Text Field** for Item Type and click **Next >**.



3) Enter `P<n>_CUSTOMER_ID` for Item Name and click **Next >**.

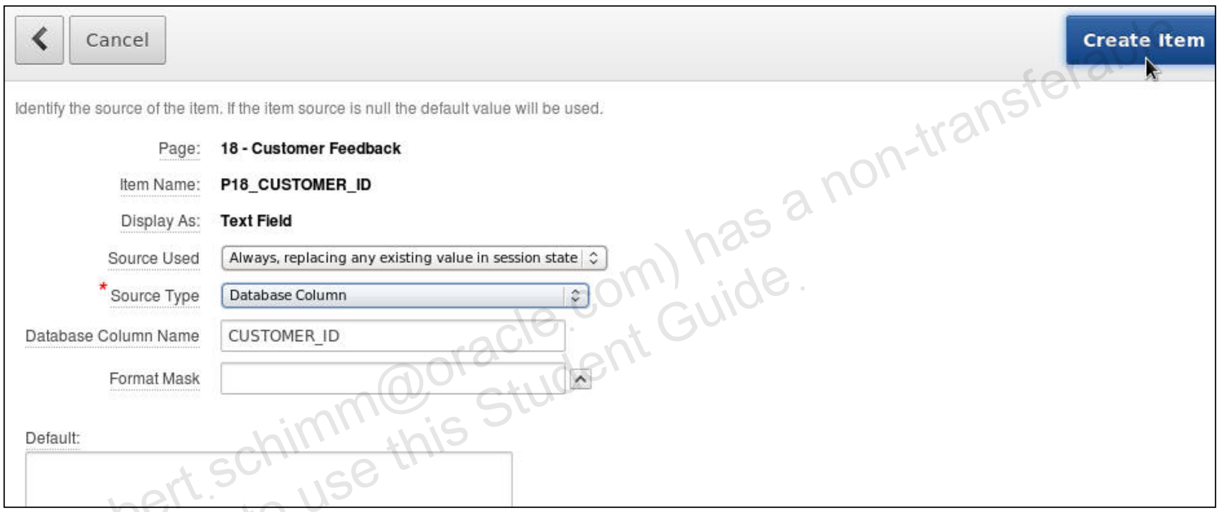


4) Accept the defaults and click **Next >**.

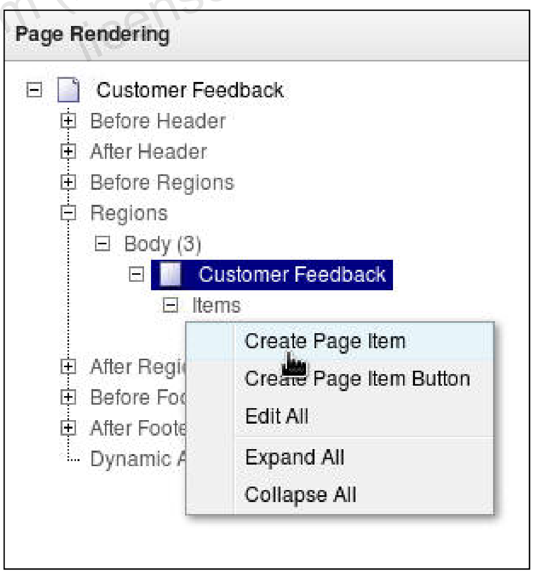


5) Accept the defaults and click **Next >**.

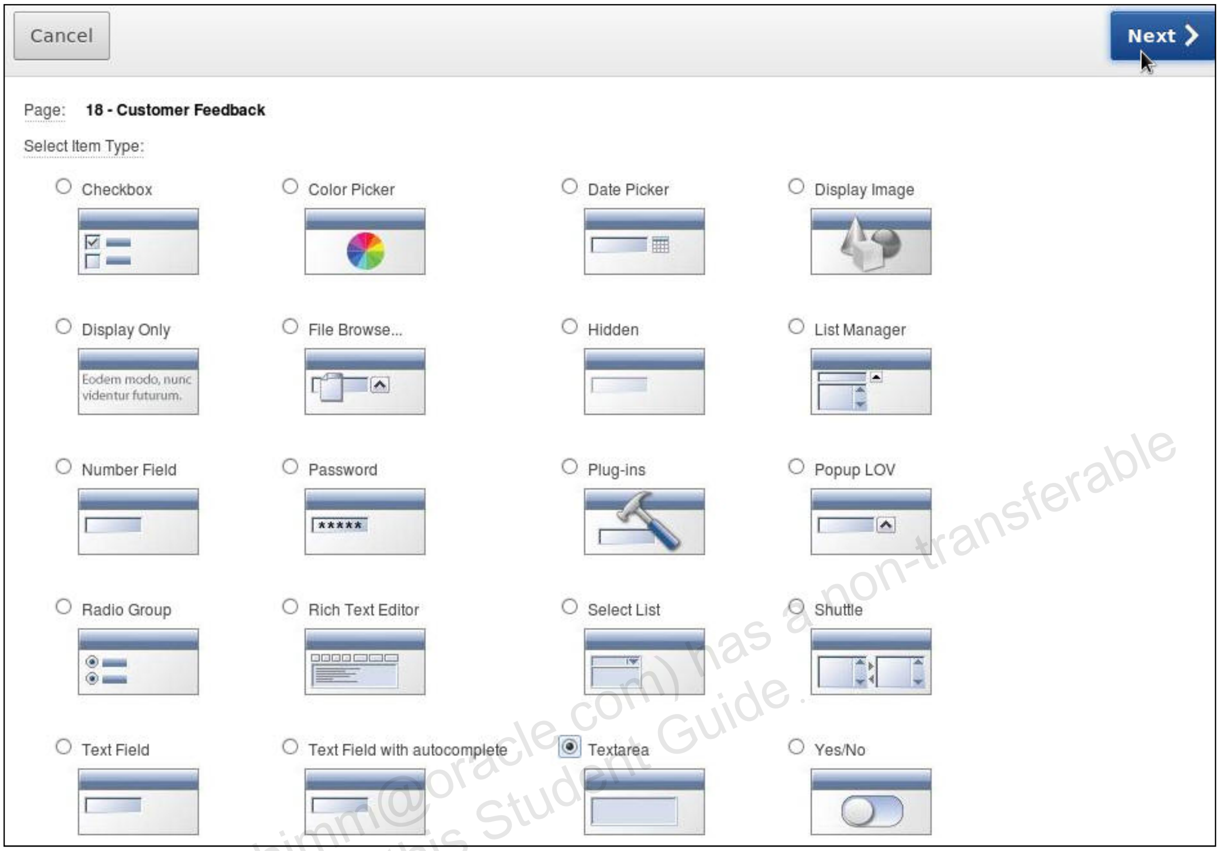
6) Select **Database Column** for Source Type and click **Create Item**.



7) Right-click **Customer Feedback** and select **Create Page Item**.

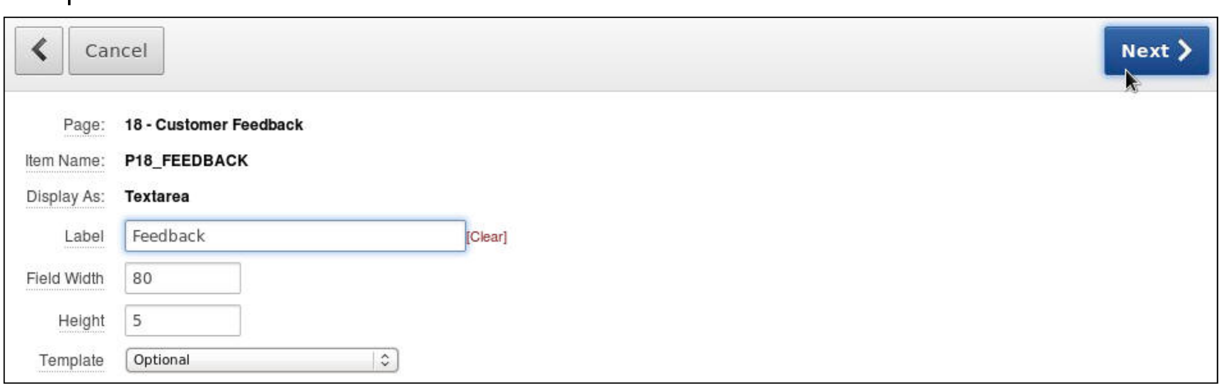


8) Select **Text Area** for Item Type and click **Next >**.



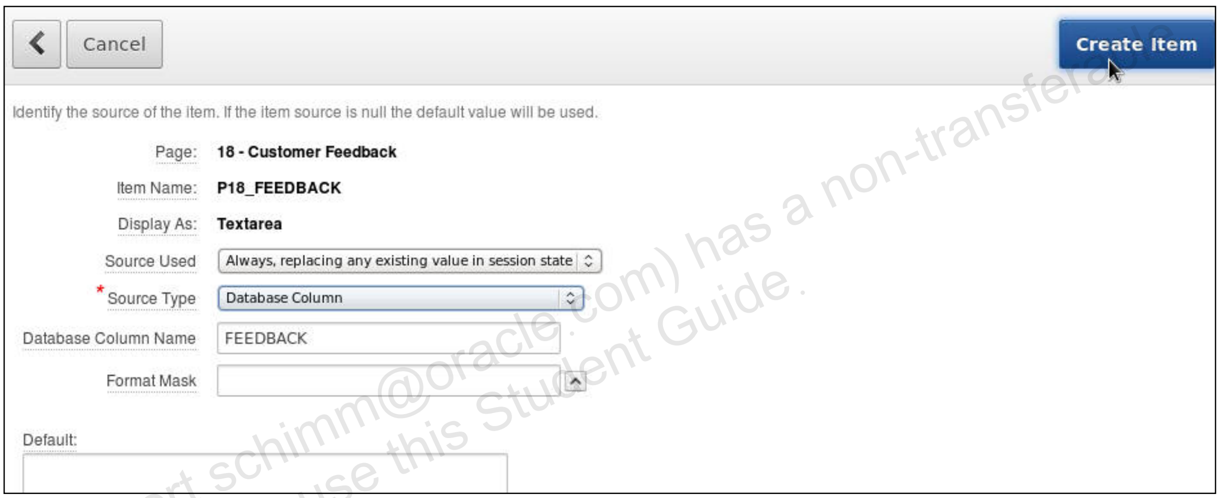
9) Enter **P<n>_FEEDBACK** for Item Name and click **Next >**.

10) Accept the defaults and click **Next >**.

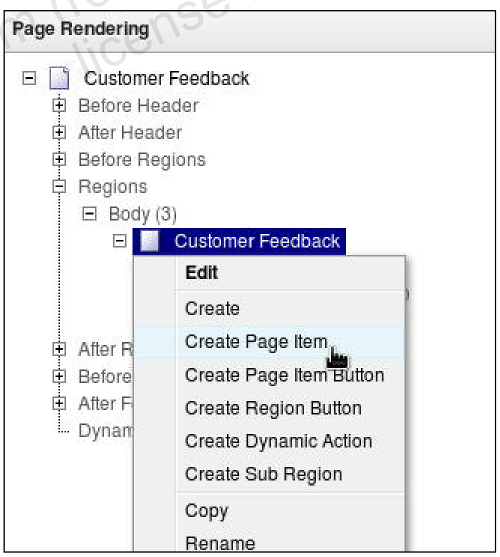


11) Accept the defaults and click **Next >**.

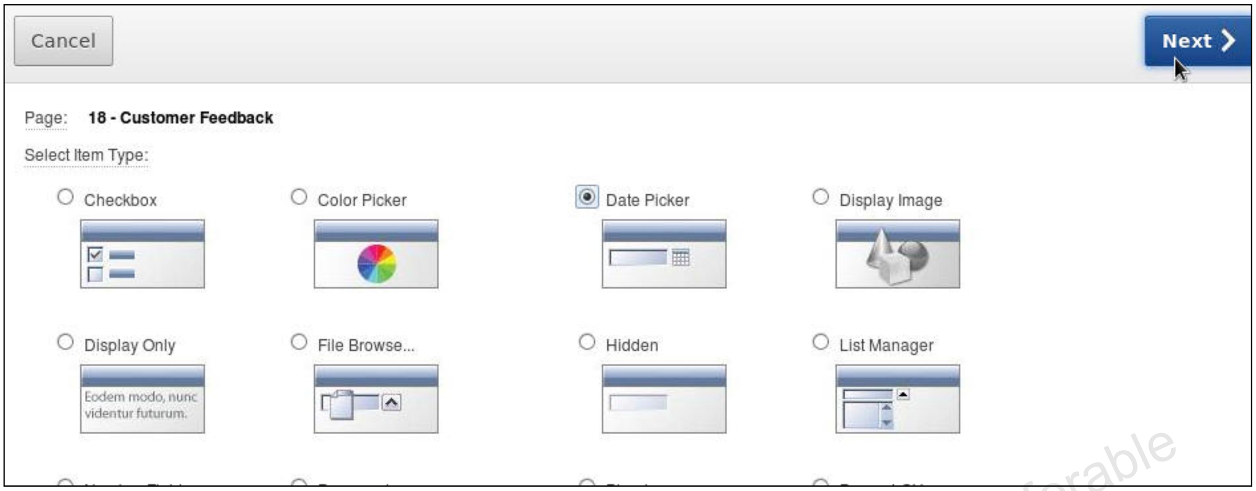
12) Select **Database Column** for Source Type and click **Create Item**.



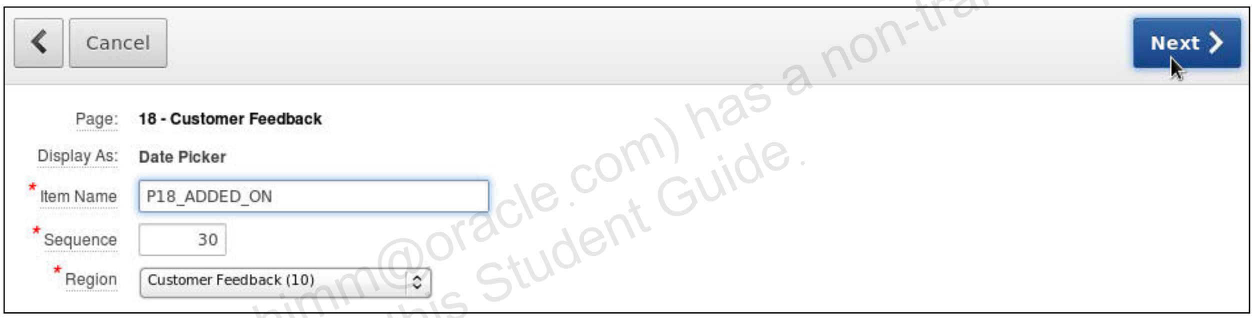
13) Right-click **Customer Feedback** and select **Create Page Item**.



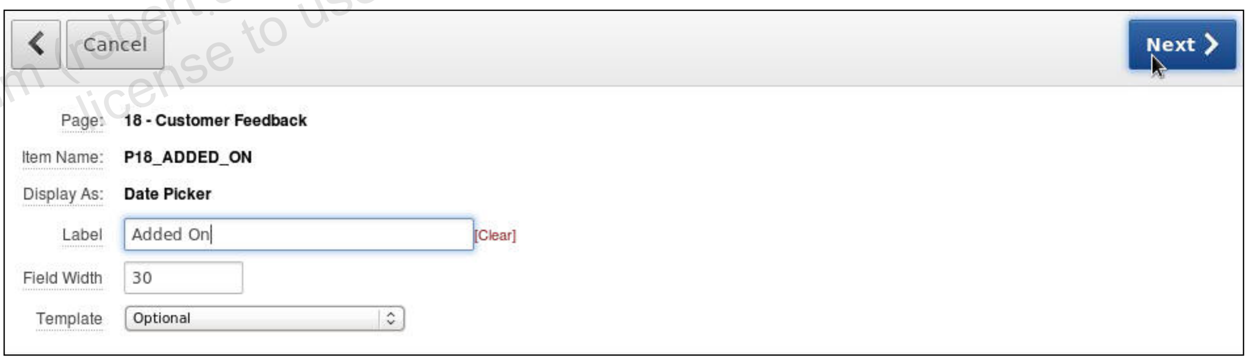
14) Select **Date Picker** for Item Type and click **Next >**.



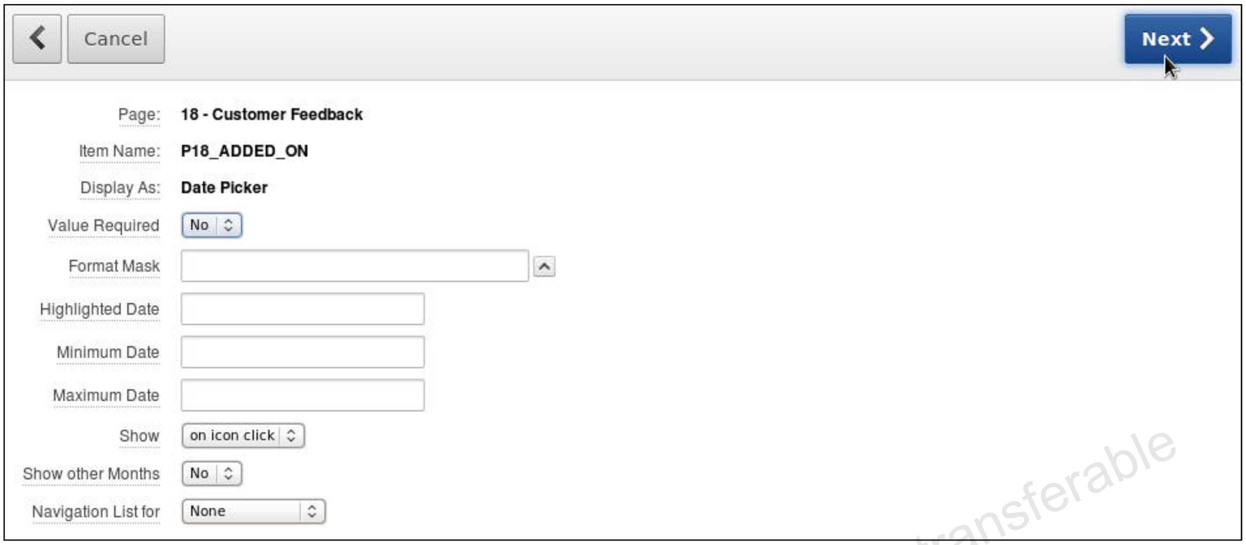
15) Enter `P<n>_ADDED_ON` for Item Name and click **Next >**.



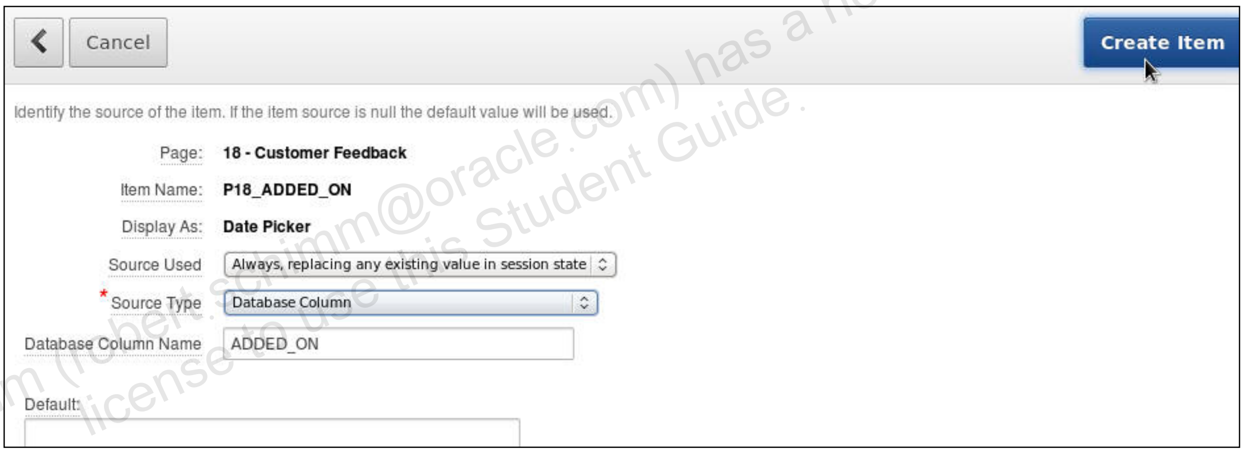
16) Accept the defaults and click **Next >**.



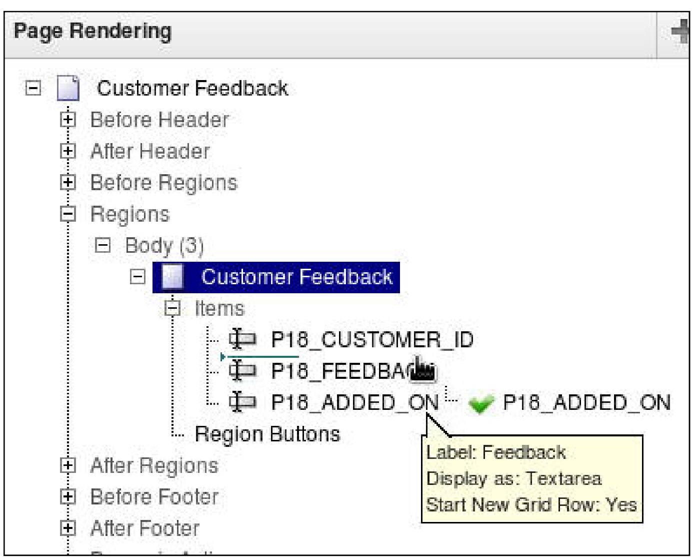
17) Accept the defaults and click **Next >**.



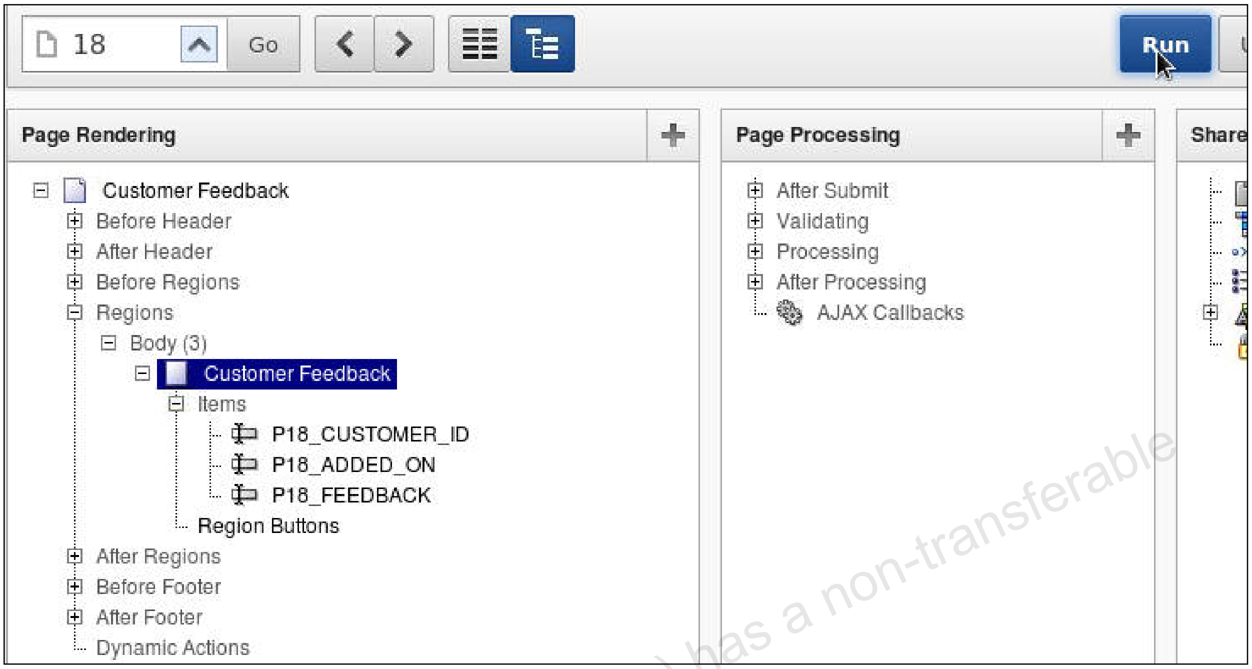
18) Select **Database Column** for Source Type and click **Create Item**.



19) You can also drag an item to reposition the item in the list. Drag the `P<n>_ADDED_ON` item to above the `P<n>_FEEDBACK` item.

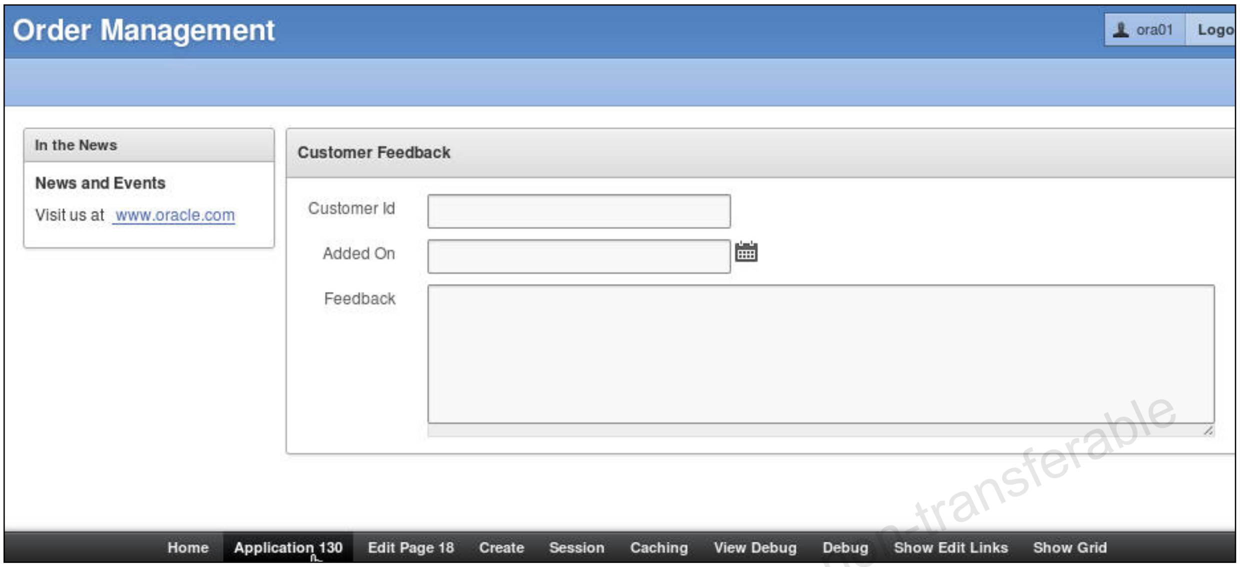


20) Run the page. Click the **Run** button.



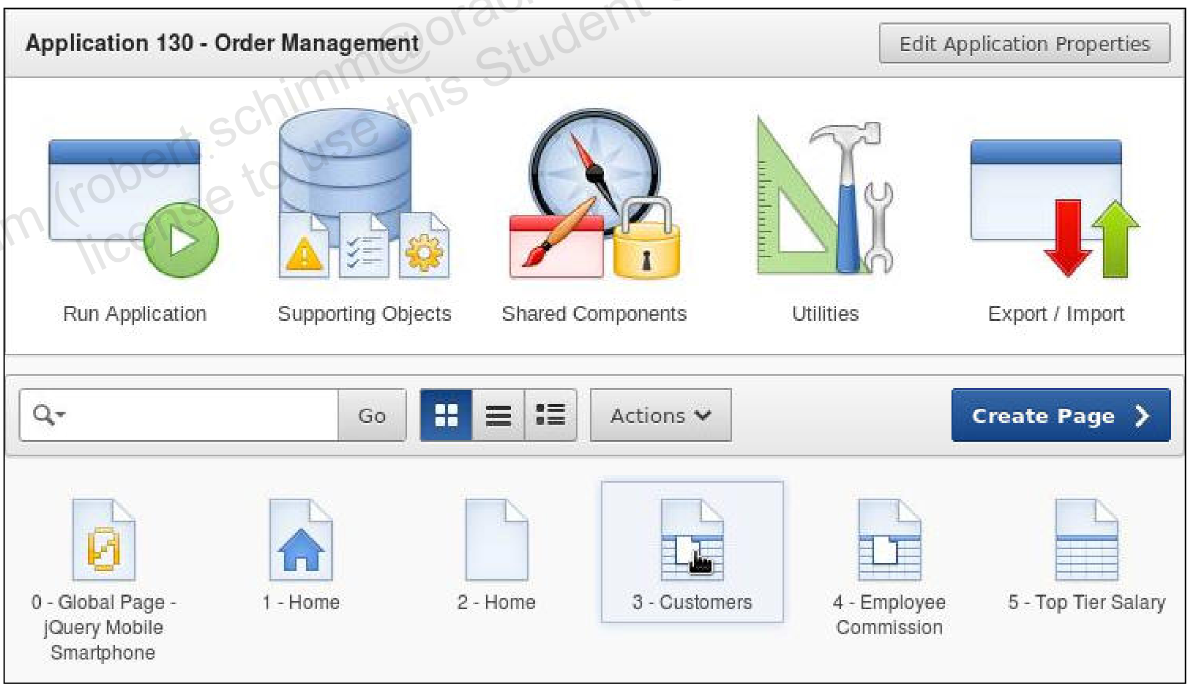
21) On the login page, enter your login credentials if prompted.

22) You want to create a button on the **Customers** page to redirect to the Customer Feedback page. Click the **Application <n>** link on the Developer toolbar.

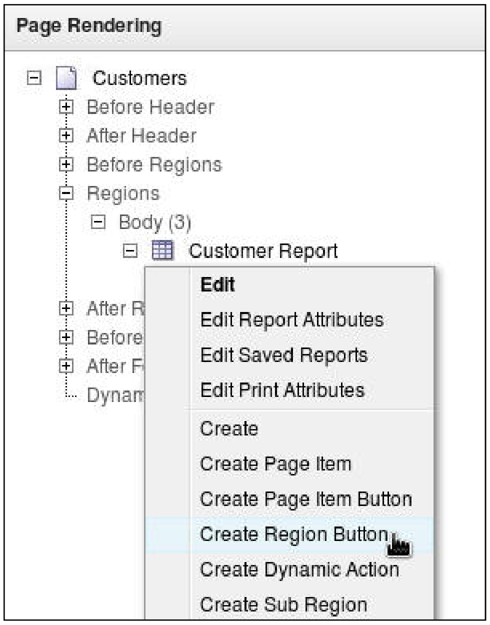


c. Add a button on the Customers page to redirect to the Customer Feedback page.

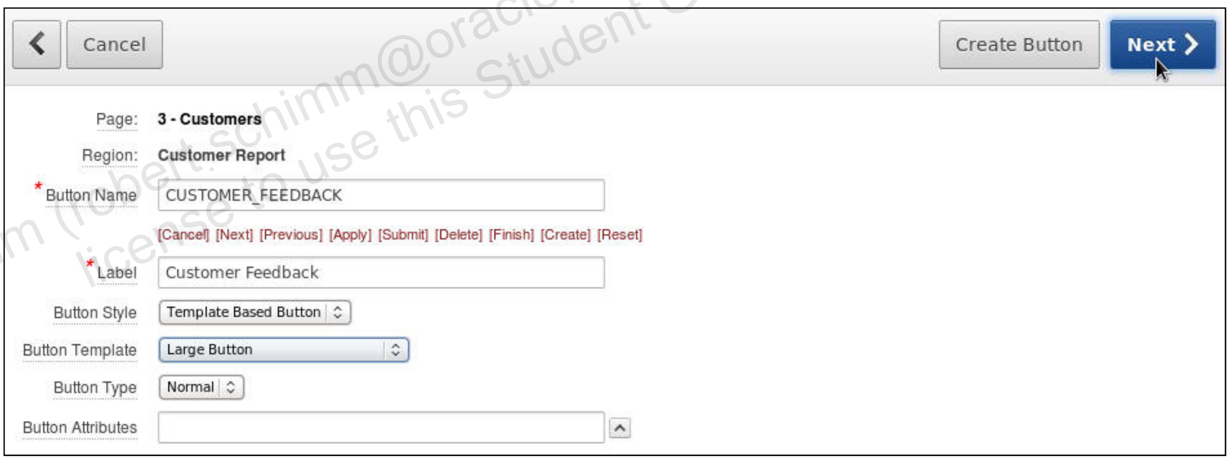
1) Click the **Customers** page icon.
Note: You may need to remove the filter you created previously and click View Icons to see what is displayed in the screenshot.



2) Right-click the **Customer Report** region and select **Create Region Button**.

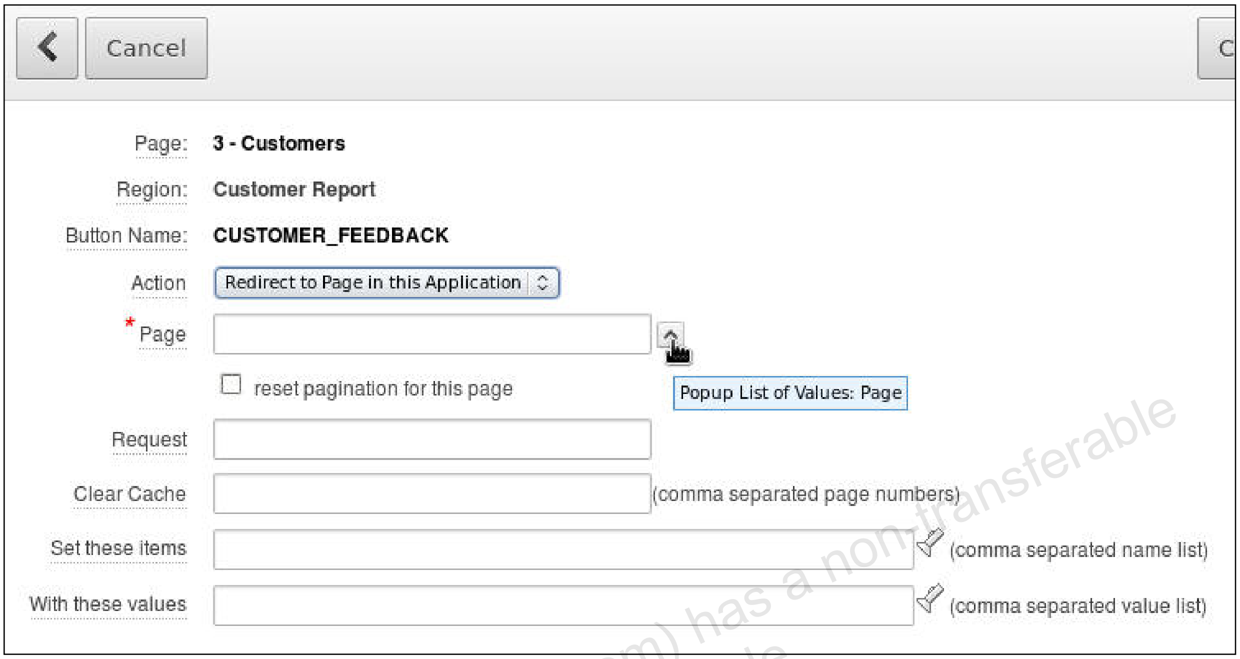


3) For Button Name, enter `Customer Feedback` and for Button Style, select **Template Based Button**. For Button Template, select **Large Button**. Click **Next >**.



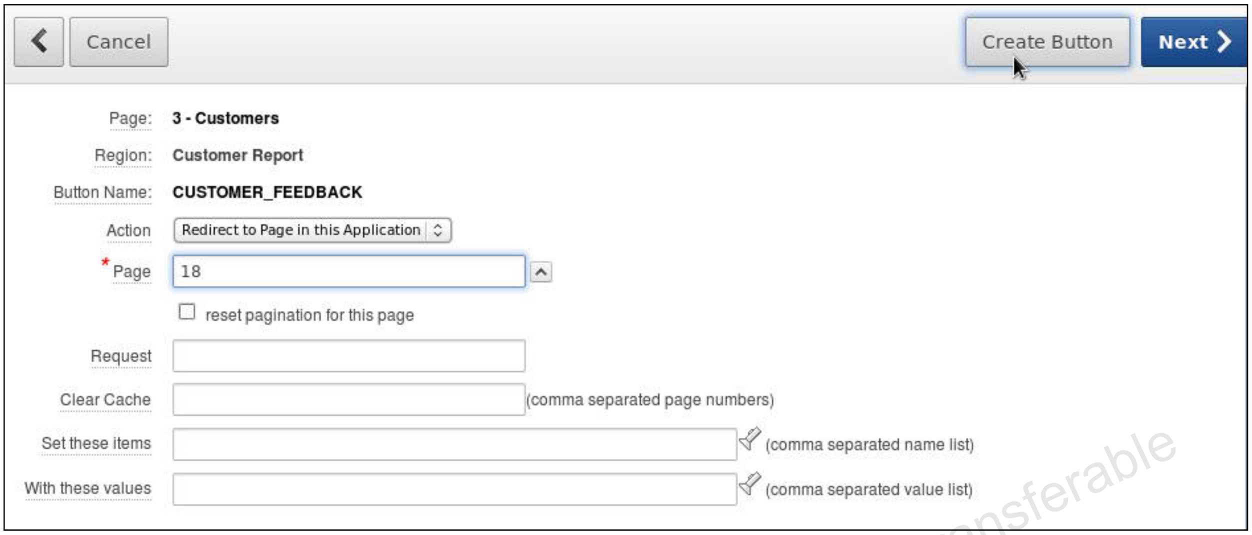
4) Select **Right of Interactive Report Search Bar** for Position and click **Next >**.

5) For **Action**, select the **Redirect to Page in this Application** and click the icon to the right of the Page field.

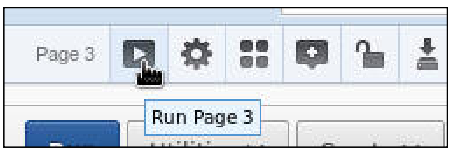


6) Select the **Customer Feedback** page from the list.

7) Click **Create Button**.



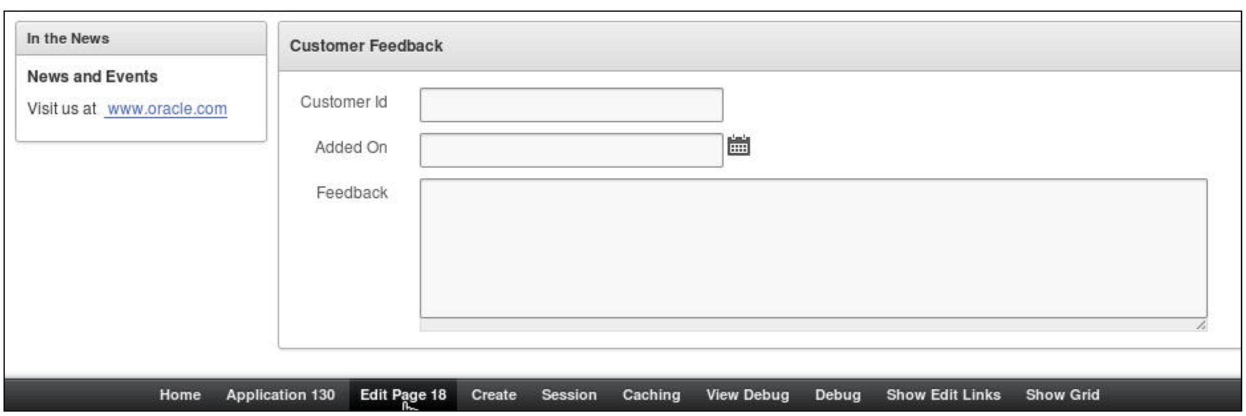
8) To run the page, click **Run**.



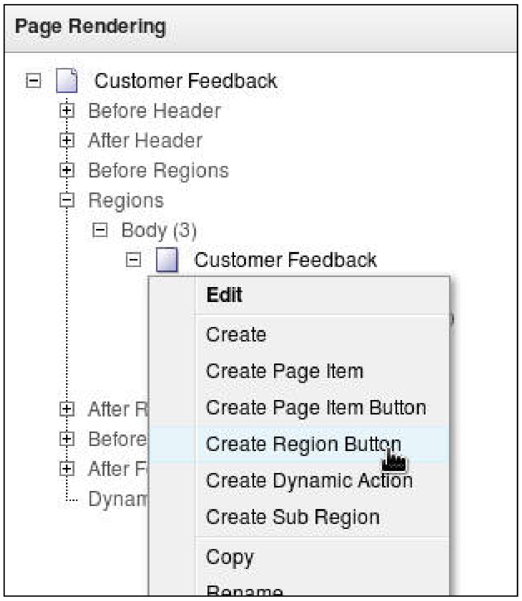
9) Click the **Customer Feedback** button.

d. Add an Apply button on the Customer Feedback page.

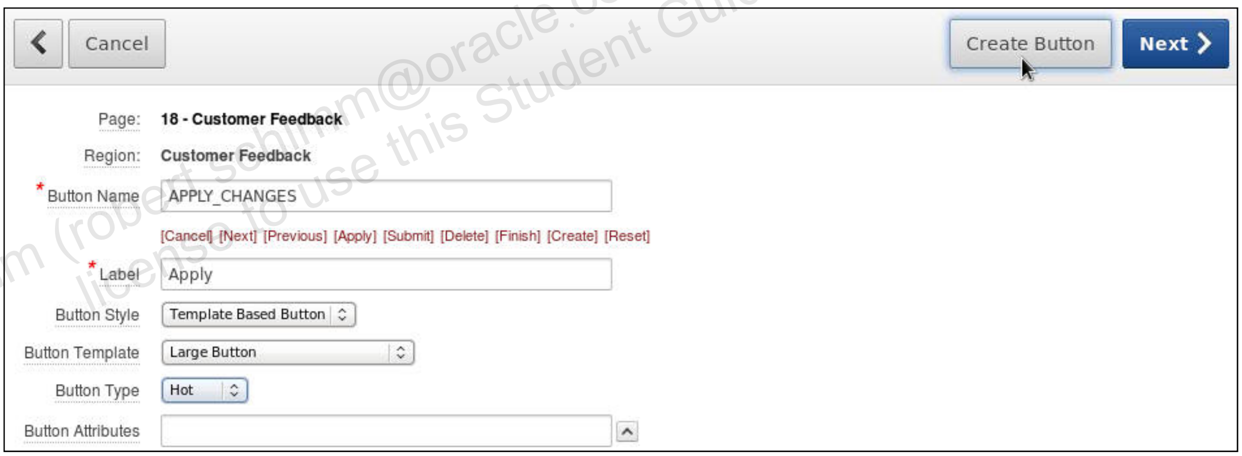
1) You are redirected to the **Customer Feedback** page that you created earlier. You want to create an **Apply** button on this page. Click the **Edit Page** link on the Developer toolbar.



2) Right-click the **Customer Feedback** region and select **Create Region Button**.

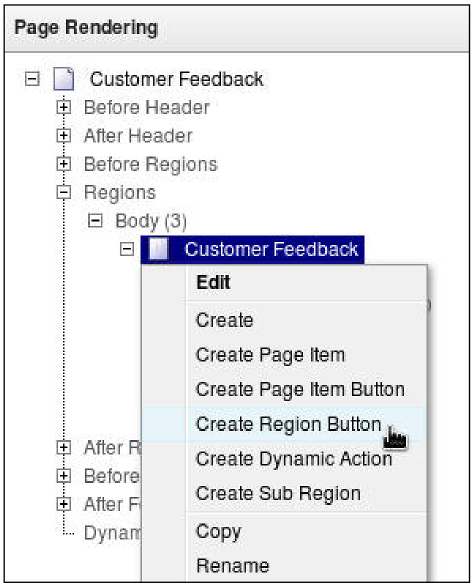


3) Click the **[Apply]** quick pick for Button Name as **`APPLY_CHANGES`** and for Button Style select **Template Based Button**. For Button Template, select **Large Button** and Button Type as **Hot**. Click **Create Button**.

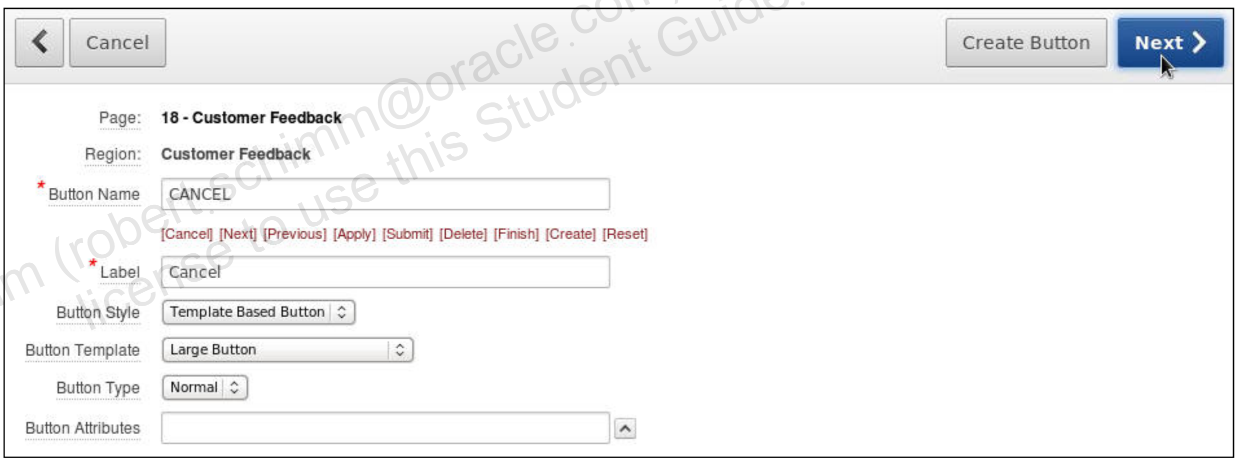


e. Add a Cancel button on the Customer Feedback page to redirect to the Customers page.

1) You also want to create a Cancel button. Right-click the **Customer Feedback** region and select **Create Region Button**.

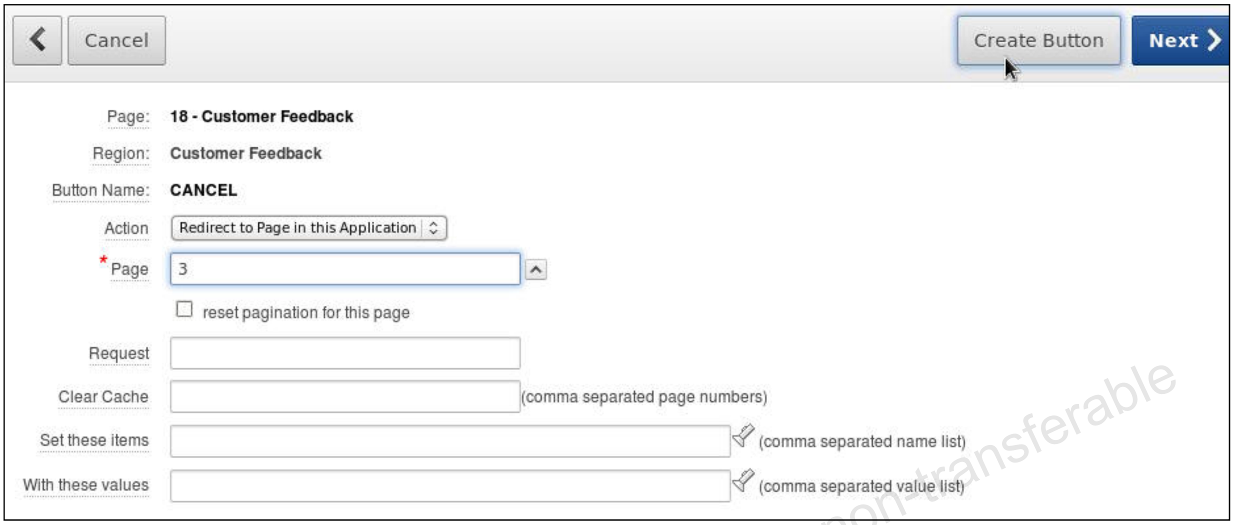


2) Click the **[Cancel]** quick pick and for Button Style, select **Template Based Button**. For Button Template, select **Large Button**, and then click **Next >**.

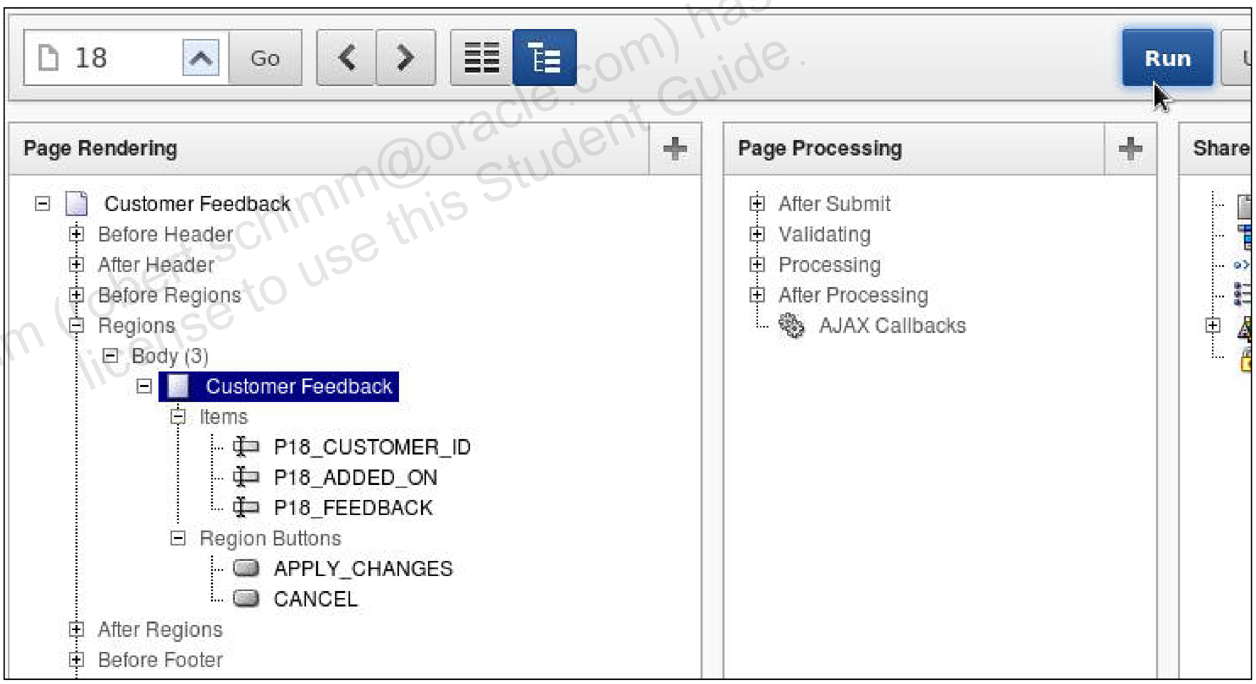


3) Accept the default and click **Next >**.

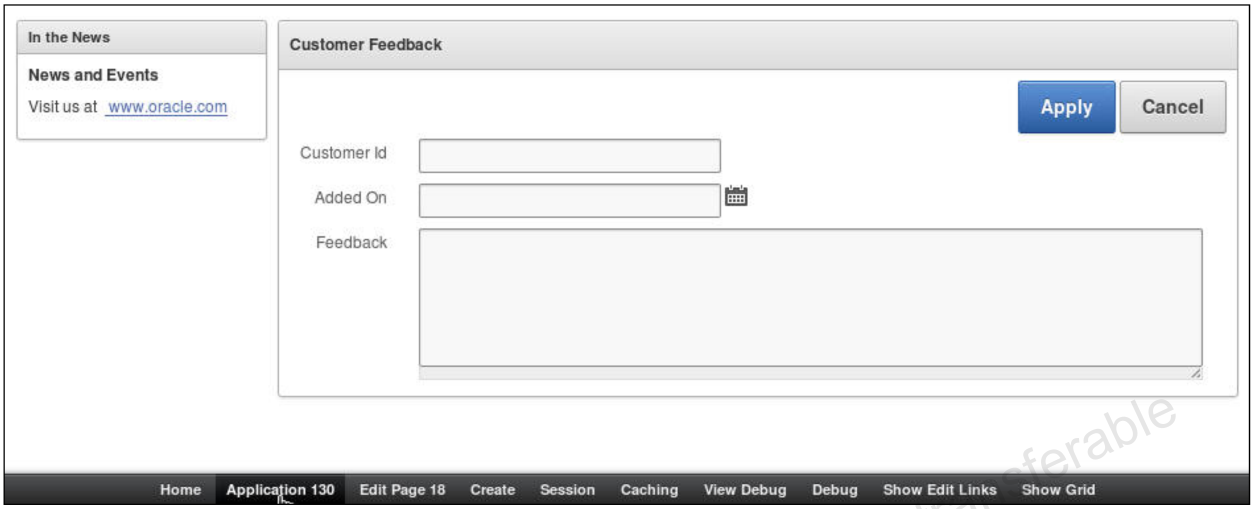
4) Select **Redirect to Page in this Application** for **Action**, and enter the page number for the **Customers** page (in this case, 3) in the Page field. Click **Create Button**.



5) Run the page. Click **Run**.



6) The **Apply** and **Cancel** buttons are created successfully. Click the **Application <*n*>** link on the Developer toolbar.



Solution 8-2: Manipulating Items

Overview

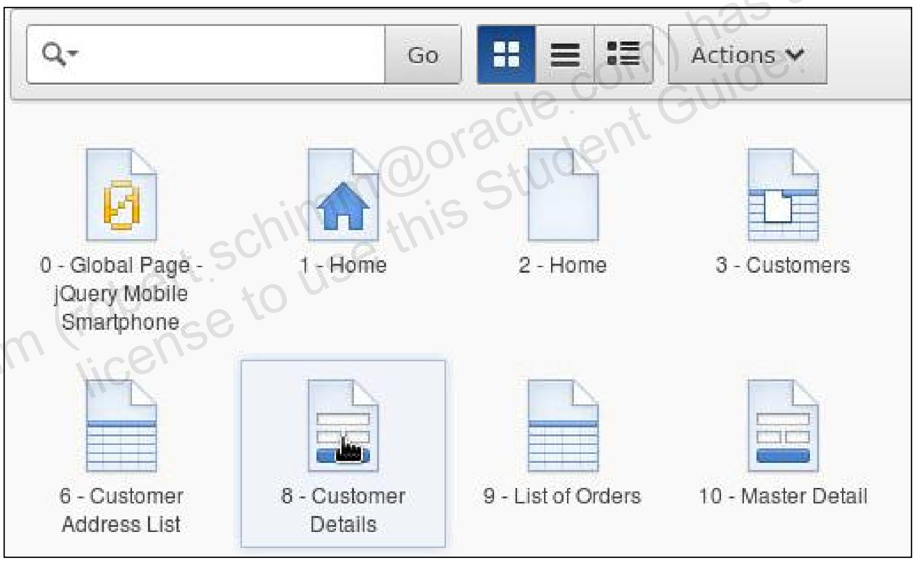
In this practice, you add some additional items and modify the way the fields in the Customer Details form are displayed.

Tasks

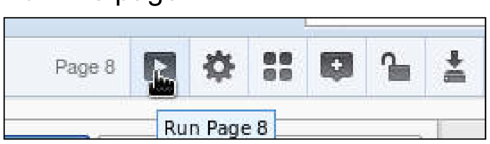
a. Modify the Account Manager item to be a select list with the following query (located in `/home/oracle/labs/files/lab8_2_1.txt`):

```
select LAST_NAME||', '||FIRST_NAME display_value, EMPLOYEE_ID
return_value
from OEHR_EMPLOYEES
where DEPARTMENT_ID=80
order by 1
```

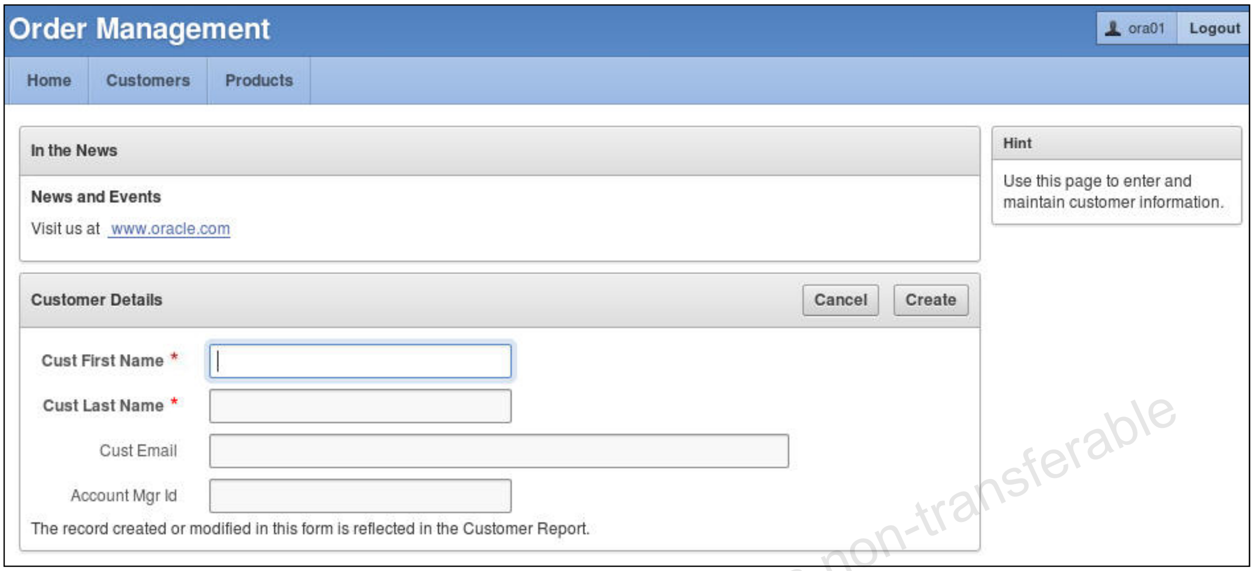
1) Navigate to the Order Management application home page and select the **Customer Details** page.



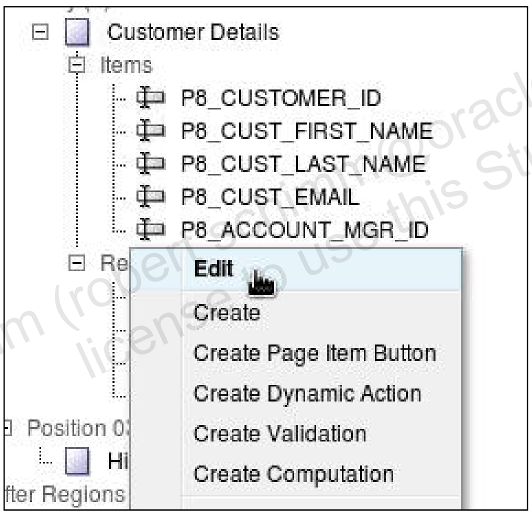
2) **Run** the page.



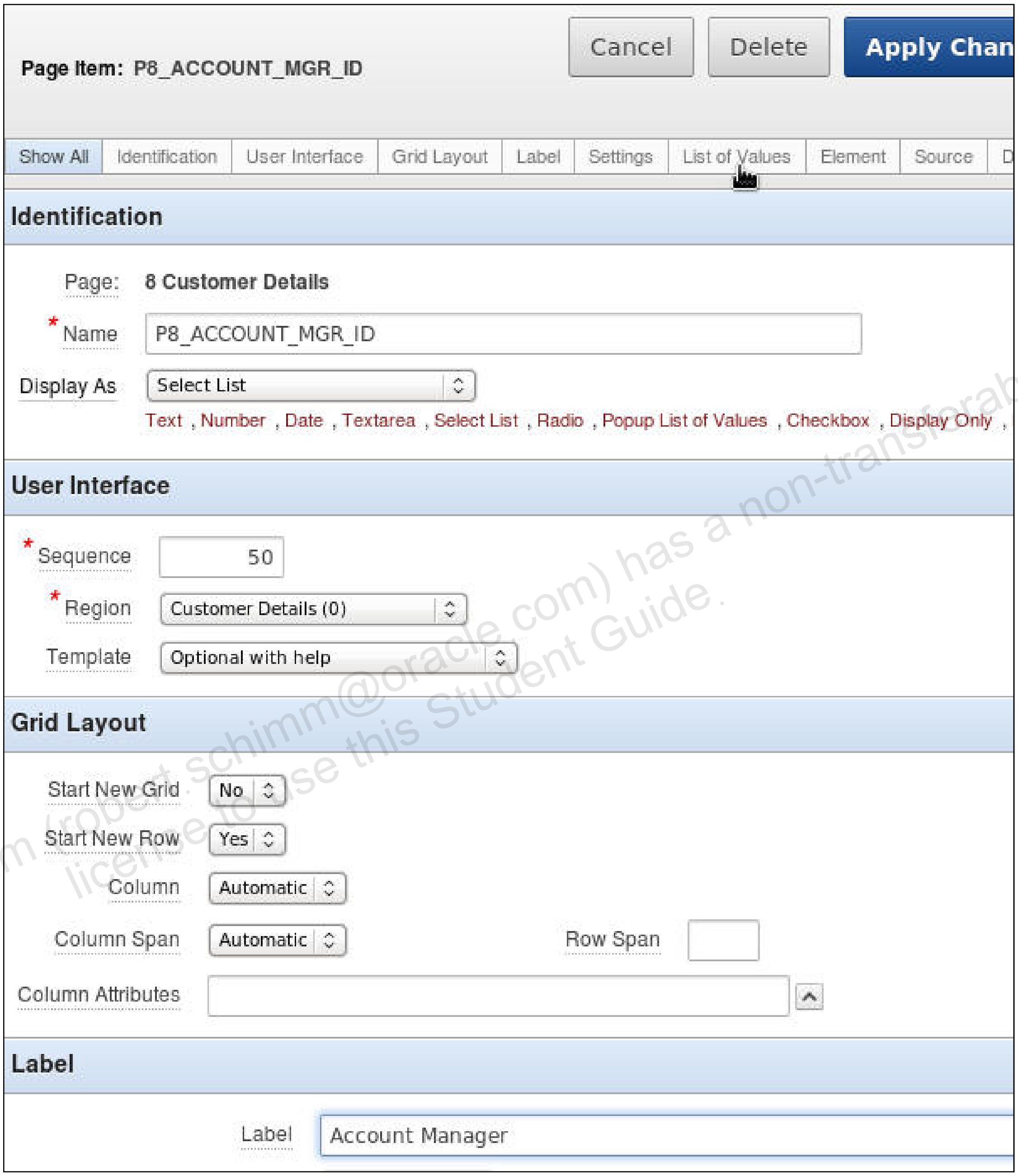
3) You will change the **Account Manager** item to a select list and also add a quick pick list. Click the **Edit Page** link on the Developer toolbar.



4) Right-click the **P<n>_ACCOUNT_MGR_ID** item and select **Edit**.

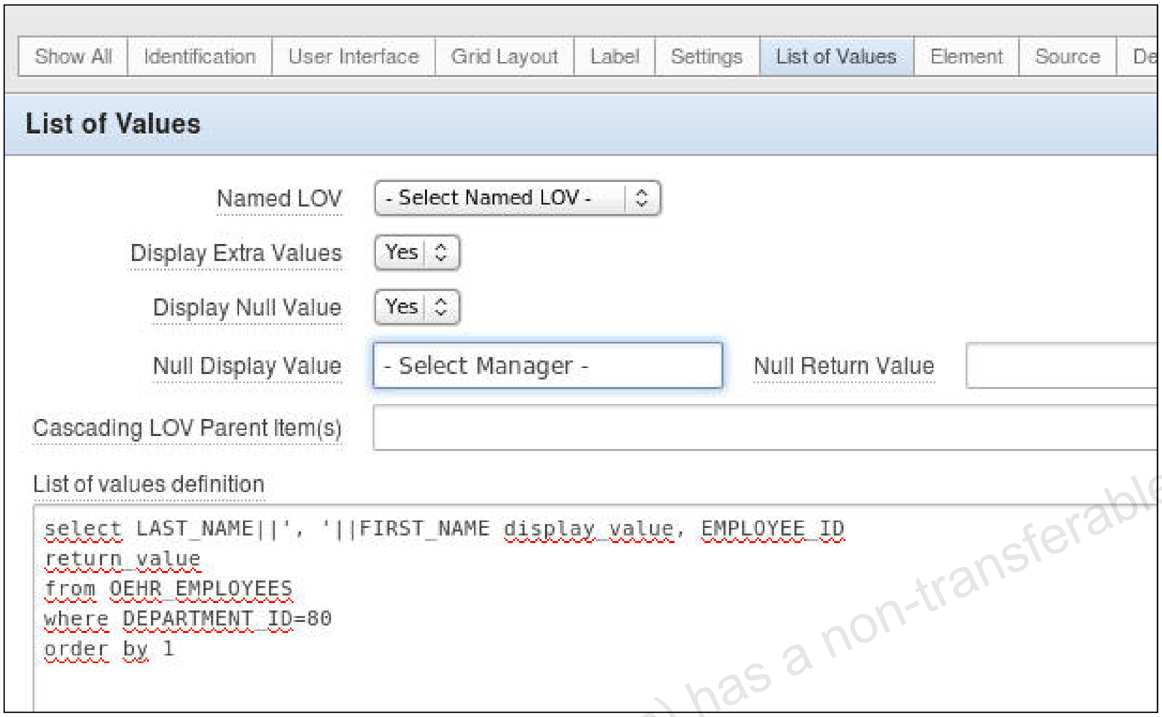


5) Click the **Select List** quick pick, change the label to **Account Manager**, and click the **List of Values** tab.



6) You want to build a dynamic list of the names of managers in the Sales department. Enter the following query (located in `/home/oracle/labs/files/lab8_2_1.txt`) to display the last name and first name, and return **`EMPLOYEE_ID`**. Select **Yes** for **Display Null Value** and enter **- Select Manager -** in the **Null Display Value** field.

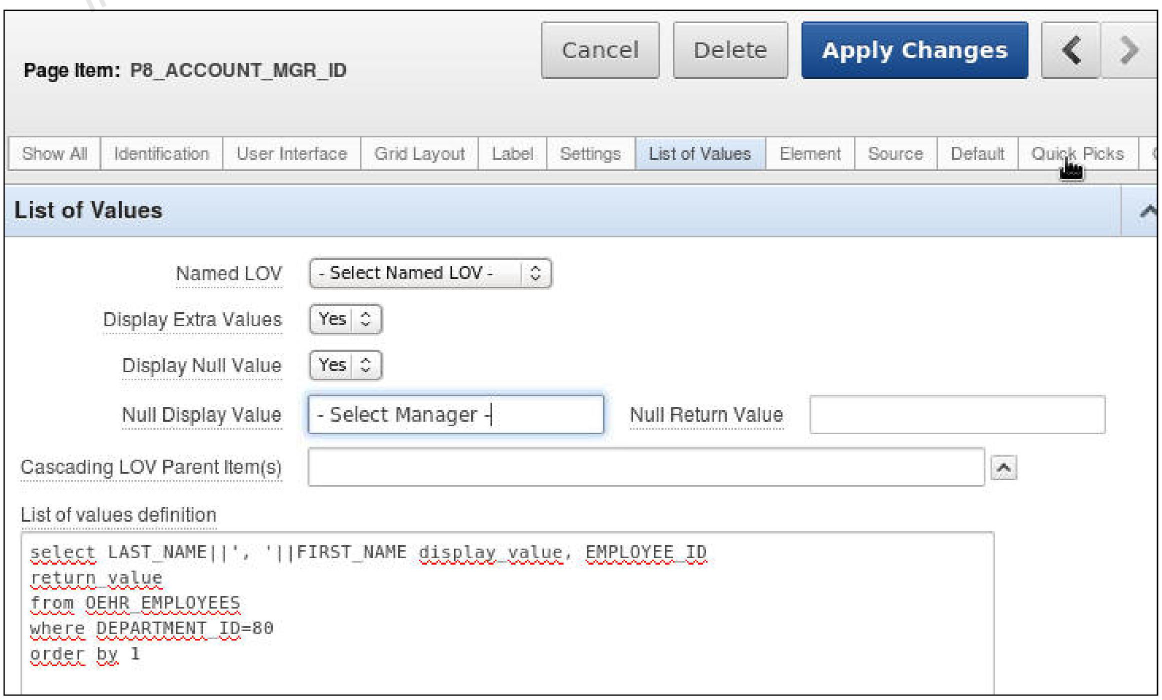
```
select LAST_NAME||', '||FIRST_NAME display_value, EMPLOYEE_ID
return_value
from OEHR_EMPLOYEES
where DEPARTMENT_ID=80
order by 1
```



b. Add a quick pick list to the Account Manager item with the following labels and values:

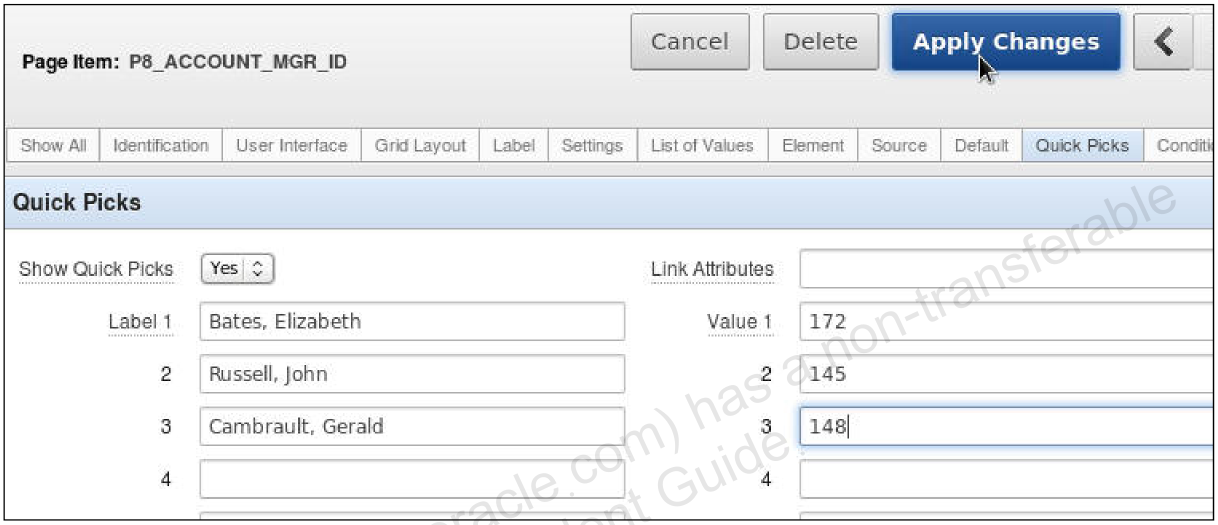
Label	Value
Bates, Elizabeth	172
Russell, John	145
Cambrault, Gerald	148

1) Click the **Quick Picks** tab.

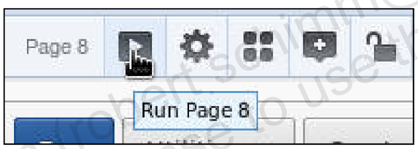


2) Select **Yes** for **Show Quick Picks**. Enter the following labels and values and click **Apply Changes**.

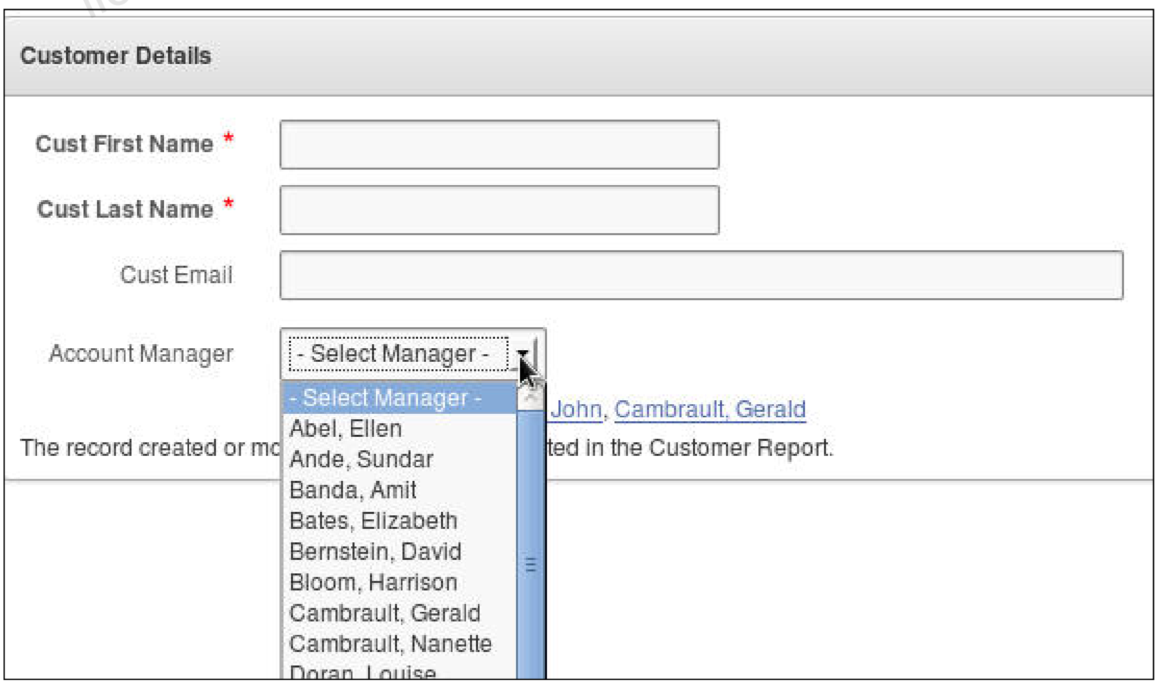
Label	Value
Bates, Elizabeth	172
Russell, John	145
Cambrault, Gerald	148



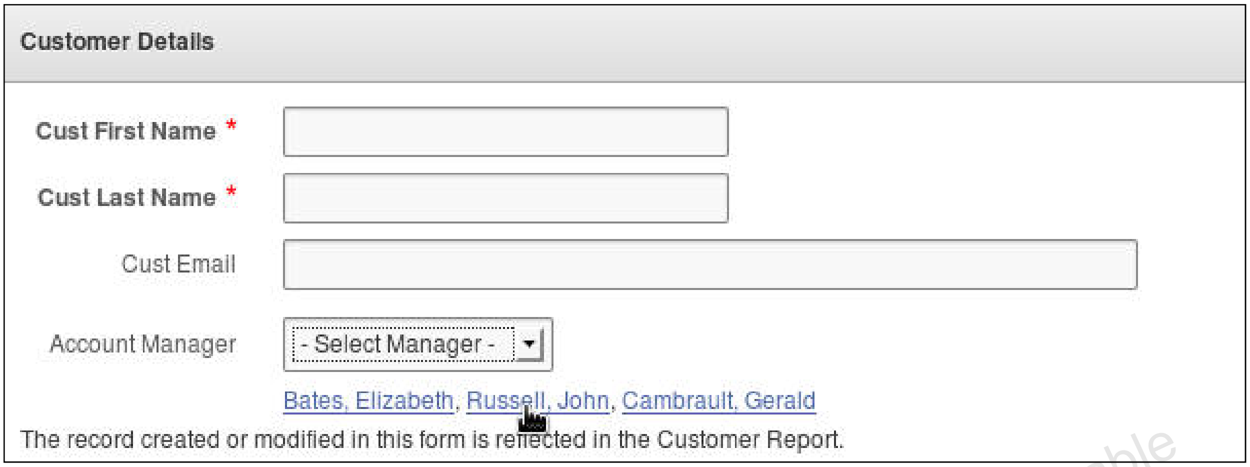
3) Click the **Run Page** icon.



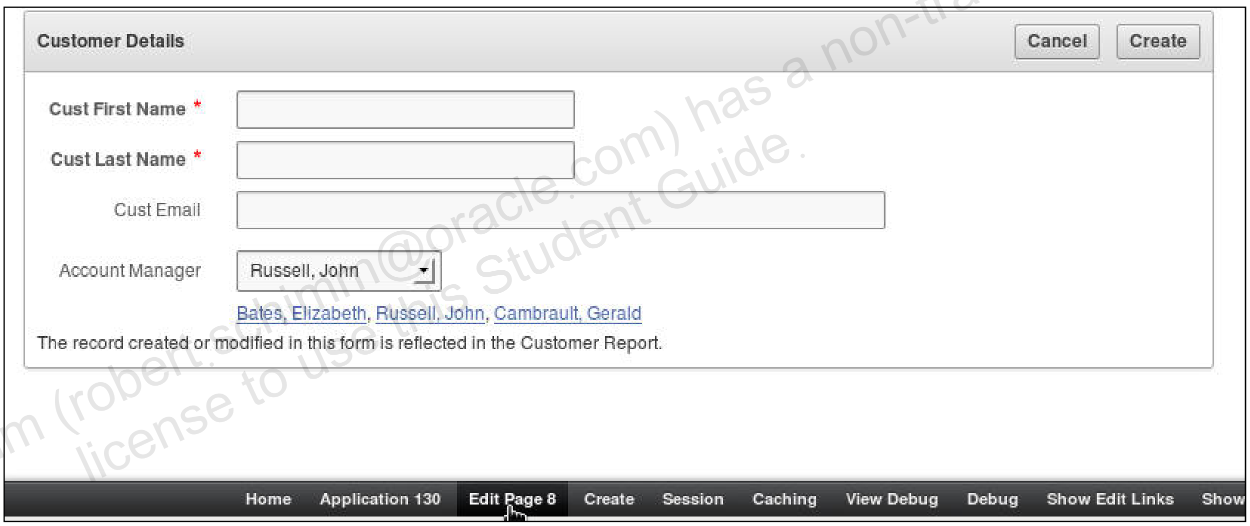
4) Click the **Account Manager** drop-down list to see the list of Account Managers.



5) Click the **Russell, John** quick pick.



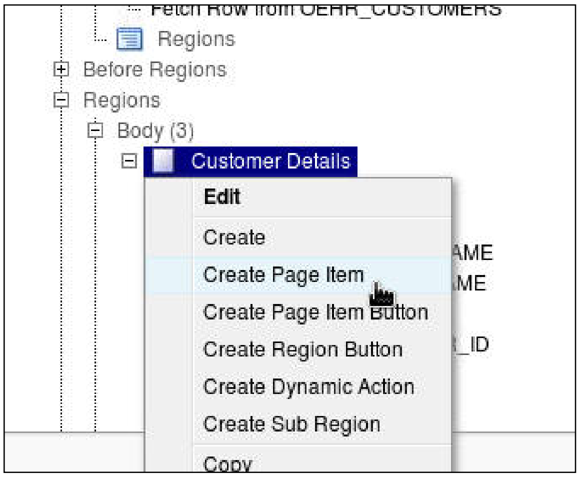
6) Notice how the name is selected for **Account Manager**. You want to add some additional items. Click the **Edit Page** link on the Developer toolbar.



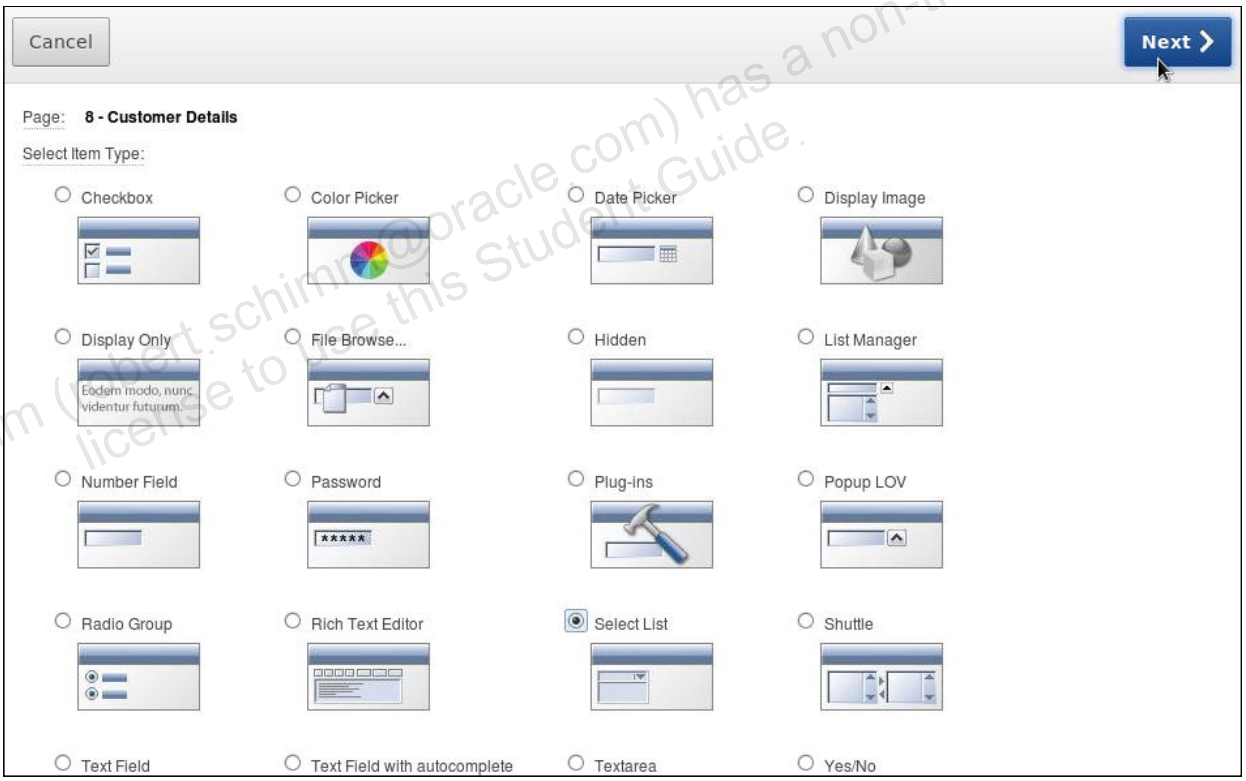
c. Add a select list item called Country that contains the following query (located in `/home/oracle/labs/files/lab8_2_2.txt`). This item should allow nulls.

```
select COUNTRY_NAME display_value, COUNTRY_ID return_value
from OEHR_COUNTRIES
order by 1
```

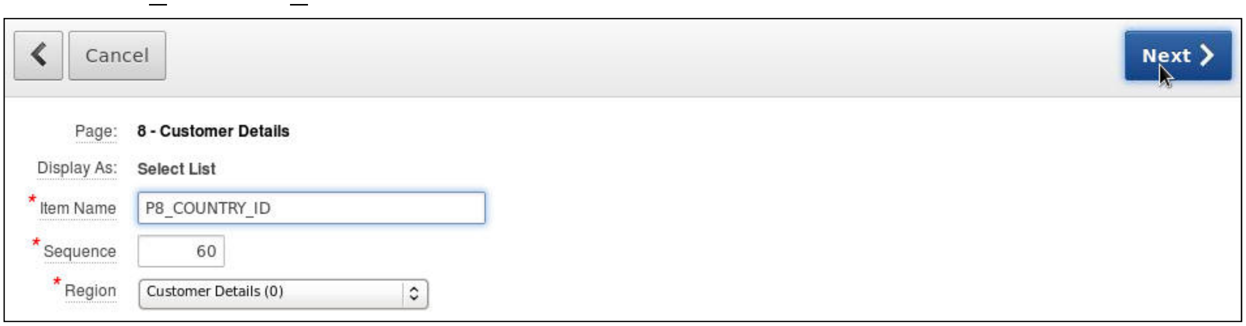
1) In the Customer Details region, right-click **Customer Details** and select **Create Page Item**.



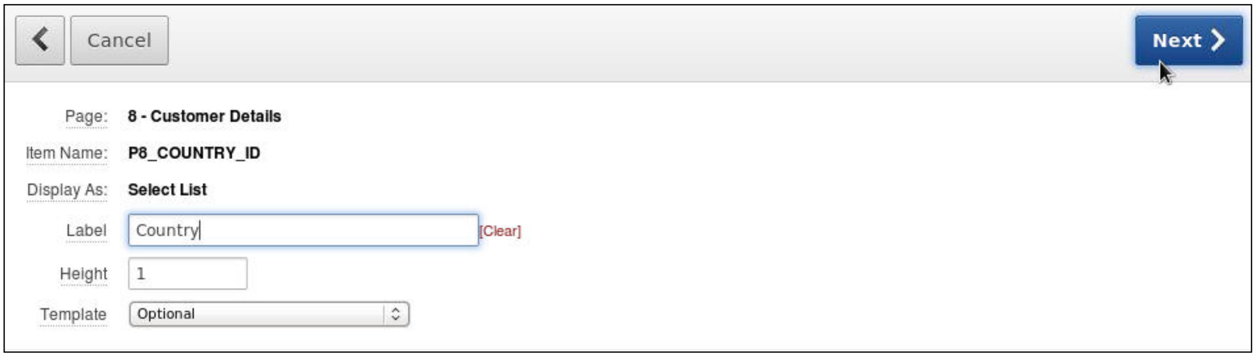
2) Select the **Select List** item type and click **Next >**.



3) Enter `P<n>_COUNTRY_ID` for Item Name and click **Next >**.



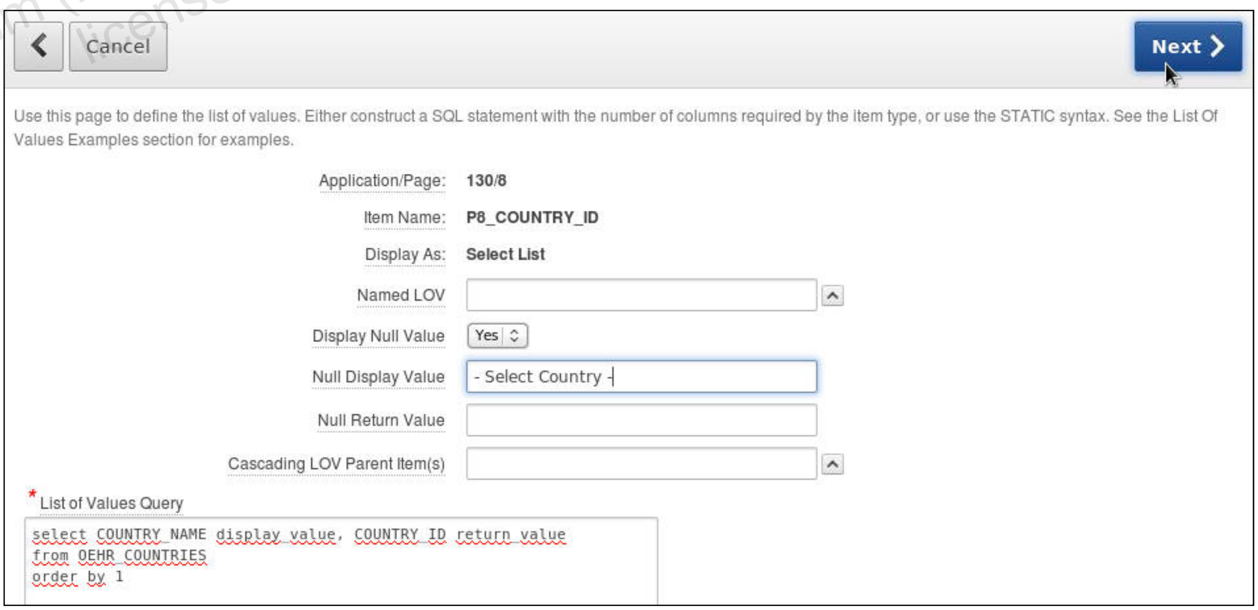
4) Change the Label to **Country** and click **Next >**.



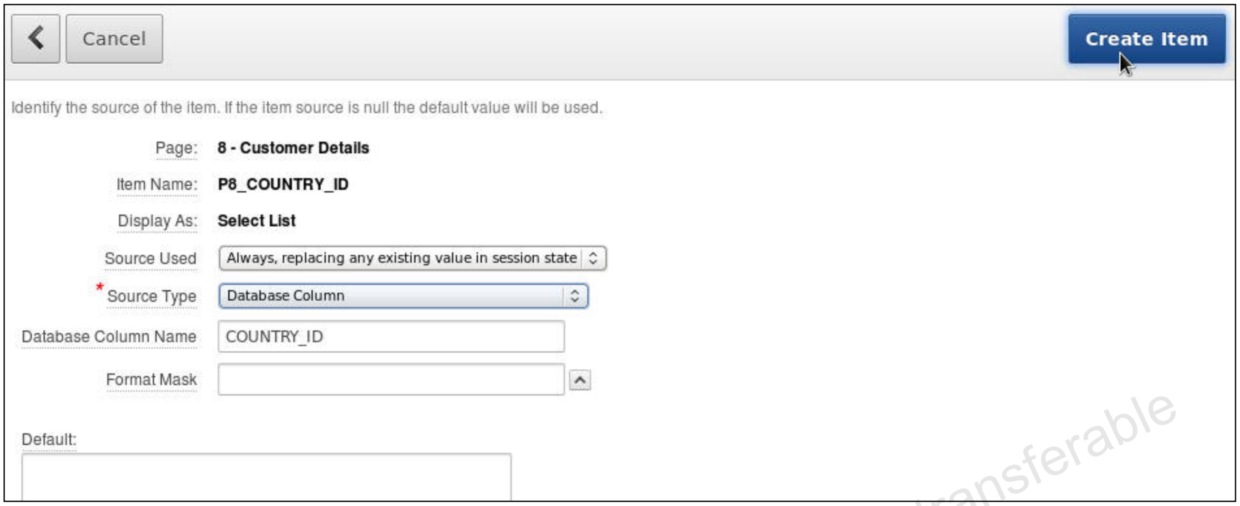
5) Accept the defaults and click **Next >**.

6) Enter the following SQL in the **List of Values** Query area (located in `/home/oracle/labs/files/lab8_2_2.txt`). Enter **- Select Country -** for Null Display Value and click **Next >**.

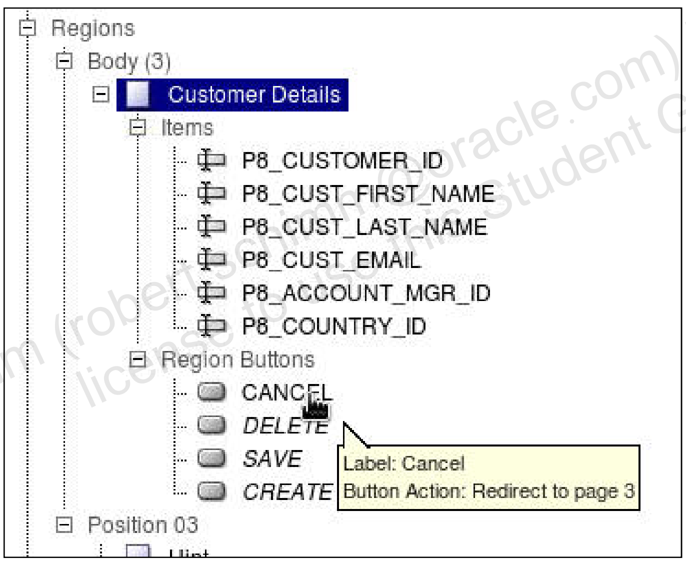
```
select COUNTRY_NAME display_value, COUNTRY_ID return_value
from OEHR_COUNTRIES
order by 1
```



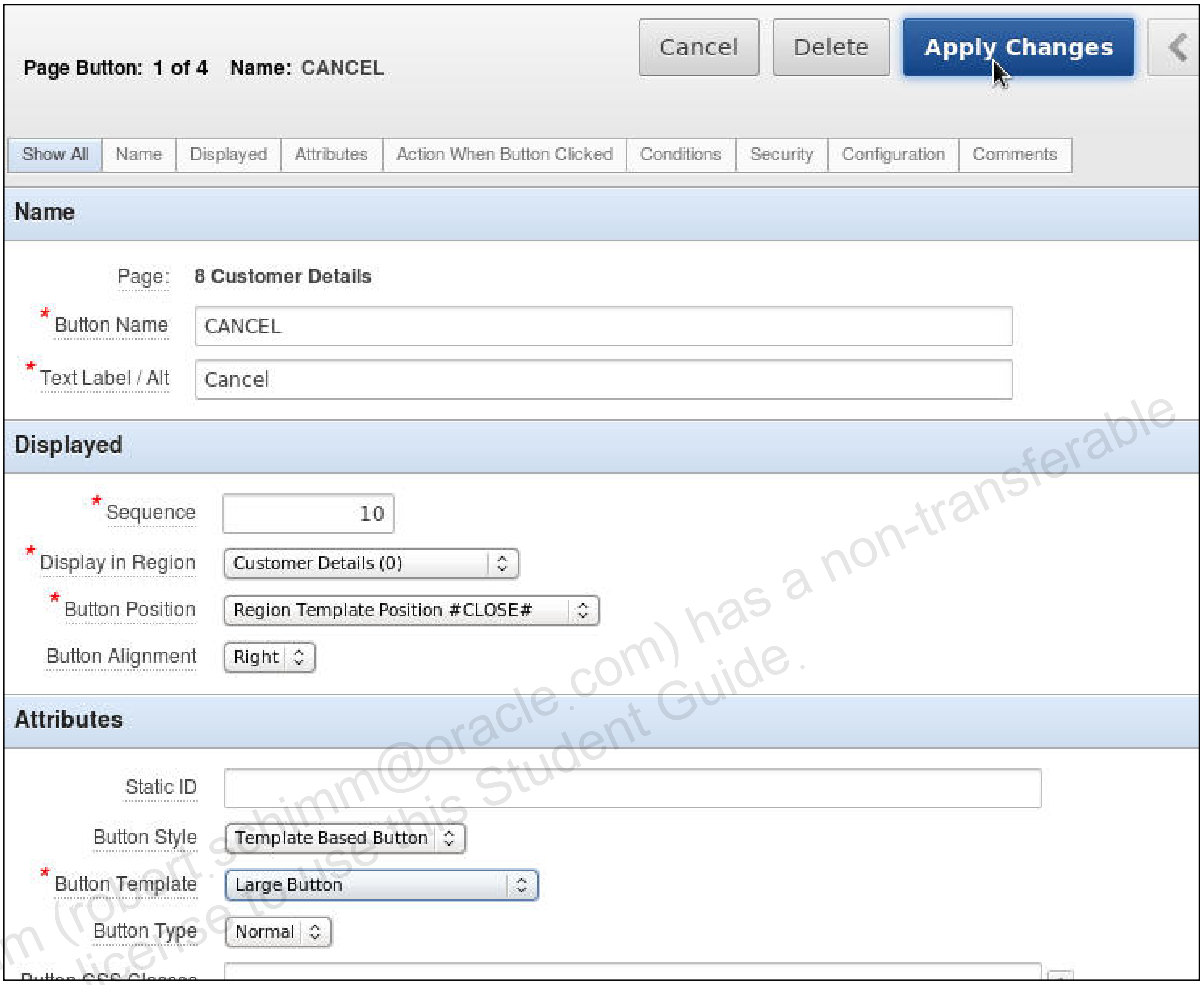
7) Select **Database Column** for Source Type. Notice that the `COUNTRY_ID` column is automatically inserted. Click **Create Item**.



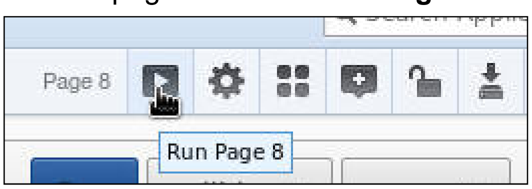
8) You want to change the size of the Cancel button. Under Region Button, double-click **CANCEL**.



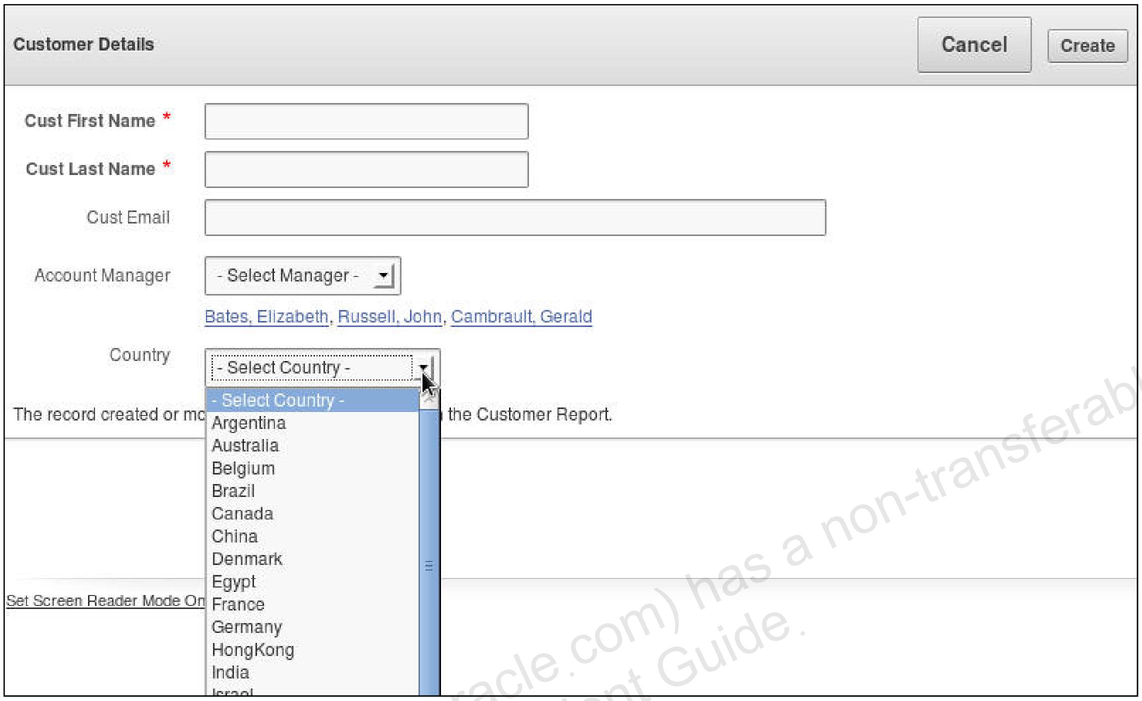
9) Under Attributes, change the Button Template to **Large Button** and click **Apply Changes**.



10) Run the page. Click the **Run Page** icon.



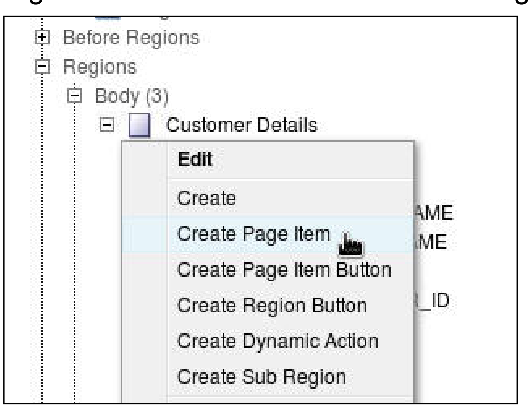
11) Notice that the **Country Id** item shows a select list of country names. You want to create an item that is based on the country selected (cascading LOV). Click the **Edit Page** link on the Developer toolbar.



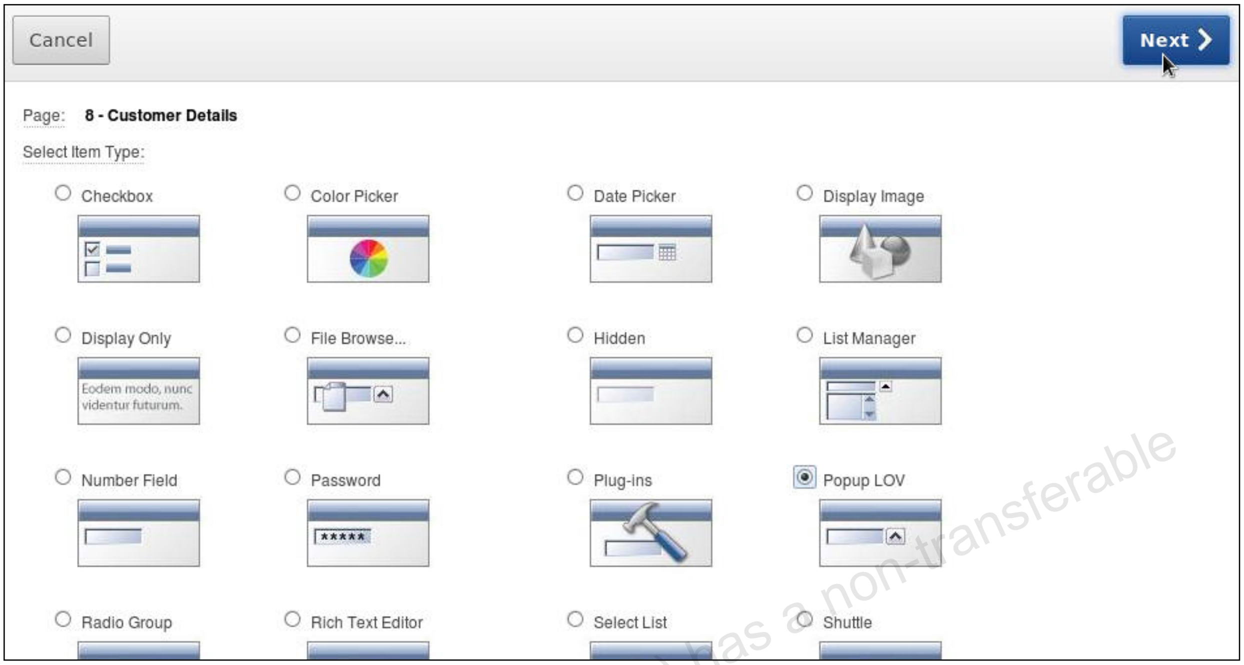
d. Add another item, City, based on the Country item that you just created with the following query (located in `/home/oracle/labs/files/lab8_2_3.txt`). Select the Country item as the cascading LOV. **Note:** You may need to change the query so that you do not have multiple rows.

```
select CITY display_value, CITY return_value
from OEHR_LOCATIONS
where country_id = :P<n>_COUNTRY_ID
order by 1
```

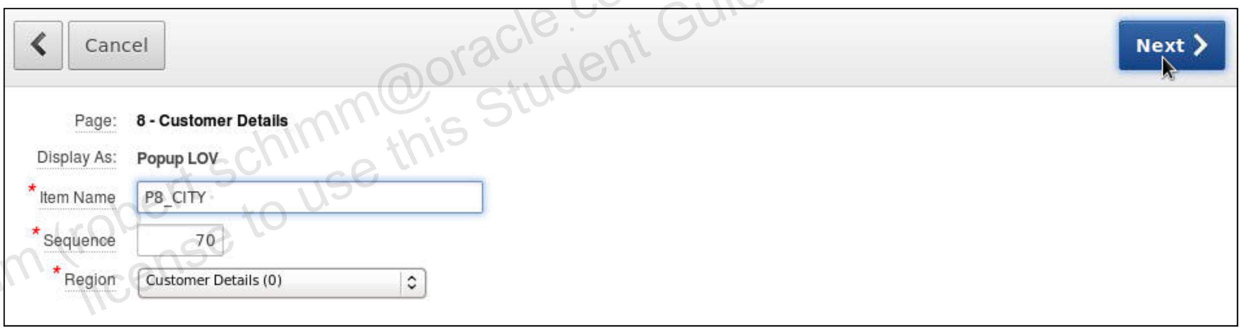
1) Right-click **Customer Details** under Regions and select **Create Page Item**.



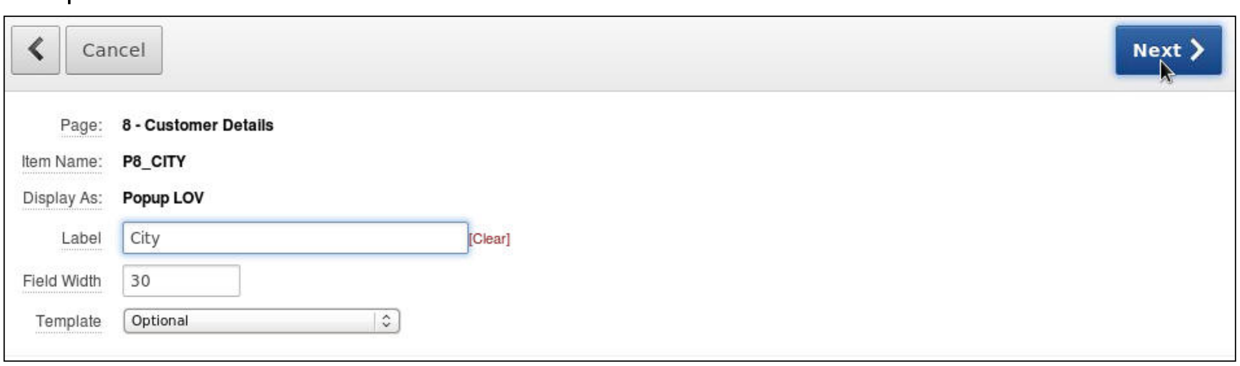
2) Select the **Popup LOV** item type and click **Next >**.



3) Enter `P<n>_CITY` for Item Name and click **Next >**.



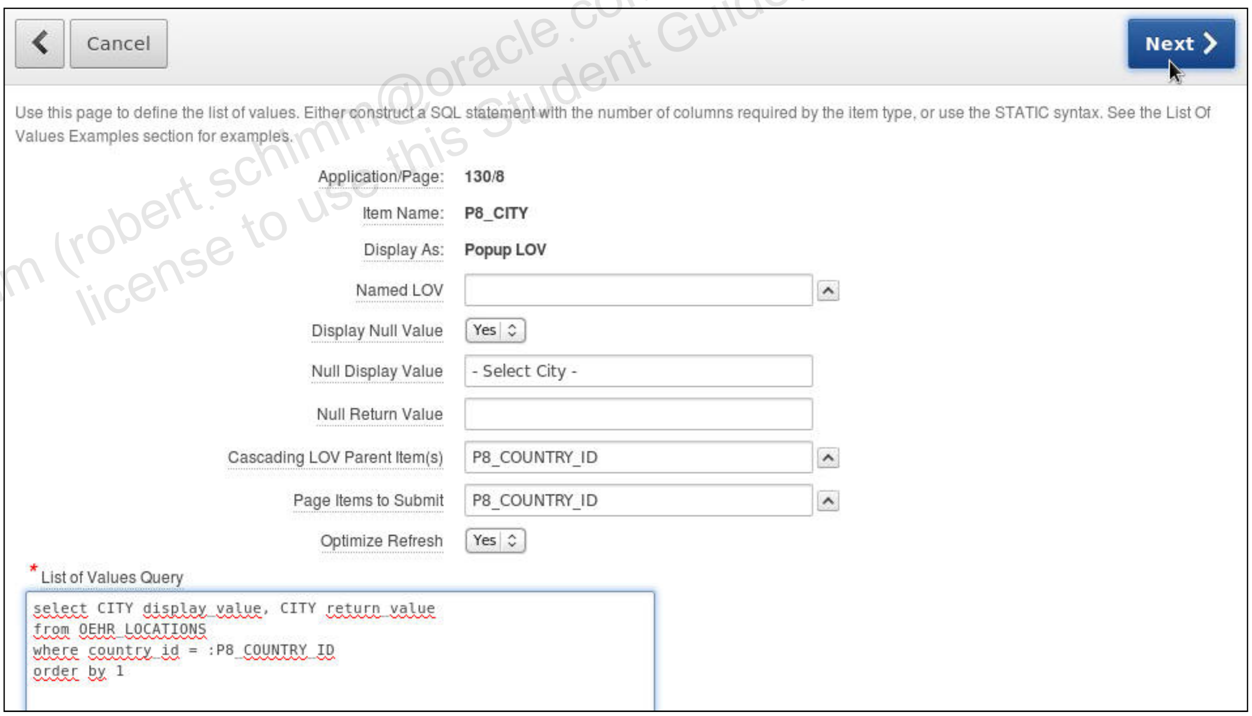
4) Accept the defaults and click **Next >**.



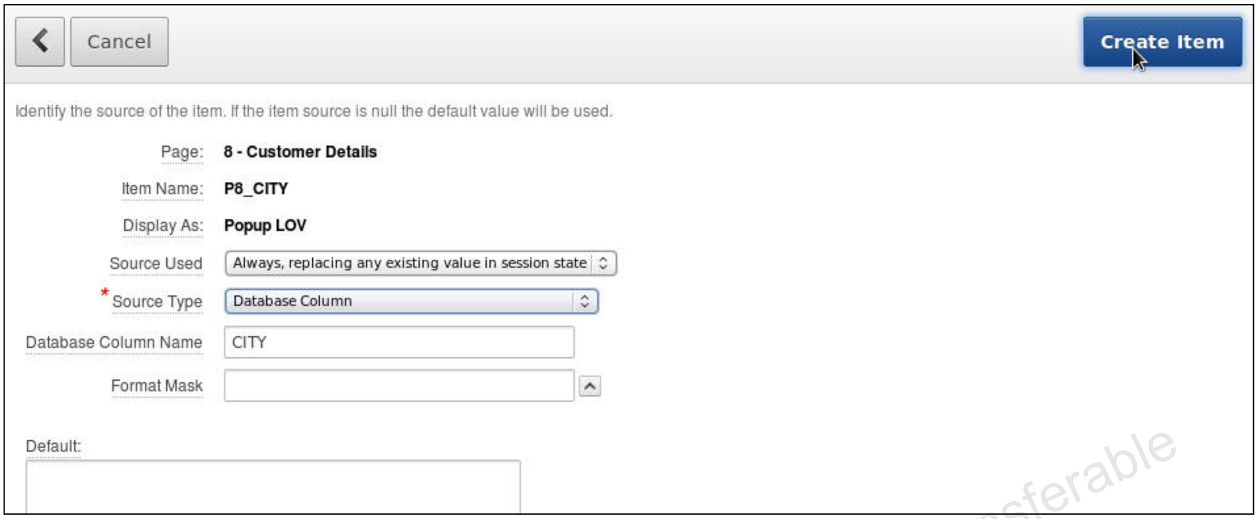
5) Accept the defaults and click **Next >**.

6) Enter the following SQL in the **List of Values** Query (located in `/home/oracle/labs/files/lab8_2_3.txt`). Enter **– Select City –** in **Null Display Value** and select **`P<n>_COUNTRY_ID`** for the **Cascading LOV Parent Item(s) and Page Items to Submit** fields. Note that this item will be refreshed when the value of **`P<n>_COUNTRY_ID`** is changed. Click **Next**. Be sure to change **P<*n*>** to your page number.

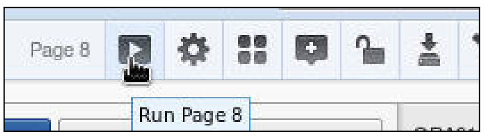
```
select CITY display_value, CITY return_value
from OEHR_LOCATIONS
where country_id = :P<n>_COUNTRY_ID
order by 1
```



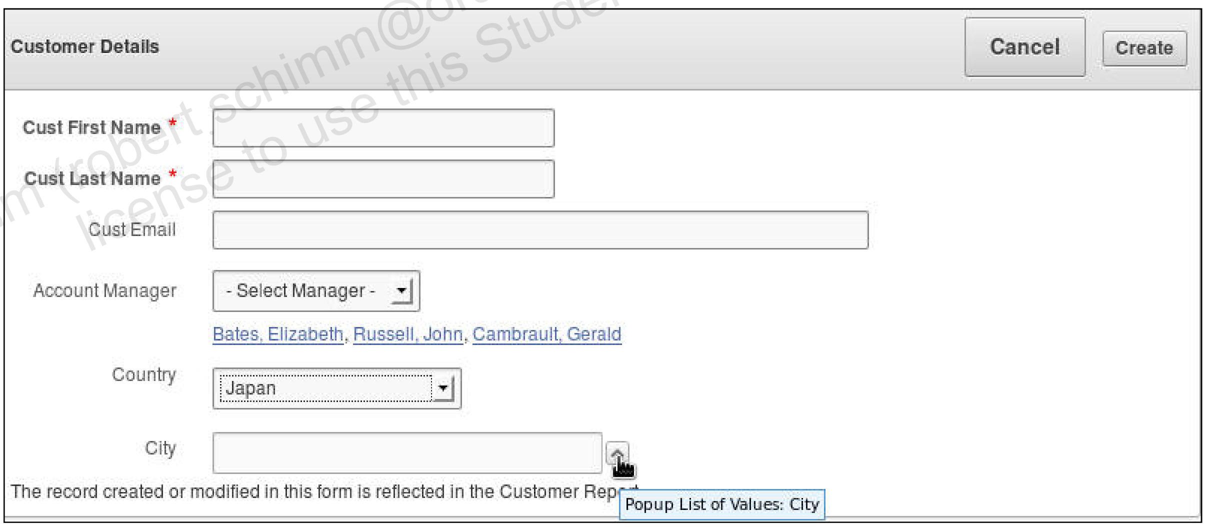
7) Select **Database Column** for Source Type and click **Create Item**.



8) Click the **Run Page** icon.



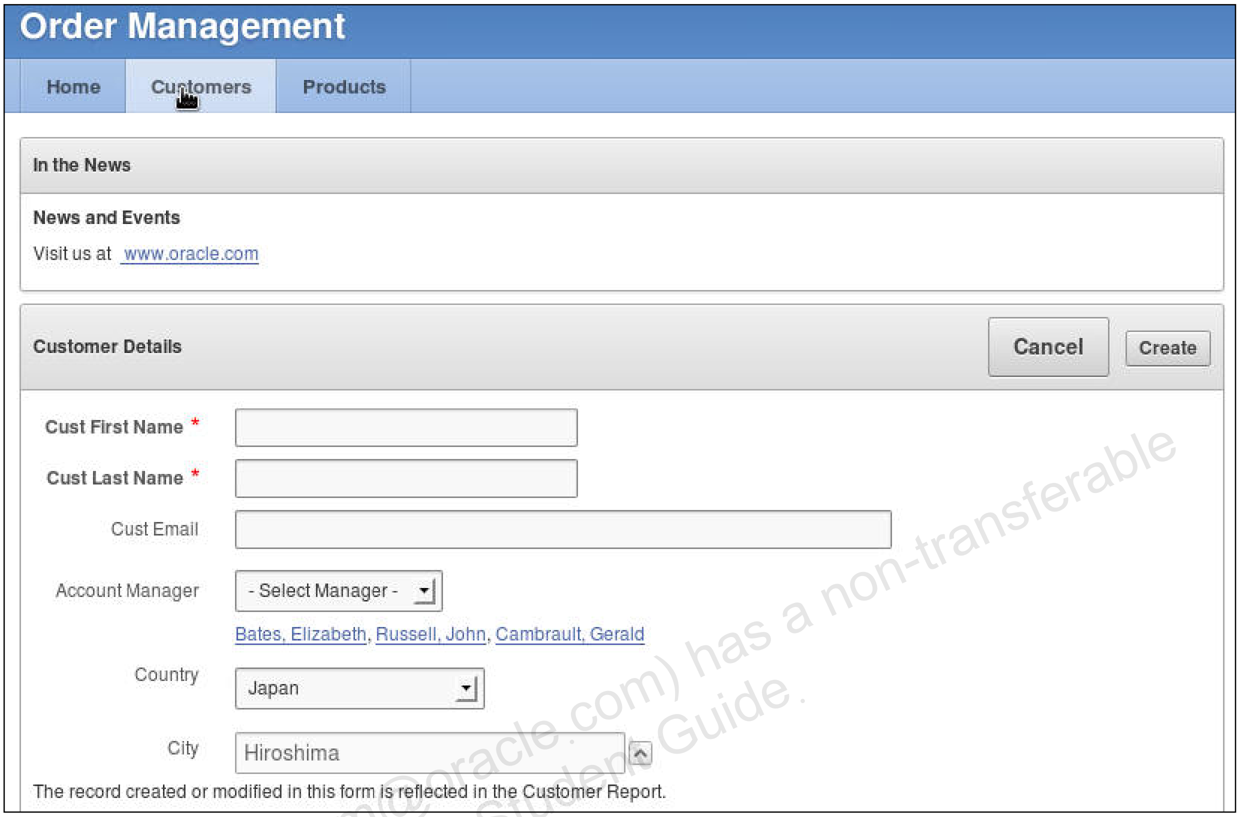
9) Select **Japan** from the list of countries. Click the **Popup List of Values** icon for City.



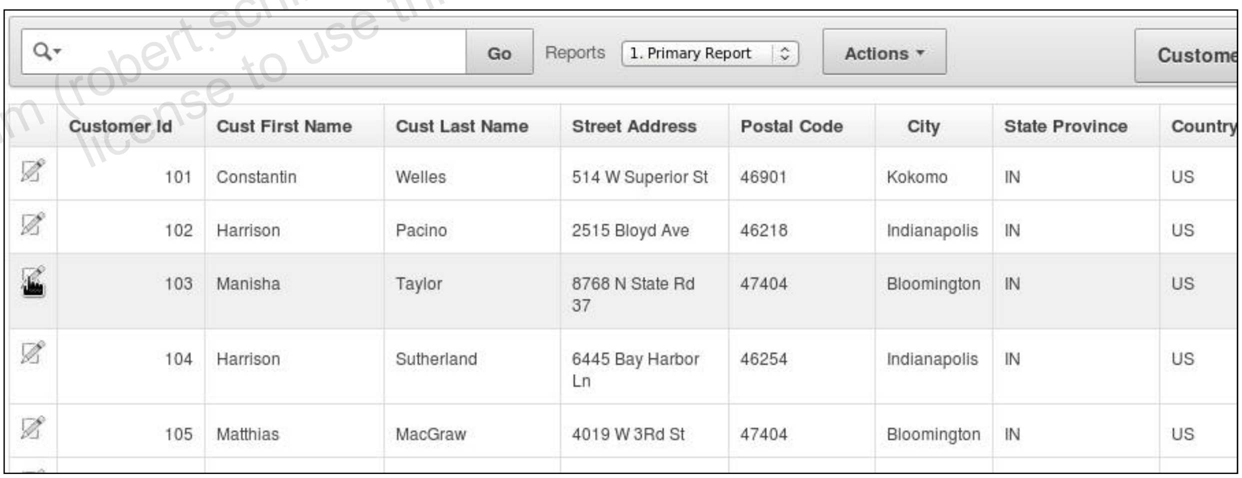
10) A pop-up window with only the cities from Japan are shown. Click one of the cities.

e. Change the Account Manager of an existing customer record.
Note: You must navigate to the customer report and edit one of the records.

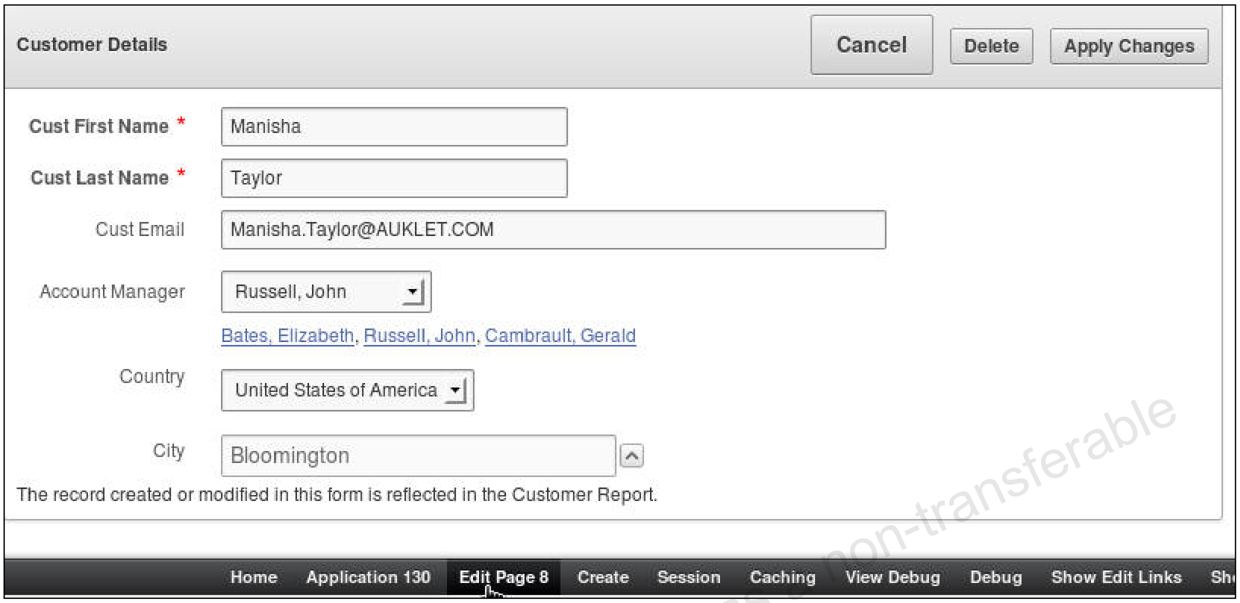
1) You want to modify an existing record. Click the **Customers** tab.



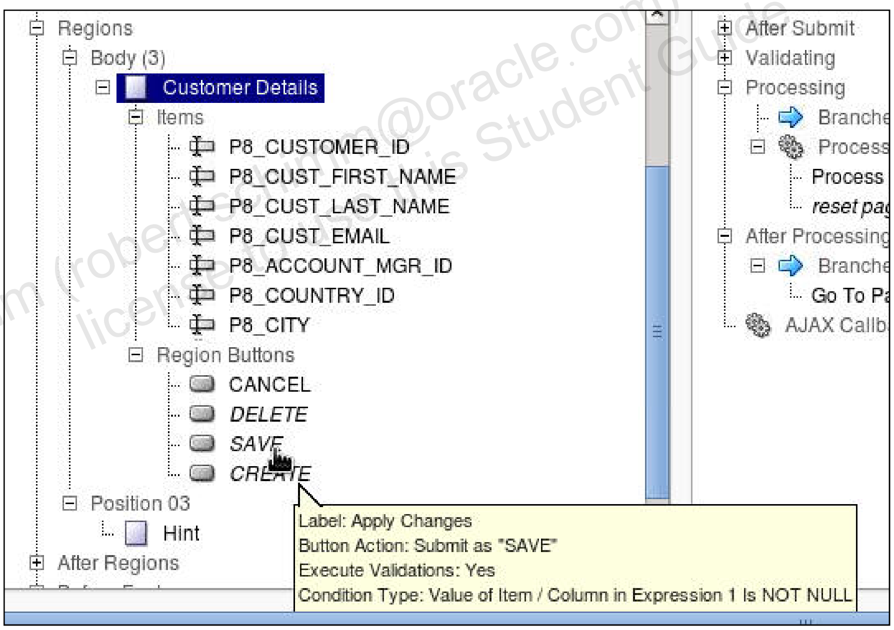
2) Click the **Edit** icon for one of the rows.



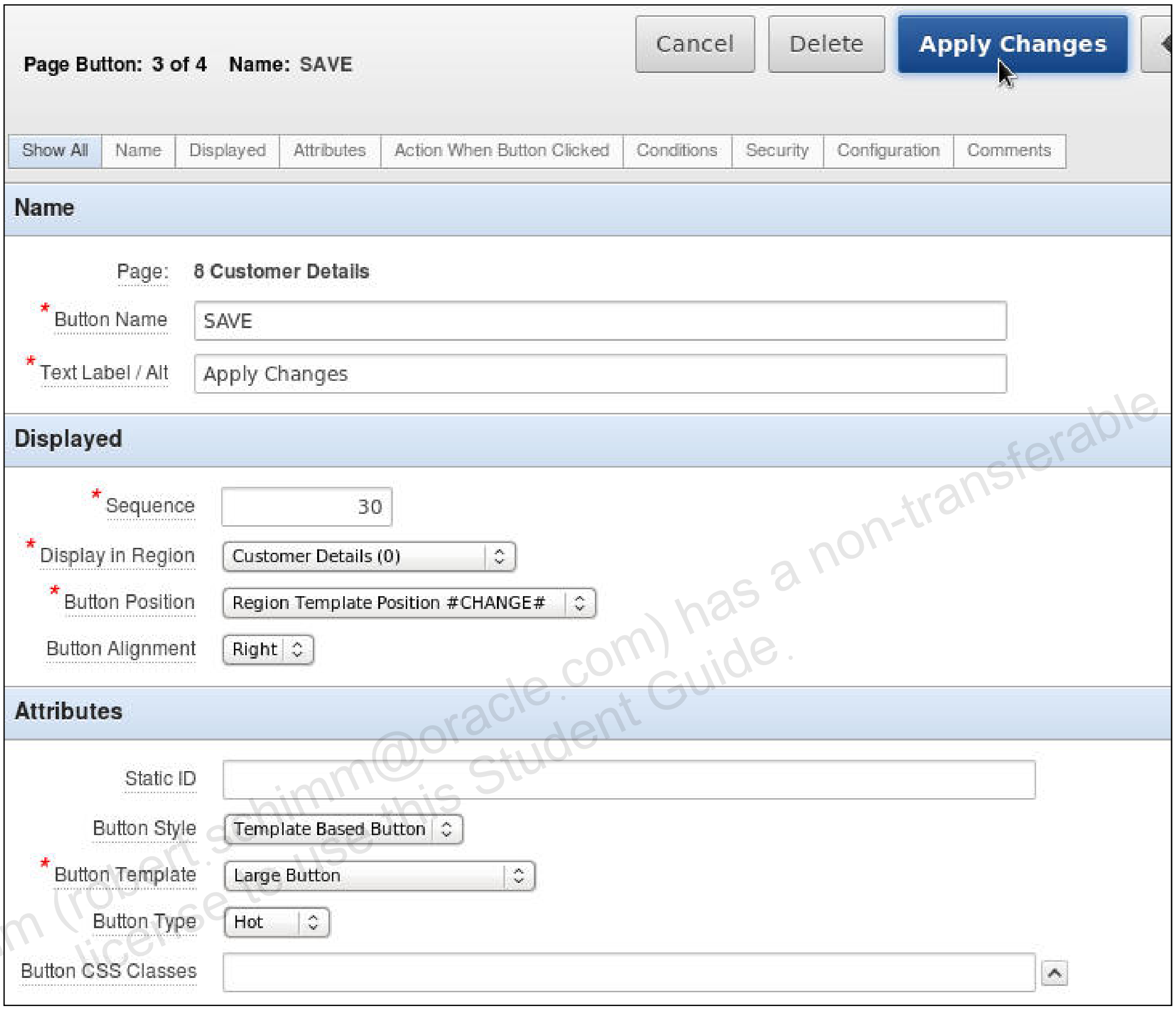
3) You want to make one more change on the Customer Details page so that the Apply Changes button is highlighted and appears larger. Click **Edit Page <*n*>**.



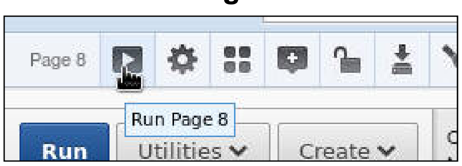
4) Under Region Buttons, double-click the **SAVE** button.



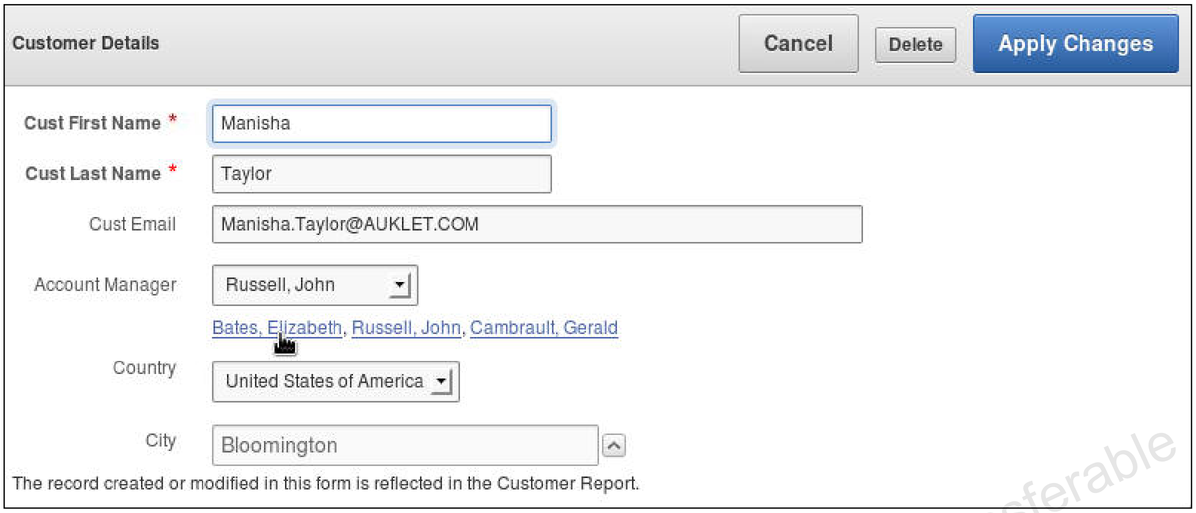
5) Under Attributes, change the Button Template to **Large Button** and change Button Type to **Hot**. Click **Apply Changes**.



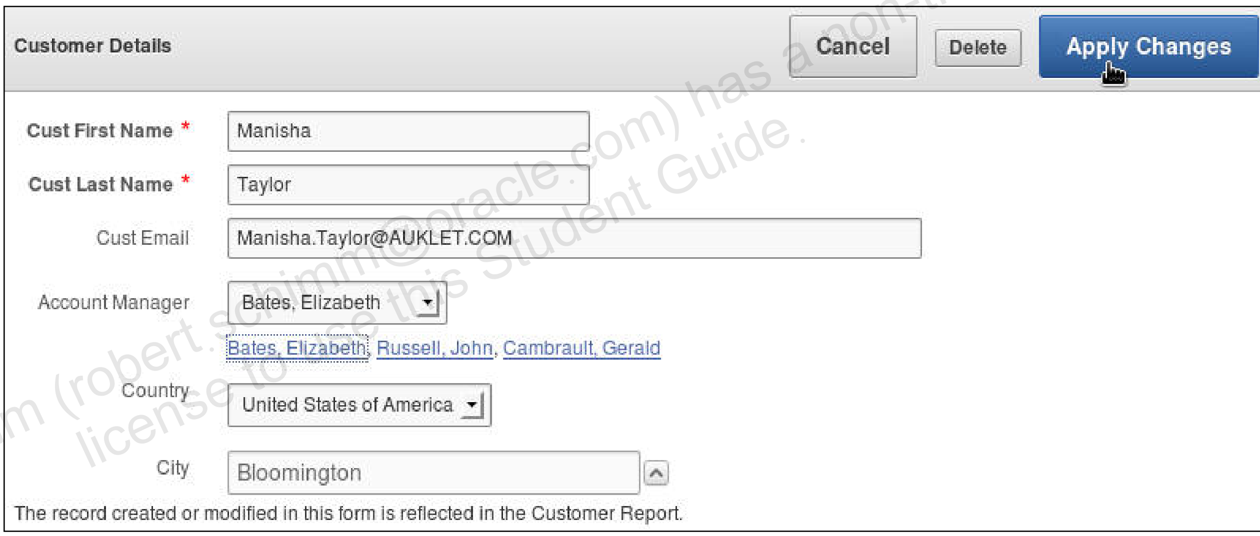
6) Click the **Run Page** icon.



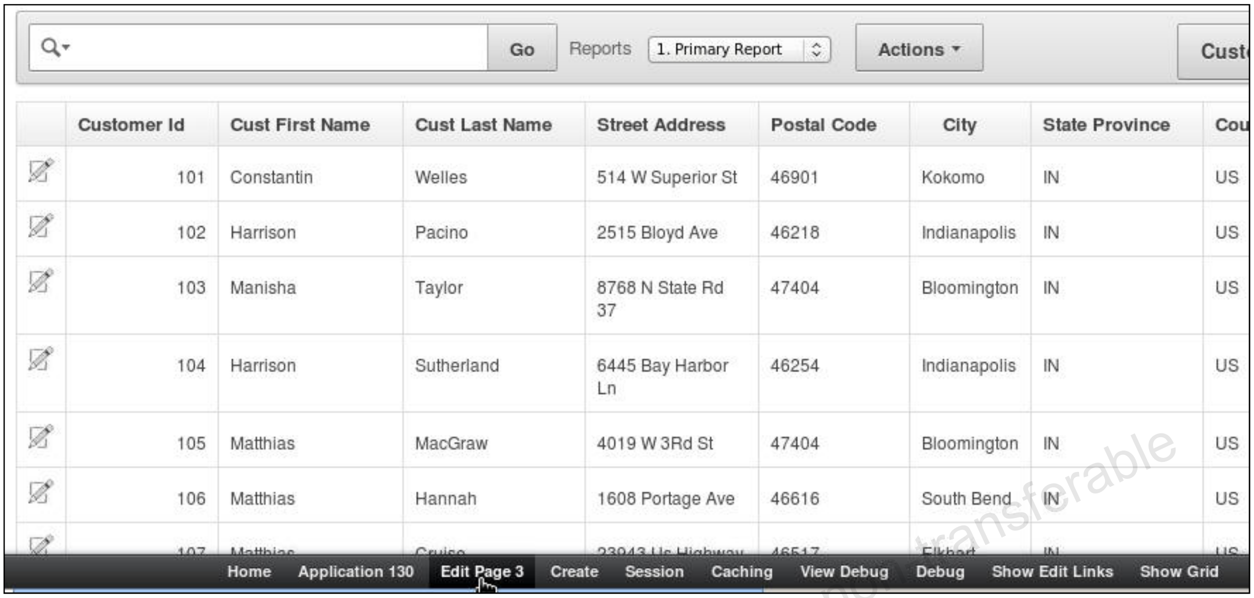
7) Click one of the quick picks for **Account Manager**.



8) Click **Apply Changes**.



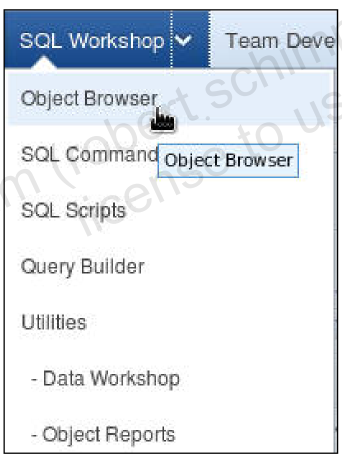
9) The action is processed. Click the **Edit Page** link on the Developer toolbar.



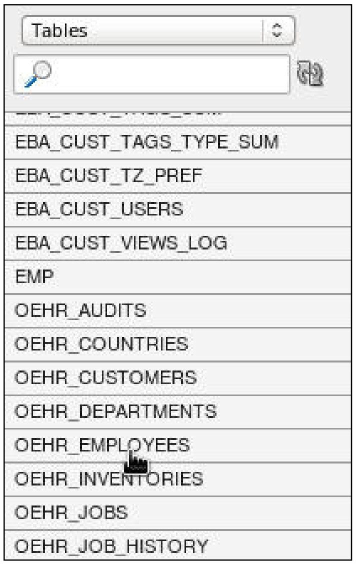
	Customer Id	Cust First Name	Cust Last Name	Street Address	Postal Code	City	State Province	Cou
	101	Constantin	Welles	514 W Superior St	46901	Kokomo	IN	US
	102	Harrison	Pacino	2515 Bloyd Ave	46218	Indianapolis	IN	US
	103	Manisha	Taylor	8768 N State Rd 37	47404	Bloomington	IN	US
	104	Harrison	Sutherland	6445 Bay Harbor Ln	46254	Indianapolis	IN	US
	105	Matthias	MacGraw	4019 W 3Rd St	47404	Bloomington	IN	US
	106	Matthias	Hannah	1608 Portage Ave	46616	South Bend	IN	US

f. Modify the Employee Detail mobile form page to take advantage of some of the new HTML5 item types.

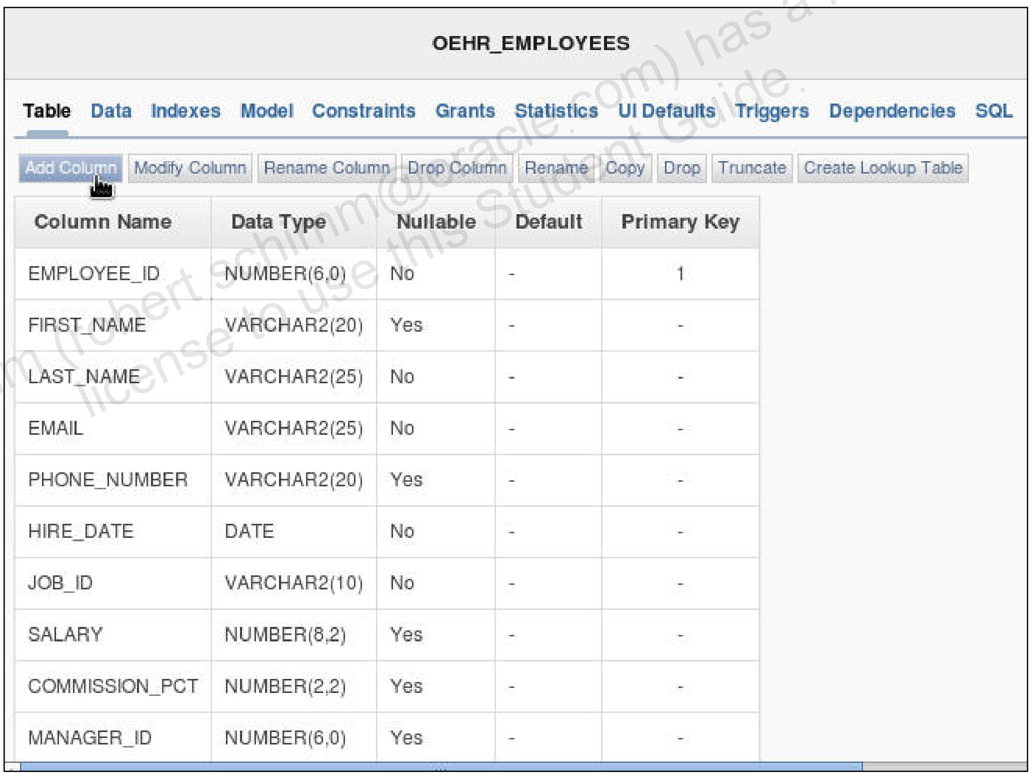
1) You want to add a new column to the OEHR_EMPLOYEES table to store whether an employee is active or not. Select **SQL Workshop > Object Browser**.



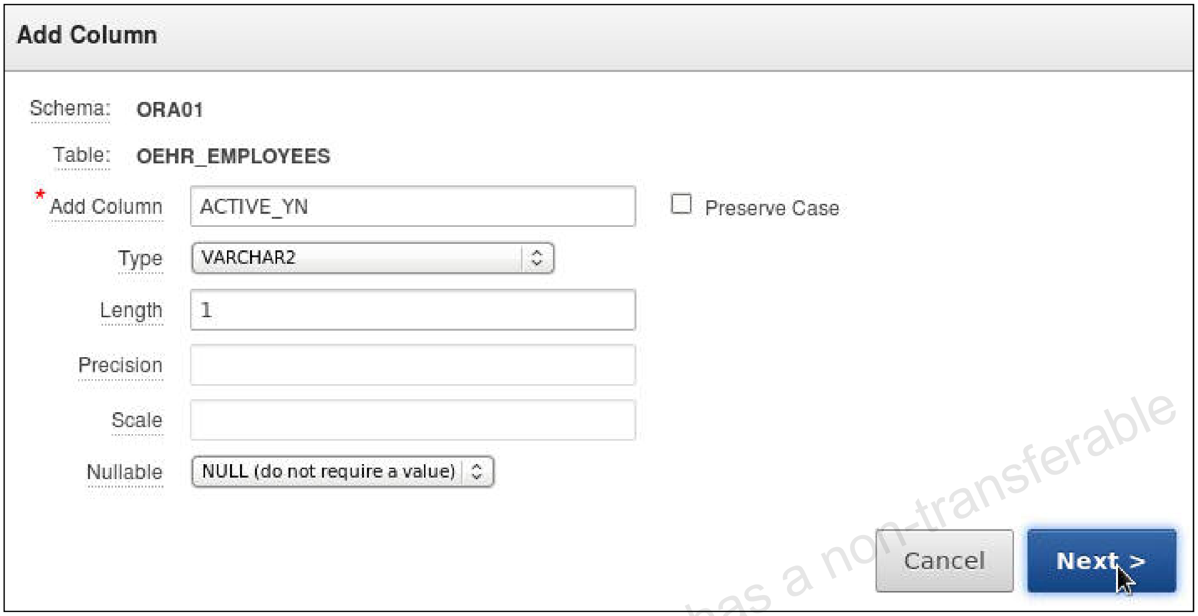
2) Select **OEHR_EMPLOYEES** from the Tables list.



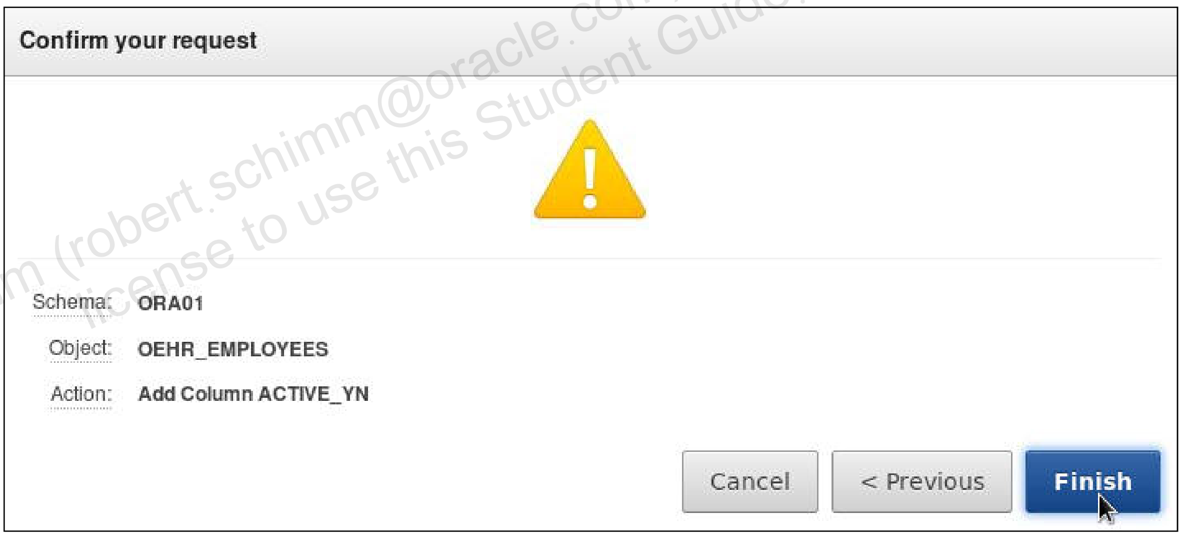
3) Click **Add Column**.



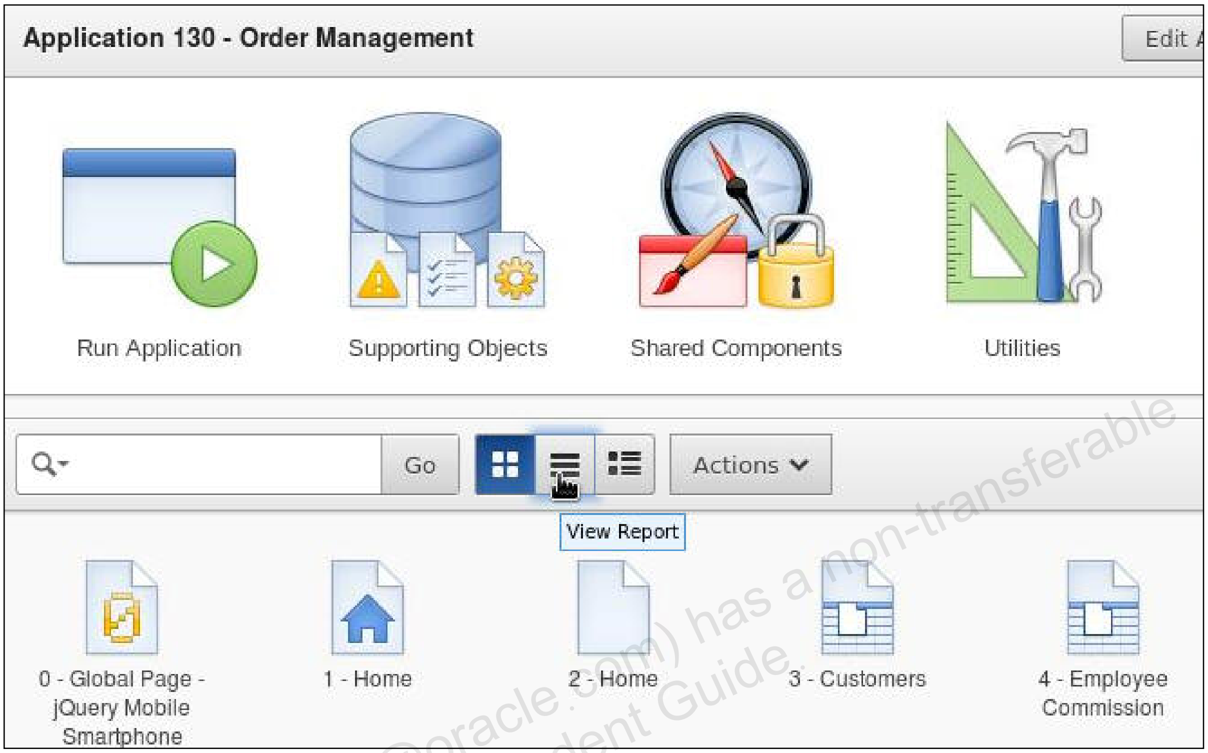
4) Enter **ACTIVE_YN** for Add Column, select **VARCHAR2** for Type, enter **1** for Length, and click **Next >**.



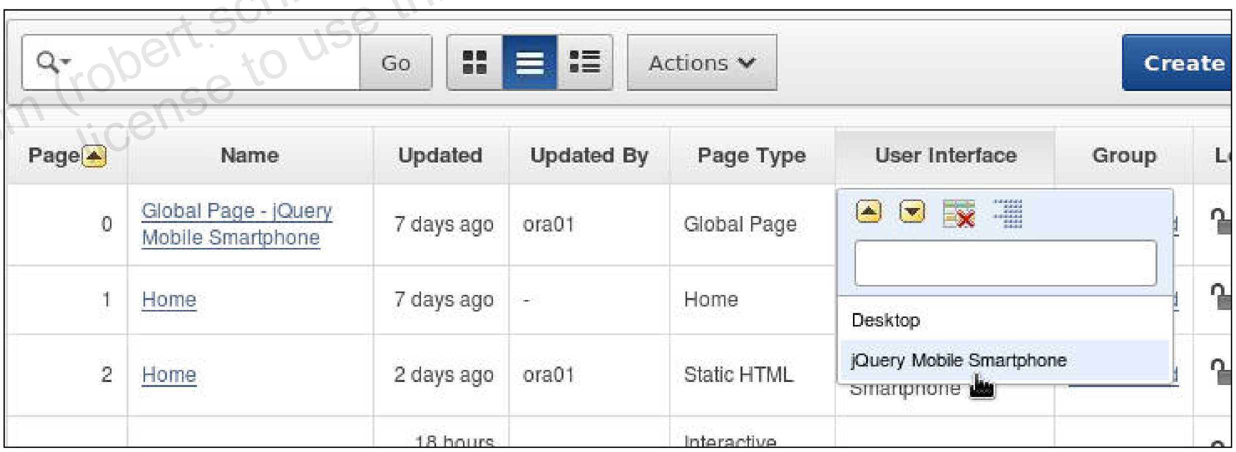
5) Click **Finish**.



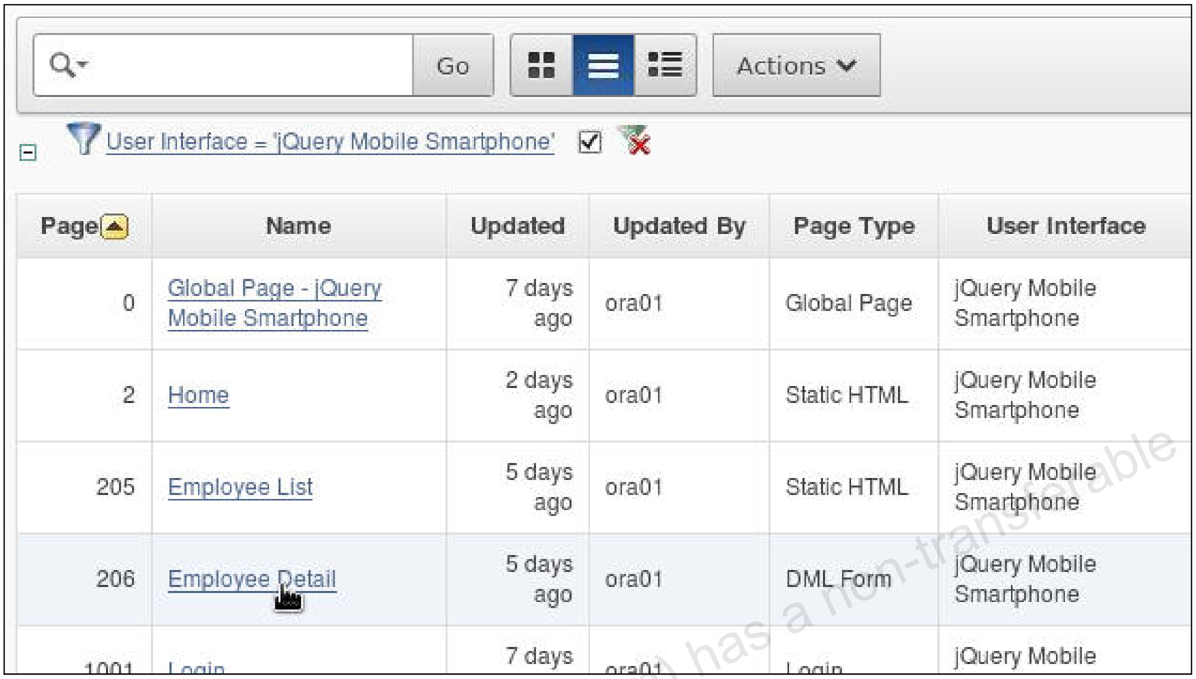
6) Now you can modify the Employee Detail mobile form page. Navigate to the Order Management application page. Click the **View Report** icon.



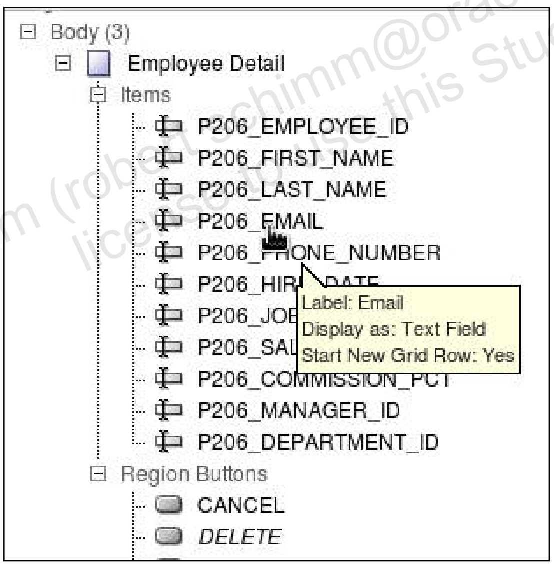
7) In the report, select the **User Interface** heading, and then select **jQuery Mobile Smartphone**.



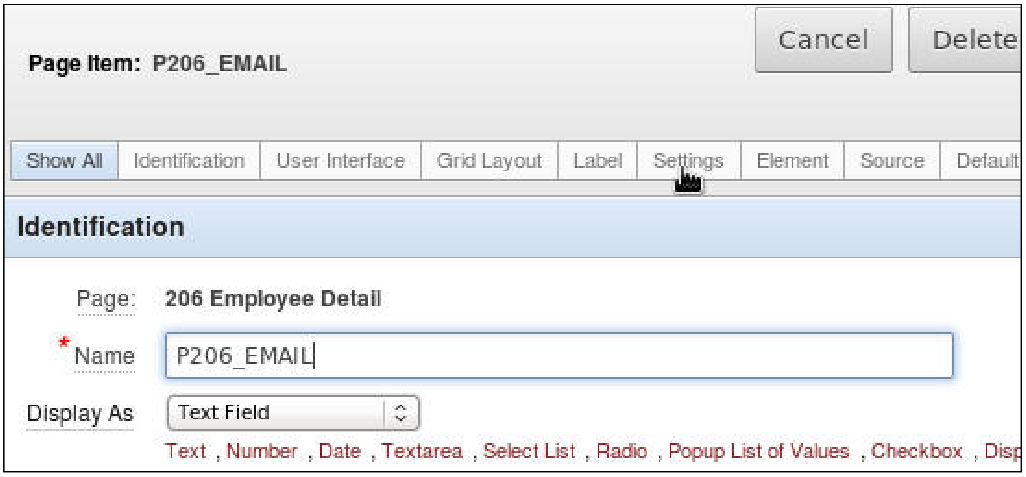
8) Select **Employee Detail**.



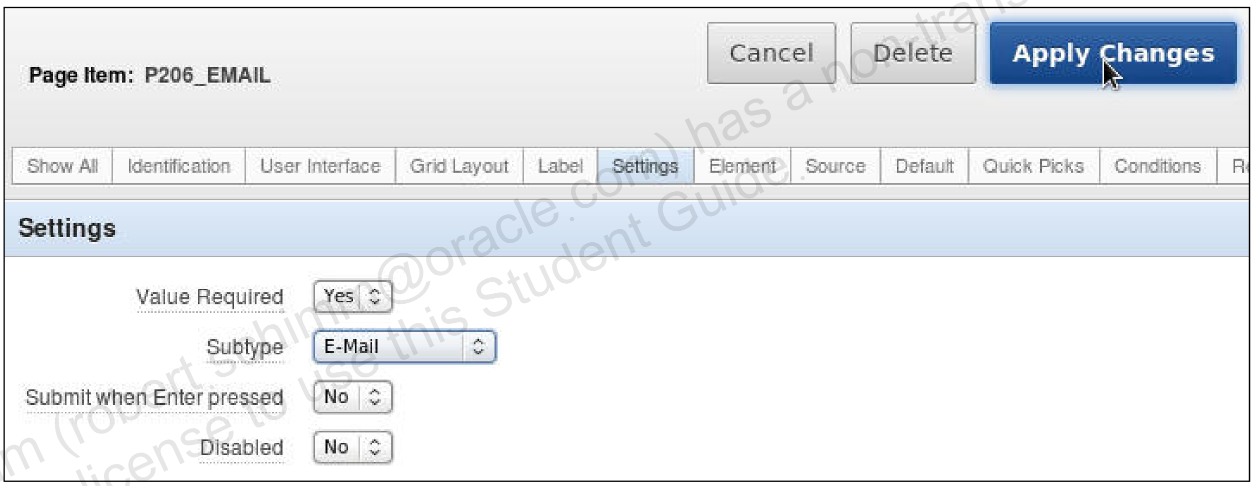
9) You want to change the setting for email so that it uses the appropriate keyboard for email on a mobile device. Double-click **P<*n*>_EMAIL**.



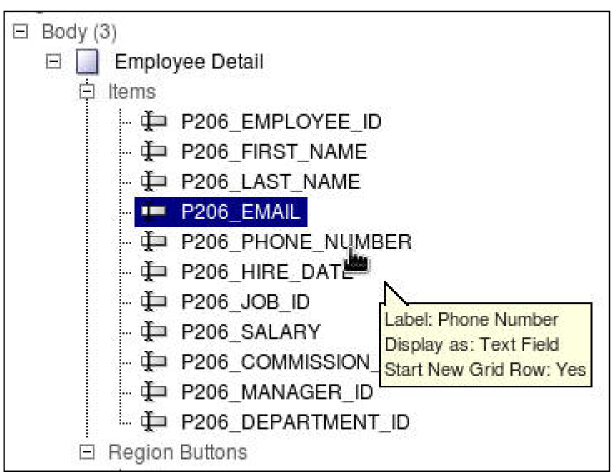
10) Click the **Settings** subtab.



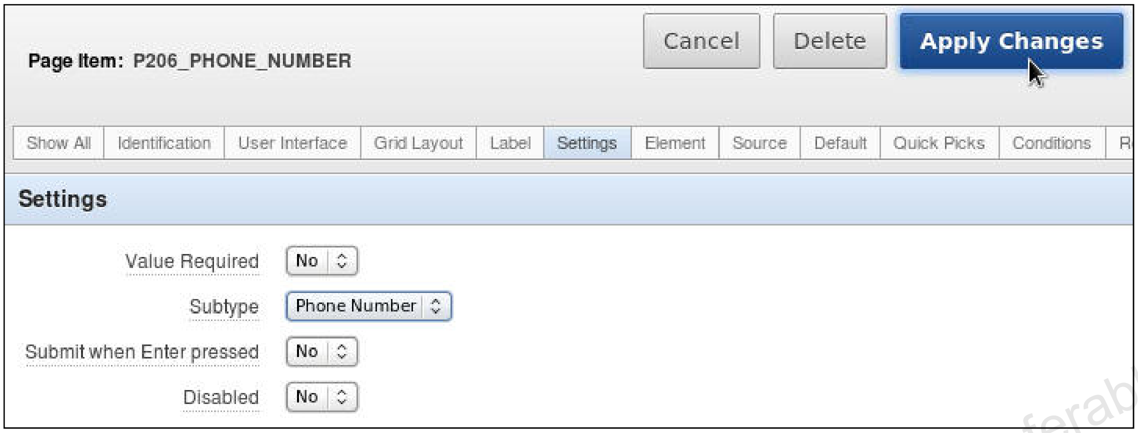
11) Select **E-Mail** for Subtype and click **Apply Changes**.



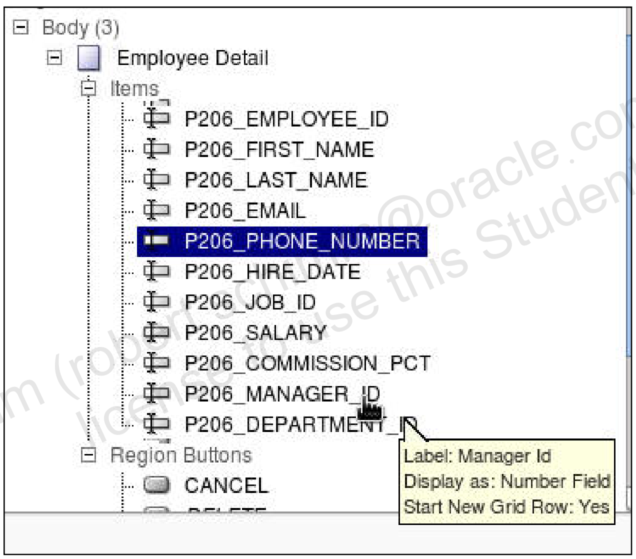
12) You want to change the subtype for Phone Number. Double-click **P<*n*>_PHONE_NUMBER**.



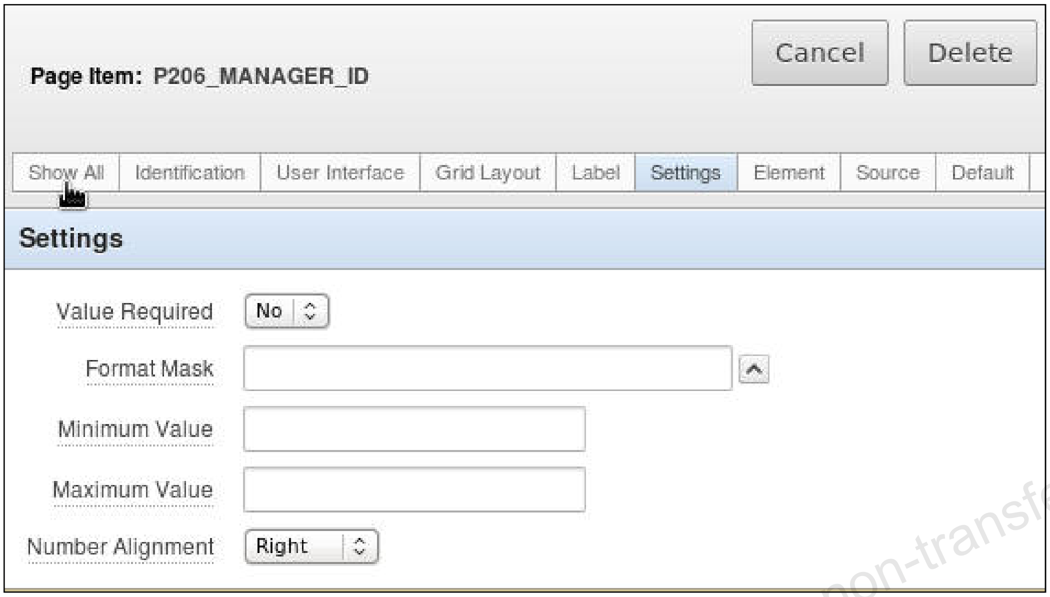
13) Notice that the Settings tab is already selected. Select Phone Number for Subtype and click **Apply Changes**. Note that to see how subtypes work, you need to run the page on a mobile device. Ask your instructor to show you an example.



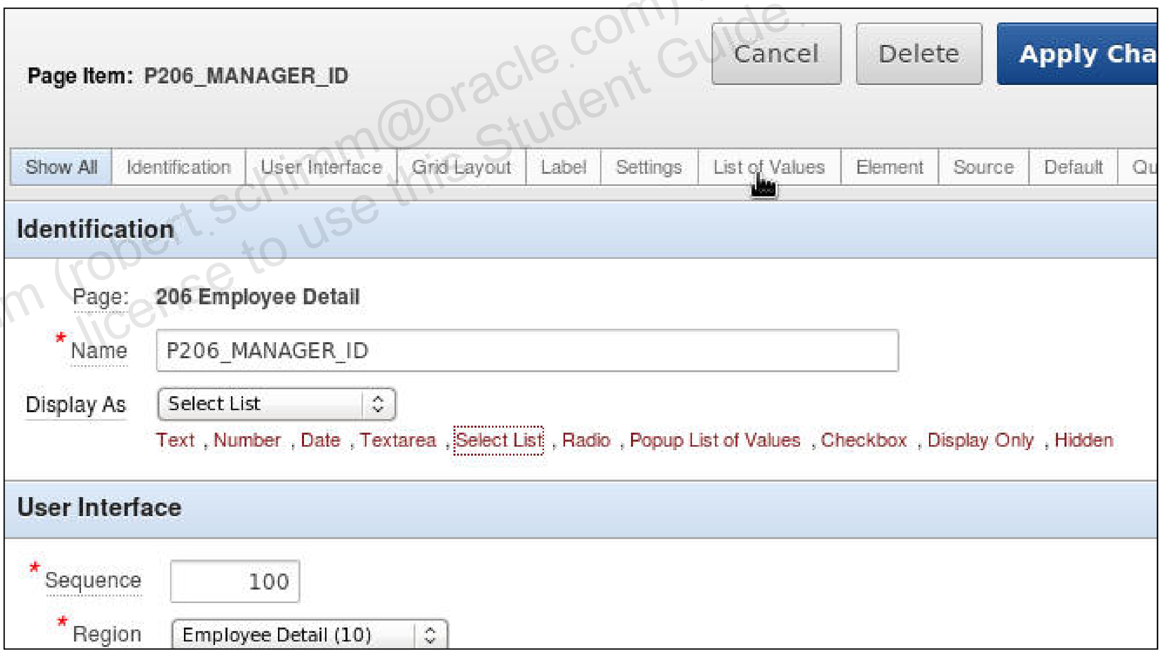
14) You want to change Manager to show a select list. Double-click **P<*n*>_MANAGER_ID**.



15) Click the **Show All** subtab.

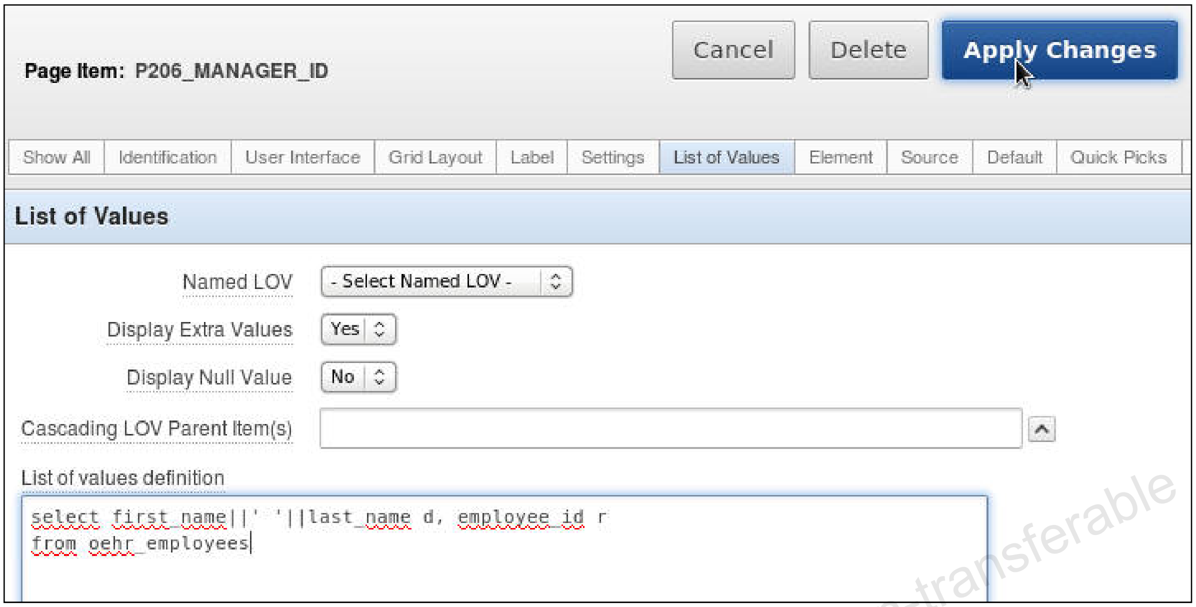


16) Click the **Select List** quick pick or select **Select List** from Display As. Then click the **List of Values** subtab.

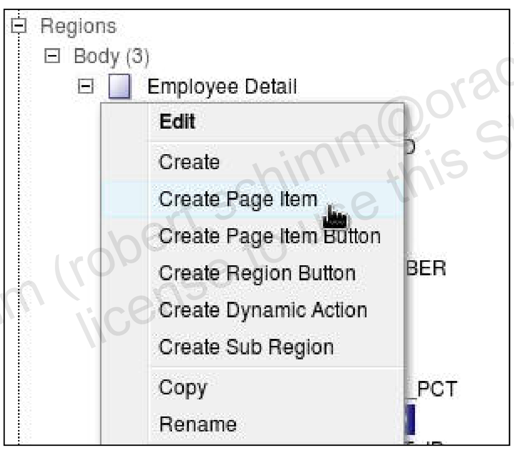


17) Enter the following code (located in the `/home/oracle/labs/files/lab8_2_4.txt` directory) in the **List of values definition area** and click **Apply Changes**:

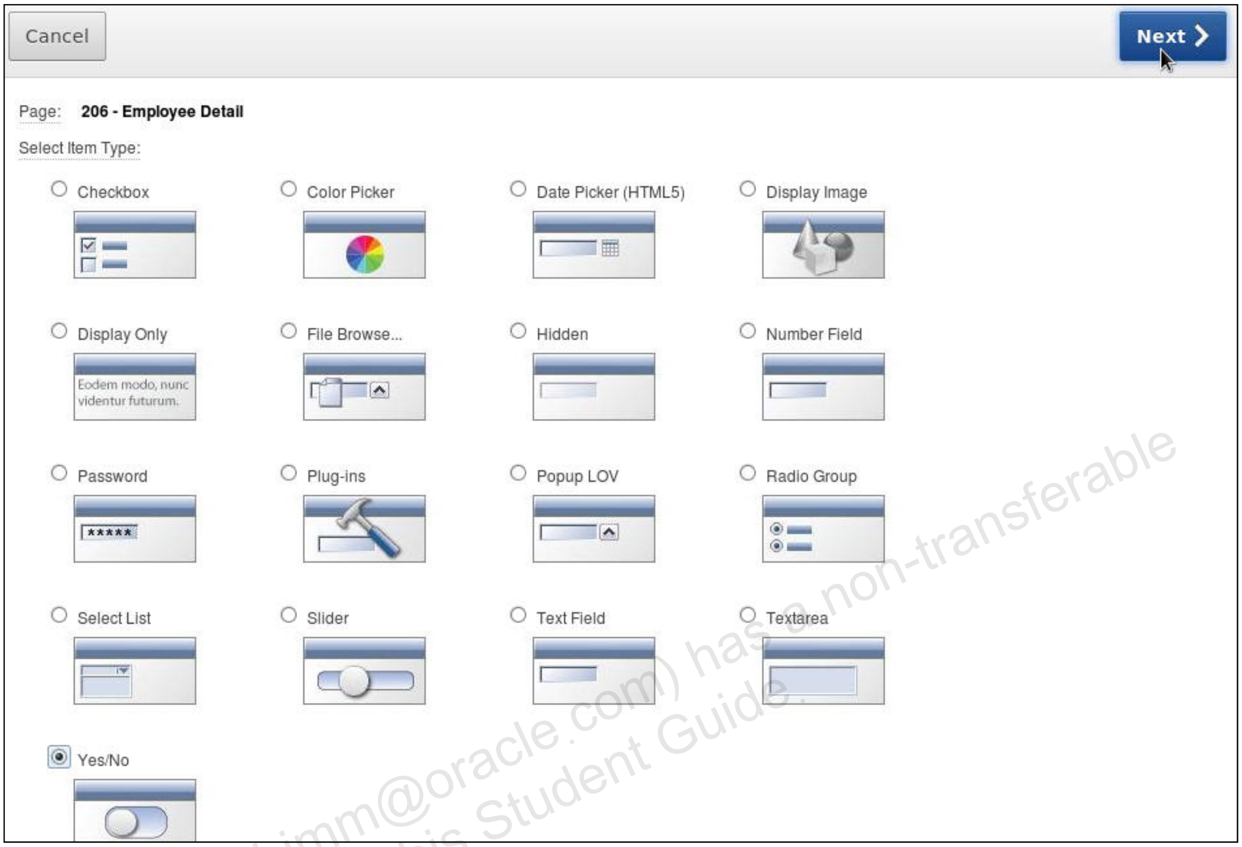
```
select first_name||’ ‘||last_name d, employee_id r
from oehr_employees
```



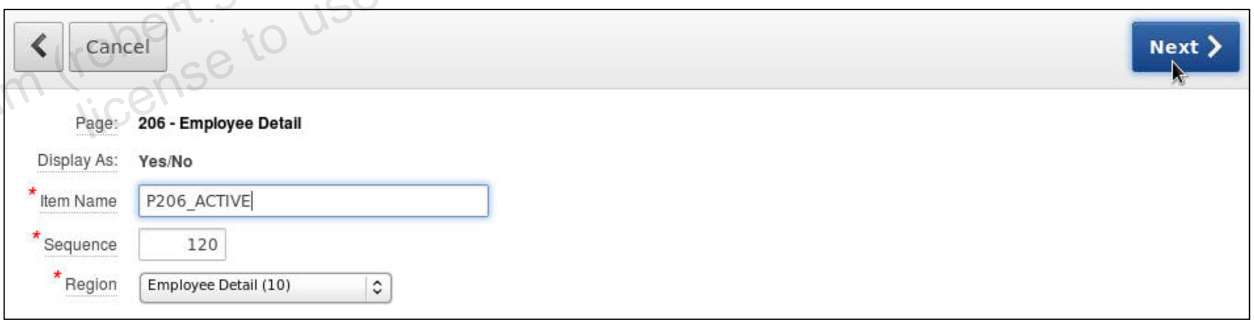
18) You want to create a new page item for the `ACTIVE_YN` column you added to the `OEHR_EMPLOYEES` table previously. Right-click **Employee Detail** and select **Create Page Item**.



19) Select the **Yes/No** item type and click **Next >**.



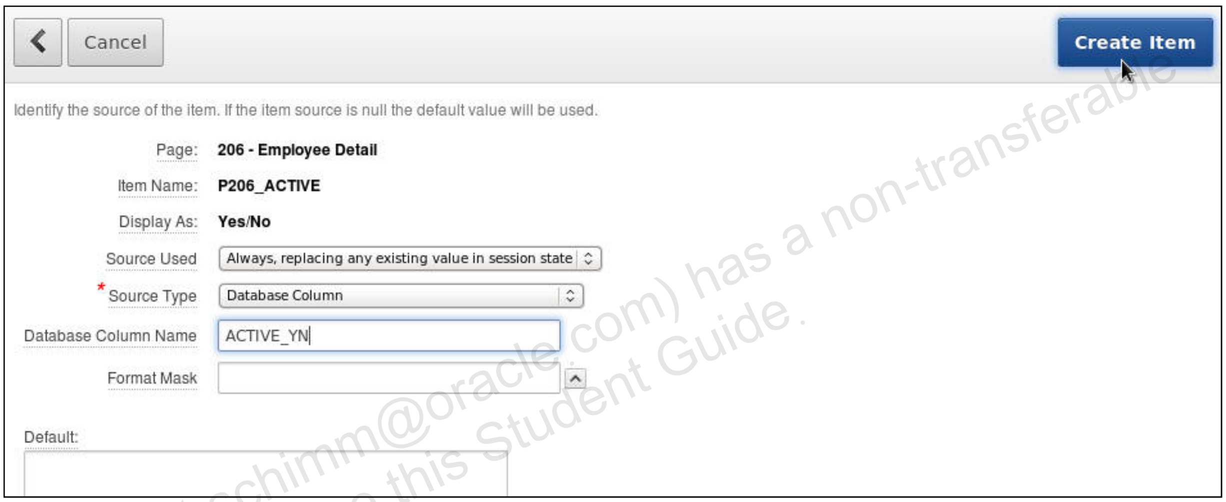
20) Change the Item Name to **P<*n*>_ACTIVE** and click **Next >**.



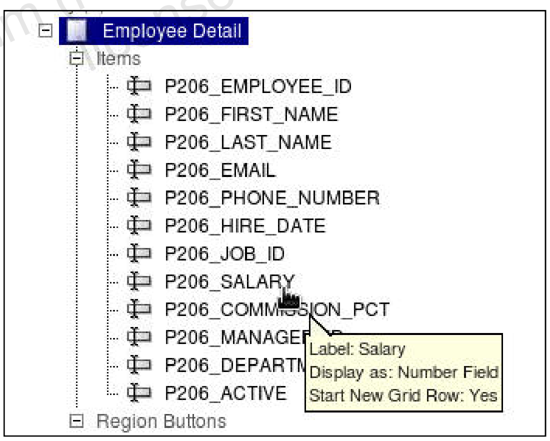
21) Accept the defaults and click **Next >**.

22) Accept the defaults and click **Next >**.

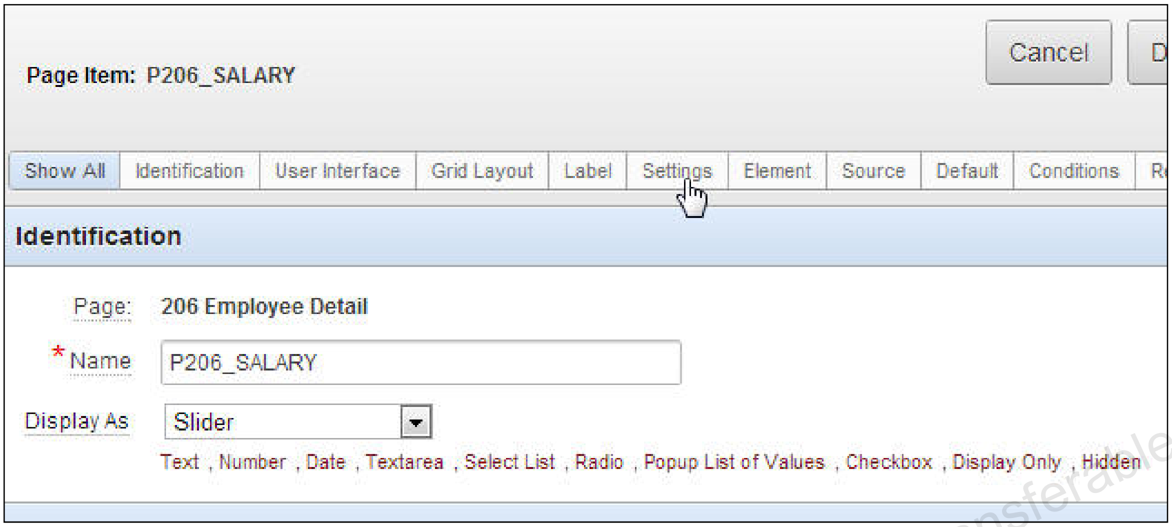
23) Select **Database Column** for Source Type and change the Database Column Name to **ACTIVE_YN** and click **Create Item**.



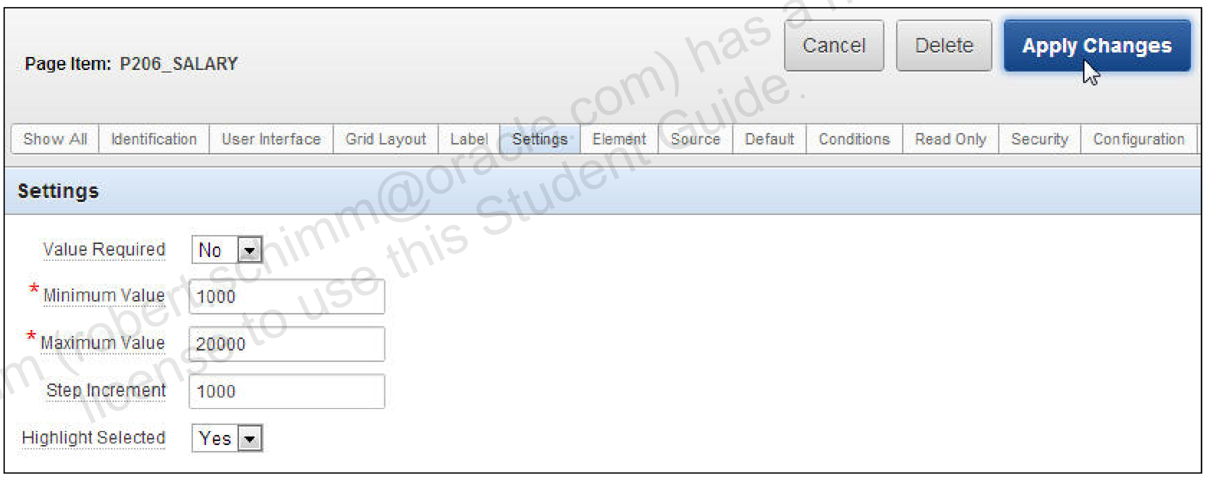
24) You want to change the Salary so that it appears as a slider. Double-click **P<*n*>_SALARY**.



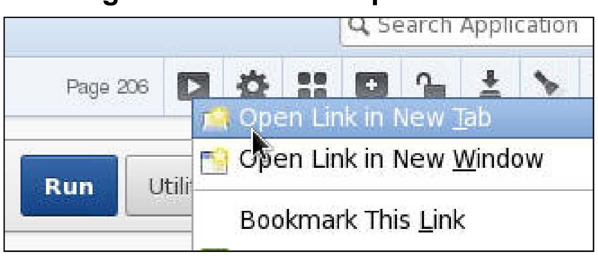
25) Select **Slider** from the Display As drop-down list and click the **Settings** subtab.



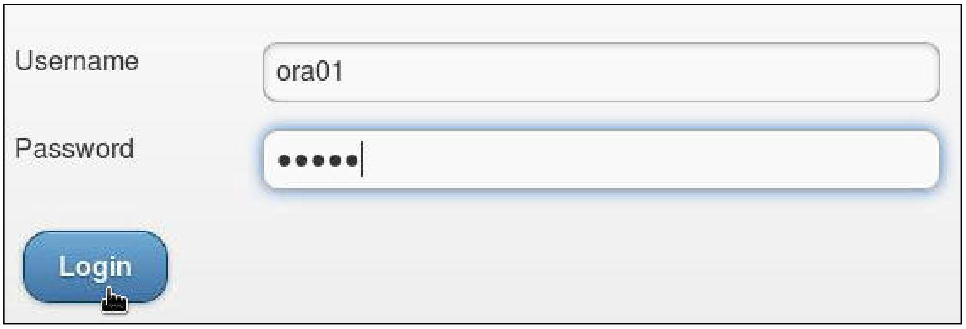
26) Enter **1000** for Minimum Value, **20000** for Maximum Value, and **1000** for Step Increment. Select **Yes** for Highlight Selected and click **Apply Changes**.



27) With mobile applications, the Developer toolbar is not displayed. Therefore, it is recommended that you run the application in a different window. Right-click the **Run Page** icon and select **Open Link in New Tab**.

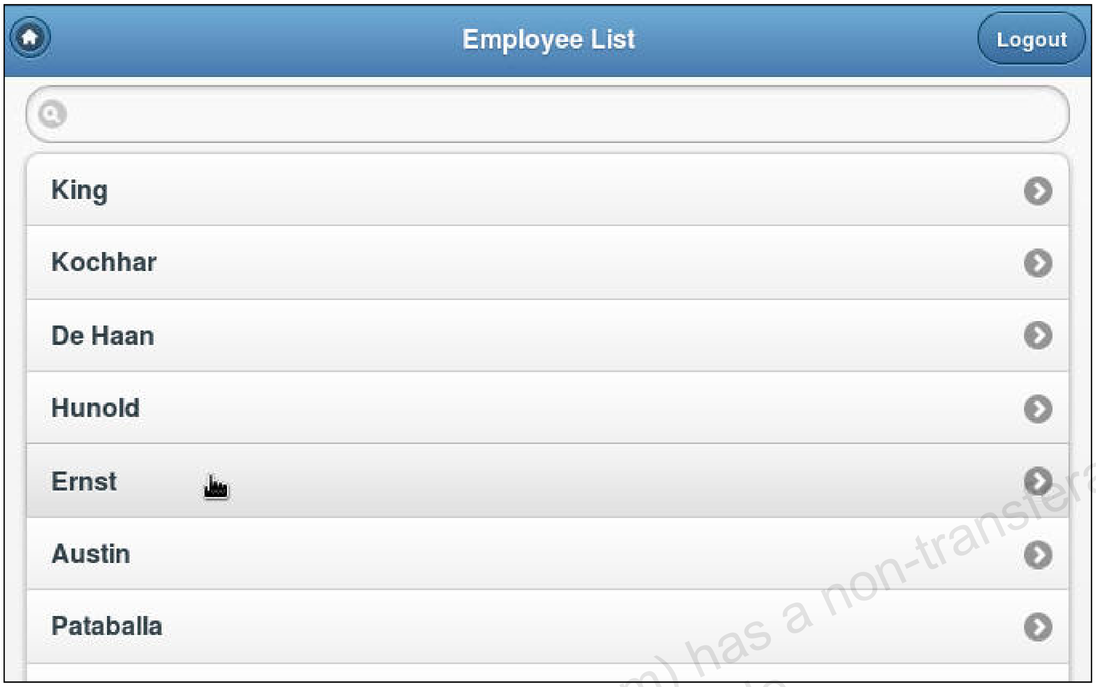


28) If prompted, enter your login information and click **Login**.

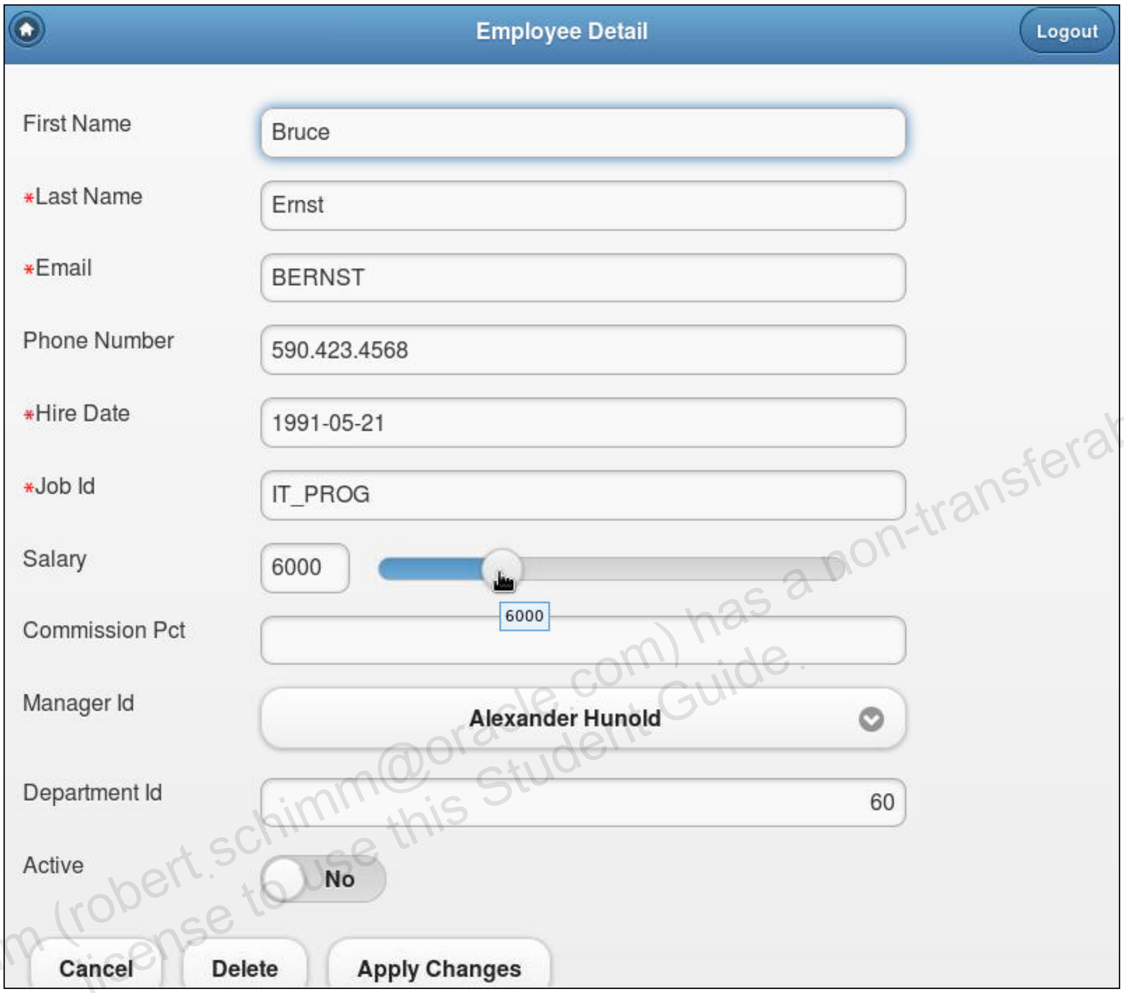


29) If the form is empty, click **Cancel** to return to the report.

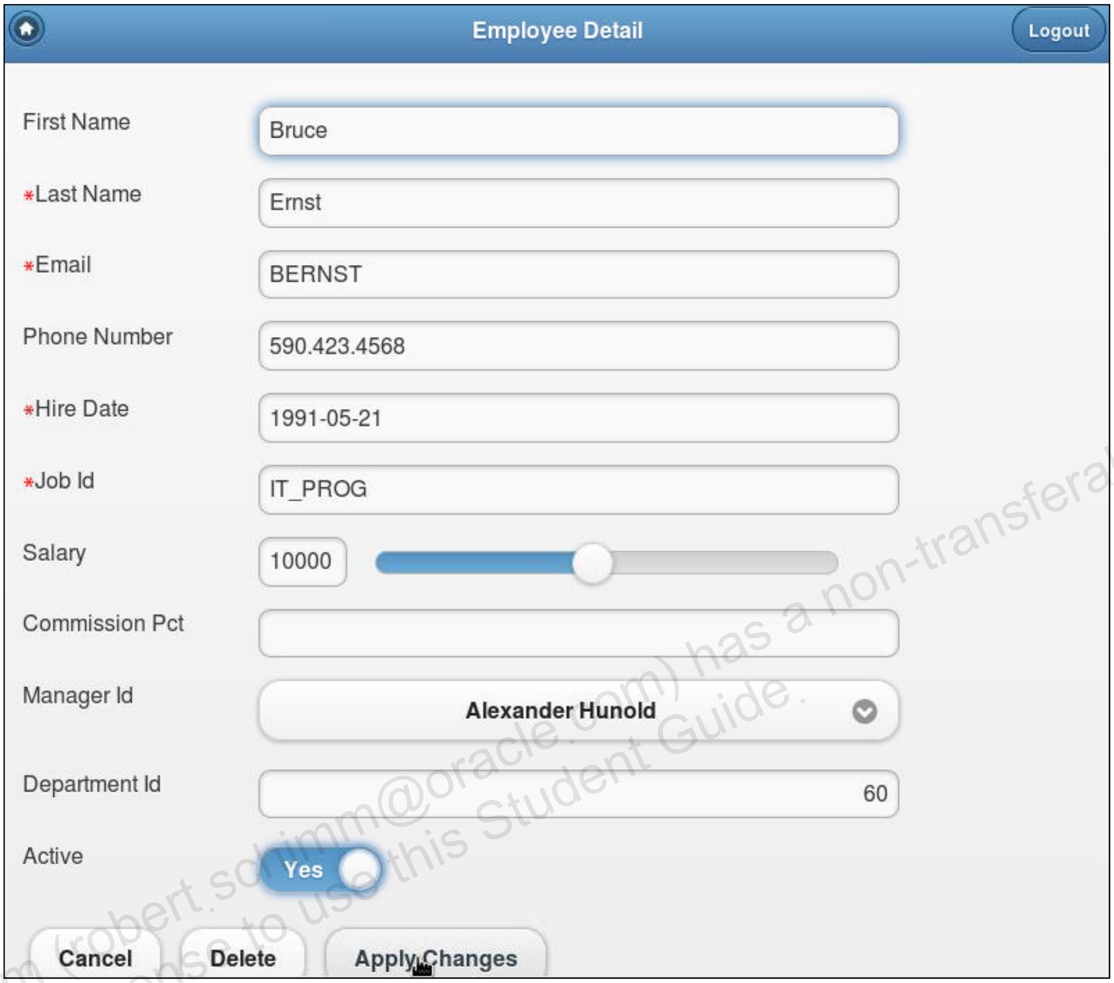
30) Select a record from the list.



31) The form is populated with the employee information. Move the Salary slider so that the salary is 10000.



32) Change the Active item so that the value is **Yes** and click **Apply Changes**.



33) Your changes are saved.

Practices for Lesson 9: Understanding Session State

Chapter 9

Practices for Lesson 9: Overview

Practices Overview

There is one practice for this lesson. In this practice, you examine how session state works in an Application Express application.

Practice 9-1: Understanding Session State

Overview

In this practice, you add a Create button to the Customers page. When the button is clicked, it redirects to the Customer Details page. You clear the cache so that when the button is clicked, the Customer Details form is empty. You review what is in session state and also add the current value for first name and last name to the Customer Details region header.

Assumptions

You have performed the previous practices or imported the **`LAB082_SOLN.sql`** application.

Tasks

a. On the Customers page in the Order Management application, add a Create Region button that navigates to the Customer Details page when it is clicked.

b. Run the page and view an existing record. Click Cancel, and then click the Create button. What do you observe?

c. Edit the button and clear the cache for the Customer Details page.

d. Edit an existing record and view the session state. Why do the values for all the items on the Customer Details page not appear?

e. Change the Link Column on the Customer Report to include the value for the **`P<n>_CUST_FIRST_NAME`** item.

f. On the Customer Details page, change the title of the Customer Details region to use the following (located in **`/home/oracle/labs/files/lab9_1.txt`**). Ensure that you change **P<*n*>** to your page number.

```
&P<n>_CUST_FIRST_NAME. &P<n>_CUST_LAST_NAME. Customer Details
```

g. Run the page. What do you observe?

Solution 9-1: Understanding Session State

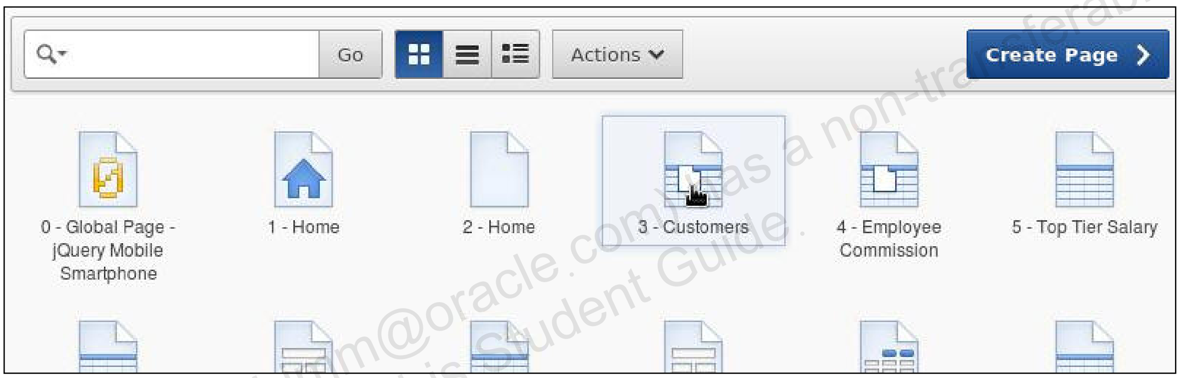
Overview

In this practice, you add a Create button to the Customers page. When the button is clicked, it redirects to the Customer Details page. You clear the cache so that when the button is clicked, the Customer Details form is empty. You review what is in session state and also add the current value for first name and last name to the Customer Details region header.

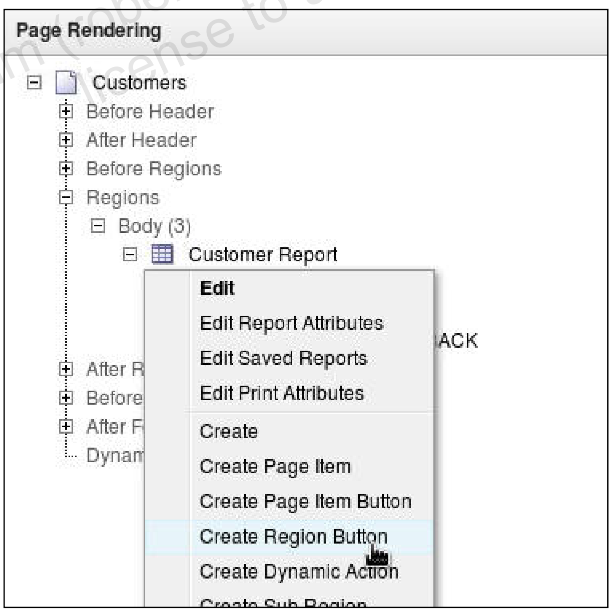
Tasks

a. On the Customers page in the Order Management application, add a Create Region button that navigates to the Customer Details page when it is clicked.

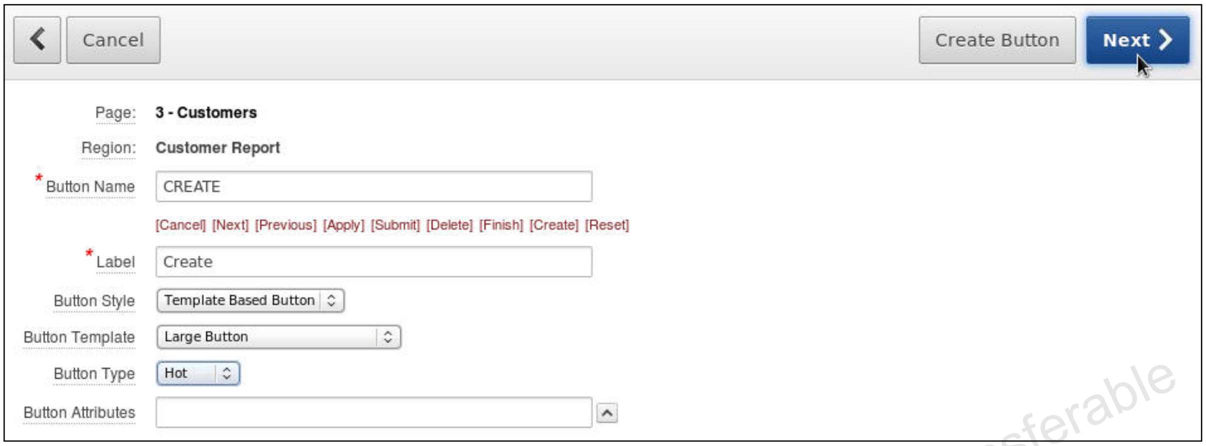
1) Navigate to the **Order Management** application home page and select the **Customers** page.



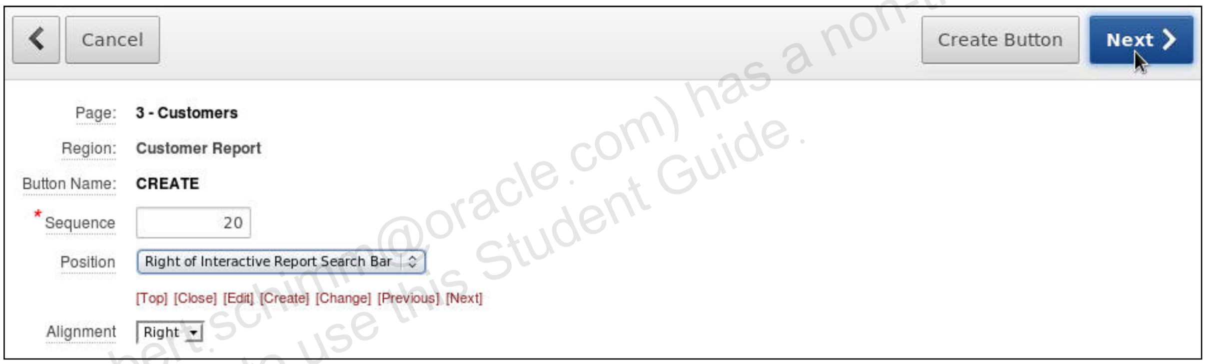
2) You want to create a region button for the Create function. Right-click the **Customer Report** region and select **Create Region Button**.



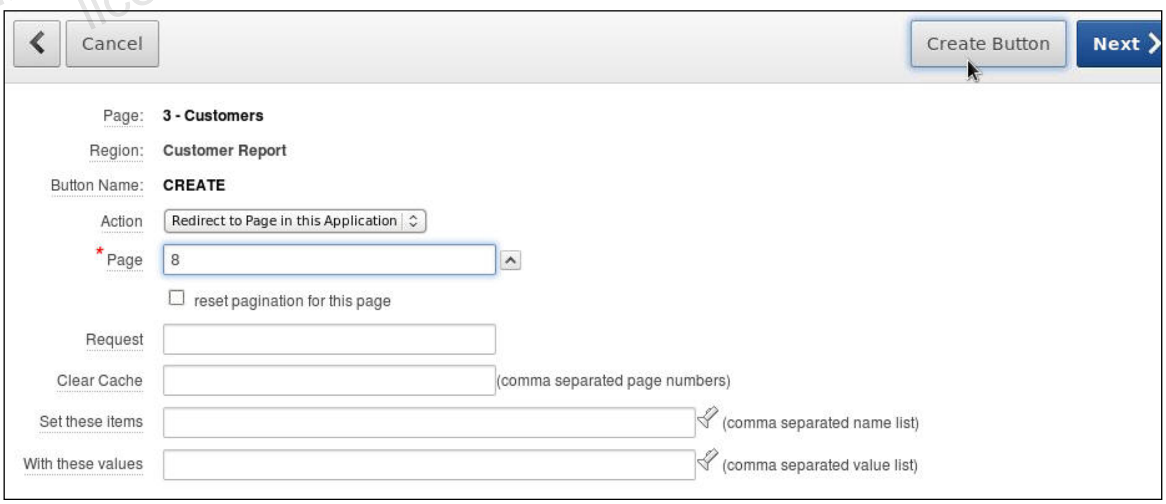
3) Select the **[Create]** quick pick for Button Name, **Template Based Button** for Button Style, **Large Button** for Button Template, and **Hot** for Button Type, and then click **Next >**.



4) Select **Right of Interactive Report Search Bar** for Position and click **Next >**.

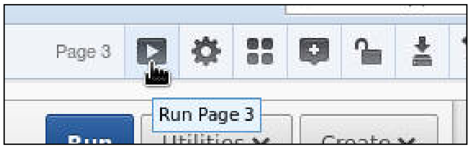


5) Select **Redirect to Page in this Application** for Action, select your **Customer Details** page number, and click **Create Button**.



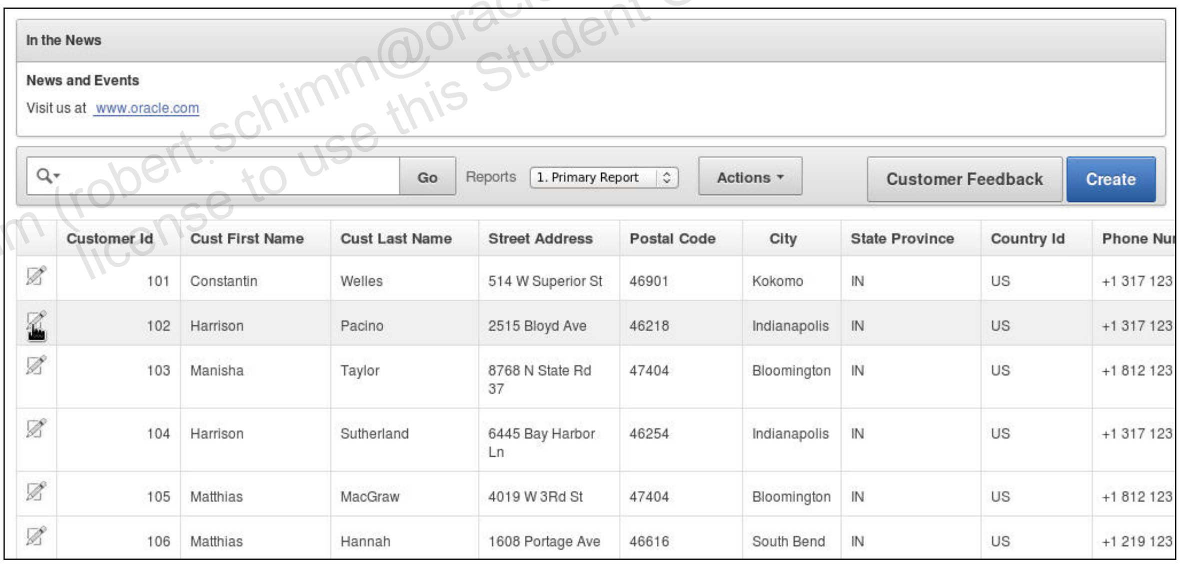
b. Run the page and view an existing record. Click Cancel, and then click the Create button. What do you observe?

1) Run the page. Click the **Run** icon.

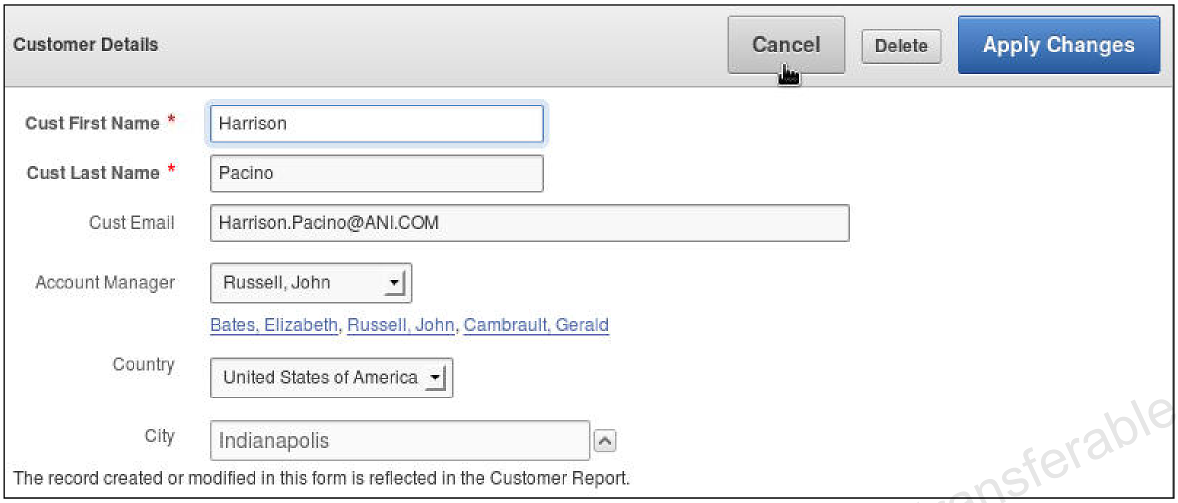


2) If you are prompted to enter your login credentials, enter the details.

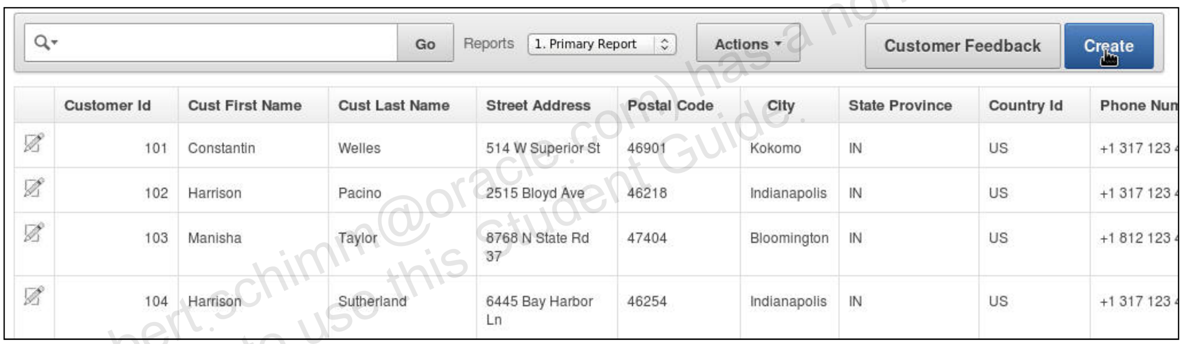
3) The report is displayed. Click the **Edit** icon for one of the rows.



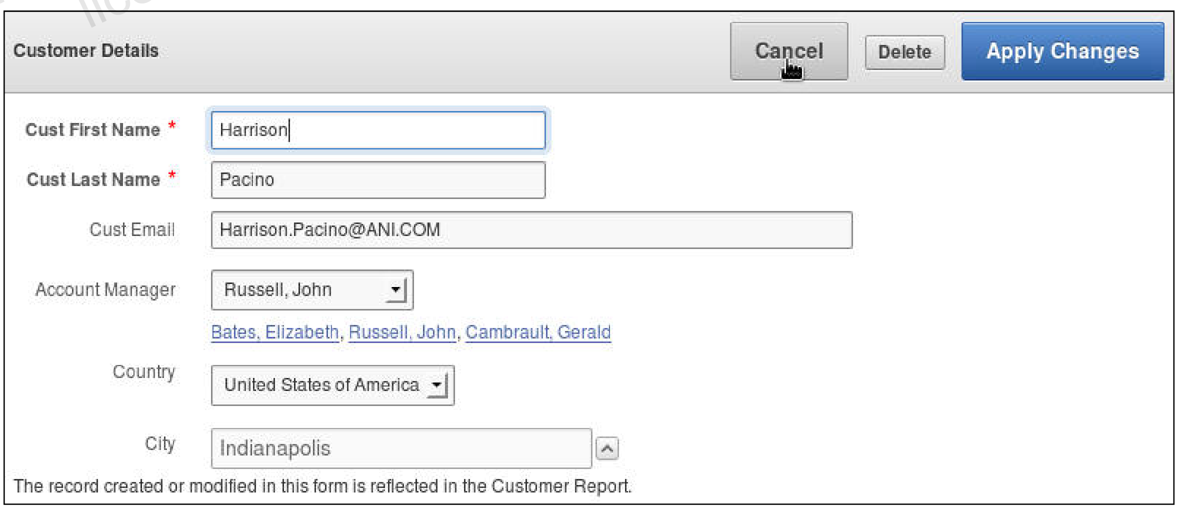
4) Note that the Customer Details form reflects the data for the customer that you chose. Click **Cancel**.



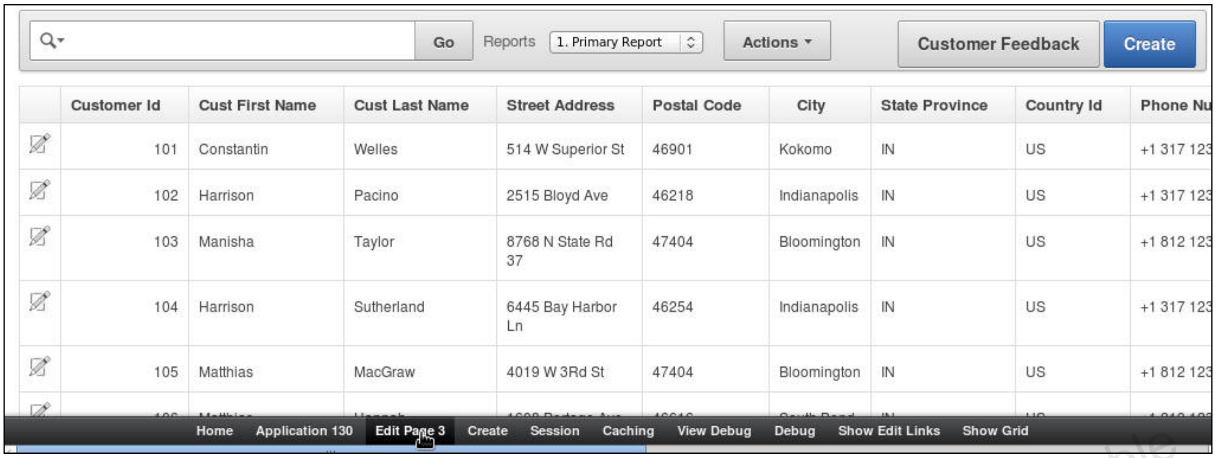
5) Click the **Create** button.



6) Note that the values are still cached on the page. You want to change this so that you receive an empty page where the cache is cleared. Click the **Cancel** button.

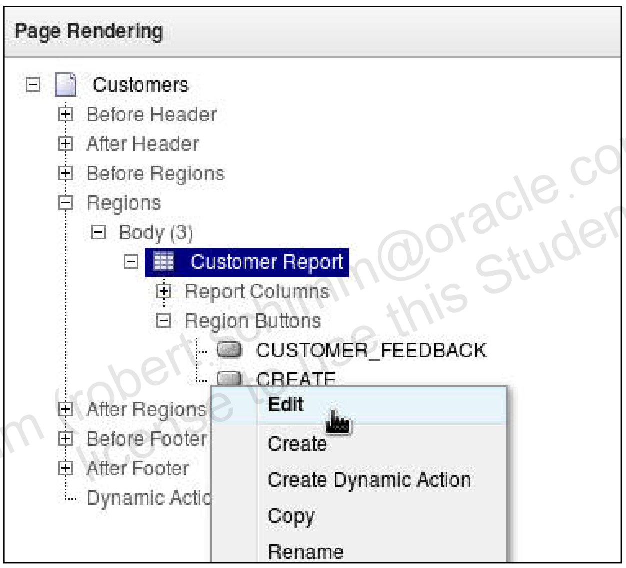


7) On the **Customers** page, click the **Edit Page** link on the Developer toolbar.

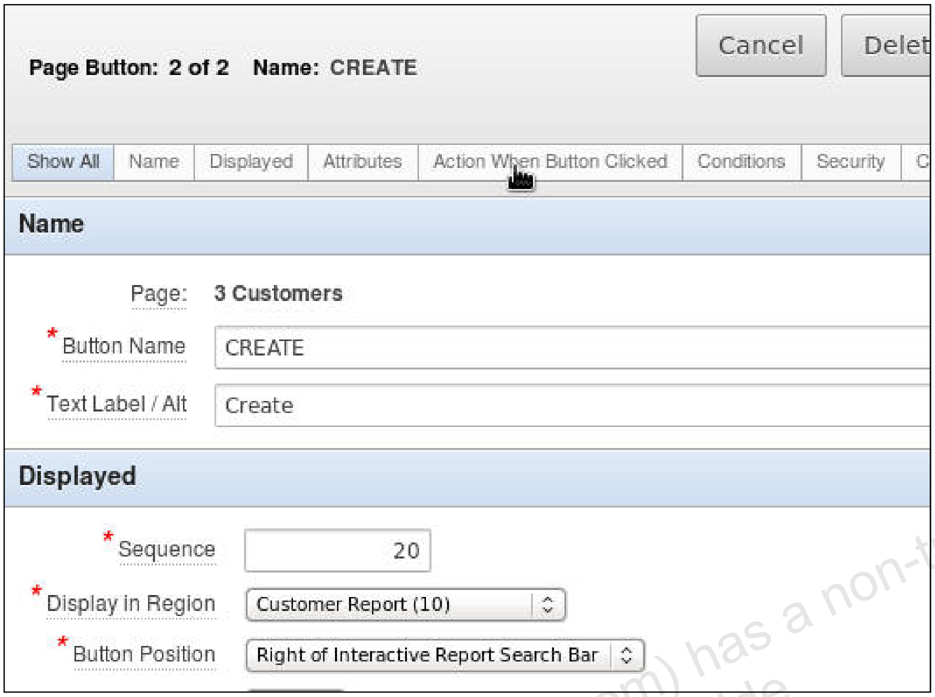


c. Edit the button and clear the cache for the Customer Details page.

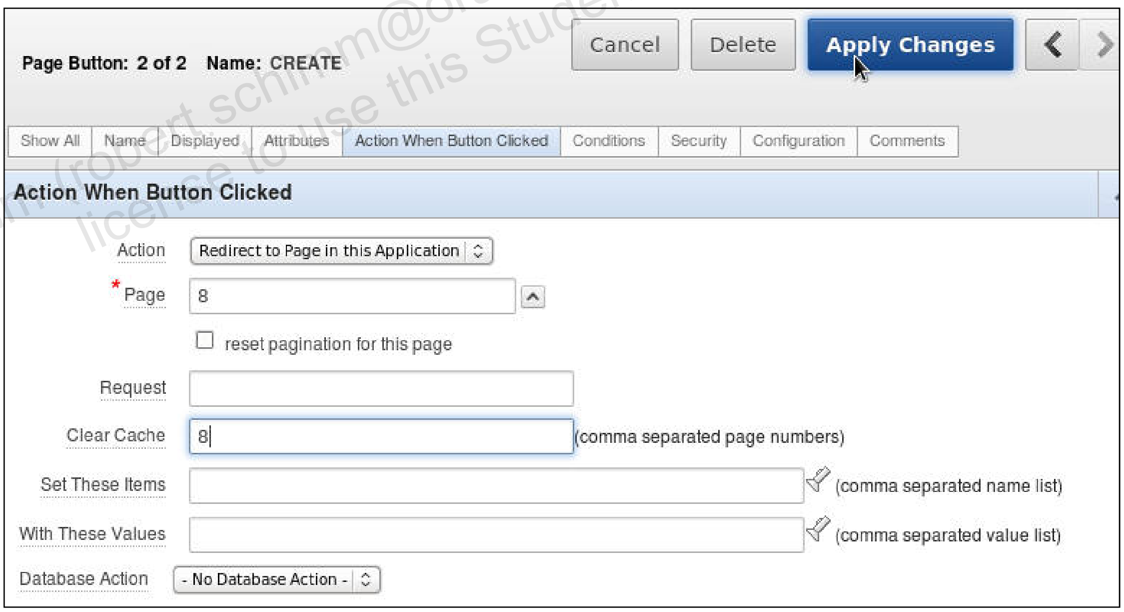
1) Right-click the **CREATE** button and select **Edit**.



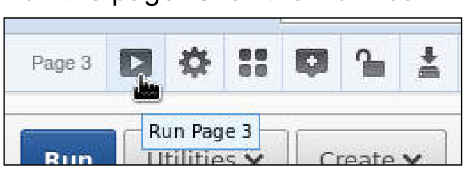
2) Click the **Action When Button Clicked** tab.



3) For Clear Cache, enter the page number of the Customer Details page. This is the same page number that is displayed in the Page field. Click **Apply Changes**.

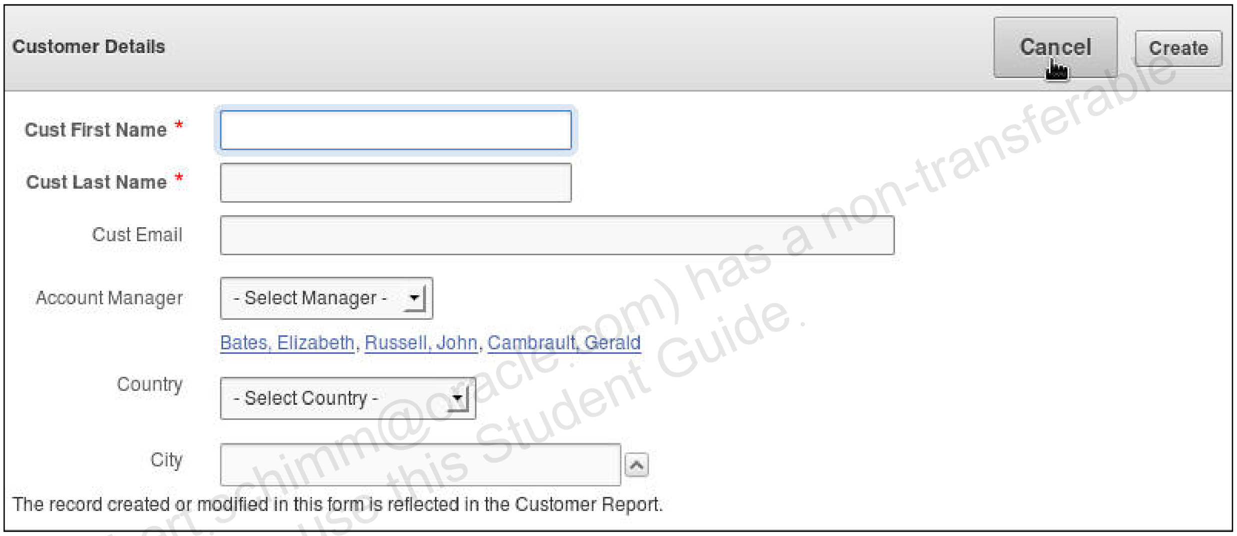


4) Run the page. Click the **Run** icon.



5) Click **Create** again.

6) Note that the values are no longer cached and the form is now empty. Also note that the application does not display the Delete or Apply Changes button; it displays the Create button instead. Click **Cancel**.

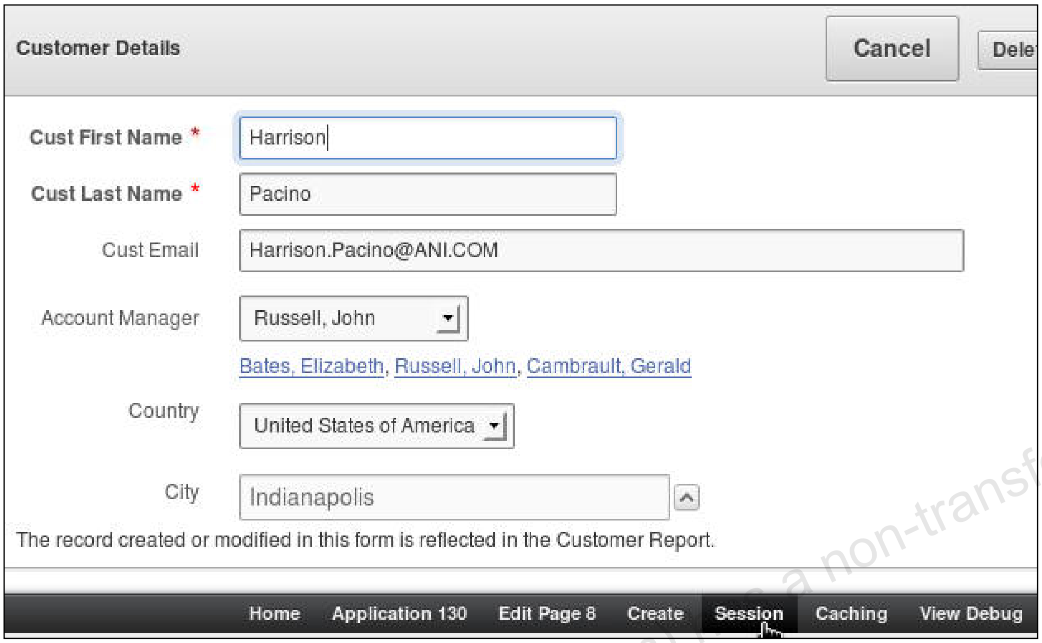


d. Edit an existing record and view the session state. Why do the values for all the items on the Customer Details page not appear?

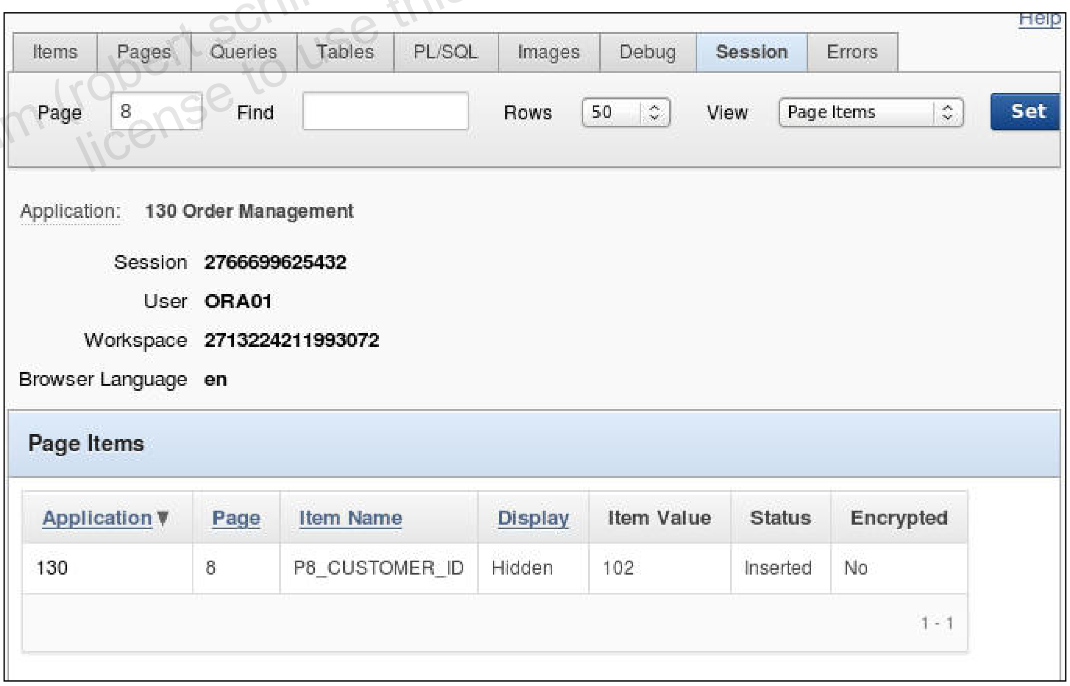
1) You may want to start a new session to clear the session state. To do this, log out of the application and log back in. Then click the **Customers** tab.

2) Click the **Edit** icon for one of the rows.

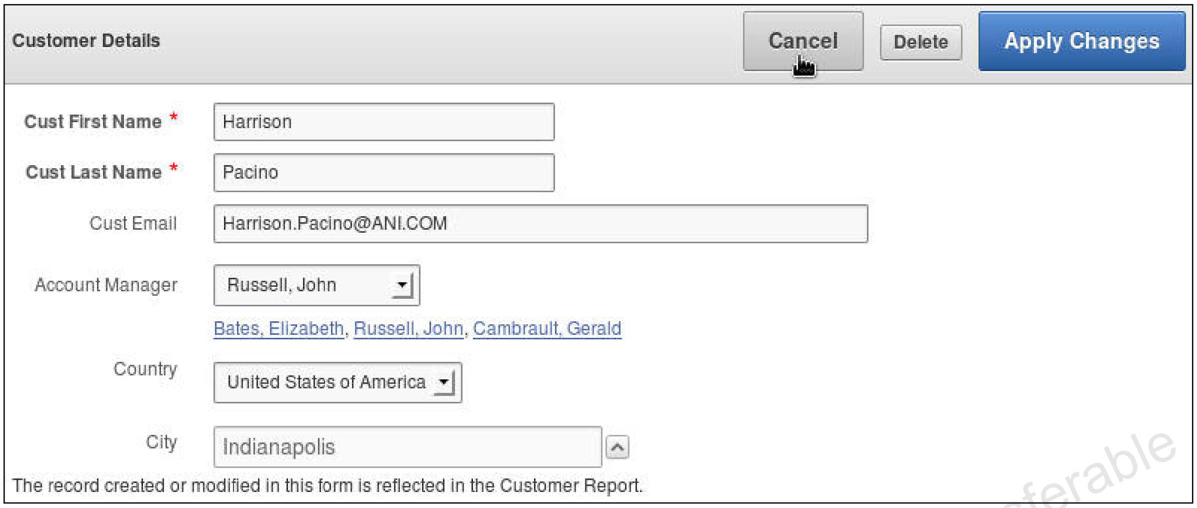
3) The values for the record are displayed. Click the **Session** link on the Developer toolbar.



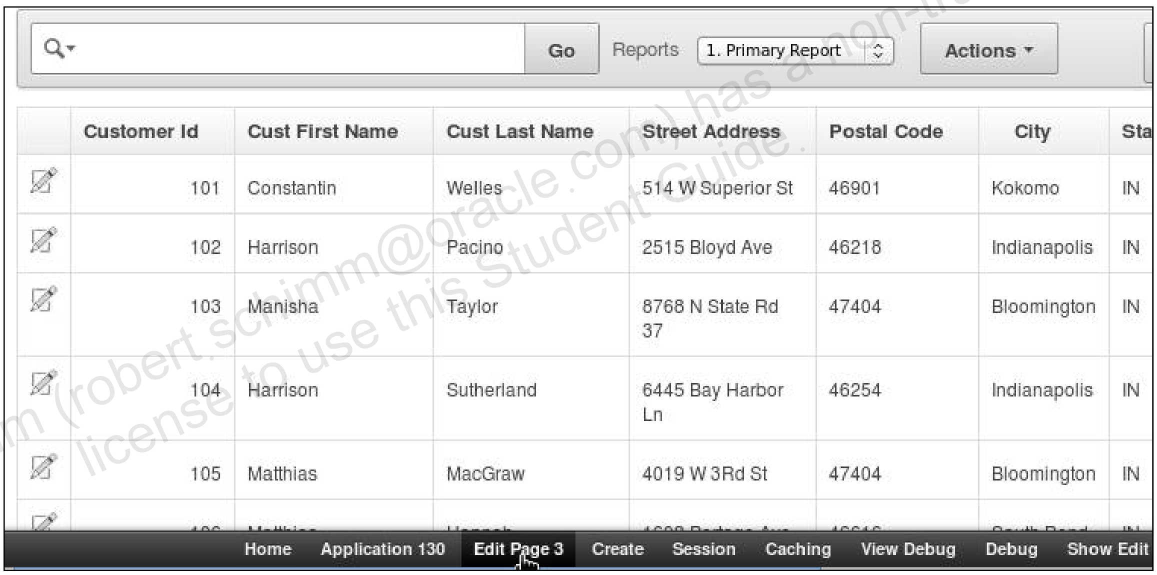
4) Notice that the only value in session state is P<n>_CUSTOMER_ID. This value is hidden on this page but the remaining values are displayed based on this value. The reason why the other values are not in session state is because they have not been submitted to the page. The current values are stored in &P<n>_<item_name>. You examine how this works later in this practice.



5) Switch back to your Customer Details page and click **Cancel**.

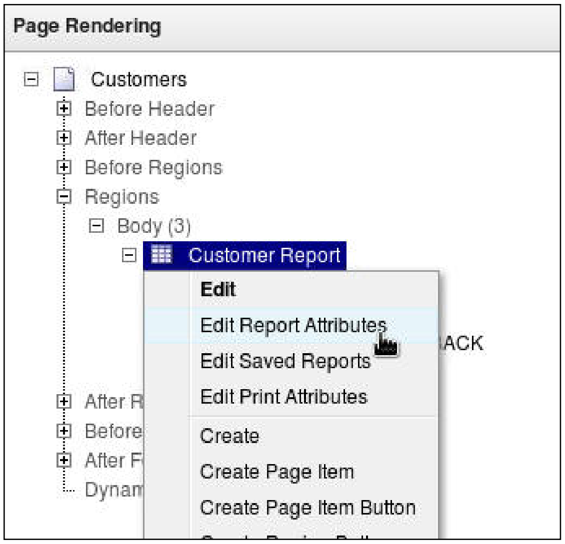


6) Click the **Edit Page** link on the Developer toolbar.

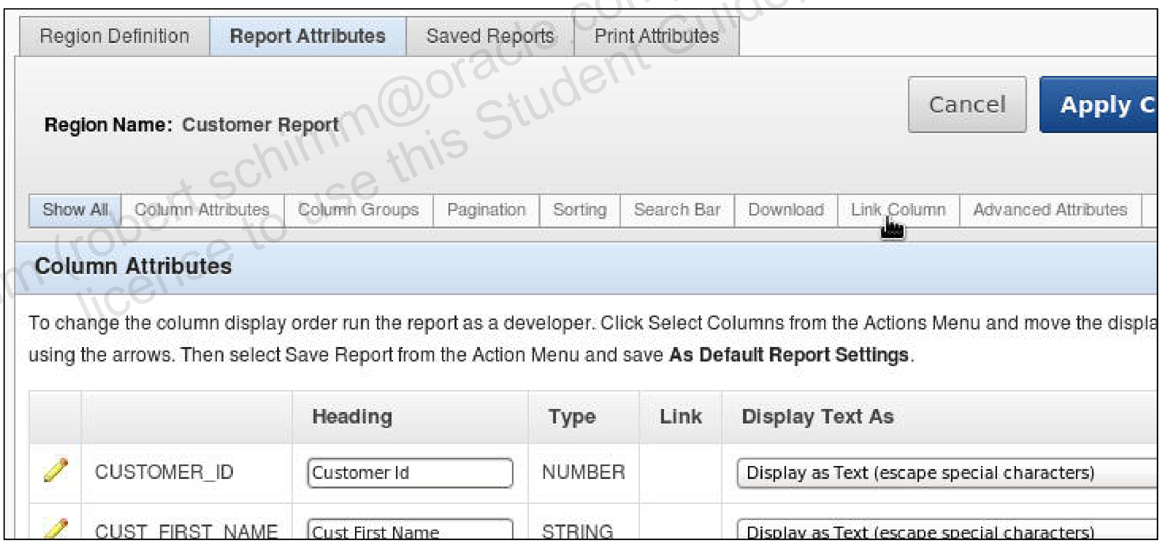


e. Change the Link Column on the Customer Report to include the value for the `P<n>_CUST_FIRST_NAME` item.

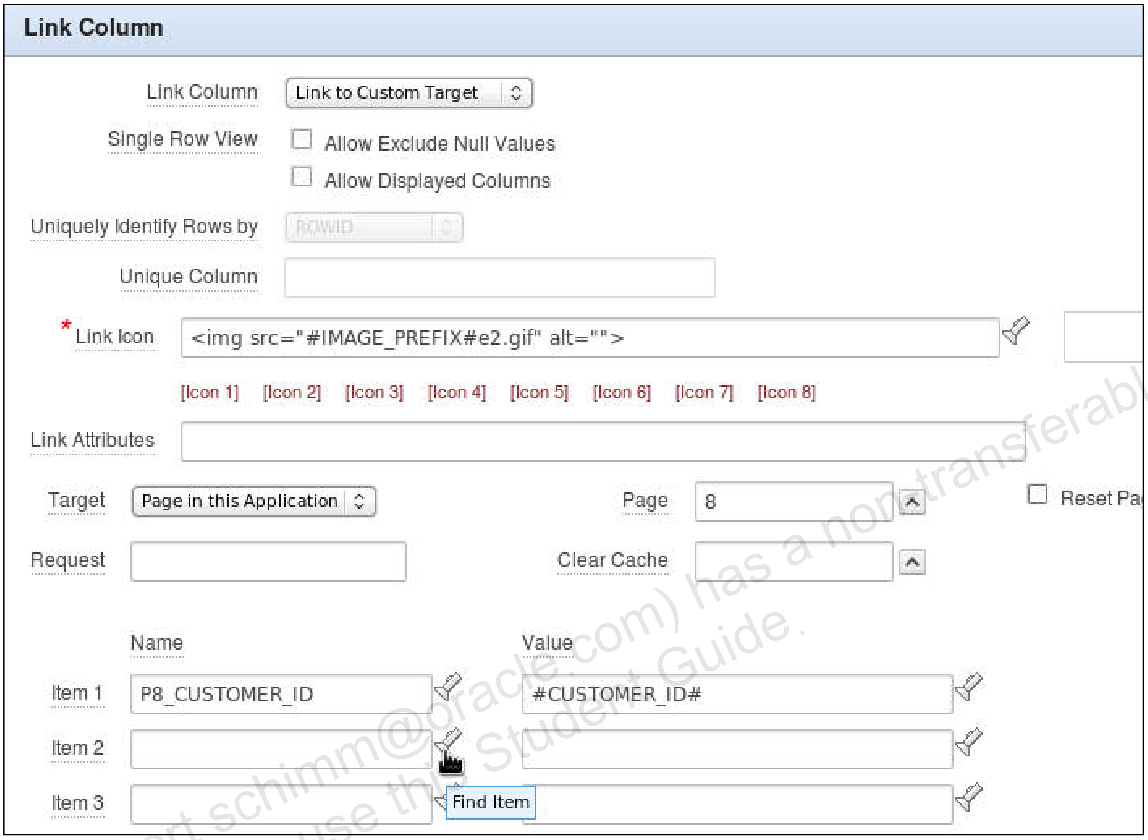
1) You want to review how the value for `P<n>_CUSTOMER_ID` is populated in session state. Right-click **Customer Report** and select **Edit Report Attributes**.



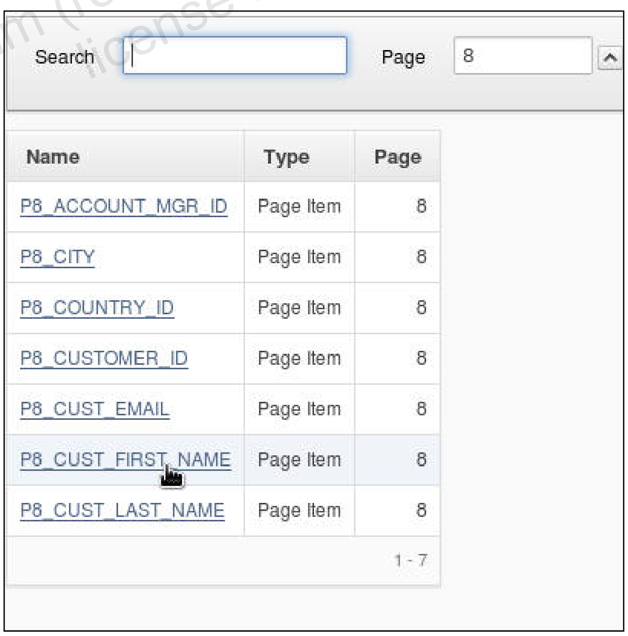
2) Click the **Link Column** tab if it is not already displayed.



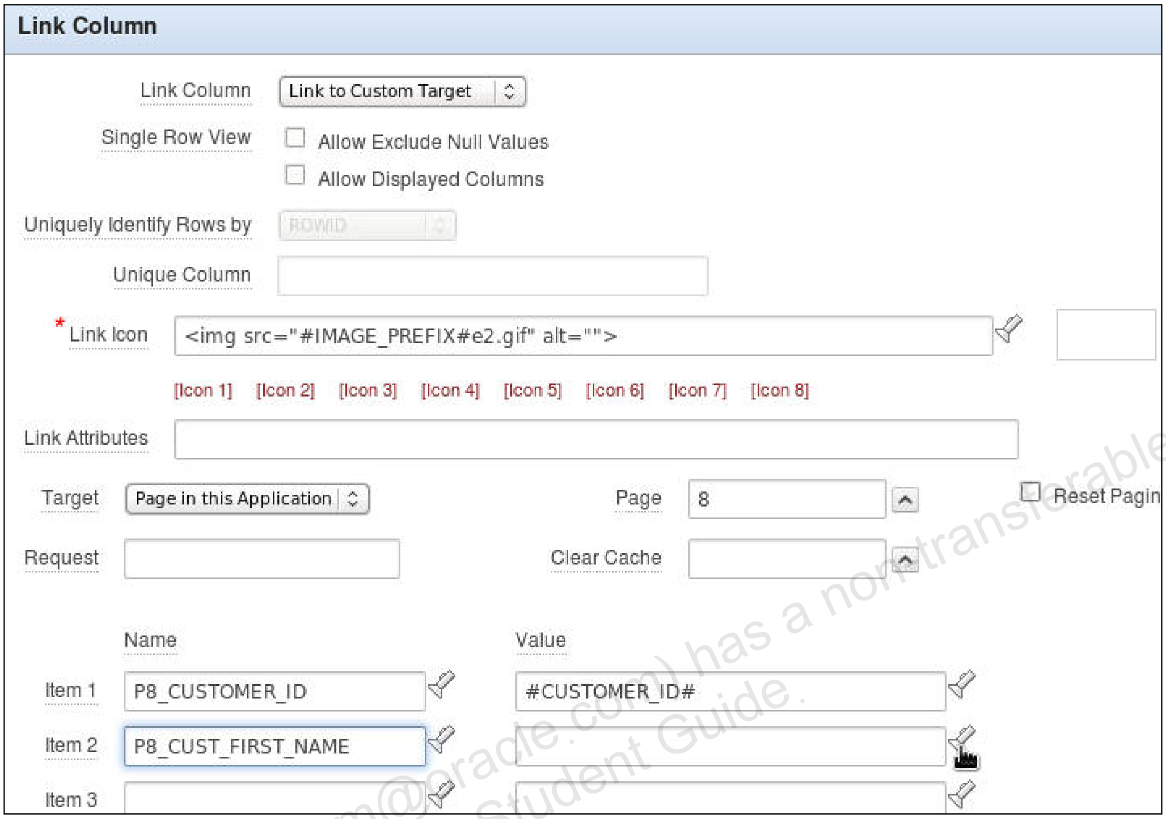
3) Note that the name for **Item 1** is **P<*n*>_CUSTOMER_ID** and the value is **CUSTOMER_ID**. This is how the value is passed when the Edit icon is clicked. You want to add another item/value. Click the Find Item icon for Item 2.



4) Select `P<n>_CUST_FIRST_NAME`.

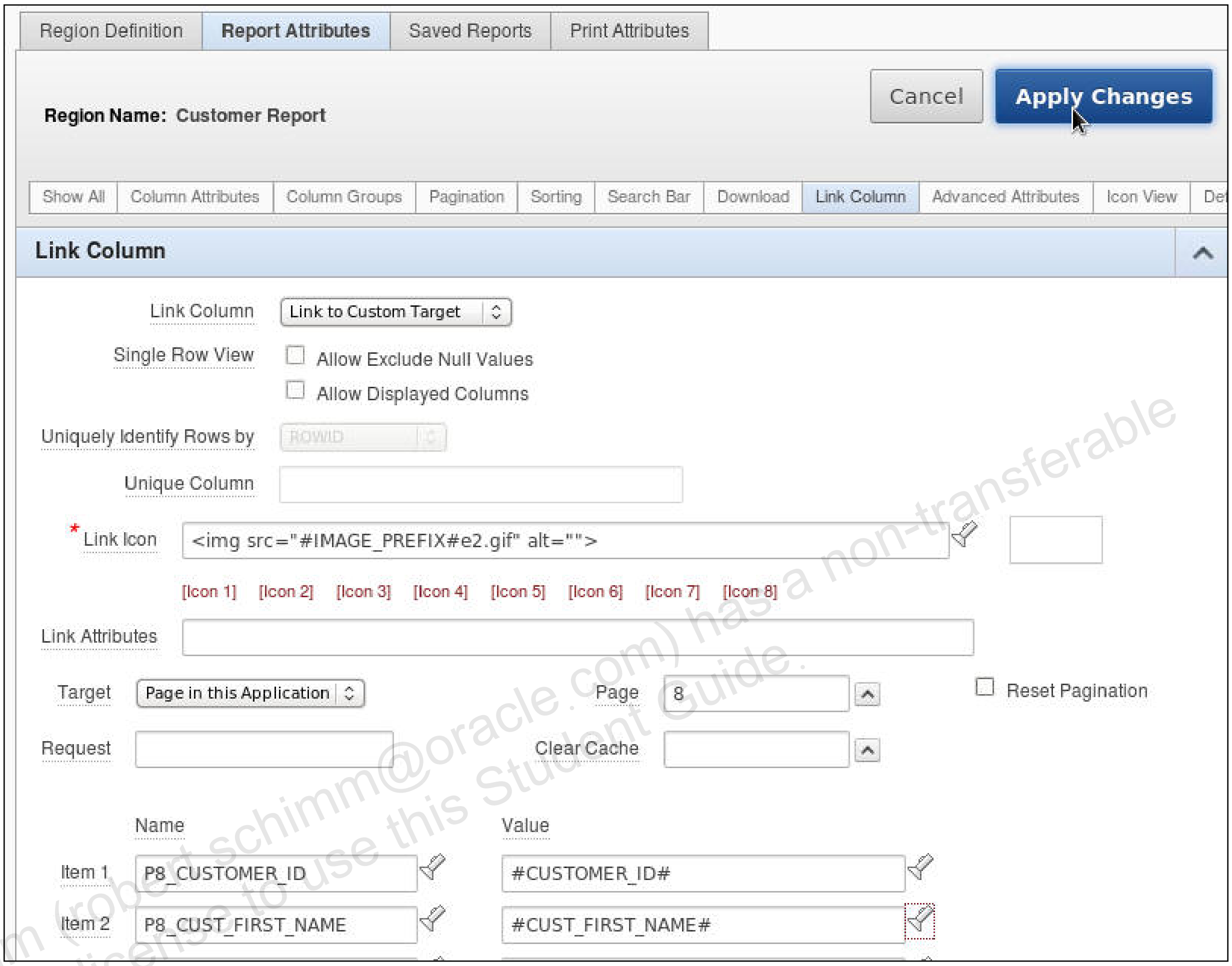


5) Click the **Find Item** icon for Value 2.

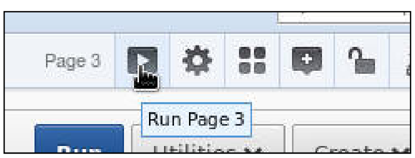


6) Select the current value **`#CUST_FIRST_NAME#`**.

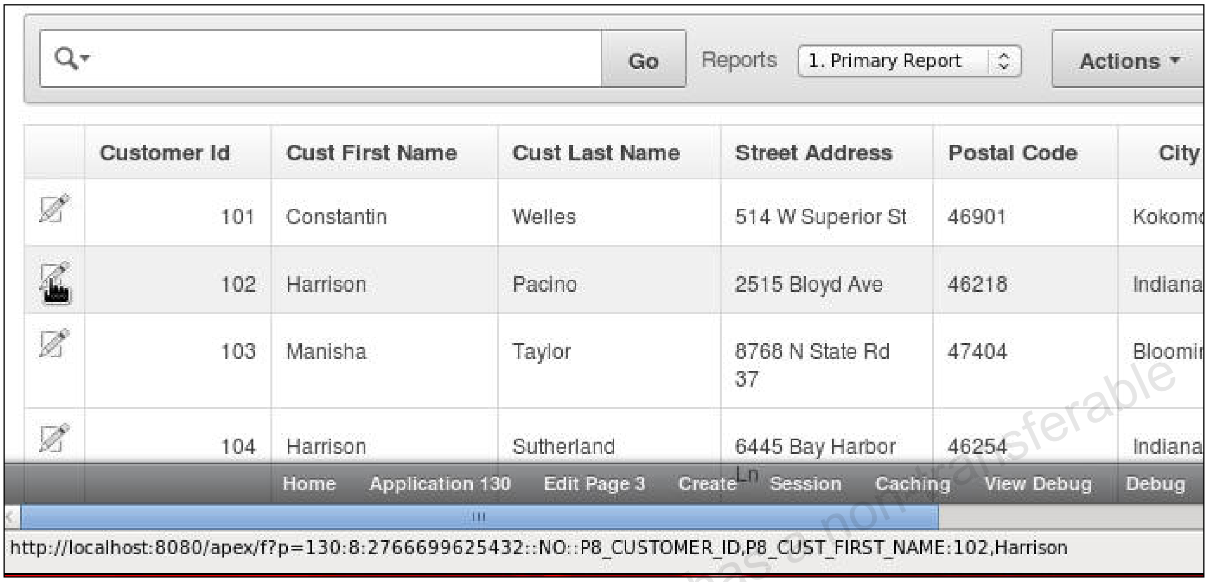
7) The Customer First Name, as well as the Customer ID, is passed into session state now. Click **Apply Changes**.



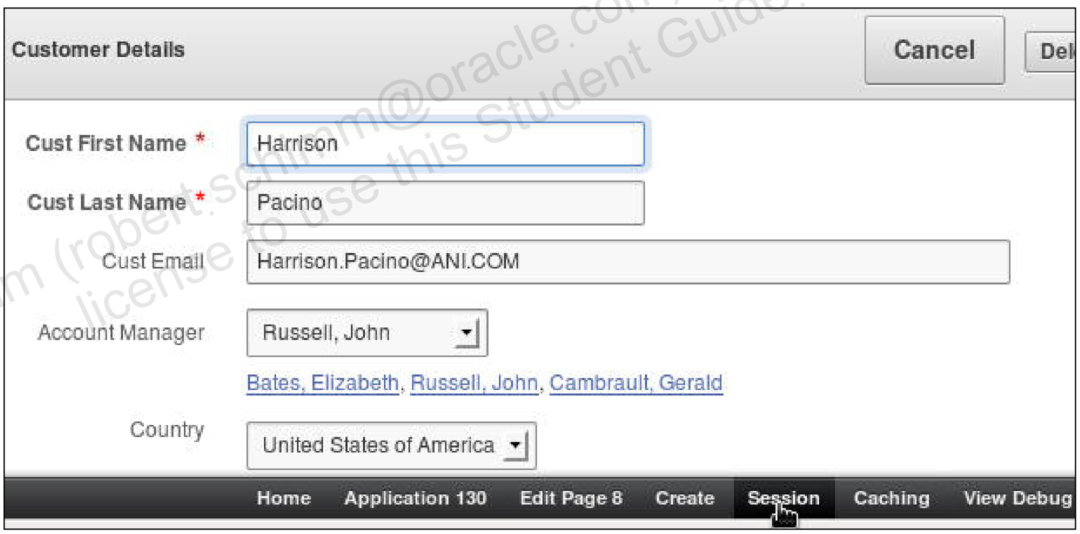
8) Click **Run Page**.



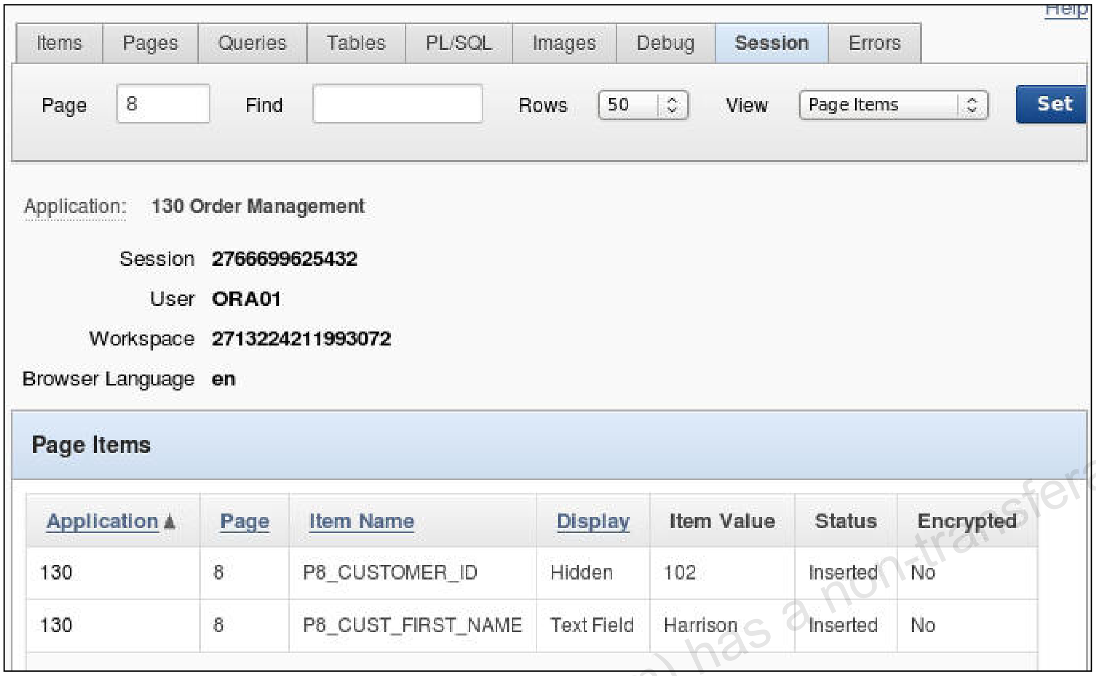
9) Move your cursor over the Edit button for a row in your report. Notice on the status bar that **`CUSTOMER_ID`** and **`CUST_FIRST_NAME`** are being passed in the URL. Click the **Edit** icon.



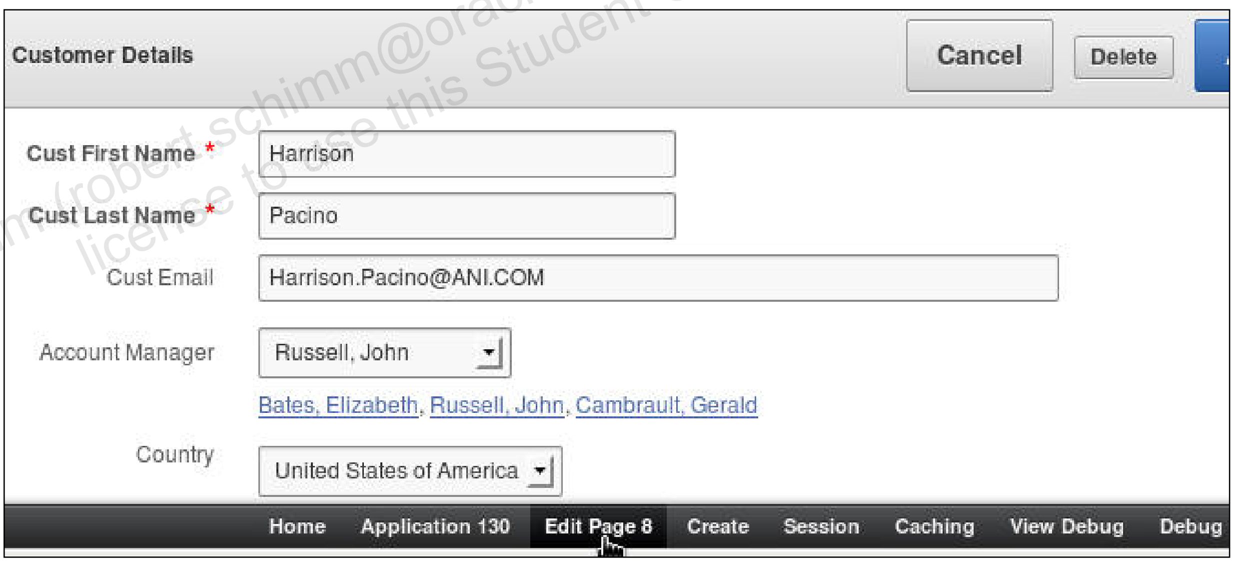
10) Click the **Session** link on the Developer toolbar.



11) Notice that this time, the **P<*n*>_CUST_FIRST_NAME** value is also passed.



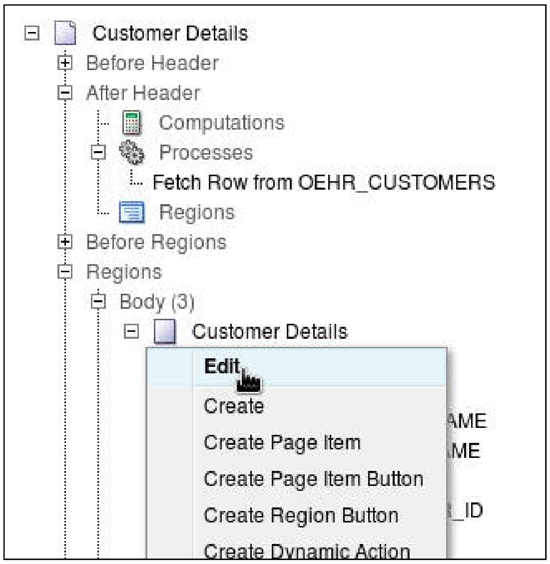
12) Switch back to the **Customer Details** page. Click the **Edit Page** link on the Developer toolbar.



f. On the Customer Details page, change the title of the Customer Details region to use the following (located in `/home/oracle/labs/files/lab9_1.txt`). Ensure that you change **P<*n*>** to your page number.

```
&P<n>_CUST_FIRST_NAME. &P<n>_CUST_LAST_NAME. Customer Details
```

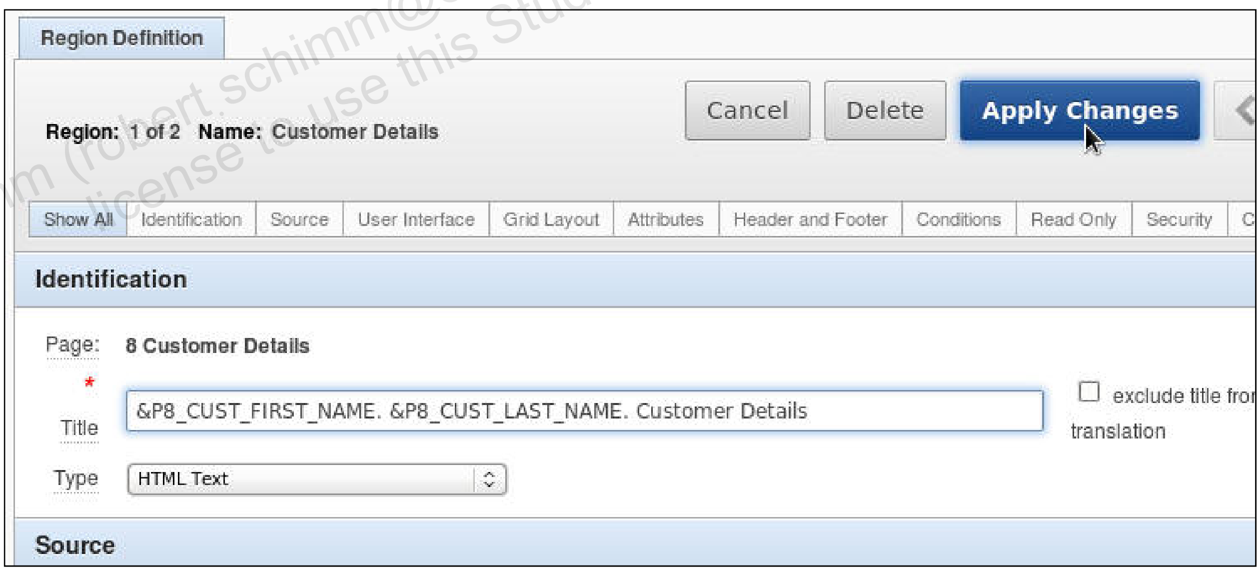
1) You want to populate the Title with the current values for First Name and Last Name. Right-click the **Customer Details** Region and select **Edit**.



2) Change the title from “Customer Details” to the following (located in **`/home/oracle/labs/files/lab9_1.txt`**), replacing ***`<n>`*** with the Customer Details page number. Click **Apply Changes**.

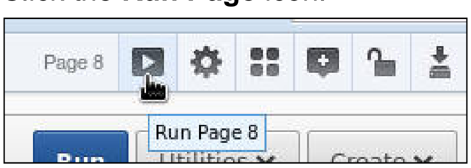
```
&P<n>_CUST_FIRST_NAME. &P<n>_CUST_LAST_NAME. Customer Details
```

Note: In the preceding text, the period (.) at the end of the item name is required.

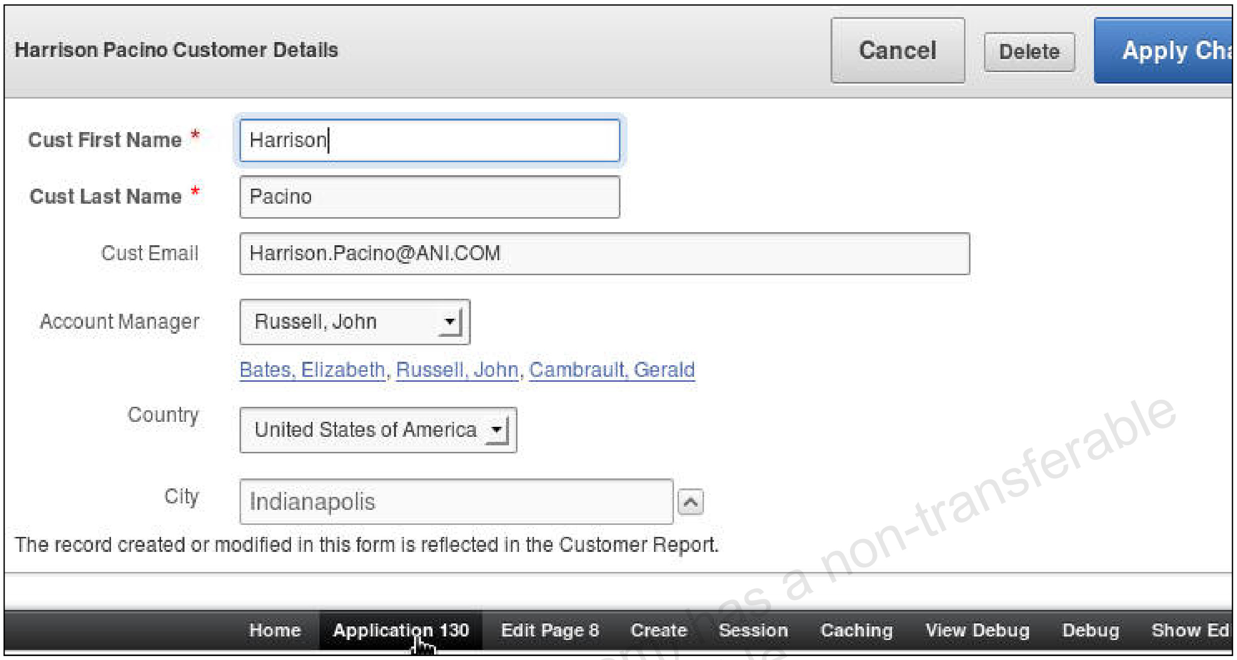


g. Run the page. What do you observe?

1) Click the **Run Page** icon.



2) Note that the Customer Name for the record being displayed is contained in the title. Click the **Application <*n*>** link on the Developer toolbar.



Practices for Lesson 10: Adding Page Processing

Chapter 10

Practices for Lesson 10: Overview

Practices Overview

There is one practice for this lesson. In this practice, you examine how computations, processes, and validations work.

Practice 10-1: Creating and Manipulating Computations, Processes, and Validations

Overview

In this practice, you make the following changes to the Customer Details page in the Order Management application:

- Create a computation that changes the email address to uppercase after the page is submitted.
- Add a Phone Number item and create a process that populates the item's value when the page is rendered.
- Add a process to insert a record into a table called `oehr_audits` every time a customer is added.
- Create an Item String Comparison validation to make sure that there are no spaces in the Email value.
- Examine the implied validation for required items.
- Create a Tabular Form Level validation. If the **`JOB_ID`** is **`'SA_REP'`**, then a commission needs to be entered. If the commission is not entered for the **`JOB_ID`** **`'SA_REP'`**, then display an error message.

Assumptions

You have performed the previous practices or imported the **`LAB091_SOLN.sql`** packaged application.

Tasks

a. Create an **After Submit PL/SQL Expression** computation on the **`P<n>_CUST_EMAIL`** item. The PL/SQL expression should be: **`upper(:P<n>_CUST_EMAIL)`**. Test the page to see that the email address is stored as uppercase.

b. Add a **Display Only** item called **`P<n>_PHONE_NUMBER`**. Create a Before Region process to load the phone number into the item that you just created. The code that you want to specify in the process is as follows (located in **`/home/oracle/labs/files/lab10_1.txt`**):

```
for c1 in (
select phone_number from oehr_customers where customer_id =
:P<N>_CUSTOMER_ID
)
loop
:P<N>_PHONE_NUMBER := c1.phone_number;
end loop;
```

c. Change the Process Row of **`OEHR_CUSTOMERS`** process to add the **`P<n>_CUSTOMER_ID`** item in the **`Return Key into Item`** field.

d. Create an **OEHR_AUDITS** table by using the SQL Workshop's Object Browser and add the following details:

Column Name	Data Type	Other Details
CUSTOMER_ID (PK)	NUMBER	Not Populated
CREATED_BY	VARCHAR2	SCALE 40
CREATED_ON	DATE	N/A

Add an After Submit PL/SQL process called audit insert which has the following PL/SQL code (located in **/home/oracle/labs/files/lab10_2.txt**). Set the success message to "You have been audited."

```
INSERT INTO oehr_audits VALUES(:P<n>_CUSTOMER_ID,:APP_USER,
sysdate);
```

e. Create an Item String Comparison validation on the **P<n>_CUST_EMAIL** item to ensure that there are no spaces in the Email value. Test the page to make sure that it works.

f. Remove the First Name value from the page and click Apply Changes. Note the implied validation. Why is the error message shown if there is no validation on the page?

g. Create a Tabular Form Level validation. If the **JOB_ID** is **'SA_REP'**, then a commission needs to be entered. If the commission is not entered for the **JOB_ID** **'SA_REP'**, then display an error message. Use the following PL/SQL code (located in **/home/oracle/labs/files/lab10_3.txt**):

```
Declare
begin
  If :JOB_ID = 'SA_REP' and :COMMISSION_PCT is not null then
     Return true;
Else
    Return false;
End if;
End;
```

Solution 10-1: Creating and Manipulating Computations, Processes, and Validations

Overview

In this practice, you make the following changes to the Customer Details page in the Order Management application:

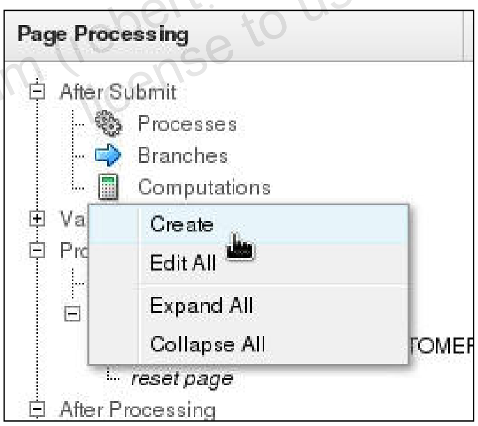
- Create a computation that changes the email address to uppercase after the page is submitted.
- Add a Phone Number item and create a process that populates the item's value when the page is rendered.
- Add a process to insert a record into a table called `oehr_audits` every time a customer is added.
- Create an Item String Comparison validation to make sure that there are no spaces in the Email value.
- Examine the implied validation for required items.
- Create a Tabular Form Level validation. If the **`JOB_ID`** is **`'SA_REP'`**, then a commission needs to be entered. If the commission is not entered for the **`JOB_ID`** **`'SA_REP'`**, then display an error message.

Tasks

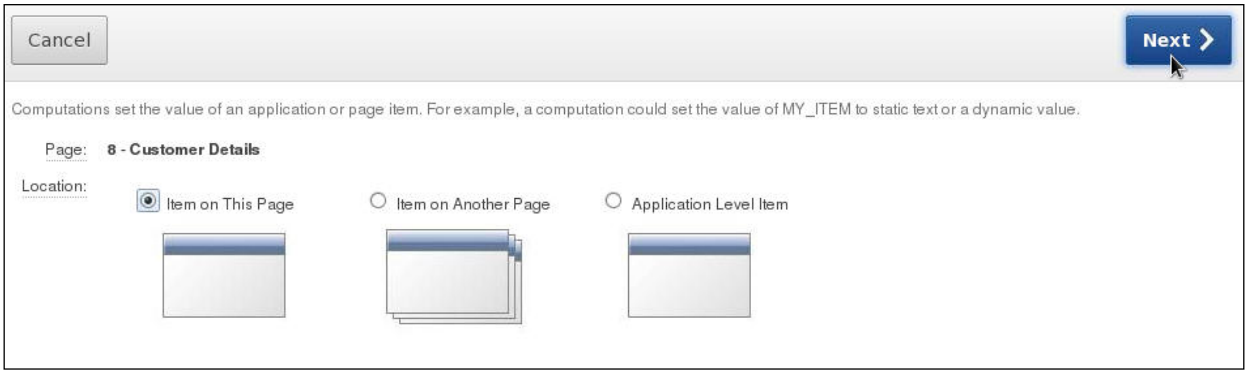
a. Create an **After Submit PL/SQL Expression** computation on the **`P<n>_CUST_EMAIL`** item. The PL/SQL expression should be: **`upper(:P<n>_CUST_EMAIL)`**. Test the page to see that the email address is stored as uppercase.

1) Navigate to the **Order Management** application home page and select the **Customer Details** page.

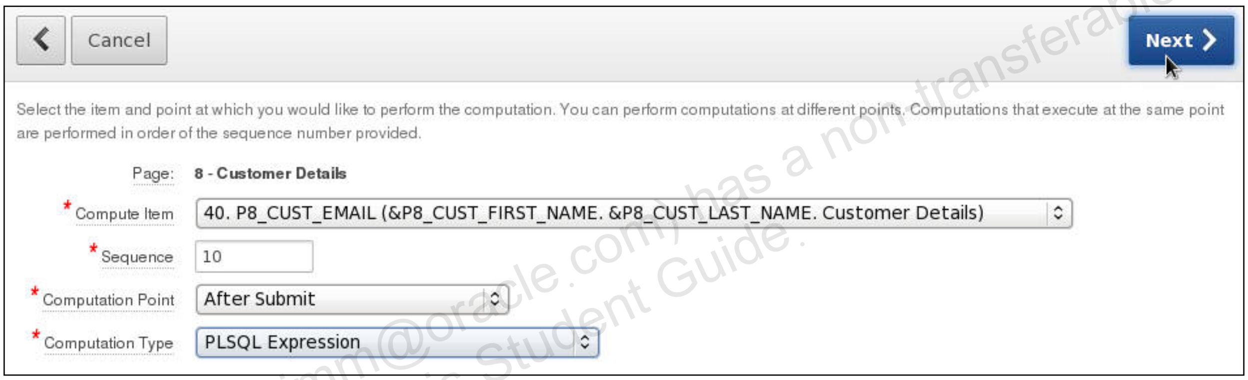
2) Under Page Processing, expand **After Submit**, right-click **Computations**, and select **Create**.



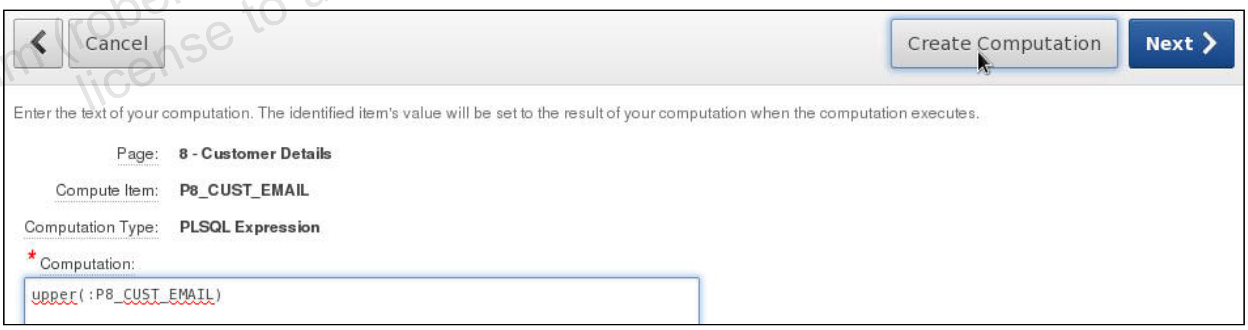
3) Ensure that the **Item on This Page** option is selected. Click **Next >**.



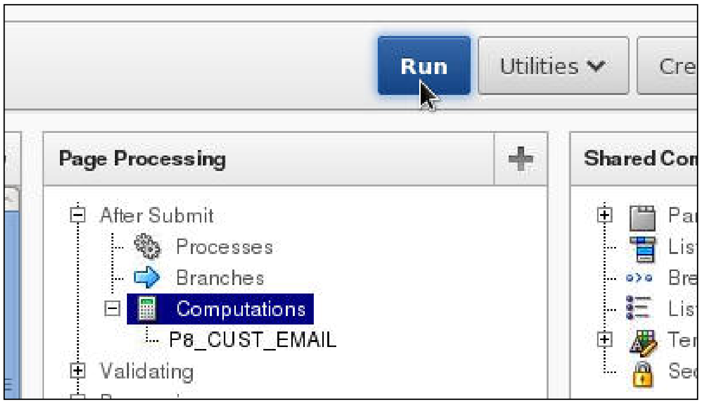
4) For Compute Item, select `P<n>_CUST_EMAIL` and for Computation Type, select **PLSQL Expression**. Then click **Next >**.



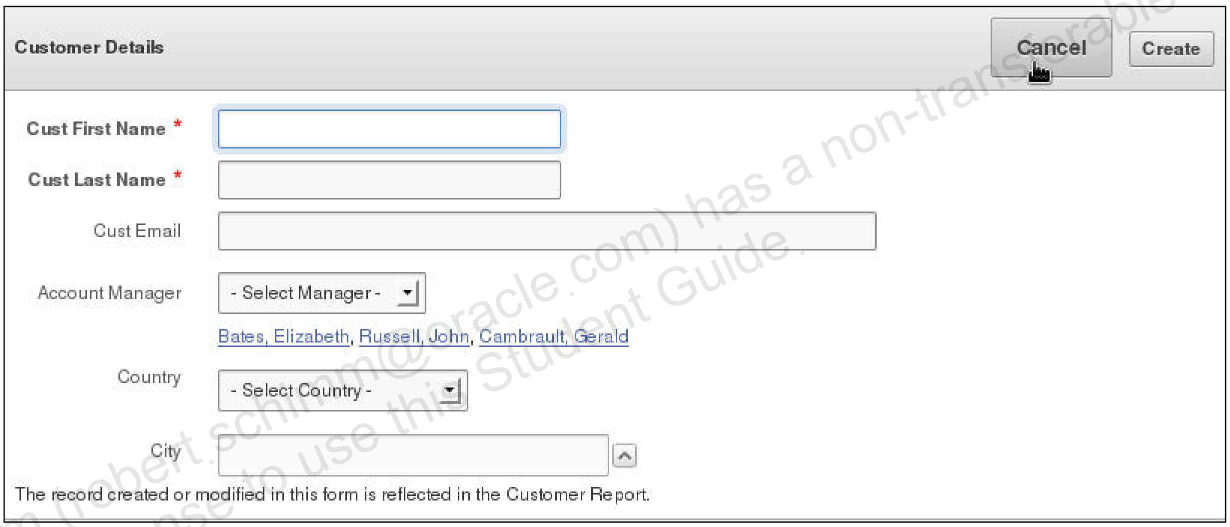
5) For Computation, enter `upper(:P<n>_CUST_EMAIL)`. Ensure that you change `<n>` to the Customer Details page number. Click **Create Computation**.



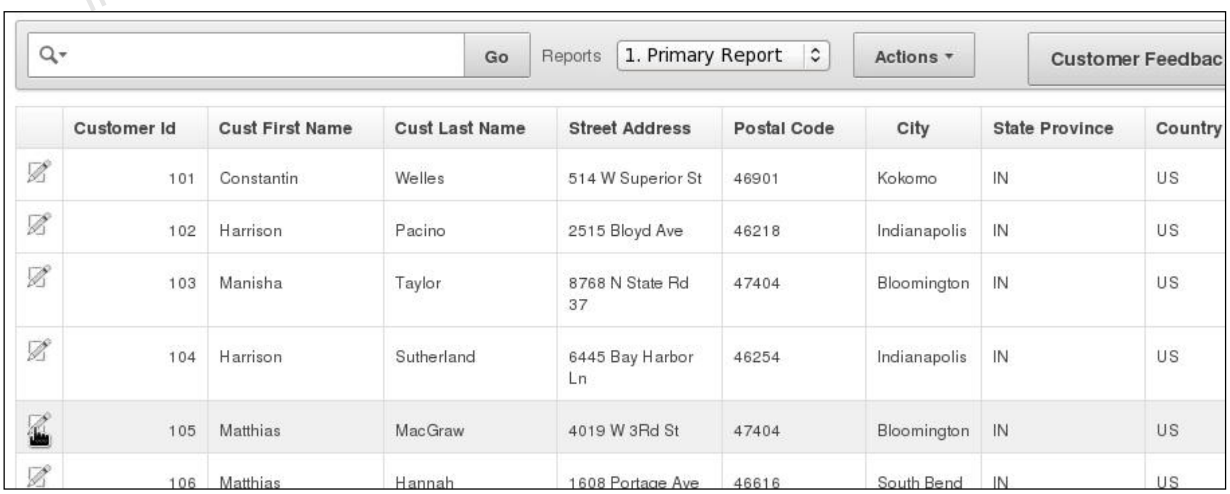
6) Run the page. Click **Run**.



7) You need to edit a record. Click **Cancel** to return to the Customer Report.

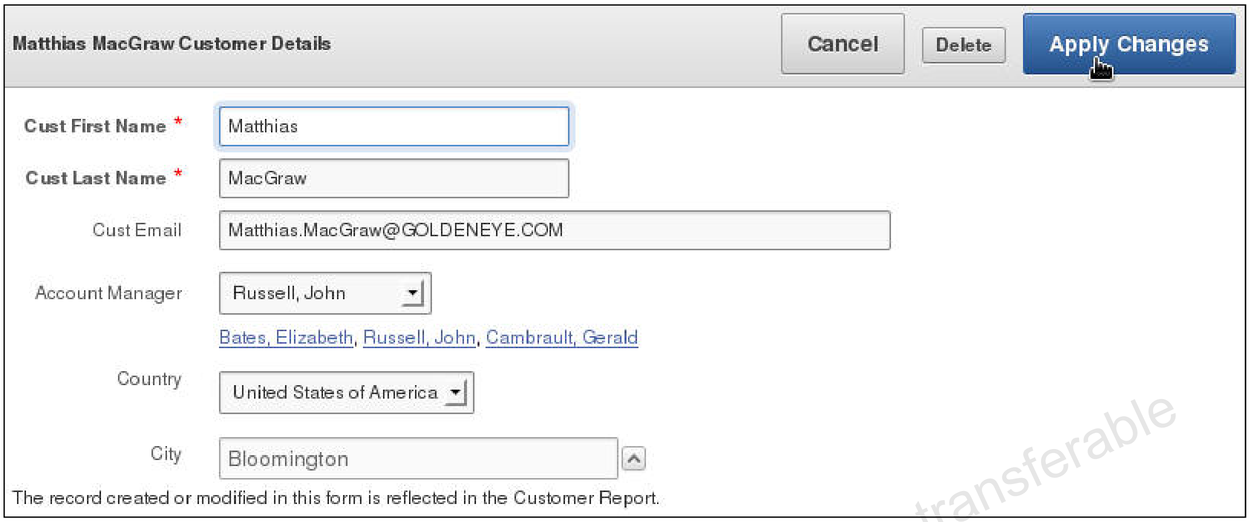


8) Click the **Edit** icon for one of the rows.

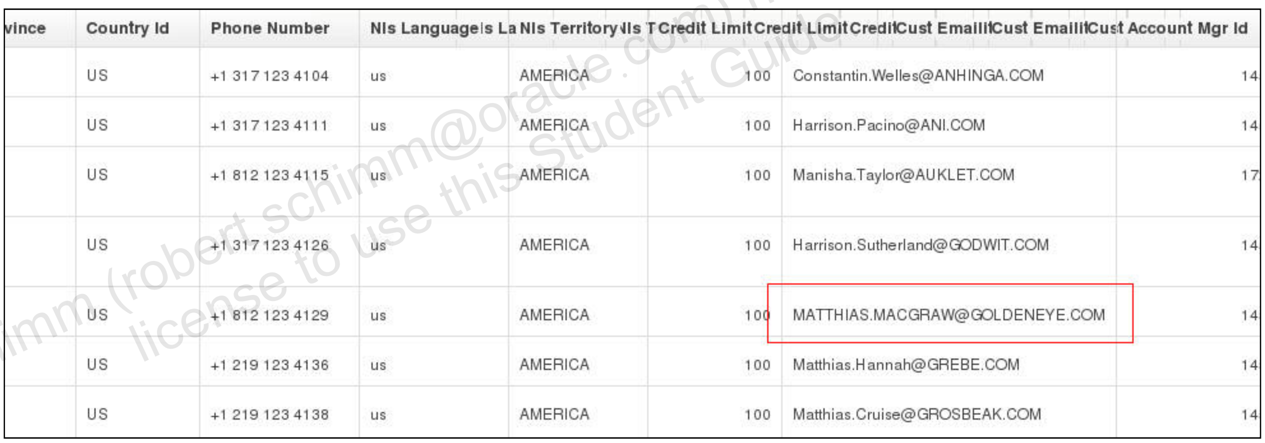


	Customer Id	Cust First Name	Cust Last Name	Street Address	Postal Code	City	State Province	Country
	101	Constantin	Welles	514 W Superior St	46901	Kokomo	IN	US
	102	Harrison	Pacino	2515 Bloyd Ave	46218	Indianapolis	IN	US
	103	Manisha	Taylor	8768 N State Rd 37	47404	Bloomington	IN	US
	104	Harrison	Sutherland	6445 Bay Harbor Ln	46254	Indianapolis	IN	US
	105	Matthias	MacGraw	4019 W 3Rd St	47404	Bloomington	IN	US
	106	Matthias	Hannah	1608 Portage Ave	46616	South Bend	IN	US

9) Notice that the email is currently in uppercase and lowercase letters. Click **Apply Changes** to invoke the computation.



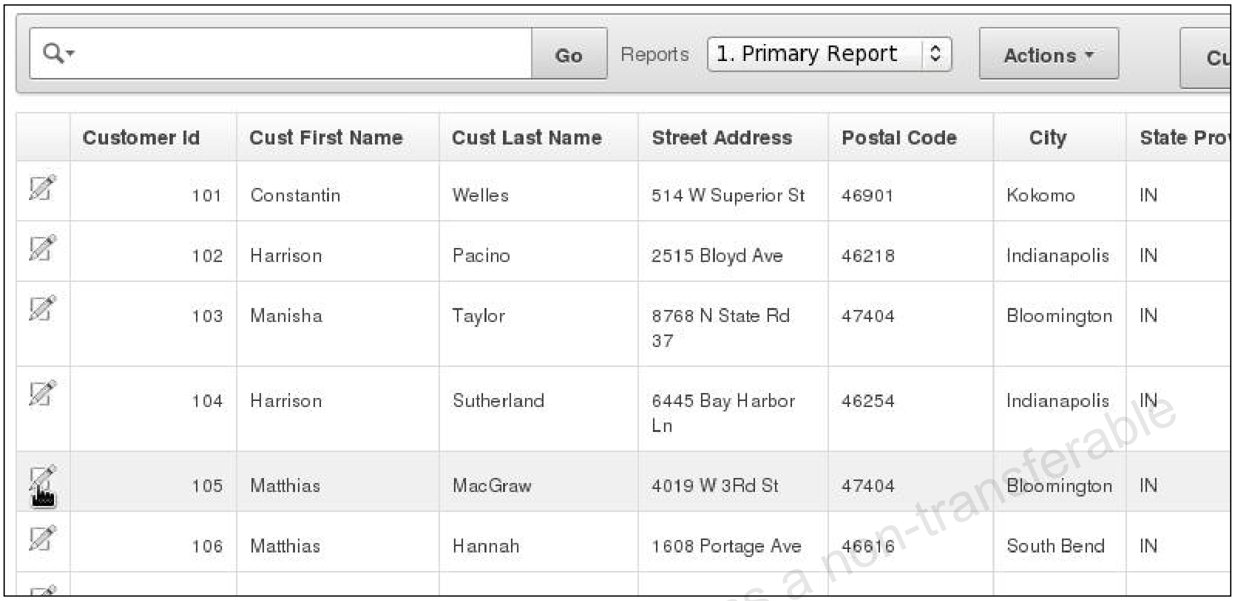
10) The Customer Report is displayed. Scroll to the right to see the Email column. Notice that the email for the record (highlighted in red as follows) that you just applied is now in uppercase letters.



b. Add a **Display Only** item called **`P<n>_PHONE_NUMBER`**. Create a Before Region process to load the phone number into the item that you just created. The code that you want to specify in the process is as follows (located in **`/home/oracle/labs/files/lab10_1.txt`**):

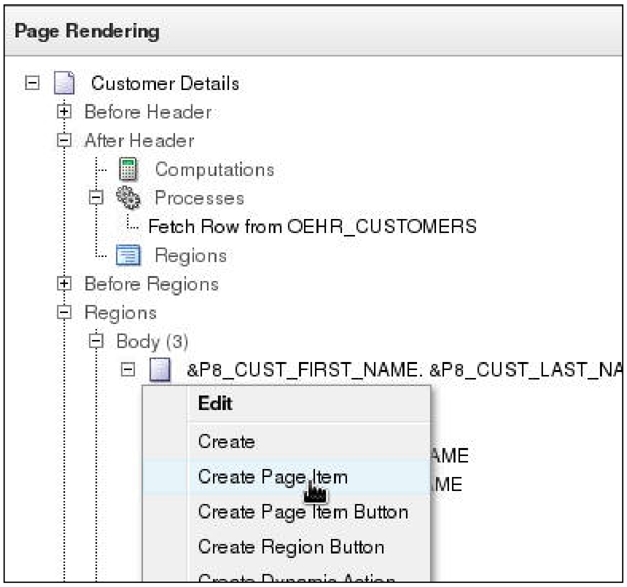
```
for c1 in (
select phone_number from oehr_customers where customer_id =
:P<N>_CUSTOMER_ID
)
loop
:P<N>_PHONE_NUMBER := c1.phone_number;
end loop;
```

1) You want to make some more modifications to the Customer Details page. Click the **Edit** icon for one of the customer records.

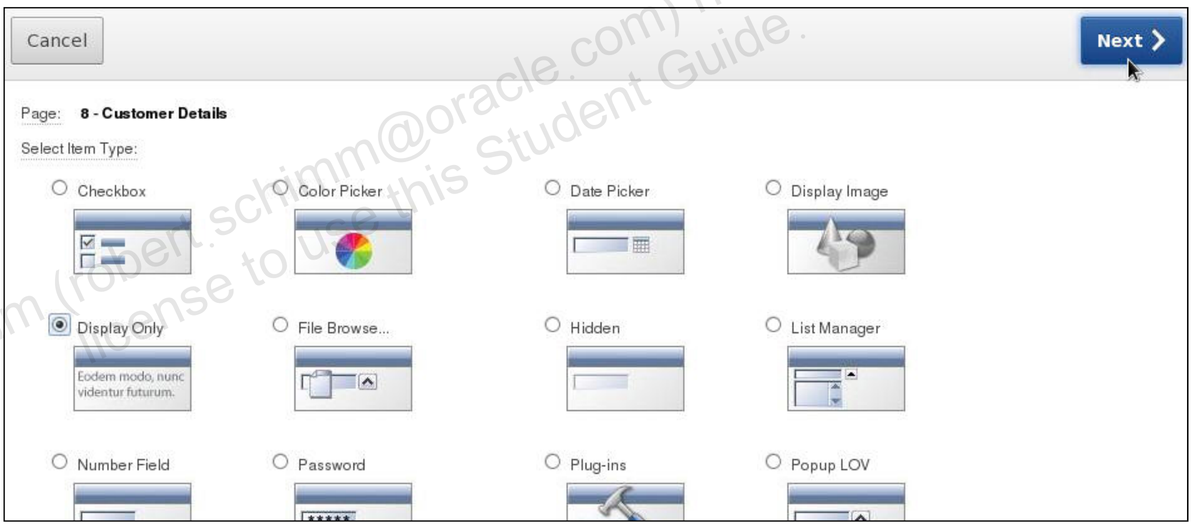


2) Click the **Edit Page** link on the Developer toolbar.

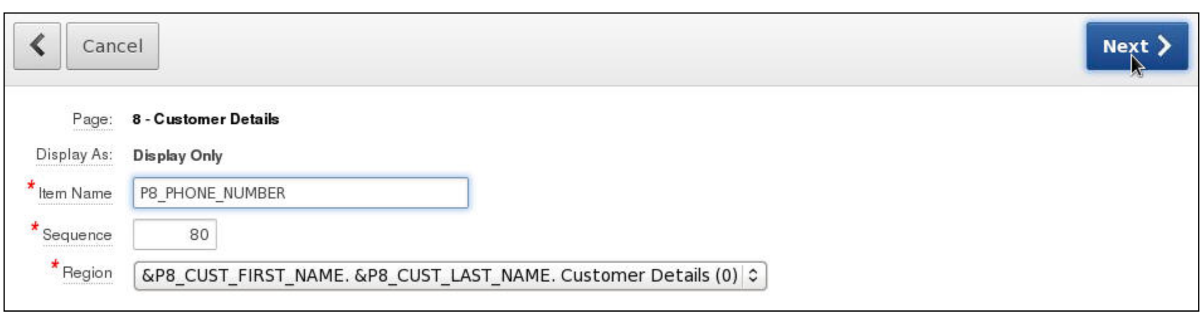
3) You want to create a page item for Phone Number. Right-click your **Region** and select **Create Page Item**.



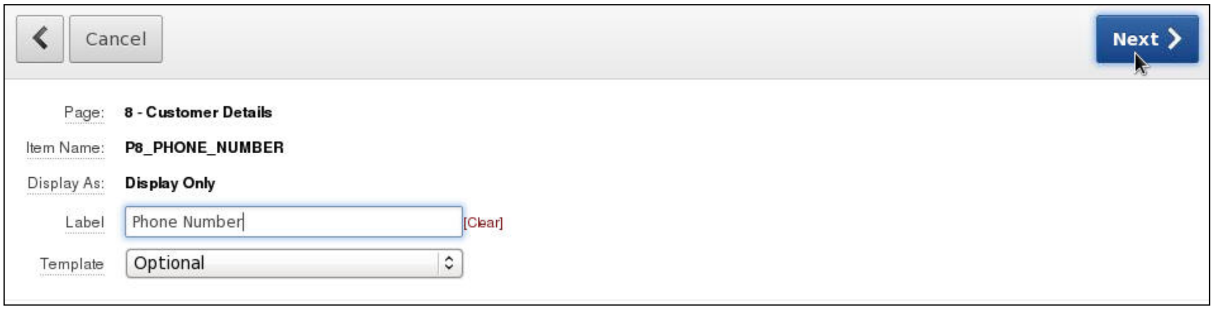
4) Select **Display Only** for the item type and click **Next >**.



5) Enter **P<*n*>_PHONE_NUMBER** for Item Name and click **Next >**.

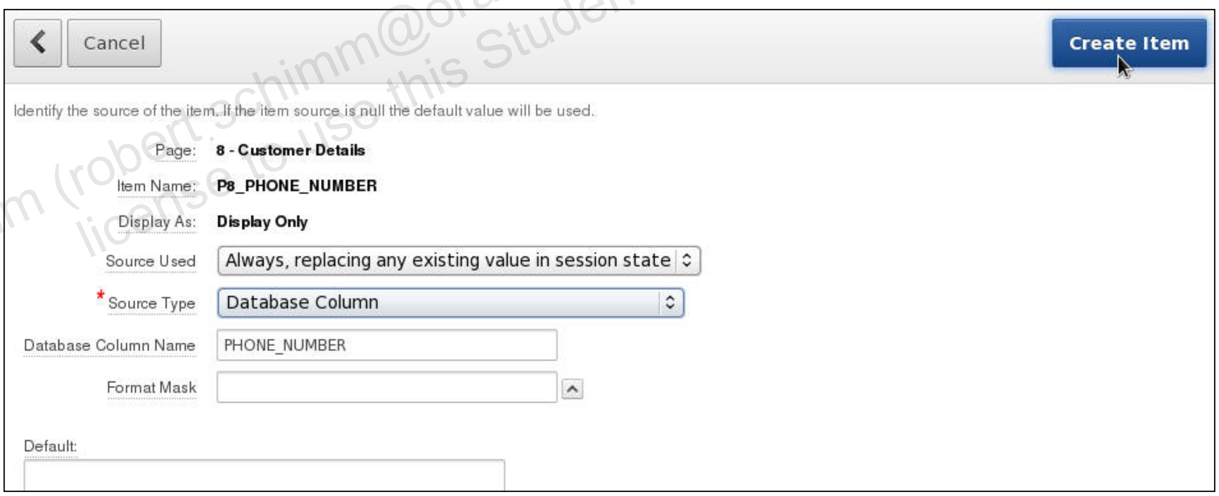


6) Accept the defaults and click **Next >**.

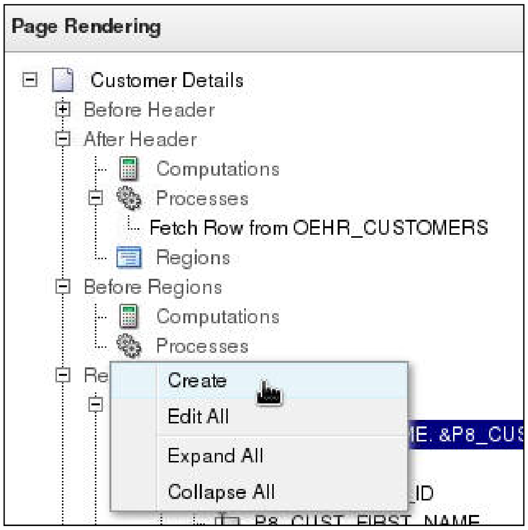


7) Accept the defaults and click **Next >**.

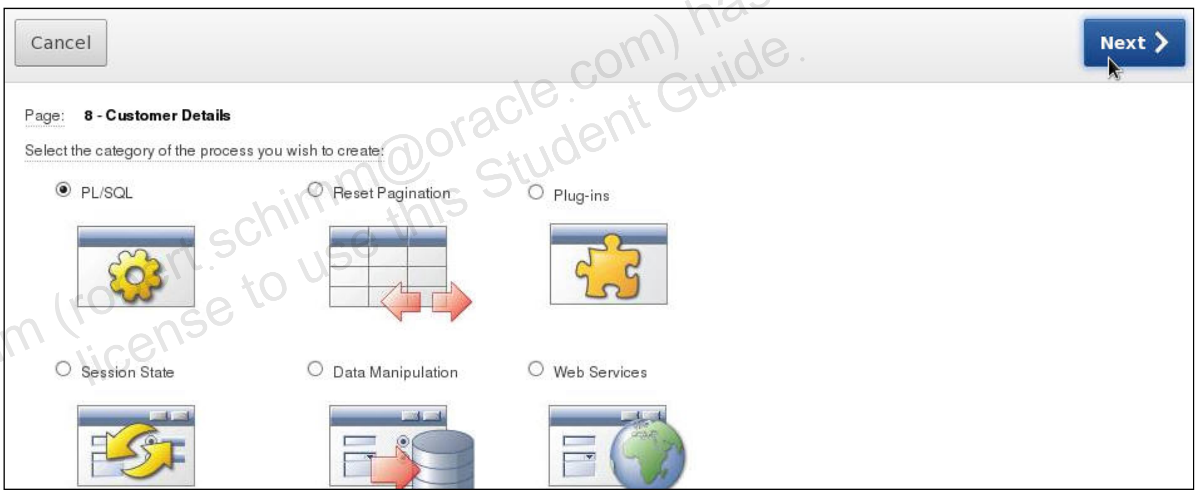
8) Select **Database Column** for Source Type. Notice that **`PHONE_NUMBER`** appears automatically in the Database Column Name field. Click **Create Item**.



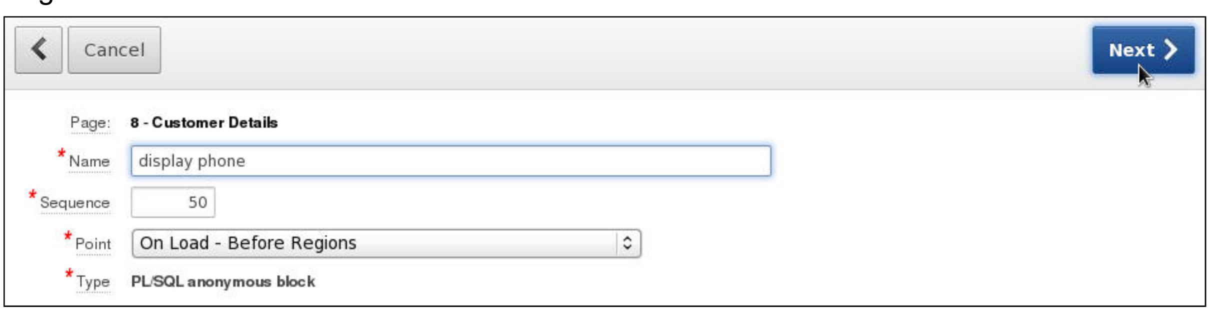
9) You want to create an On Load process that is executed Before Regions. This process retrieves PHONE_NUMBER for display only. Under Page Rendering, expand Before Regions, right-click Processes, and select **Create**.



10) Make sure that **PL/SQL** is selected and click **Next >**.

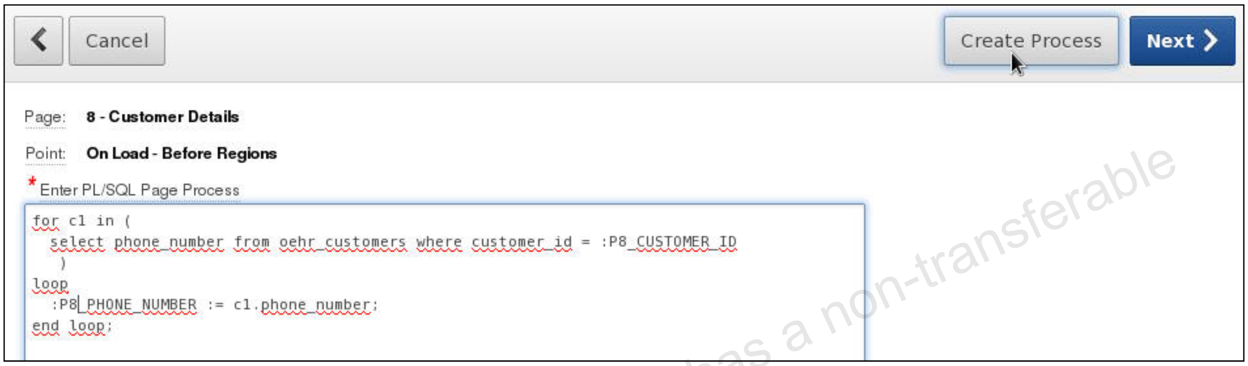


11) For Name, enter `display phone` and click **Next >**. Note that On Load – Before Regions should be selected for Point.

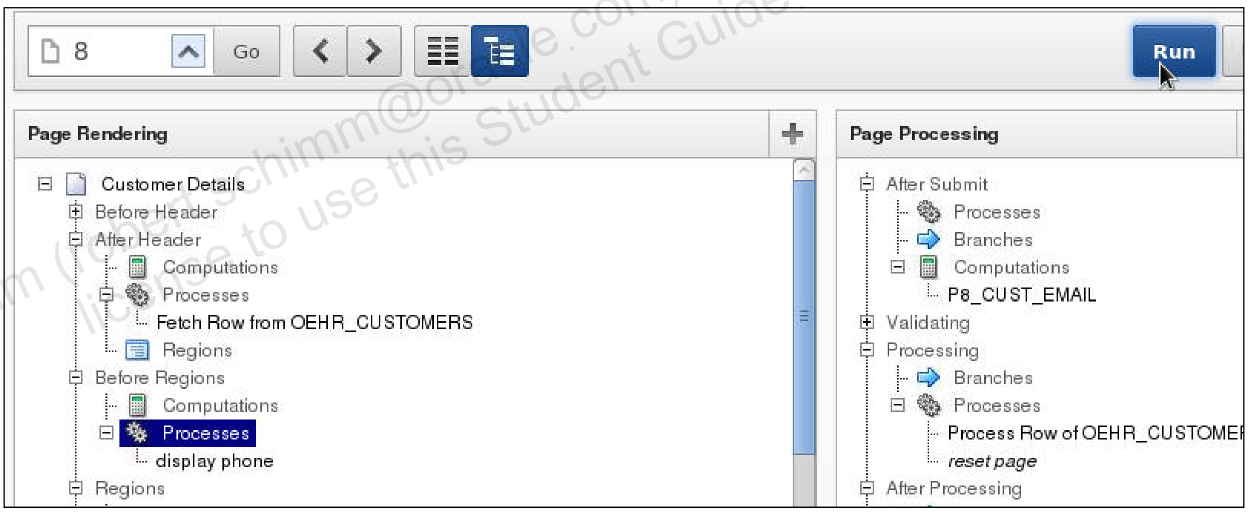


12) Enter the following code in the Enter PL/SQL Page Process text box (located in `/home/oracle/labs/files/lab10_1.txt`) and click **Create Process**.

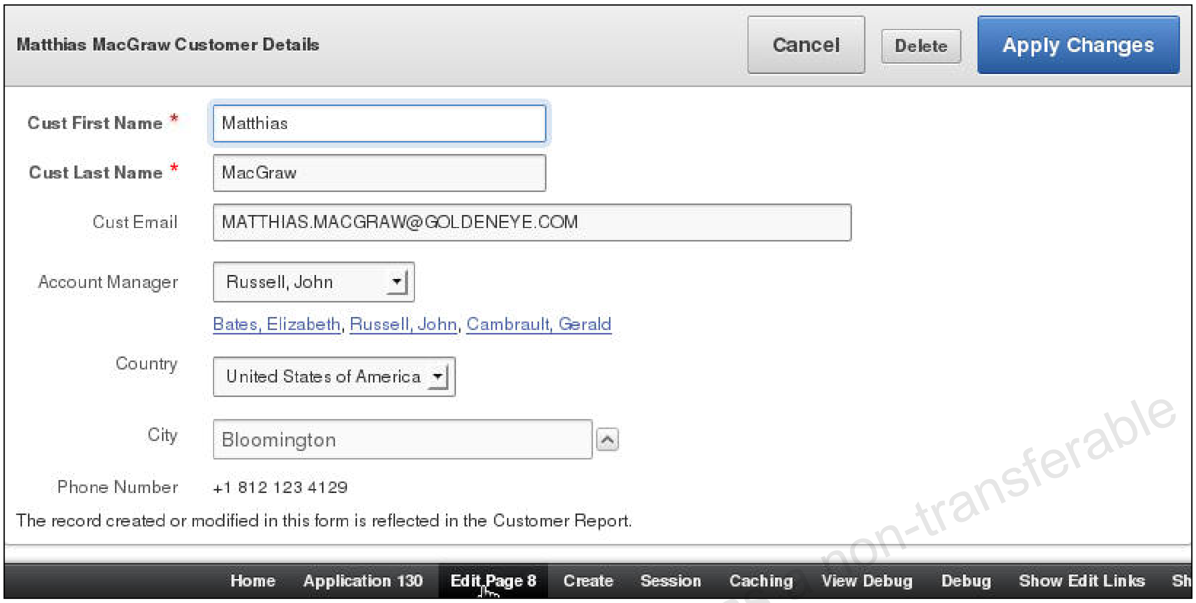
```
for c1 in (
select phone_number from oehr_customers where customer_id =
:P<N>_CUSTOMER_ID
)
loop
  :P<N>_PHONE_NUMBER := c1.phone_number;
end loop;
```



13) Click **Run** to run the page.

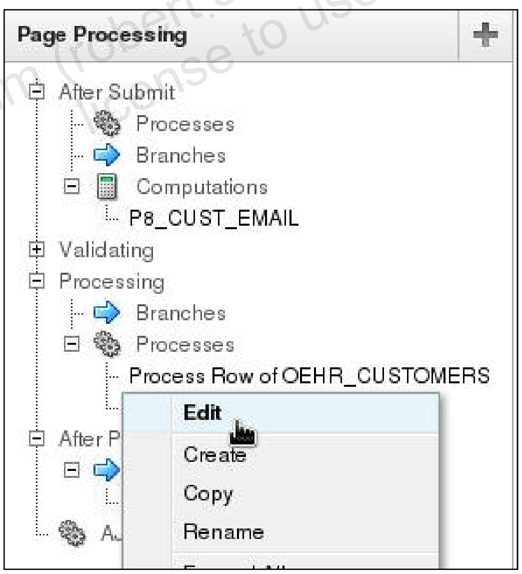


14) Notice that the phone number is displayed for the customer that you selected. Click the **Edit Page** link on the Developer toolbar.

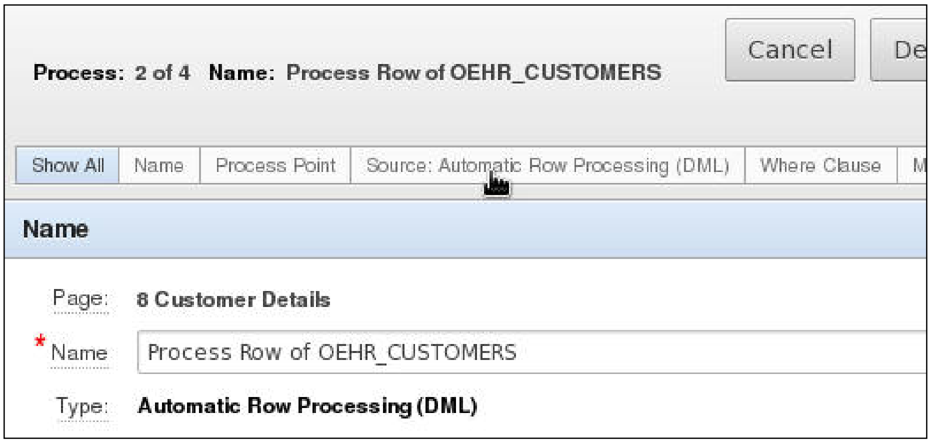


c. Change the Process Row of `OEHR_CUSTOMERS` process to add the `P<n>_CUSTOMER_ID` item in the `Return Key into Item` field.

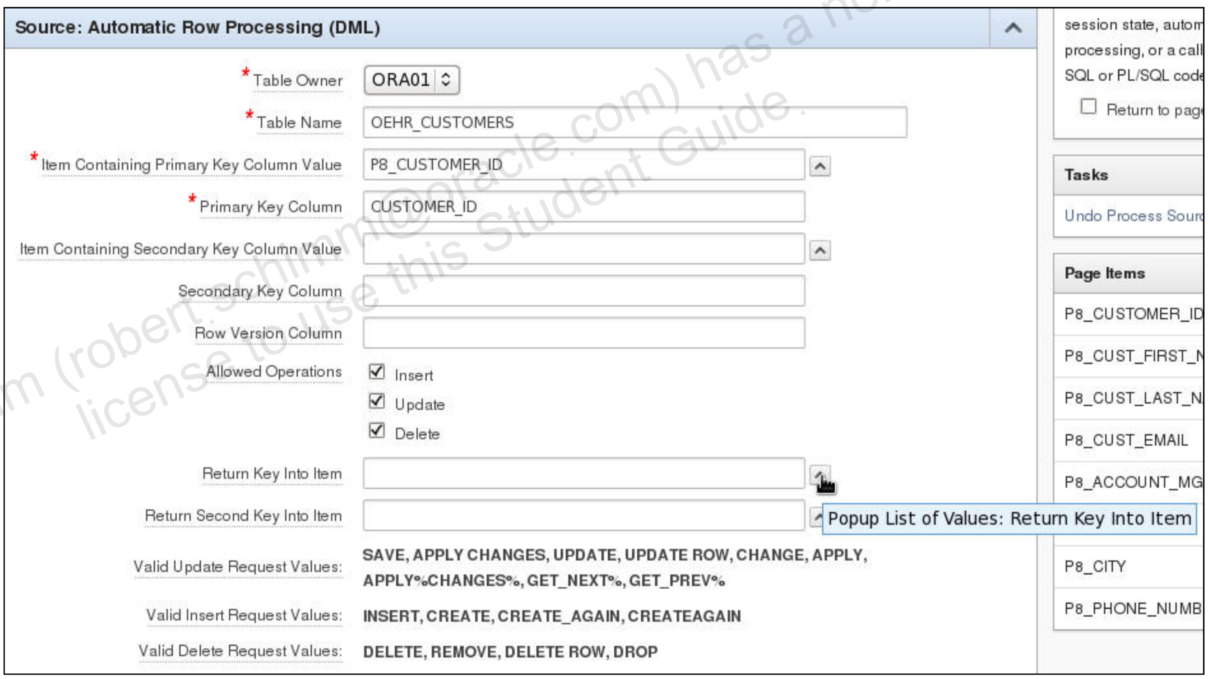
1) You want to create an After Submit process on the Customer Details page. Whenever a new customer is added to the `OEHR_CUSTOMERS` table by using the form, the details of the user who created the new customer are stored in the Audit table. Under Page Processing, in the Processes region, right-click **Process Row of OEHR_CUSTOMERS** and select **Edit**.



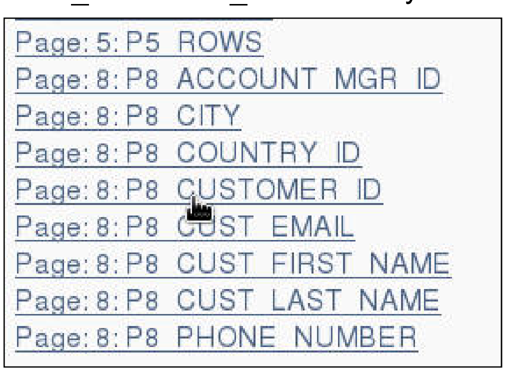
2) From the list of tabs that is displayed at the top of the page, click **Source: Automatic Row Processing (DML)**.



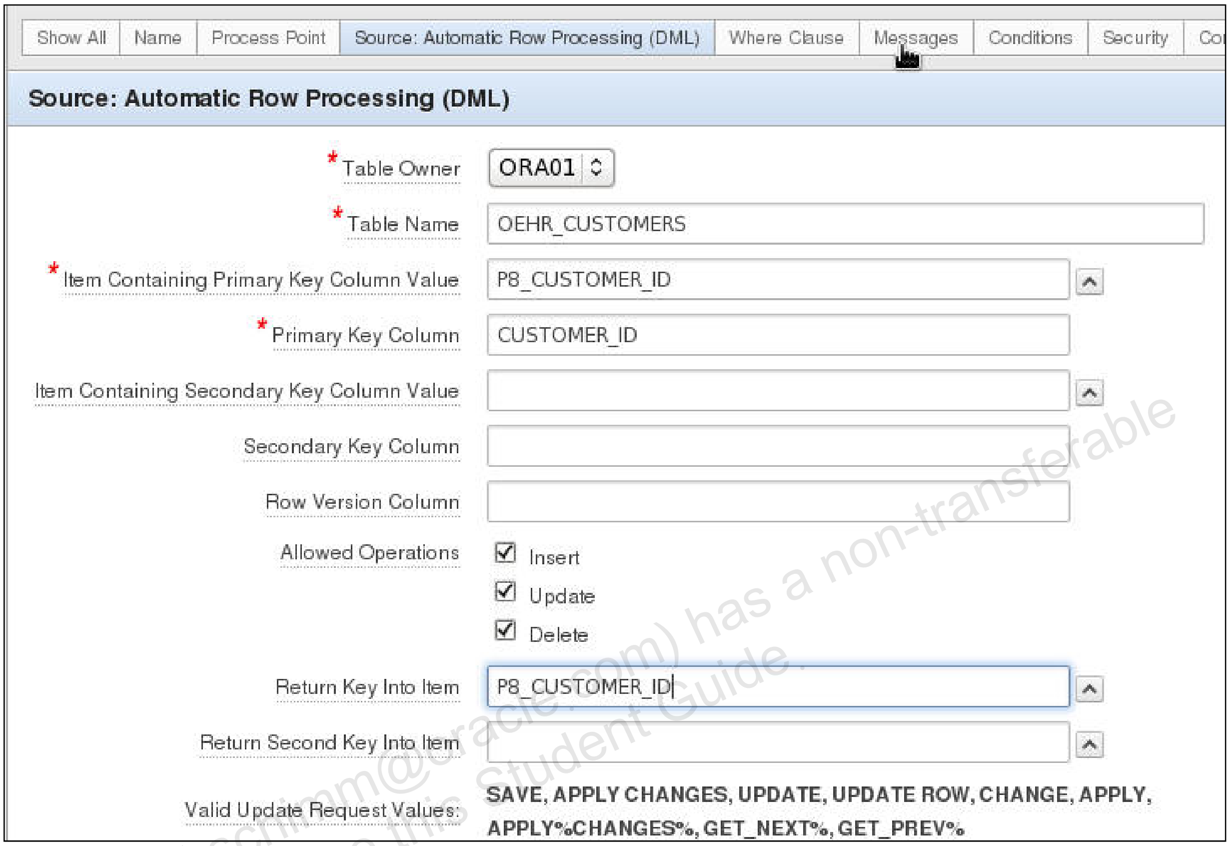
3) Because you want to use the value of `CUSTOMER_ID` in another process, you want to put the value into the `P<n>_CUSTOMER_ID` item on your page. Click the icon to the right of the **Return Key Into Item** field.



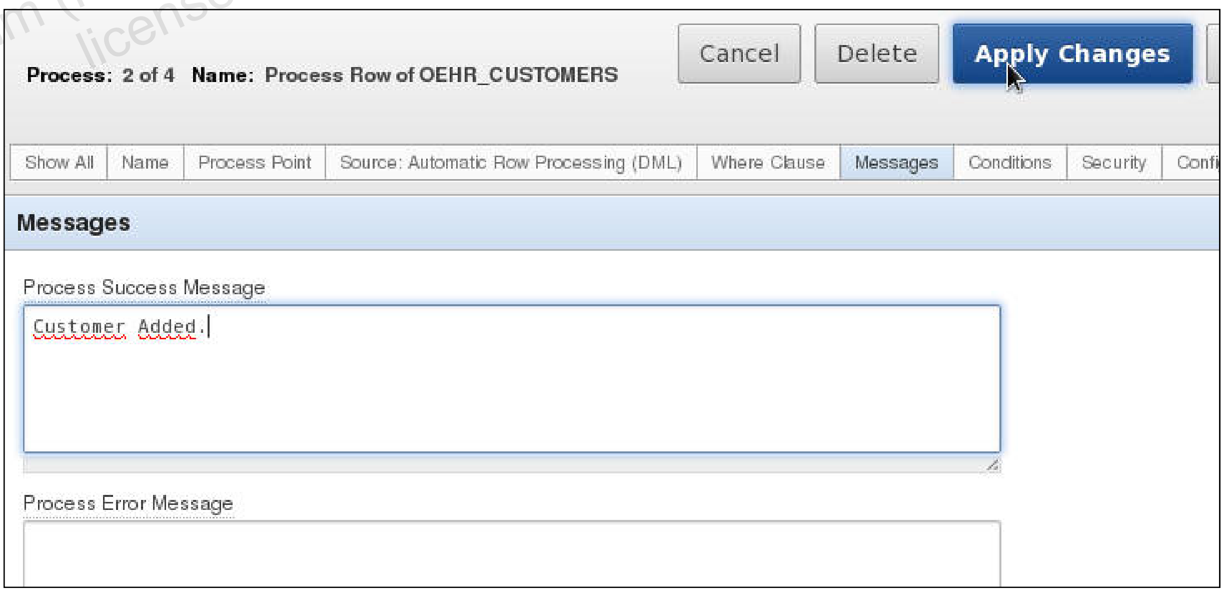
4) In the list that is displayed, click the link corresponding to the `P<n>_CUSTOMER_ID` item on your Customer Details page.



5) To change the message that is displayed when a new customer is successfully added to the table, click the **Messages** tab.



6) Replace the process success message with `Customer Added` and click **Apply Changes**.



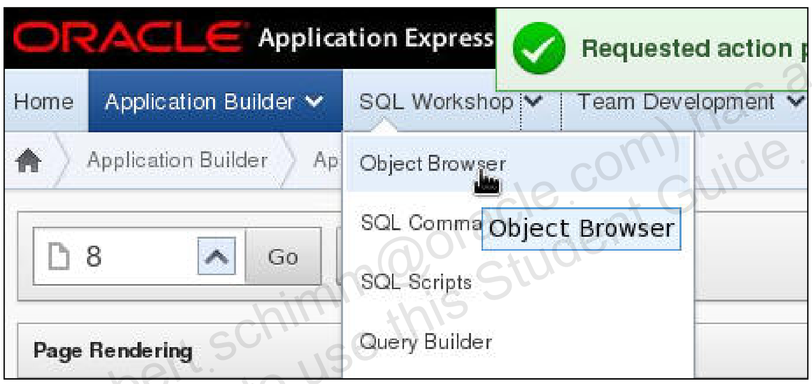
d. Create an **`OEHR_AUDITS`** table by using the SQL Workshop's Object Browser and add the following details:

Column Name	Data Type	Other Details
CUSTOMER_ID (PK)	NUMBER	Not Populated
CREATED_BY	VARCHAR2	SCALE 40
CREATED_ON	DATE	N/A

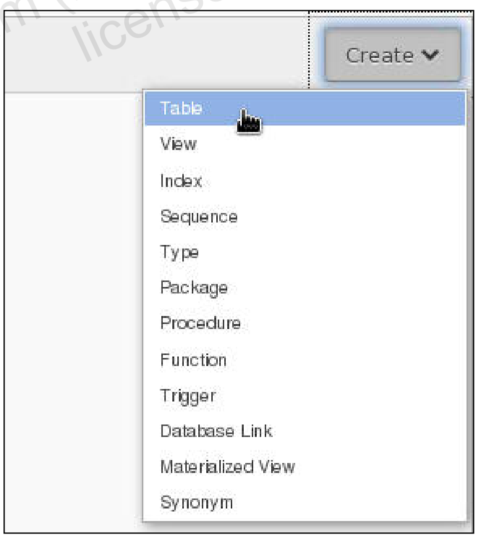
Add an After Submit PL/SQL process called audit insert, which has the following PL/SQL code (located in **`/home/oracle/labs/files/lab10_2.txt`**). Set the success message to "You have been audited."

```
INSERT INTO oehr_audits VALUES(:P<n>_CUSTOMER_ID,:APP_USER,
sysdate);
```

1) To create the **`OEHR_AUDITS`** table, navigate to the Object Browser page by selecting **Object Browser** from the SQL Workshop tab menu.

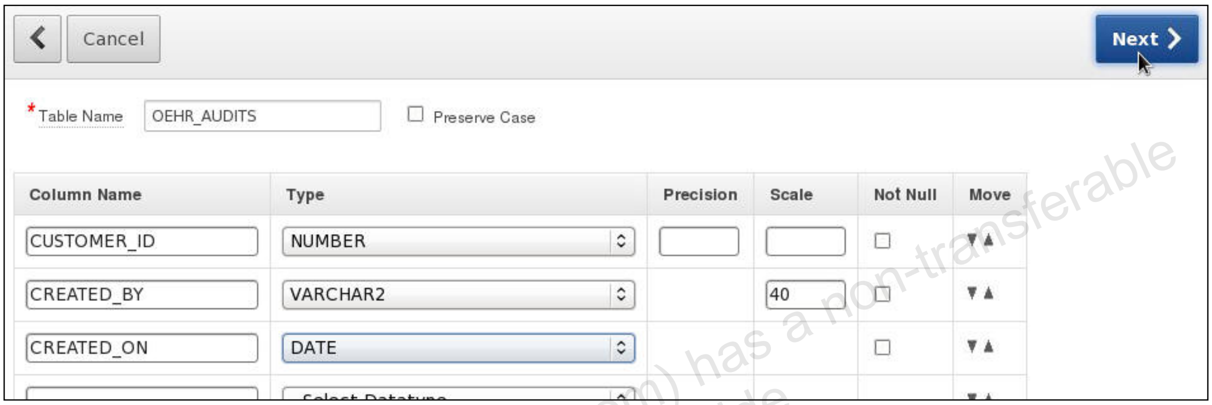


2) Click the down arrow in the **Create** button and select **Table**.

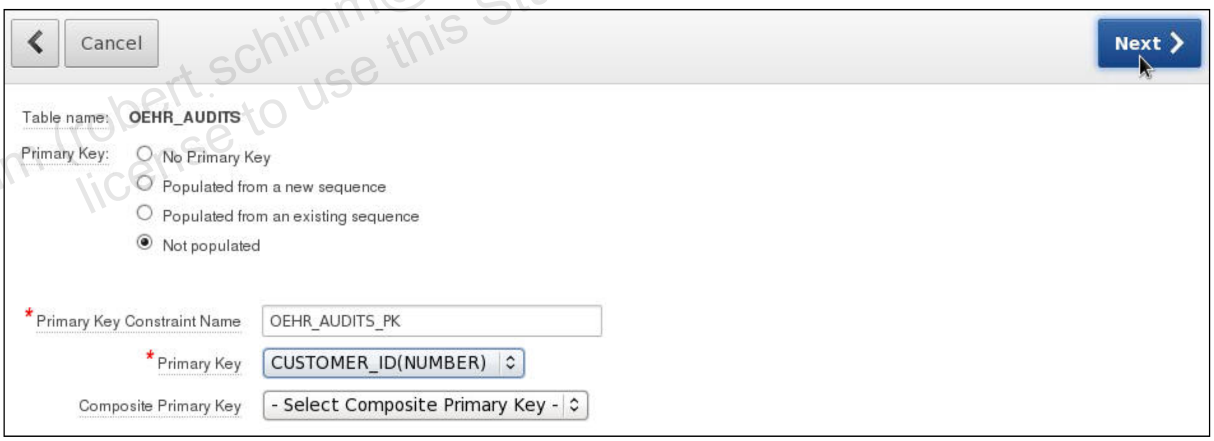


3) The Create Table Wizard opens. Enter **`OEHR_AUDITS`** for Table Name, and then fill out the columns by using the following details. Then click **Next >**.

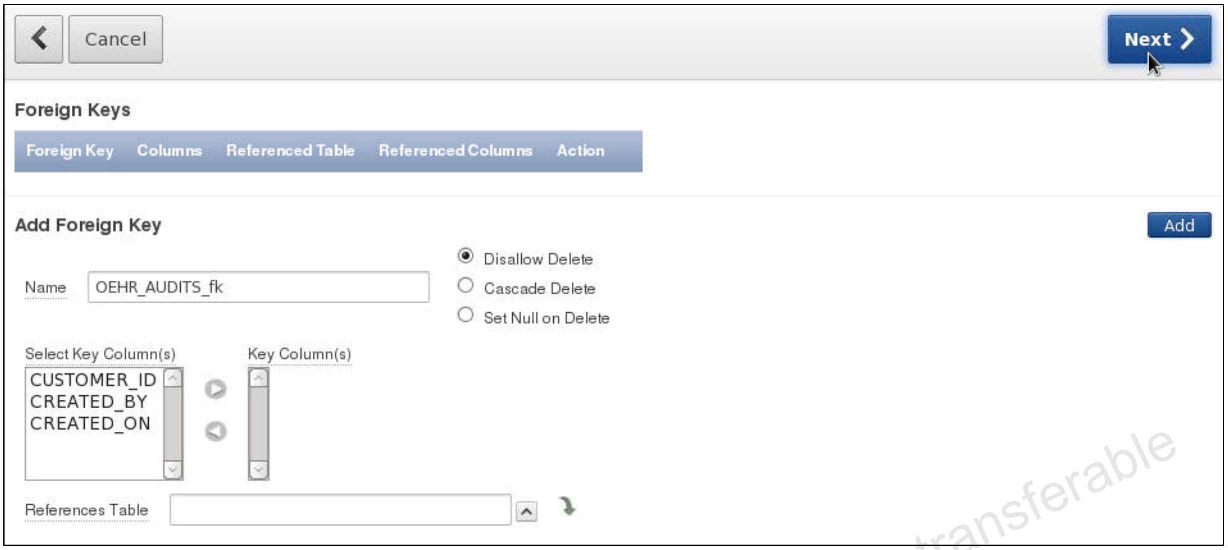
Column Name	Data Type	Other Details
CUSTOMER_ID (PK)	NUMBER	Not Populated
CREATED_BY	VARCHAR2	SCALE 40
CREATED_ON	DATE	N/A



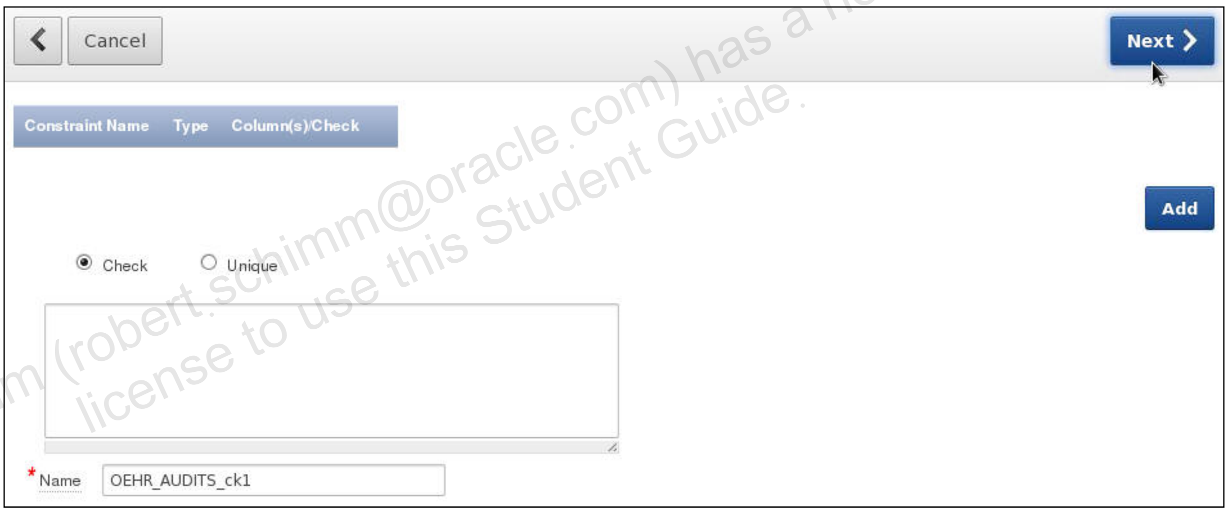
4) Select **Not populated** for Primary Key. Select **`CUSTOMER_ID(NUMBER)`** from the Primary Key drop-down list and click **Next >**.



5) You do not want to create a foreign key. Click **Next >.**

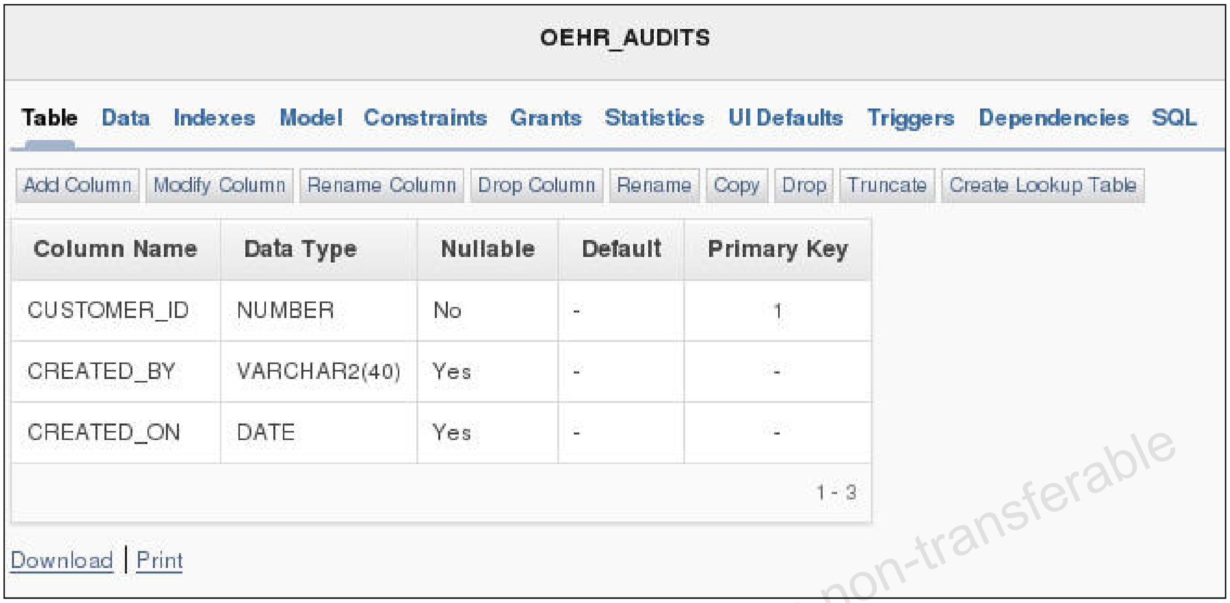


6) You do not want to create constraints. Click **Next >**.



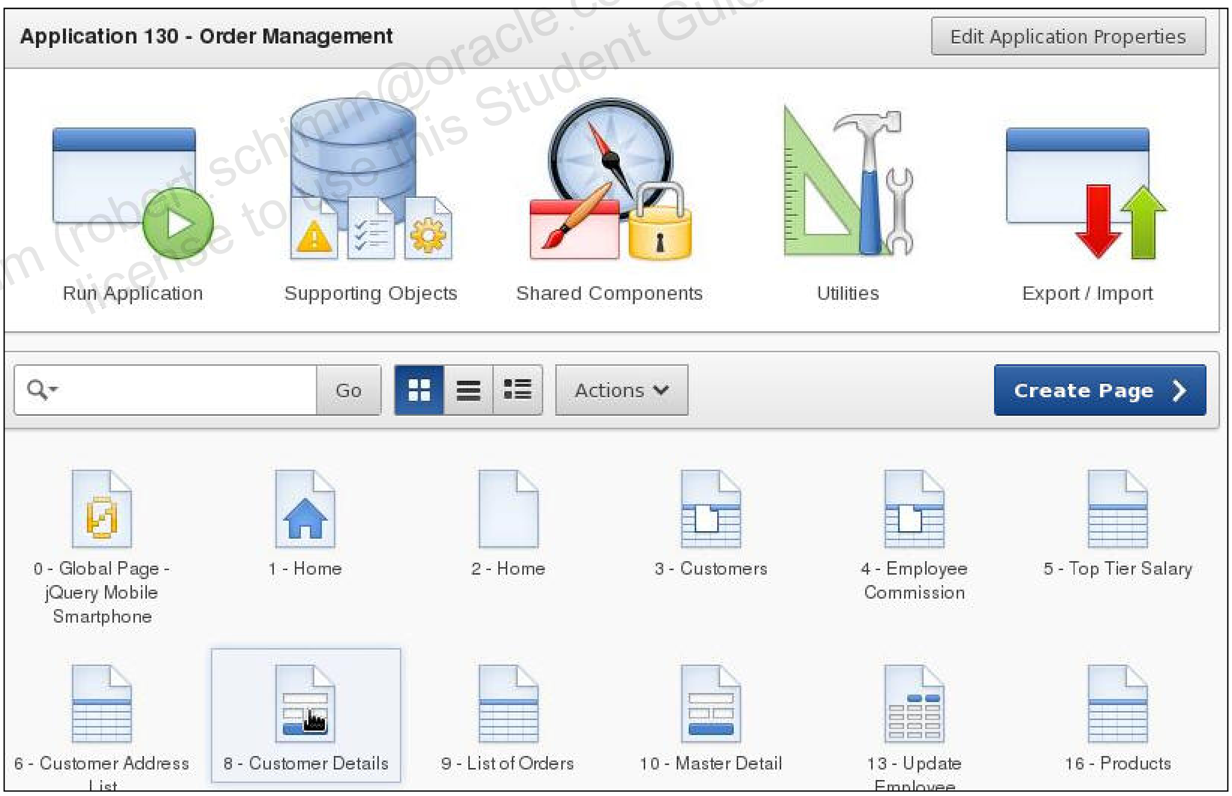
7) Click **Create Table** to create the table.

8) The `OEHR_AUDITS` table is created and displayed on the Object Browser page.

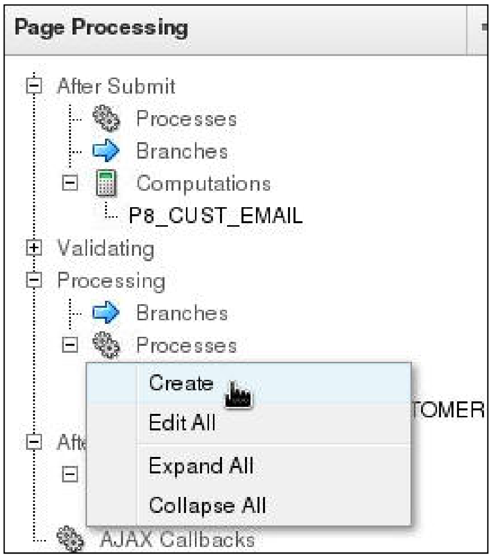


Column Name	Data Type	Nullable	Default	Primary Key
CUSTOMER_ID	NUMBER	No	-	1
CREATED_BY	VARCHAR2(40)	Yes	-	-
CREATED_ON	DATE	Yes	-	-

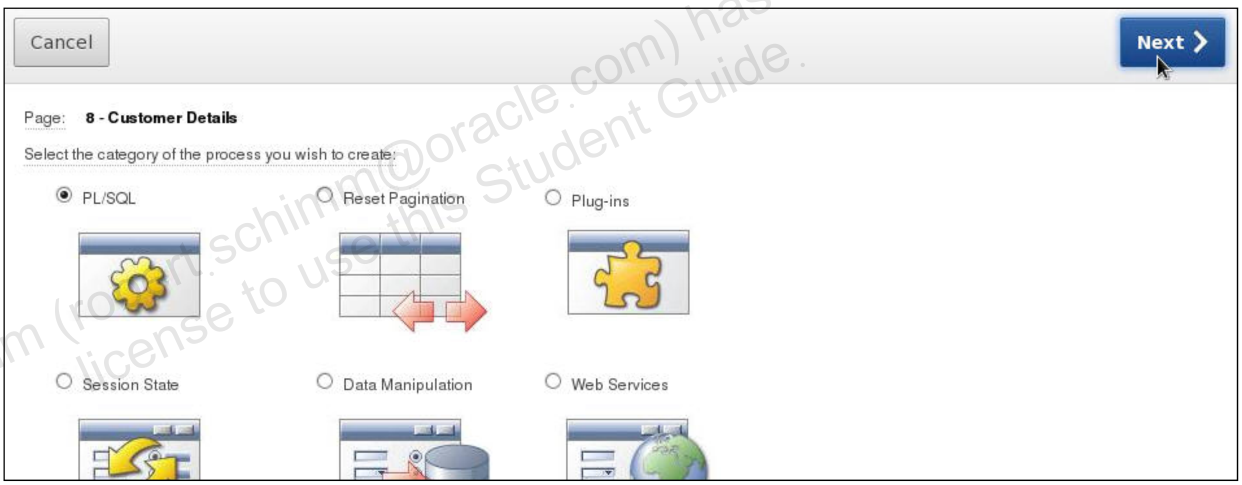
9) You want to create a new page process on the Customer Details page. Click Application Builder and select Database Applications. Navigate to the **Order Management** application home page and select the **Customer Details** page.



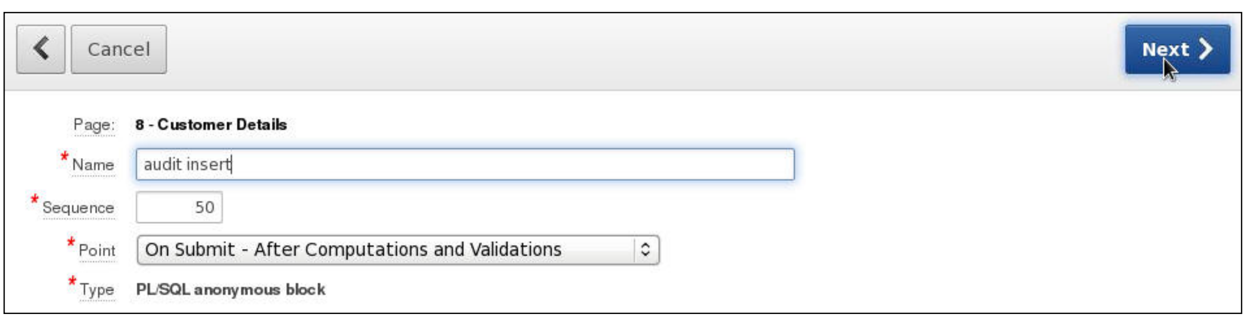
10) Under Page Processing, in the Processes region, right-click **Processes** and select **Create**.



11) Select the **PL/SQL** option and click **Next >**.

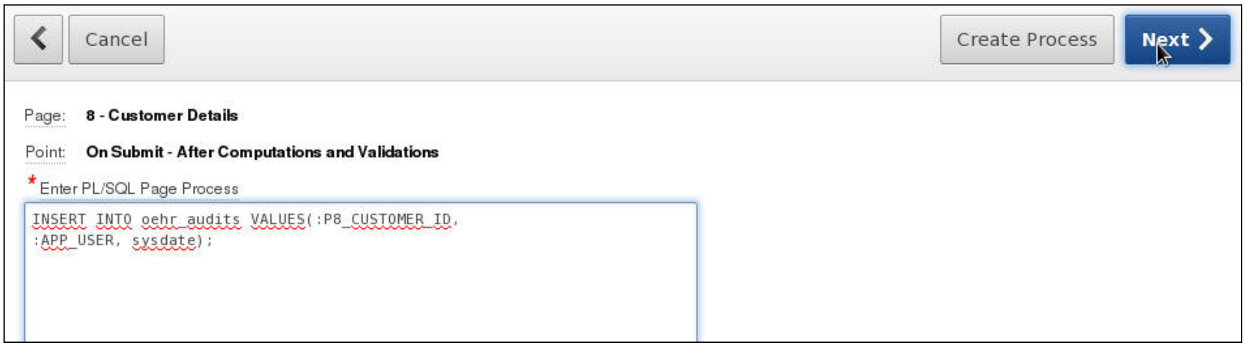


12) For Name, enter **`audit insert`** and click **Next**.

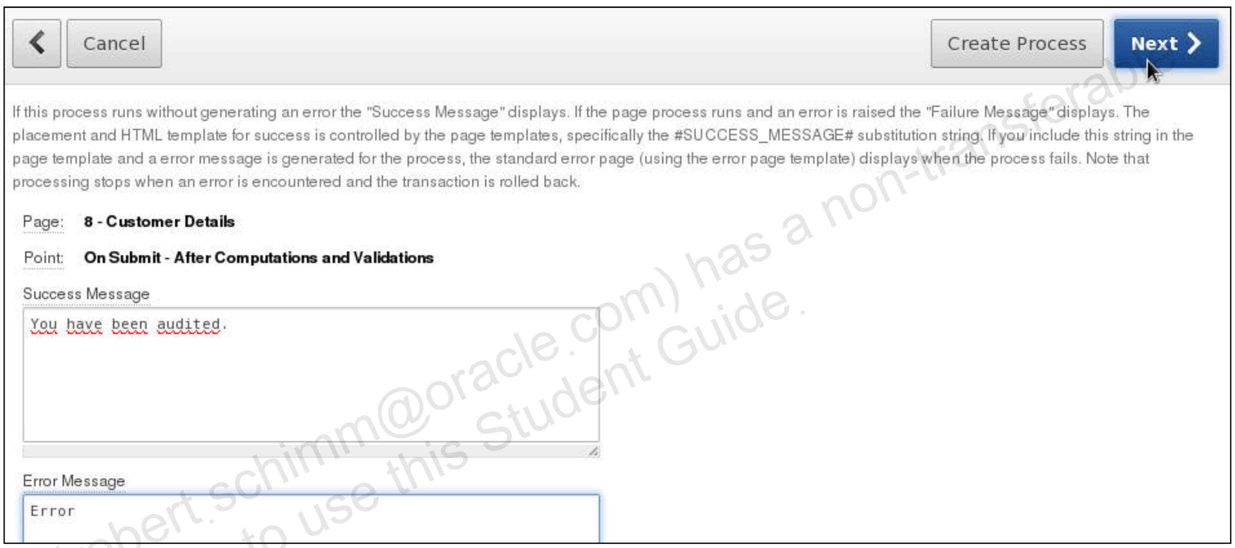


13) In the **Enter PL/SQL Page Process** text area, enter the following code (located in `/home/oracle/labs/files/lab10_2.txt`) and click **Next >**. Ensure that you change **`P<n>`** to your Customer Details page number.

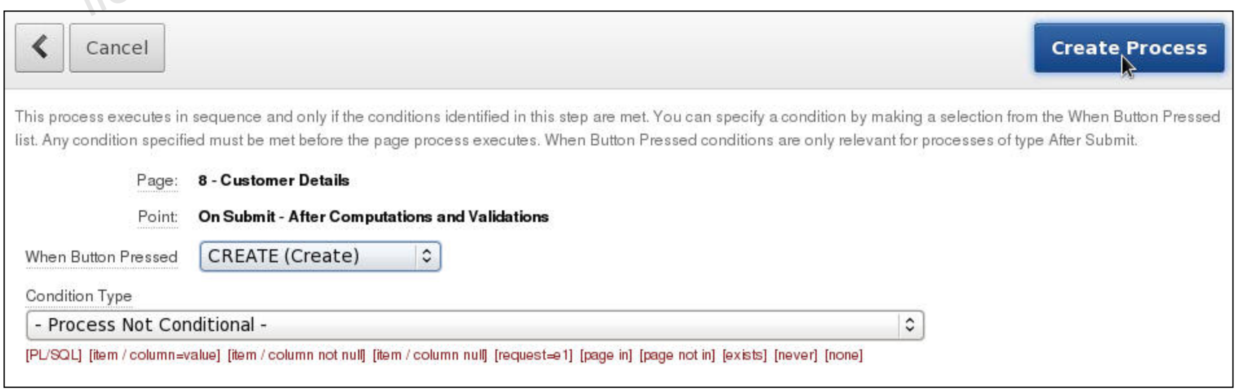
```
INSERT INTO oehr_audits VALUES(:P<n>_CUSTOMER_ID,
:APP_USER, sysdate);
```



14) For Success Message, enter **`You have been audited`**. For Error Message, enter **`Error`**. Click **Next >**.

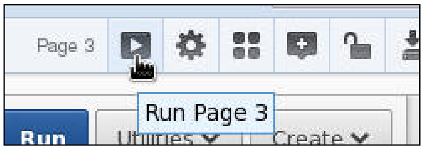


15) For When Button Pressed, select **CREATE** from the drop-down list and click **Create Process**.

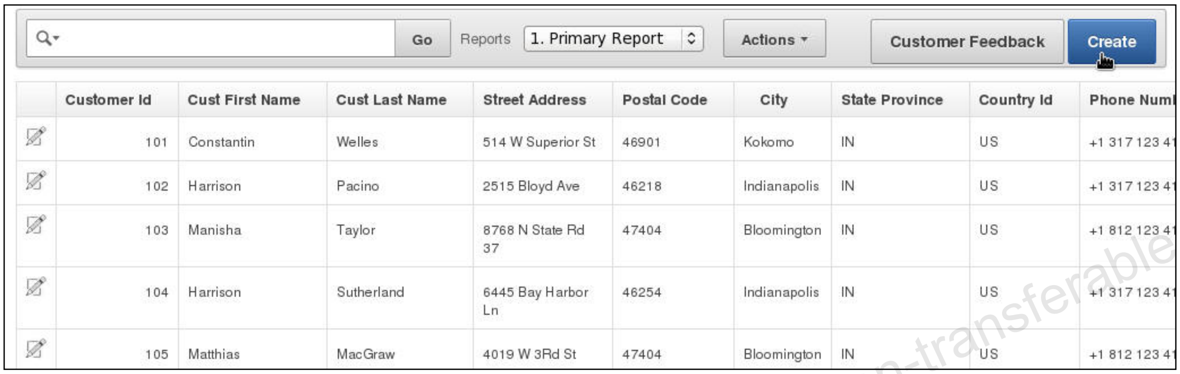


16) To verify that the processes are working, navigate to the Customers page by entering `3` for Page and clicking **Go**.

17) Click the **Run Page** icon.

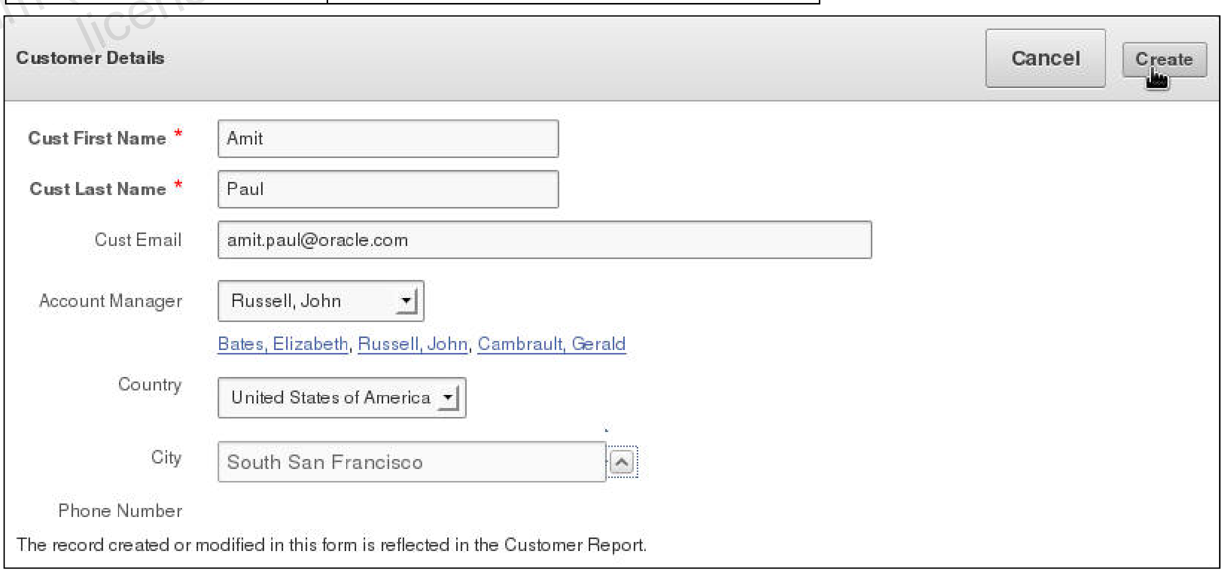


18) Click the **Create** button.



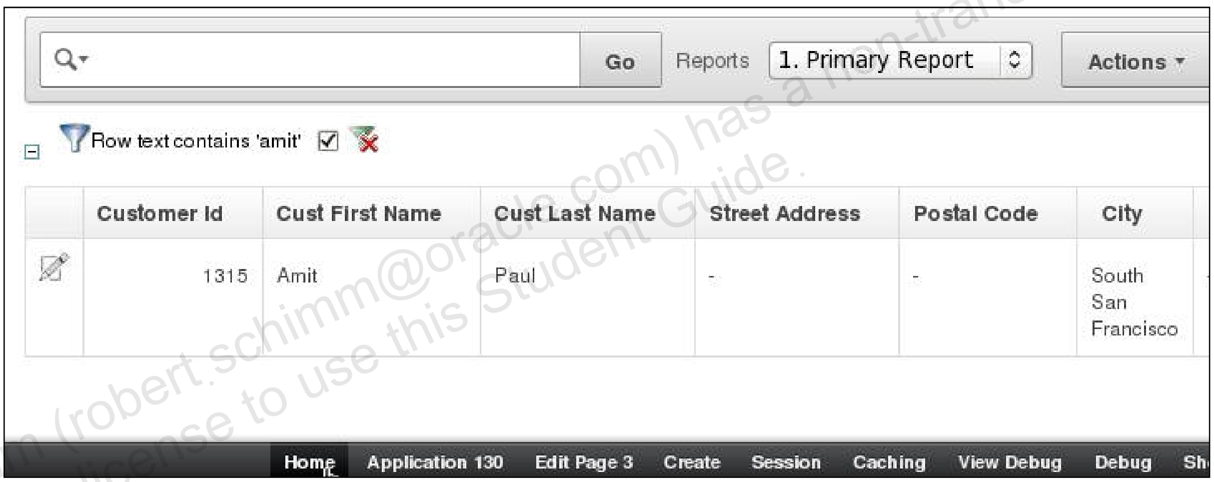
19) Enter the following information and click **Create**.

Item	Value
First Name	Amit
Last Name	Paul
Email	Amit.paul@oracle.com
Account Manager	John Russell
Country	United States of America
State	South San Francisco

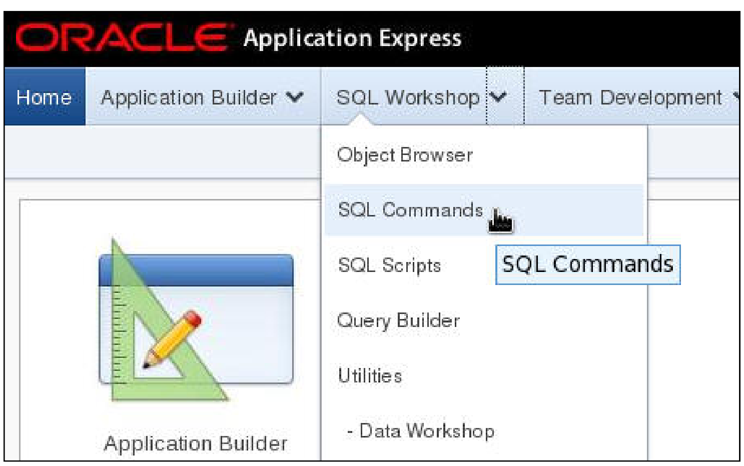


20) Notice the success messages for the audit and processing of the new customer. Enter **Amit** in the search area and click **Go**.

21) You want to review what is in the `OEHR_AUDITS` table. Click the **Home** link on the Developer toolbar.

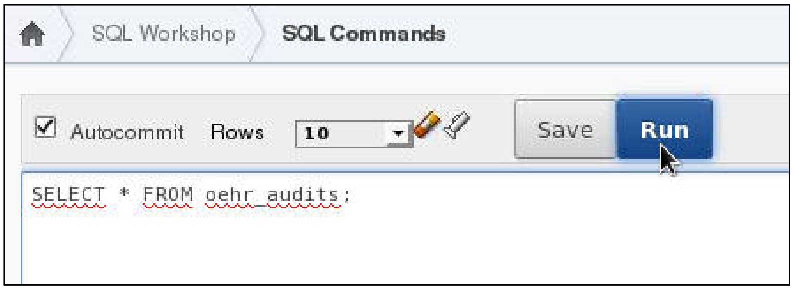


22) Click **SQL Workshop** > **SQL Commands**.

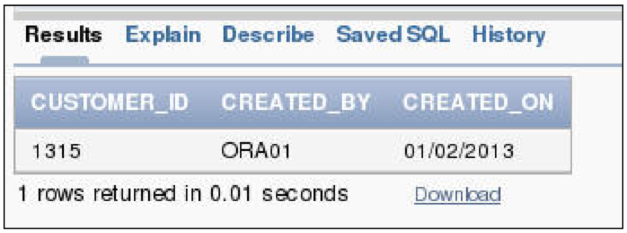


23) In the text area, enter the following and click **Run**.

```
SELECT * FROM oehr_audits;
```

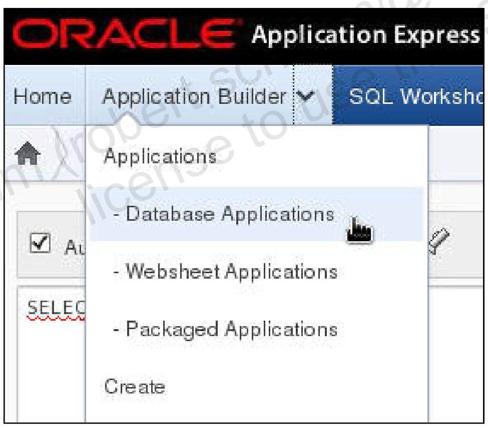


24) Note that the details have been added to the `OEHR_AUDITS` table.



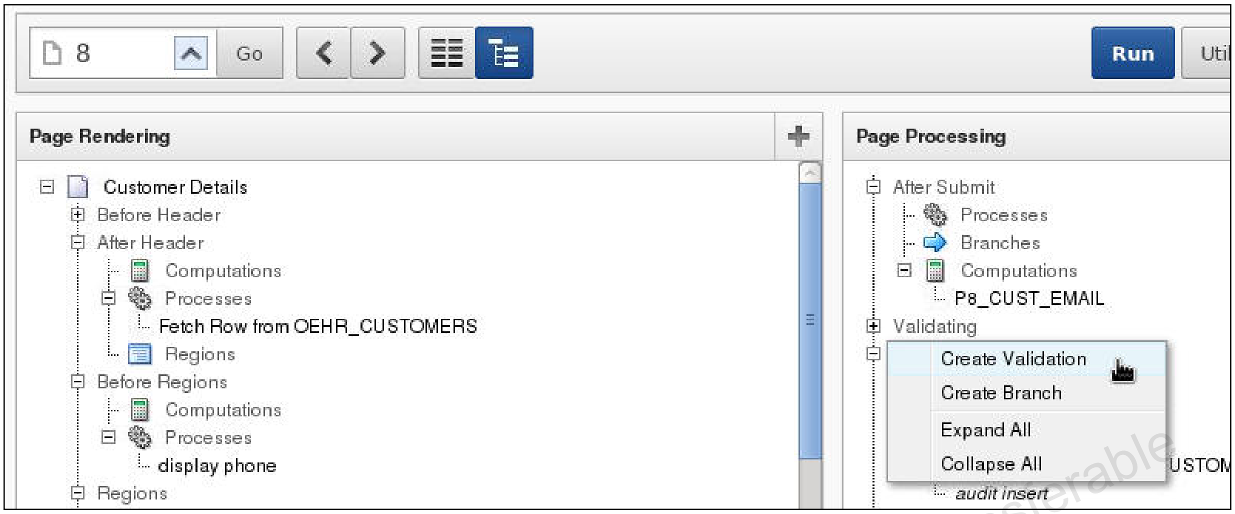
e. Create an Item String Comparison validation on the **`P<n>_CUST_EMAIL`** item to ensure that there are no spaces in the Email value. Test the page to make sure that it works.

1) You want to add a validation to the Customer Details page in your application. Click **Application Builder** > **Database Applications**.



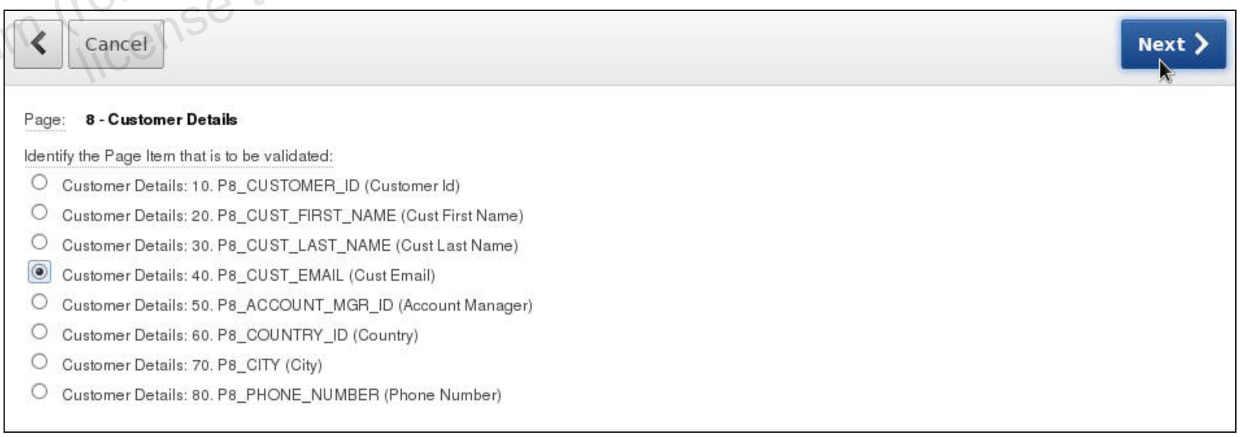
2) You can navigate to your Customer Details page in the Order Management application. Alternatively, you can enter the **<application id>:<page number>** in the search field and press Enter.

3) Under Page Processing, right-click **Validating** and select **Create Validation**.

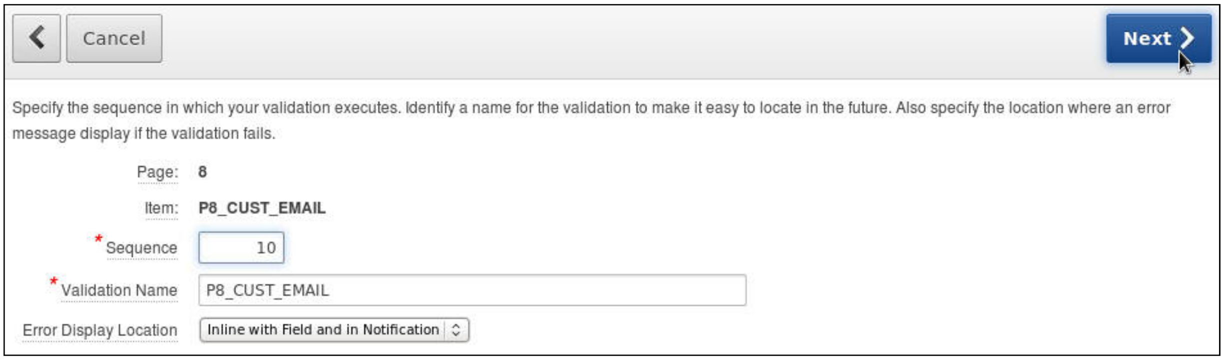


4) Make sure that **Page Item** is selected and click **Next >**.

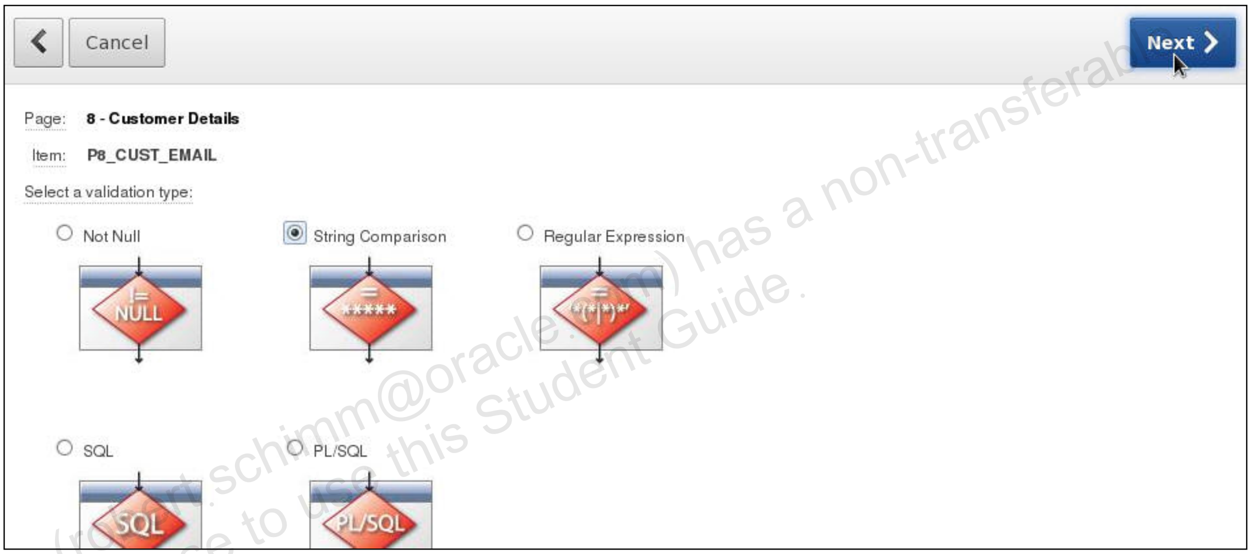
5) Select the item for `P<n>_CUST_EMAIL` and click **Next >**.



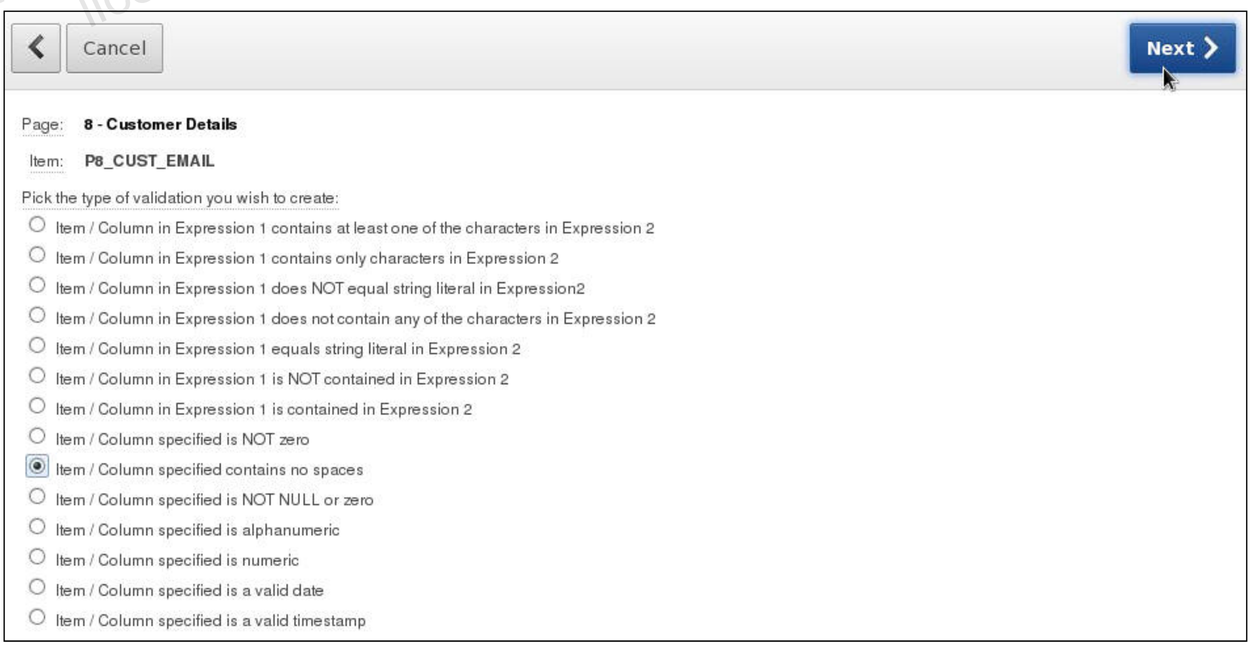
6) Accept the default and click **Next >**.



7) Select **String Comparison** for validation method and click **Next >**.

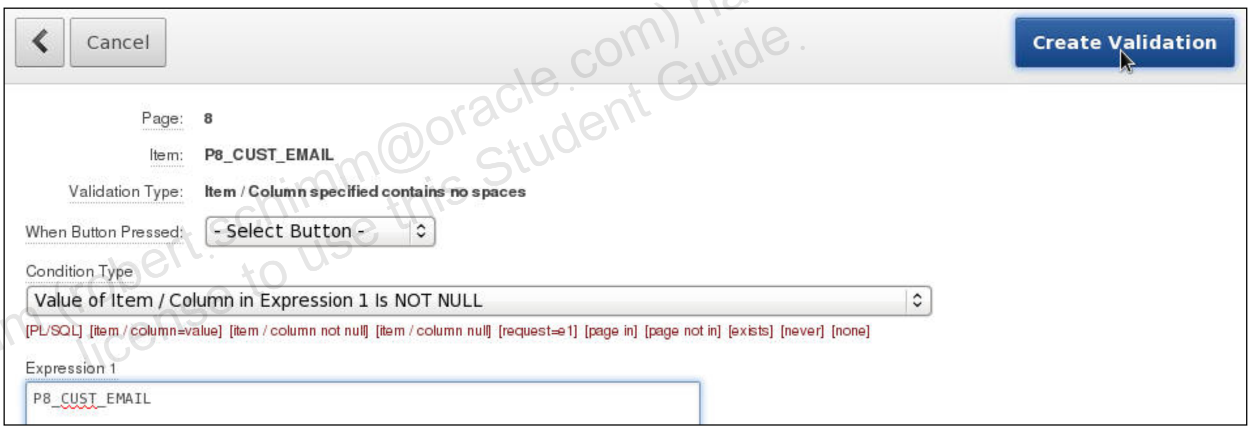


8) Select **Item / Column specified contains no spaces** for type and click **Next >**.

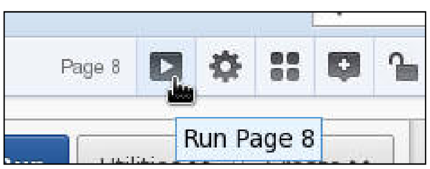


9) Enter **`Email must not contain any spaces`** for Error Message and click **Next >**.

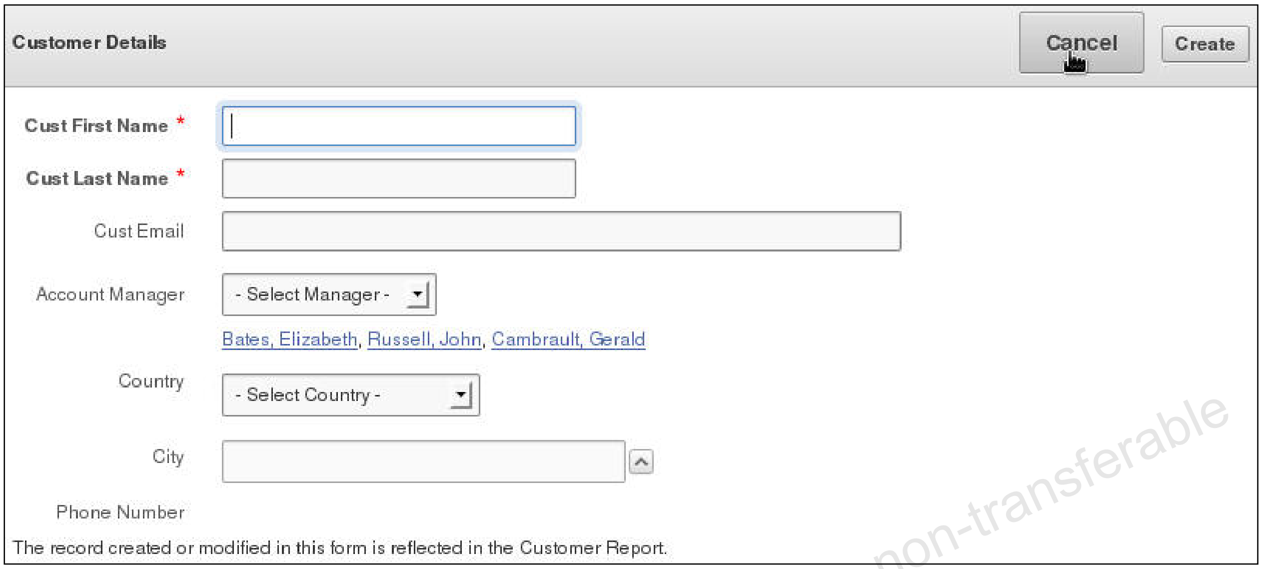
10) You want this validation to fire only when the item is not null. Select **Value of Item / Column in Expression 1 is NOT NULL** for Condition Type and enter **`P<n>_CUST_EMAIL`** for Expression 1. Click **Create Validation**. Make sure that you replace the *<n>* in P<*n*>_CUST_EMAIL with the current page number.



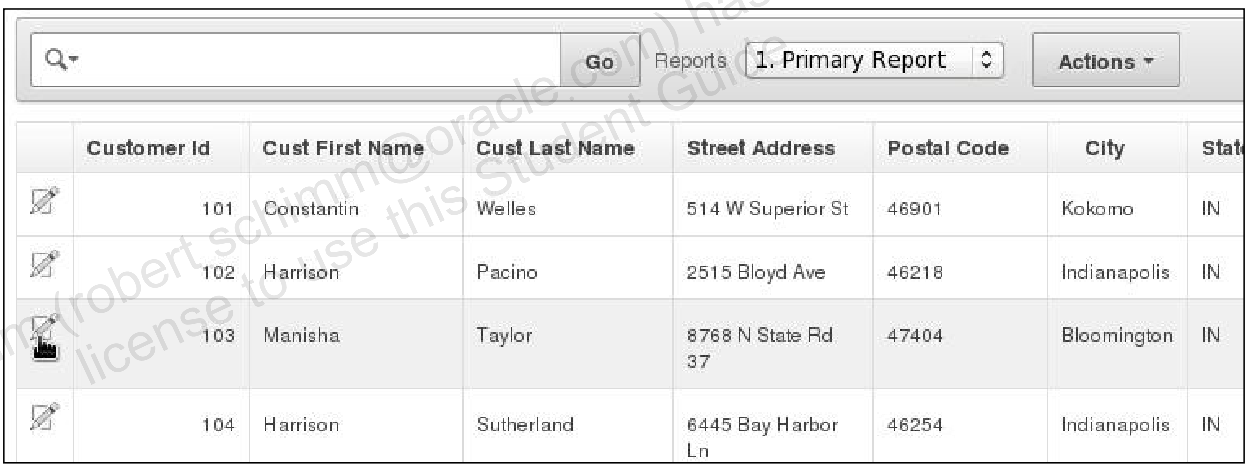
11) To see how the validation works, run the page. Click the **Run** icon.



12) You want to edit a record. Click **Cancel** to return to the Customer Report so that you can edit a record. This step is not required if the form is already filled.

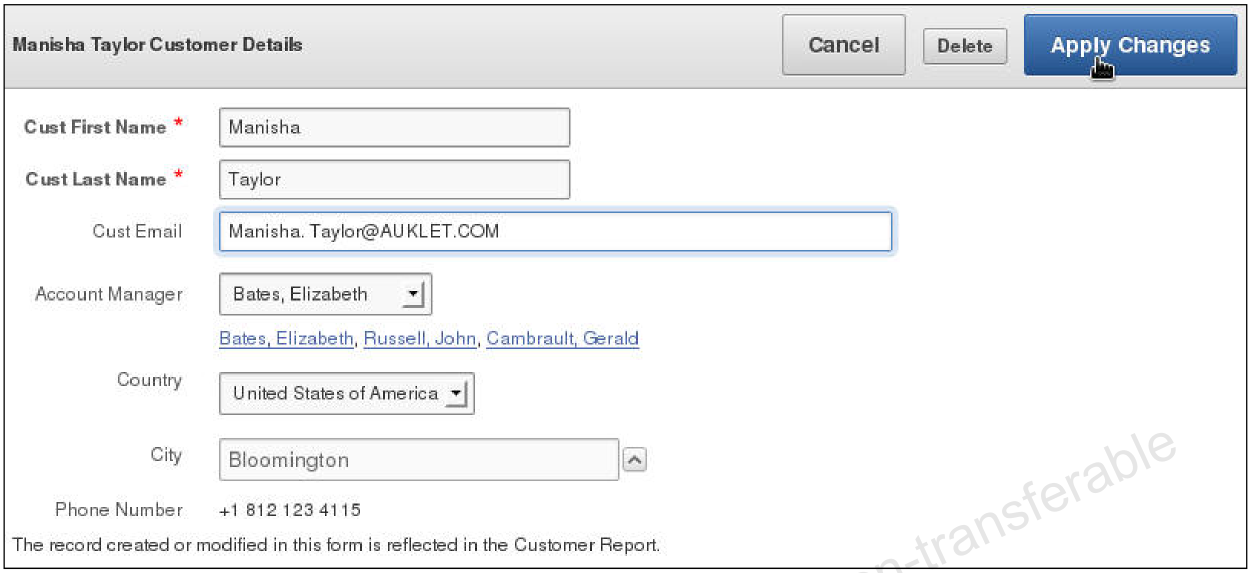


13) Click the **Edit** icon for one of the rows.

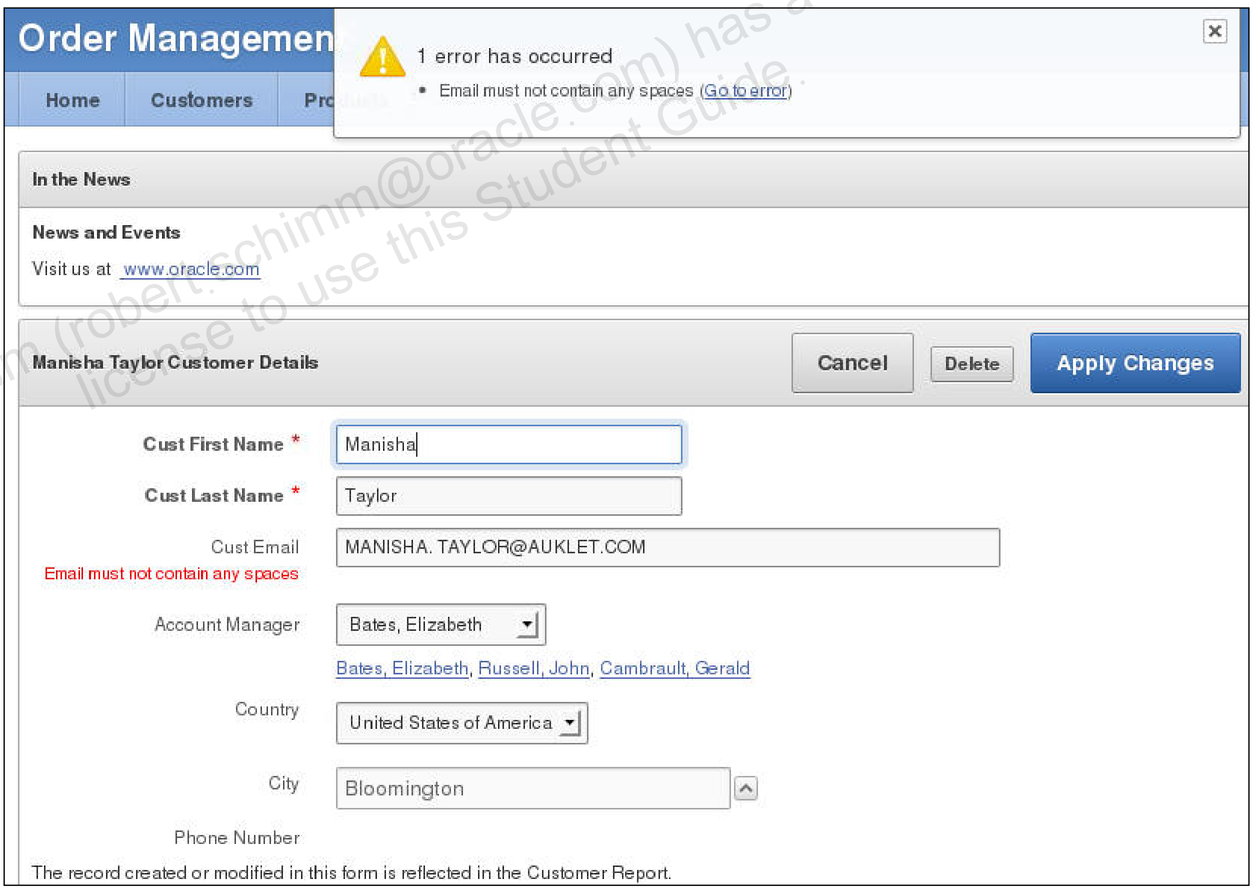


	Customer Id	Cust First Name	Cust Last Name	Street Address	Postal Code	City	Stat
	101	Constantin	Welles	514 W Superior St	46901	Kokomo	IN
	102	Harrison	Pacino	2515 Bloyd Ave	46218	Indianapolis	IN
	103	Manisha	Taylor	8768 N State Rd 37	47404	Bloomington	IN
	104	Harrison	Sutherland	6445 Bay Harbor Ln	46254	Indianapolis	IN

14) Add a space to the email and click **Apply Changes**.

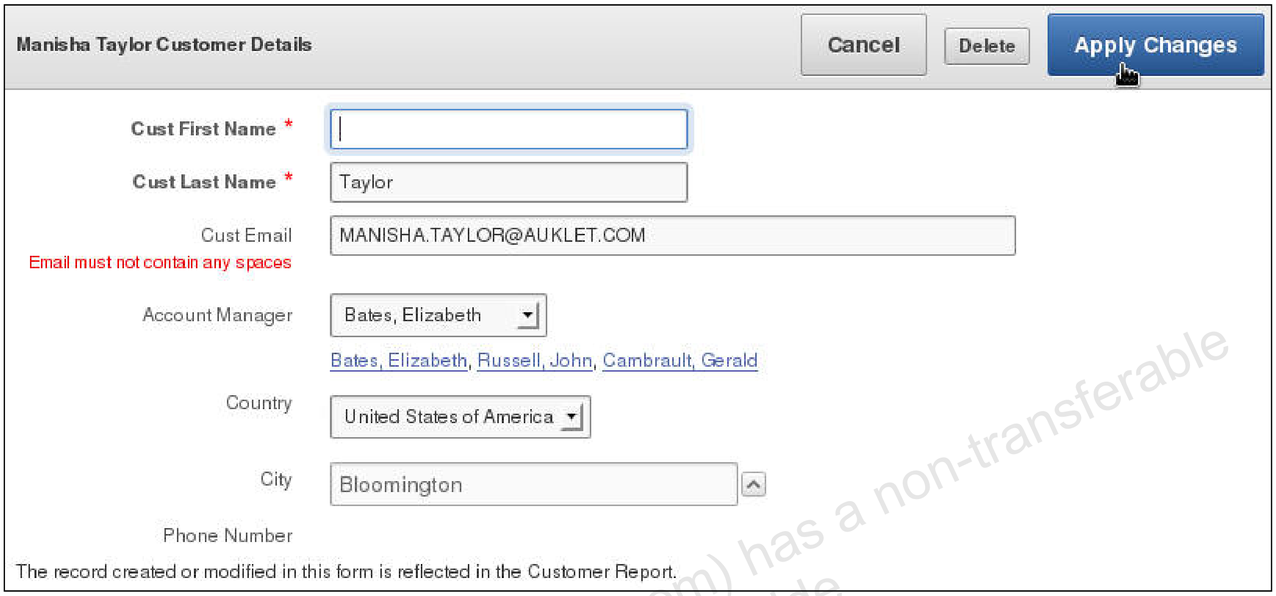


15) Notice that you receive an error message inline and also at the top of the page.

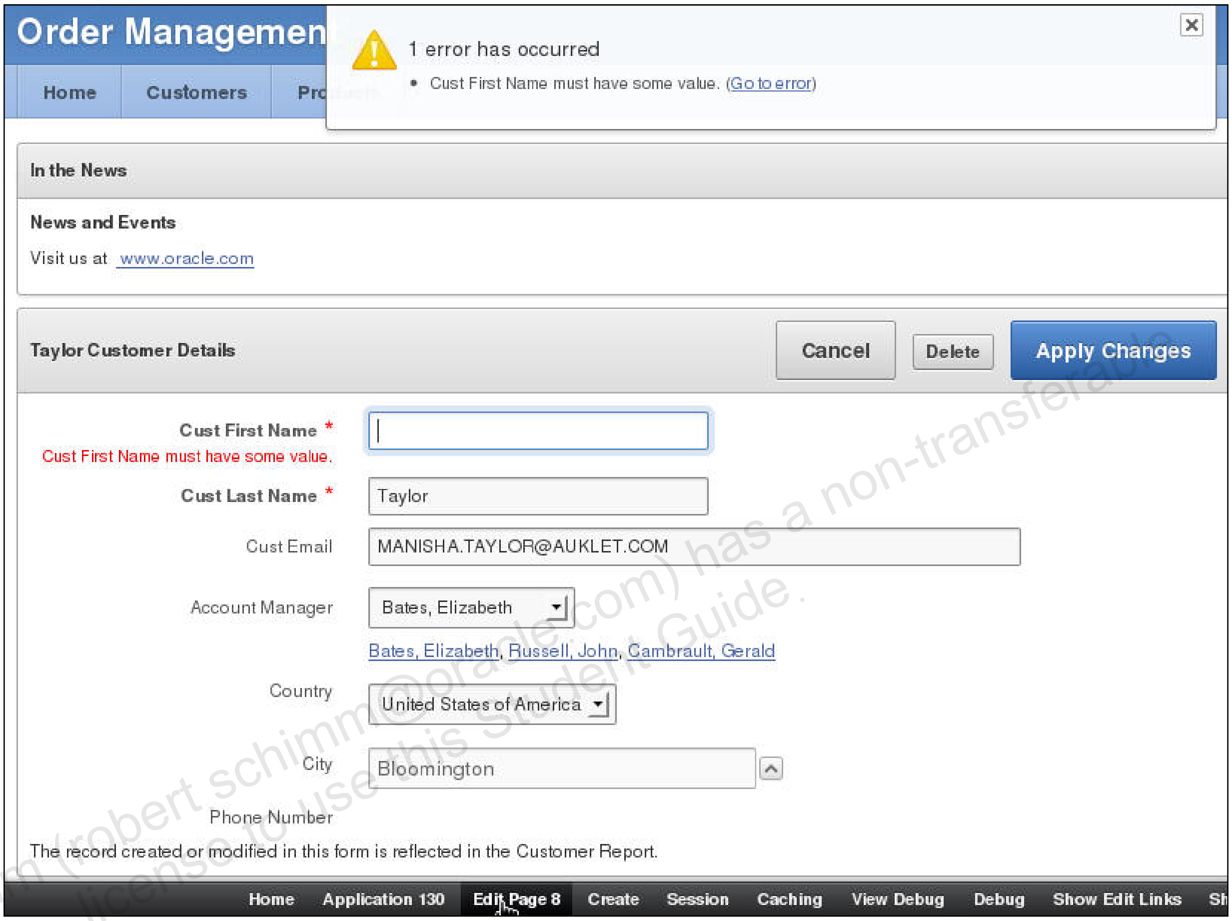


f. Remove the First Name value from the page and click Apply Changes. Note the implied validation. Why is the error message shown if there is no validation on the page?

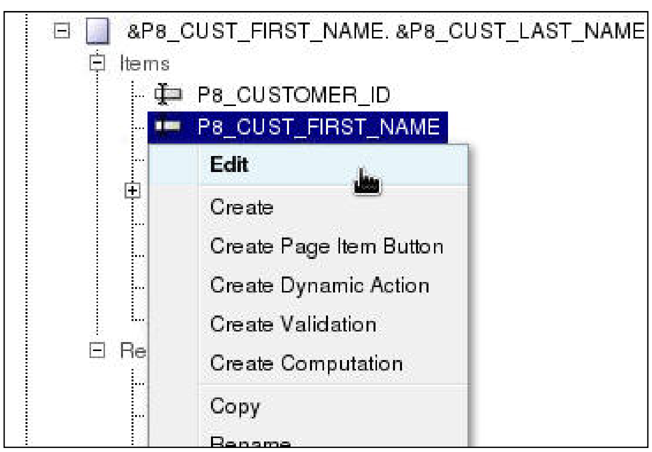
1) Notice that items such as First Name and Last Name have an asterisk (*) next to their labels. This means that the items must have a value. Remove the space in the email, delete what is contained in the First Name field, and click **Apply Changes**.



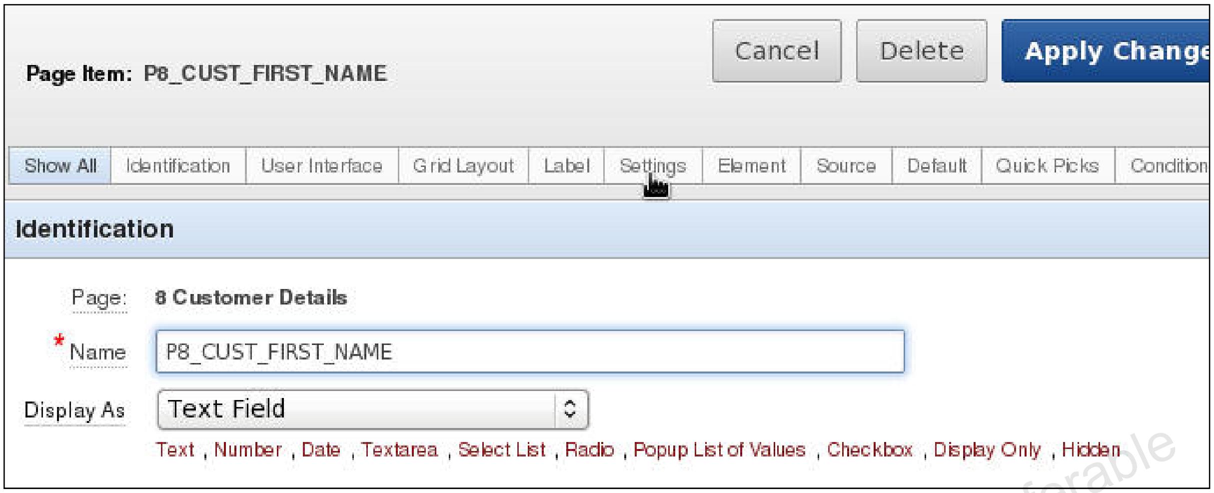
2) Notice that you receive an error stating that you must enter a value. This is an implied validation, which means that you do not have to explicitly define a Not Null validation on fields that are not-null columns. You want to look at the definition for this item. Click the **Edit Page** link on the Developer toolbar.



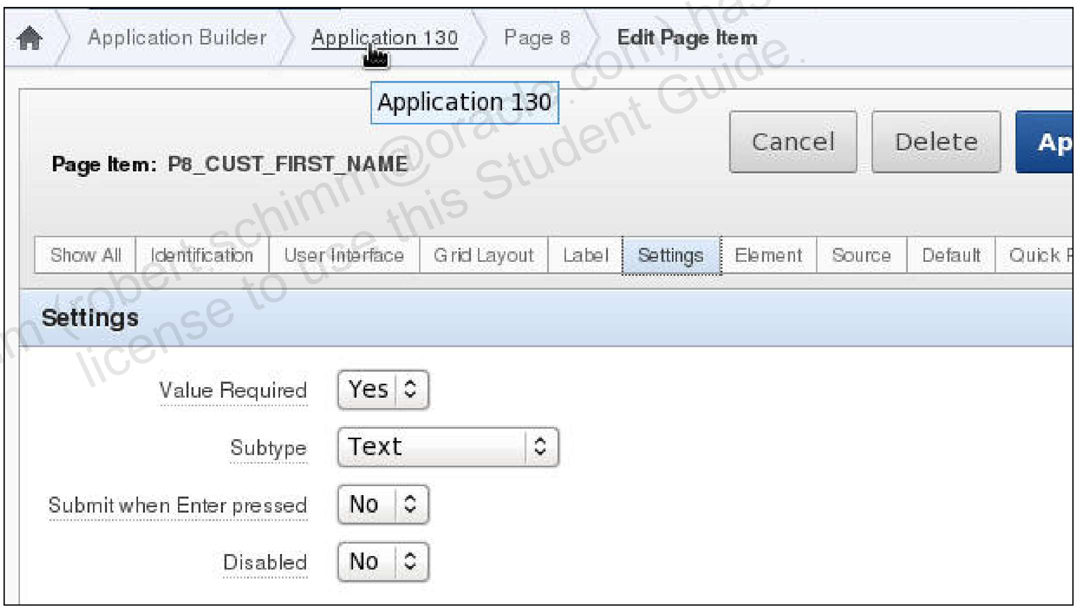
3) Right-click **P<n>_CUST_FIRST_NAME** and select **Edit**.



4) Click the **Settings** tab.



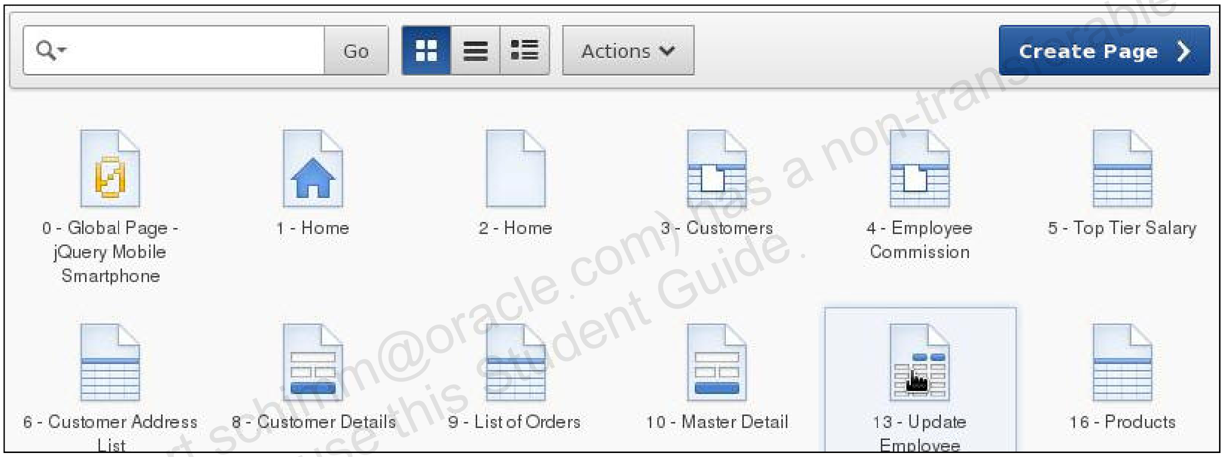
5) Notice that the Value Required item is set to Yes. You can, alternatively, set this item to No and create a Not Null validation on this item. Doing it this way will allow you to specify the error message to be displayed. Click the **Application <*n*>** breadcrumb.



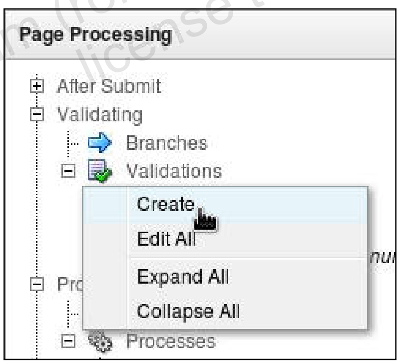
g. Create a Tabular Form validation. If the **JOB_ID** is **'SA_REP'**, then a commission needs to be entered. If the commission is not entered for the **JOB_ID 'SA_REP'**, then display an error message. Use the following PL/SQL code (located in **/home/oracle/labs/files/lab10_3.txt**):

```
Declare
begin
  If :JOB_ID = 'SA_REP' and :COMMISSION_PCT is not null then
     Return true;
Else
    Return false;
End if;
End;
```

1) Select the **Update Employee Information** page.

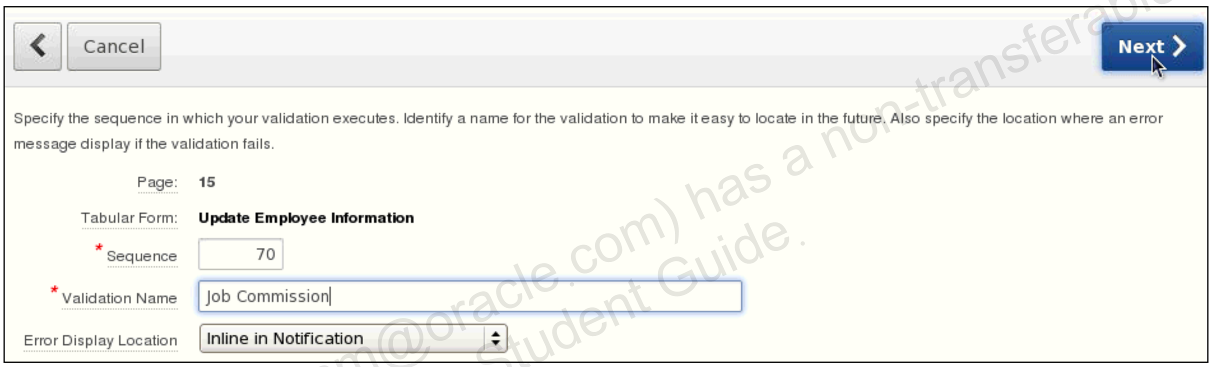


2) Under **Page Processing**, right-click **Validations** and select **Create**.



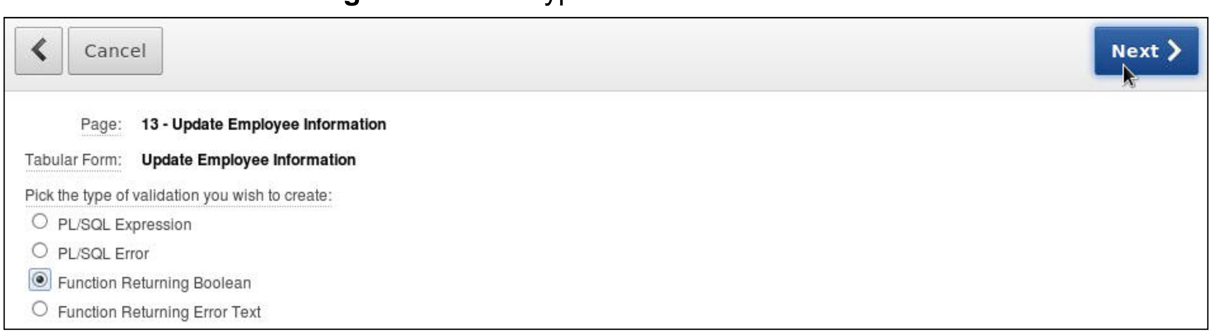
3) For Tabular Form, select **Update Employee Information** from the drop-down list and select **Tabular Form Row** for “Identify the validation level.” Click **Next >**.

4) Enter **Job Commission** for Validation Name and click **Next >**.



5) Select **PL/SQL** for validation type and click **Next >**.

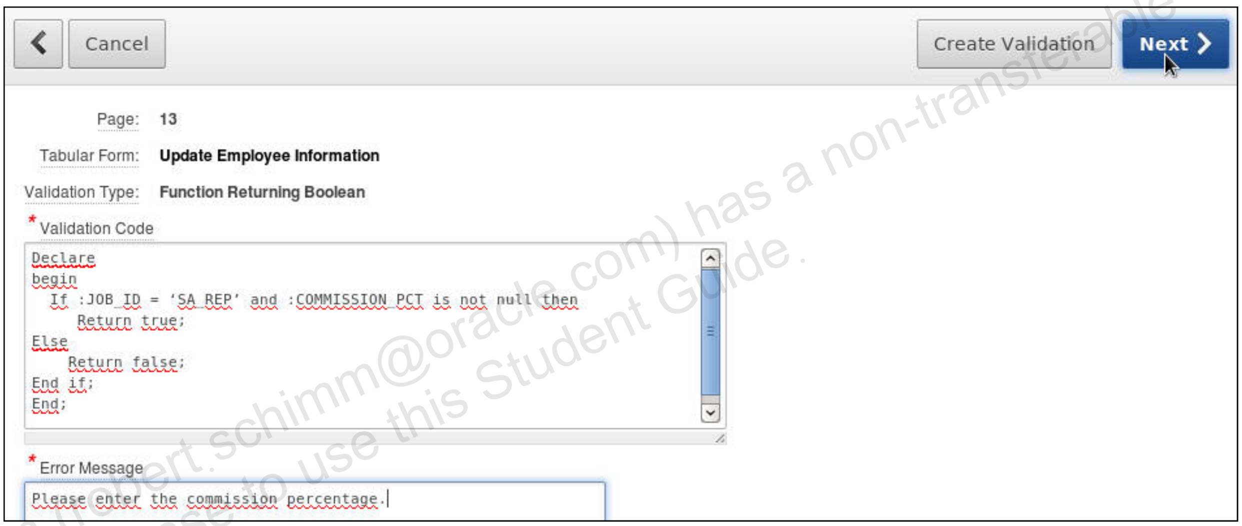
6) Select **Function Returning Boolean** for type of validation and click **Next >**.



7) In the Validation Code box, enter the following code (located in **`/home/oracle/labs/files/lab10_3.txt`**):

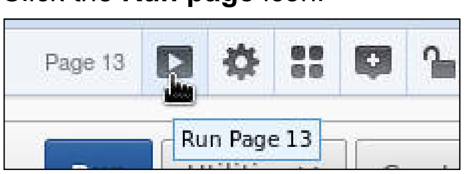
```
declare
begin
  if :JOB_ID = 'SA_REP' and :COMMISSION_PCT is not null then
     return true;
  else
    return false;
end if;
end;
```

In the Error Message field, enter "`Please enter the commission percentage.`" and click **Next >**.

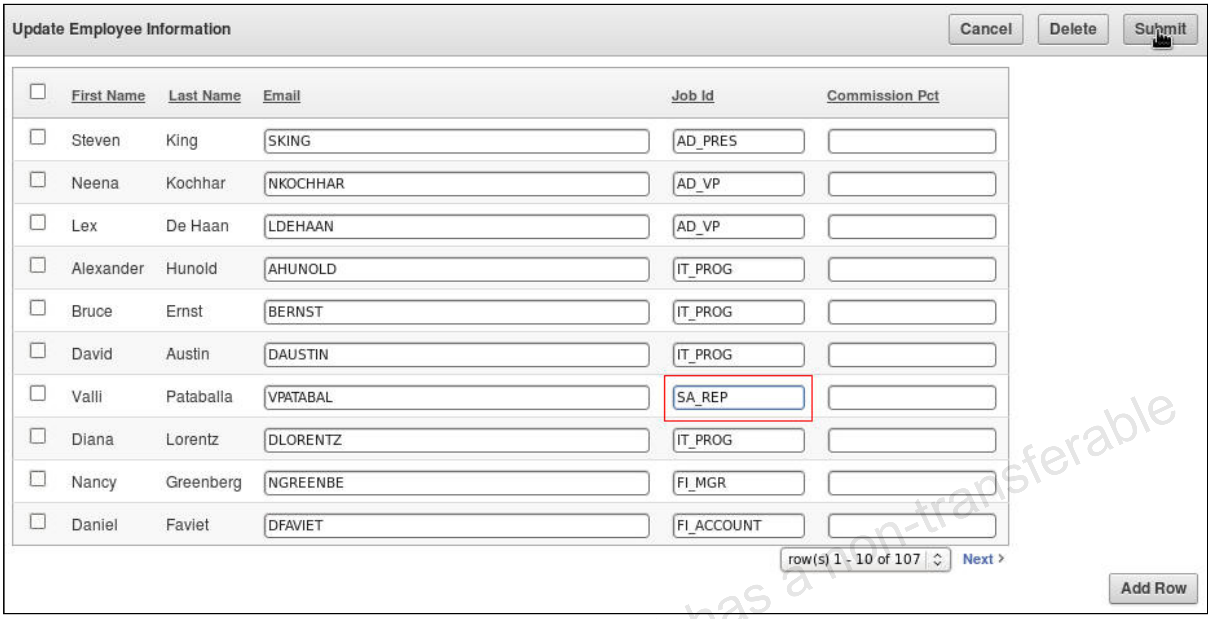


8) Select **Submit** for When Button Pressed and click **Create Validation**.

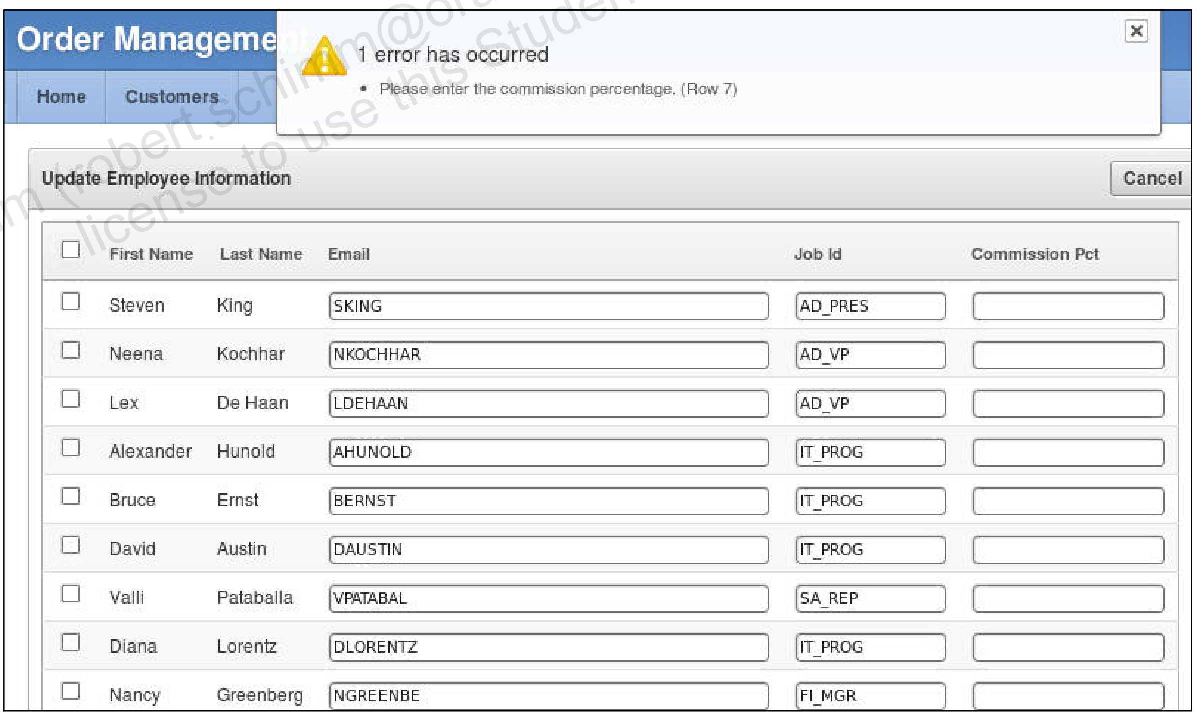
9) Click the **Run page** icon.



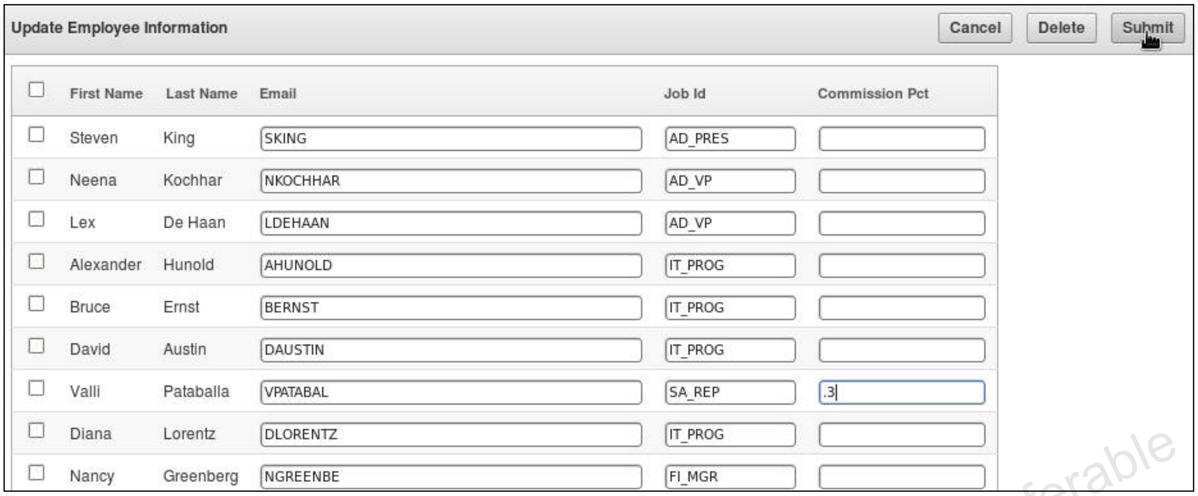
10) Edit one of the Employee's information. Change the Job_Id to **SA_REP** and click **Submit**.



11) An error message is displayed because the commission percentage has not been entered.



12) Enter the commission percentage for the employee and click **Submit**.



The employee information is successfully updated.

Practices for Lesson 11: Validating and Debugging Your Application

Chapter 11

Practices for Lesson 11: Overview

Practices Overview

In these practices, you use the Advisor to validate your application, update the Attribute Dictionary based on items and report columns on your page, and examine how to use debug and resolve some common issues during application development.

Practice 11-1: Using the Advisor

Overview

In this practice, you use the Advisor to validate your application.

Assumptions

You have performed the previous practices or imported the **`LAB101_SOLN.sql`** packaged application.

Tasks

a. Run the Advisor and correct the warning on the Customer Address page by specifying a sort order.

b. Run the Advisor for the Customer Address List page only.

c. Run the Advisor and correct the warning on the `P<n>_CUST_EMAIL` item by defining help text.

d. Change the settings in the Advisor so that you do not get any more errors or warnings.

Practice 11-2: Managing Your Attribute Dictionary

Overview

In this practice, you update the Attribute Dictionary based on the items and report columns on your page.

Assumptions

You have performed the previous practices in this lesson.

Tasks

a. Change the widths of items on the Customer Details page of the Order Management application to the following.

Item	Attribute	Value
P<n>_CUST_FIRST_NAME	Width	18
P<n>_CUST_LAST_NAME	Width	18
P<n>_CUST_EMAIL	Width	18

b. Add the items on the Customer Details page to the Attribute Dictionary.

c. Review the UI defaults in SQL Workshop. Change the help text for `CUST_FIRST_NAME` to `Customer First Name` and add a Synonym called `FIRST_NAME`.

d. Make sure that `OEHR_CUSTOMERS` is not in the Table Dictionary.

e. Update the Attribute Dictionary for the items on the Customer Detail page.

f. Update the Customers page to use the Attribute Dictionary defaults. Verify by showing the help text for the First Name column in the report.

g. Create a new forms page based on the `OEHR_CUSTOMERS` table. Make sure that UI Defaults is enabled. Run the page to see that the Attribute Dictionary is used.

Practice 11-3: Debugging and Troubleshooting Common Issues in Your Application

Overview

In this practice, you debug your application and resolve some common issues that may occur while developing your application.

Assumptions

You have performed the previous practices in this lesson.

Tasks

a. Import an application with some issues to resolve.
b. Run and debug the application.
c. Review and make changes to the SQL Query in the Interactive Report.
d. Why does the Create button not do anything when you click it?
e. Optional: When you edit an employee on page 3 (the Employee Report), why is the employee record not displayed on page 4? See if you can figure this out on your own without looking at the solution.

Solution 11-1: Using the Advisor

Overview

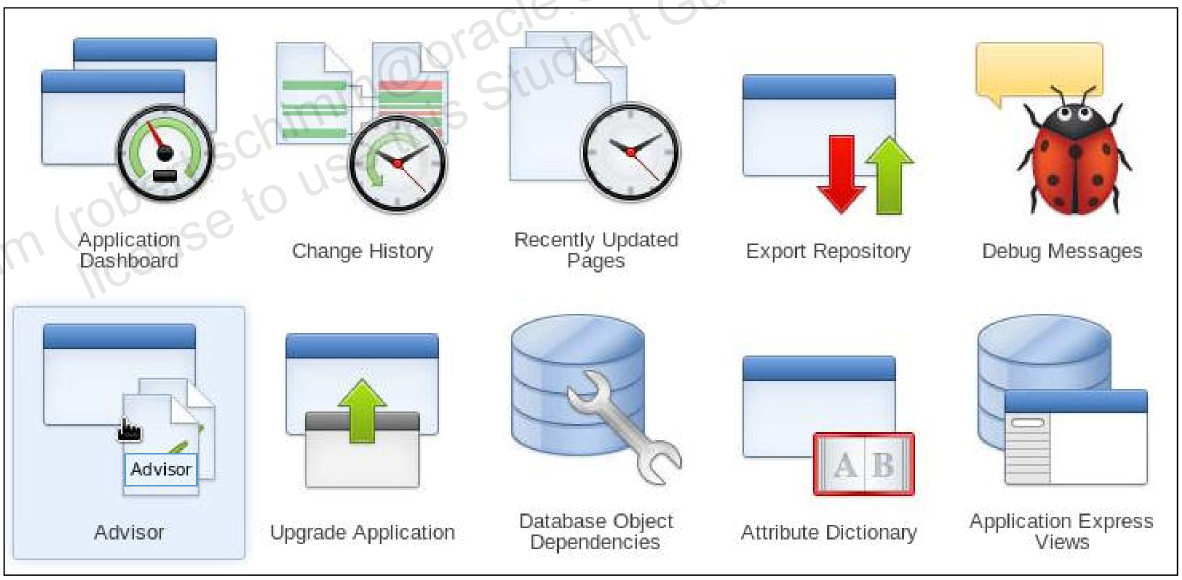
In this practice, you run the Advisor and correct some of the warnings that appear.

Tasks

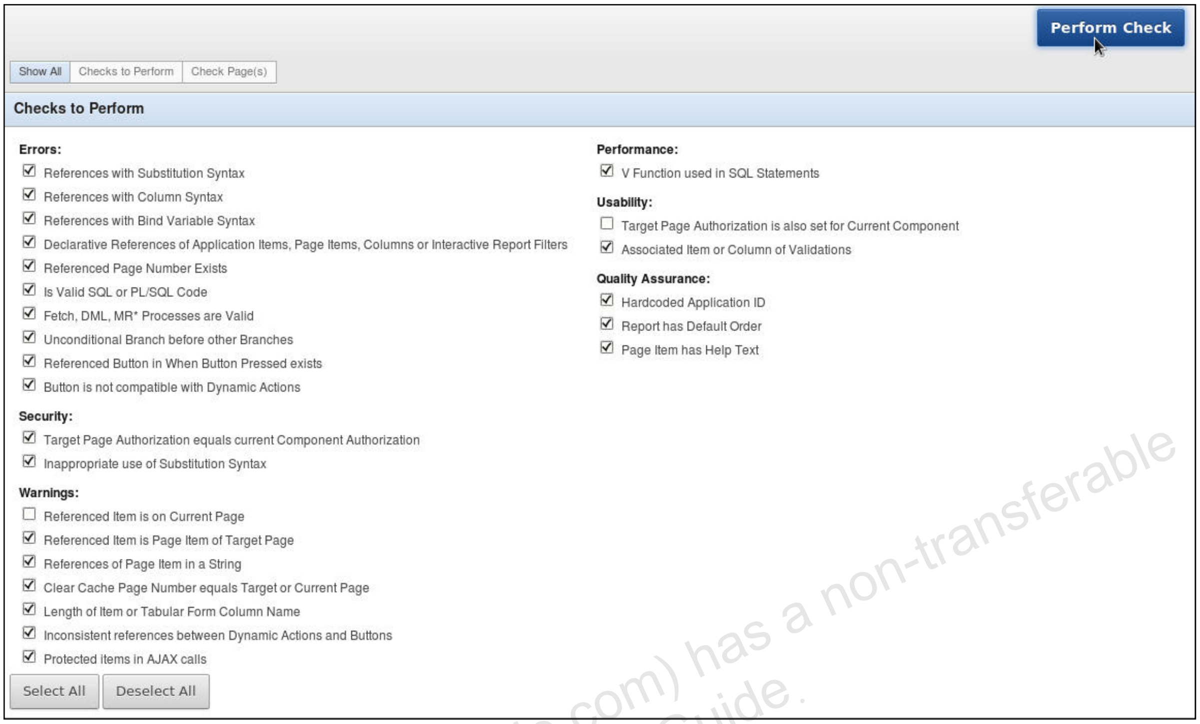
a. Run the Advisor and correct the warning on the Customer Address List page by specifying a sort order.

1) Navigate to the **Order Management** application home page and select **Utilities**.

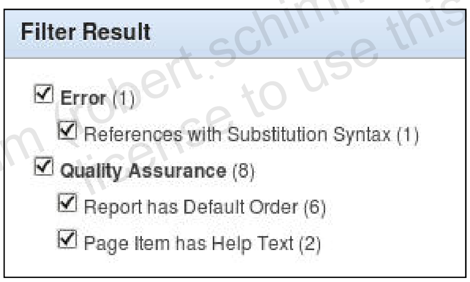
2) Click **Advisor**.



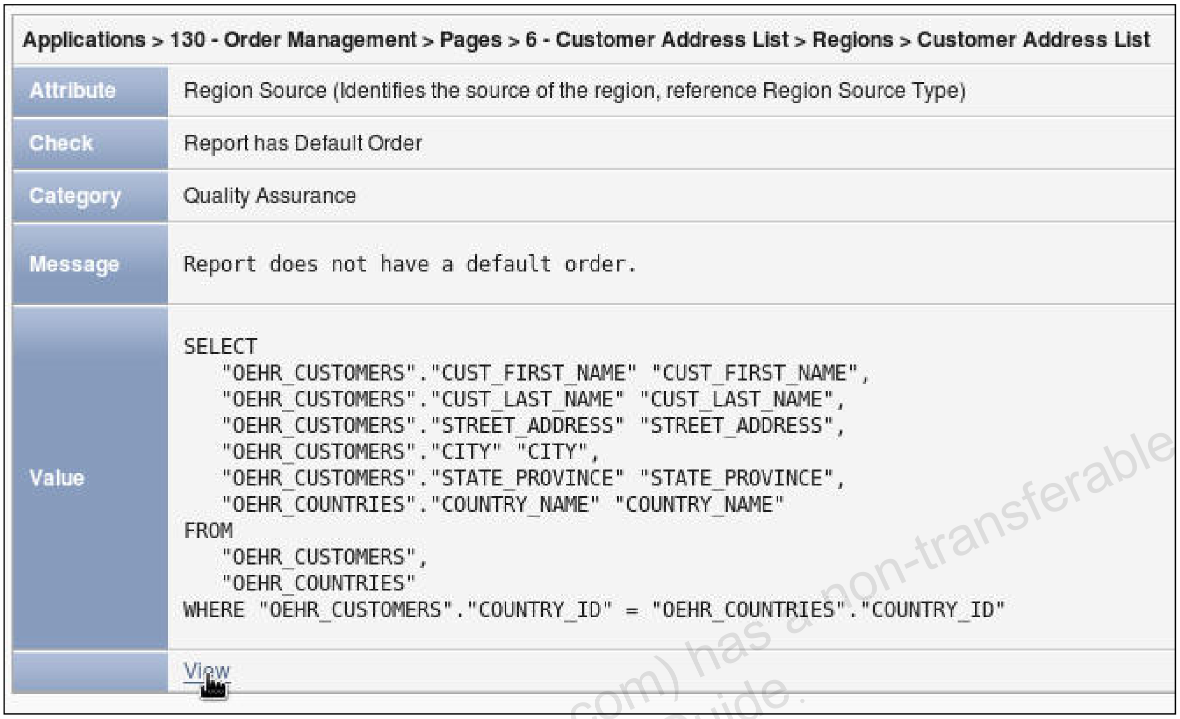
3) Click **Perform Check**.



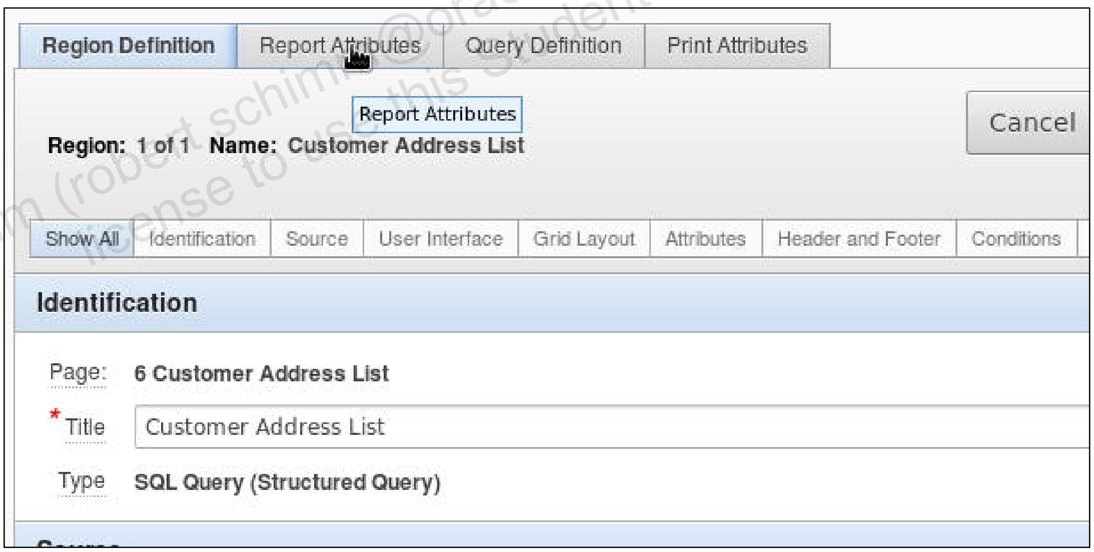
4) The list of violations appears. In the Filter Result area, you see the number of violations by category. You want to fix the warning on the **Customer Address List** page. Scroll down and locate the warning.



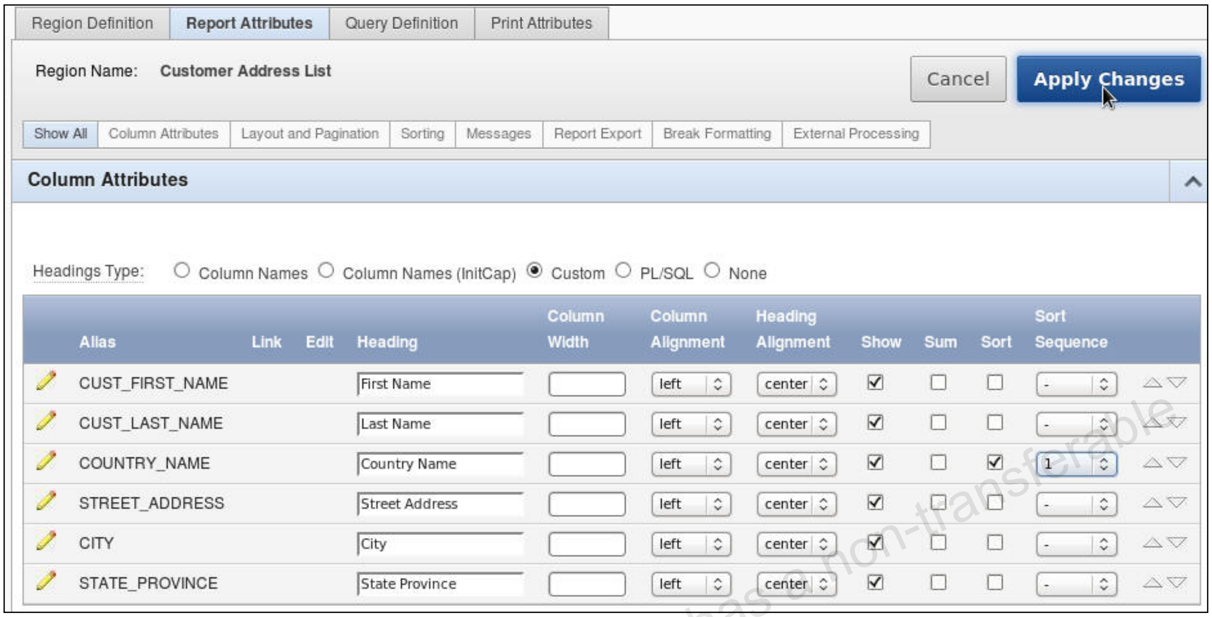
5) Click the **View** link.



6) Click the **Report Attributes** tab.

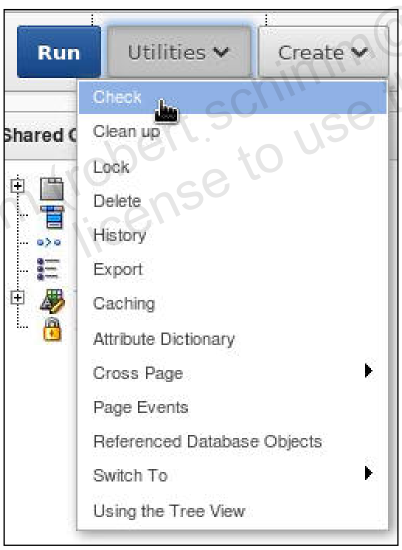


7) You want to sort by Country Name. Select the Sort check box and select **1** for Sort Sequence for `COUNTRY_NAME`, and click **Apply Changes**.

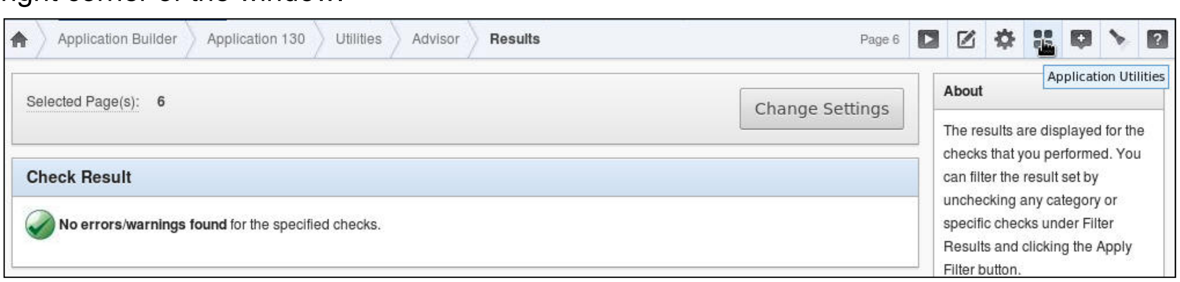


b. Run the Advisor for the Customers Address List page only.

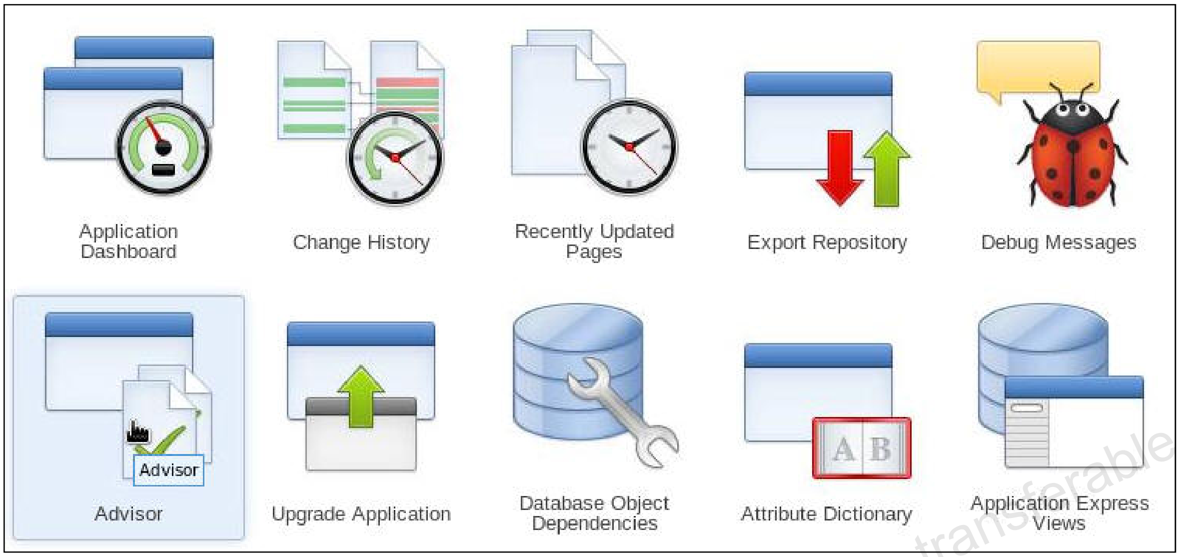
1) You can run the Advisor again just for the current page. Click **Utilities** and select **Check**.



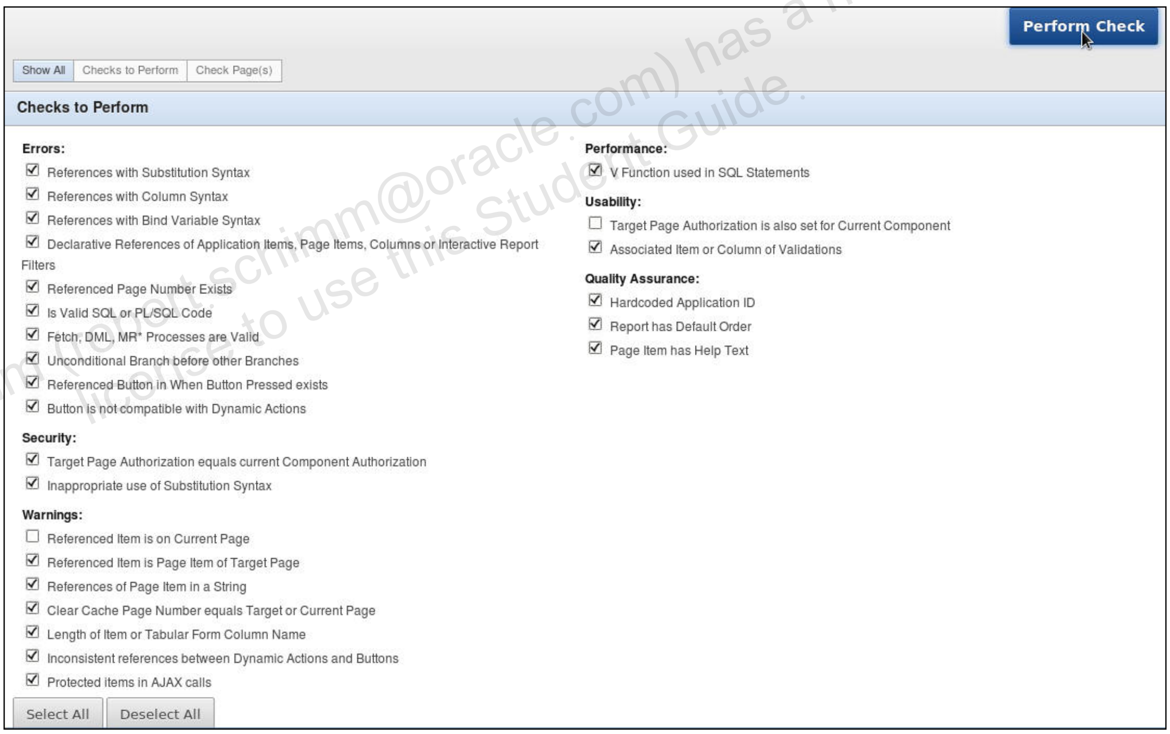
2) Notice that you do not receive any more violations for this page. To run the Advisor again for the entire application, click the **Application Utilities** icon in the upper-right corner of the window.



3) Click **Advisor**.

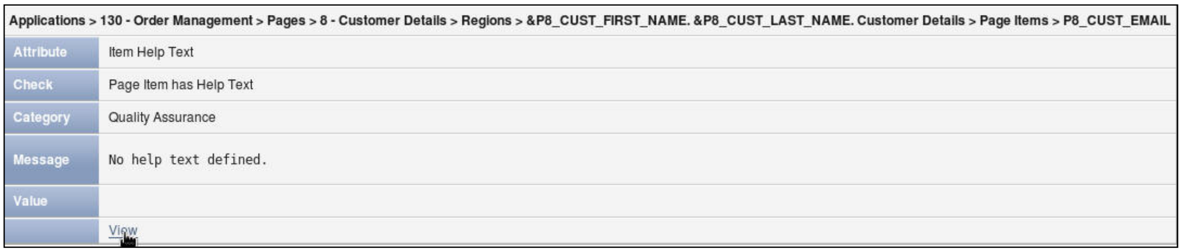


4) Click **Perform Check**.

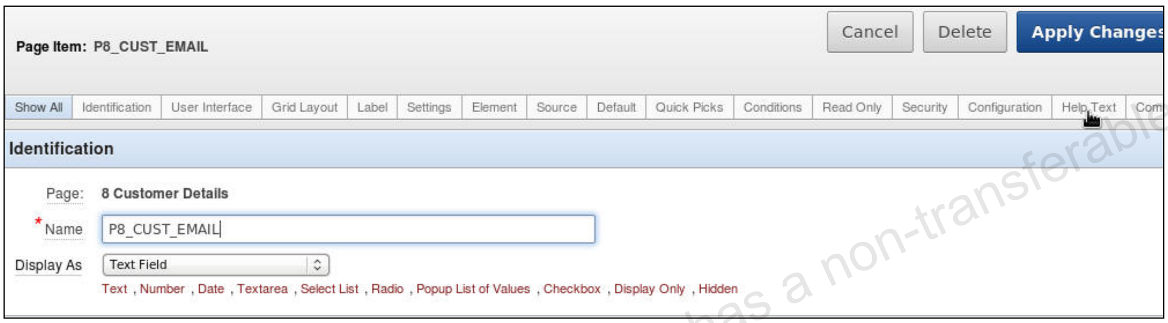


c. Run the Advisor and correct the warning on the `P<n>_CUST_EMAIL` item by defining help text.

1) Scroll to the result that pertains to `P<n>_CUST_EMAIL`. Click the **View** link to go directly to the page item definition.



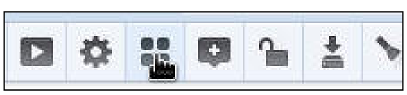
2) Click the **Help Text** tab.



3) Enter **Customer Email** for Help Text and click **Apply Changes**.

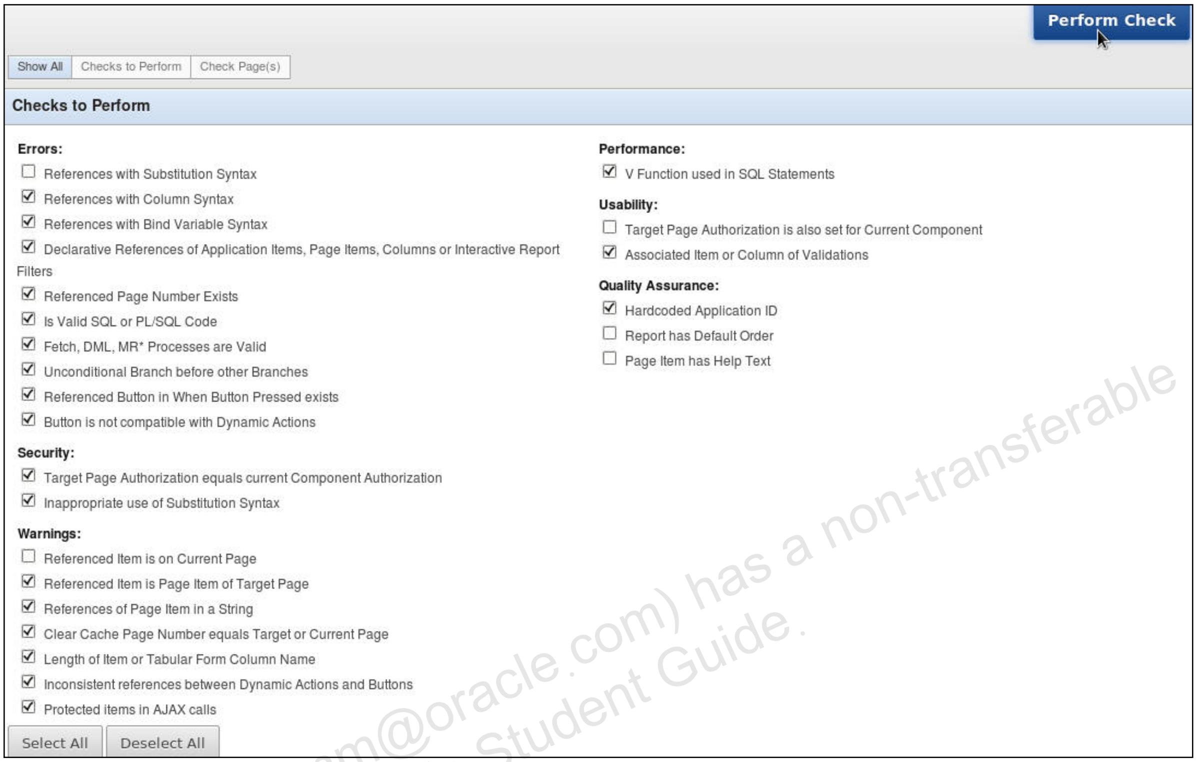
d. Change the settings in the Advisor so that you do not get any more errors or warnings.

1) Click the **Application Utilities** icon.

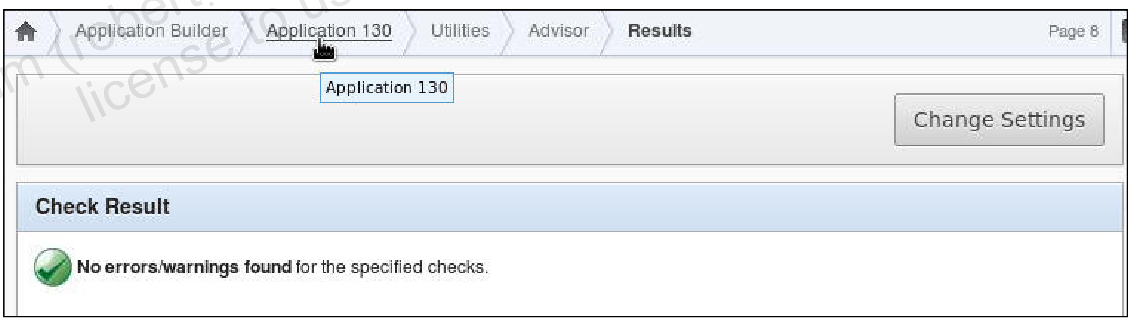


2) Click **Advisor**.

3) You can change the checks that the Advisor performs. Deselect **References with Substitution Syntax**, **Report has Default Order**, and **Page Item has Help Text**, and click **Perform Check**.



4) Note that you do not receive any errors or warnings on any of the checks that were still selected.



Solution 11-2: Managing Your Attribute Dictionary

Overview

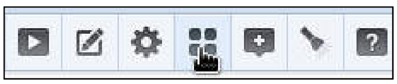
In this solution, you manage attributes in your Attribute Dictionary.

Tasks

a. Change the widths of items on the Customer Details page of the Order Management application to the following.

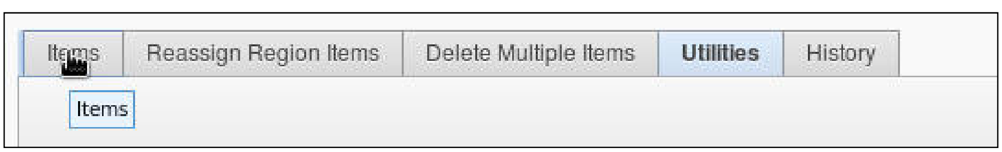
Item	Attribute	Value
P<n>_CUST_FIRST_NAME	Width	18
P<n>_CUST_LAST_NAME	Width	18
P<n>_CUST_EMAIL	Width	18

1) Navigate to the **Order Management** application home page and click the **Application Utilities** icon.



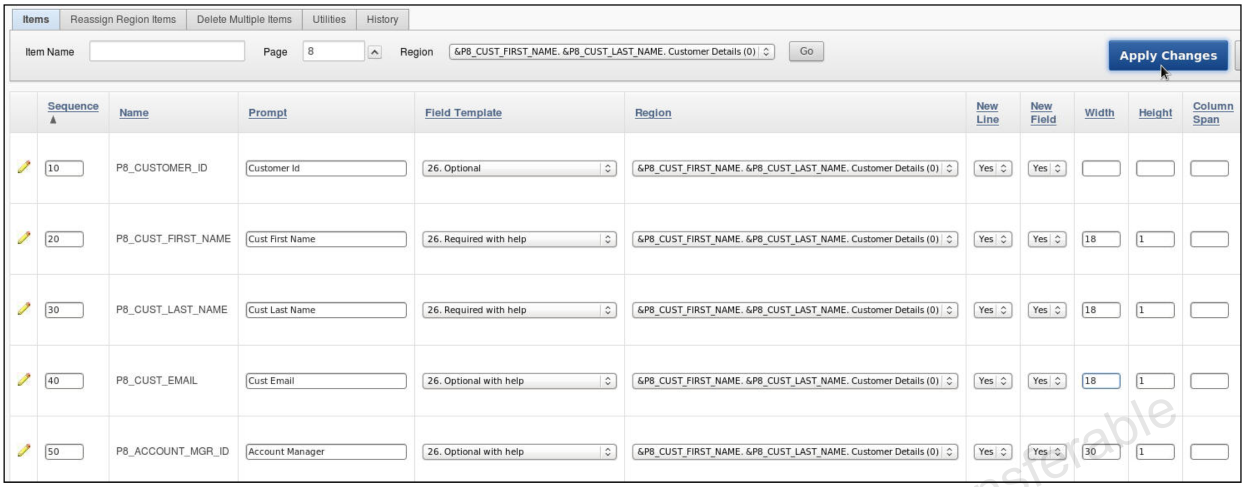
2) Under Page Specific Utilities, select **Item Utilities**.

3) Click the **Items** tab.

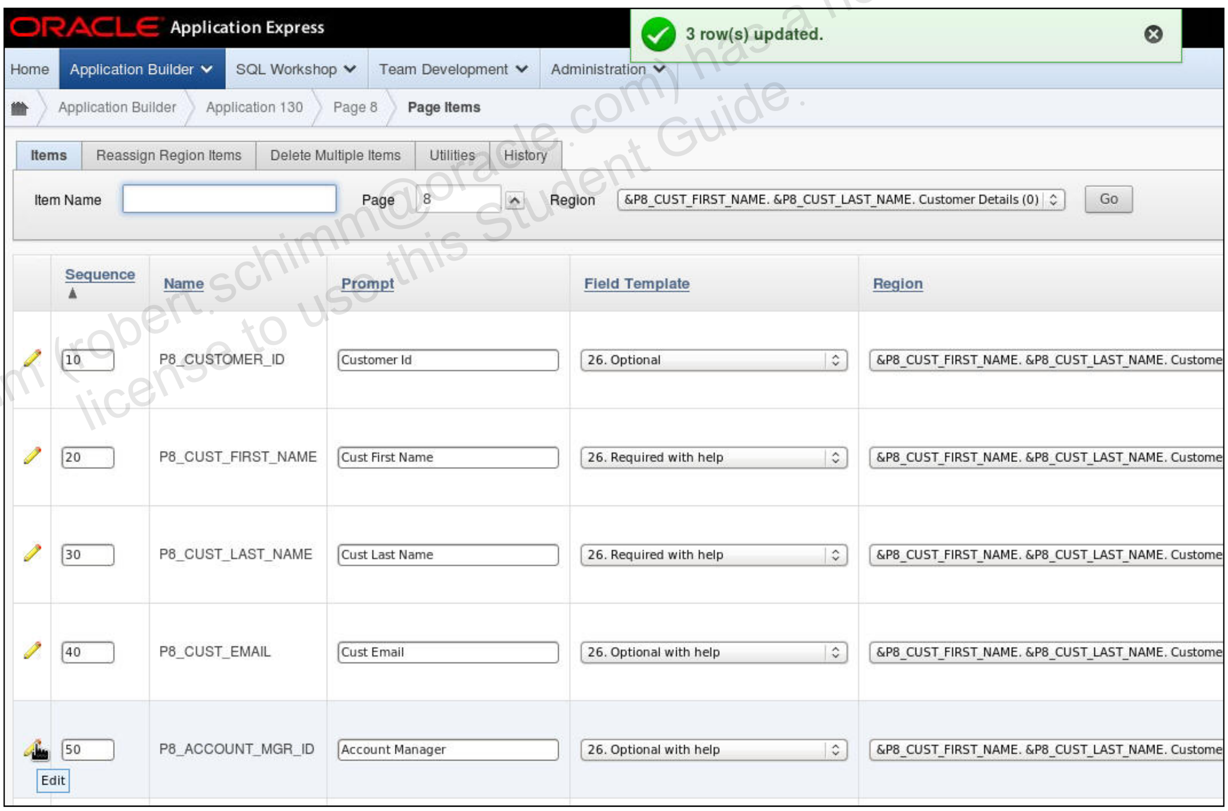


4) Make sure that the Customer Details page number is entered for Page and select the Customer Details region from the Region select list. Click **Go**.

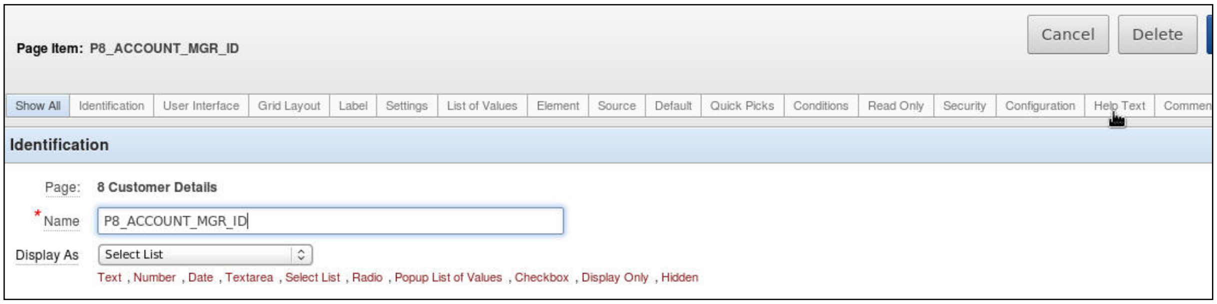
5) Change the Width for P<n>_CUST_FIRST_NAME, P<n>_CUST_LAST_NAME and P<n>_CUST_EMAIL to **18** and click **Apply Changes**.



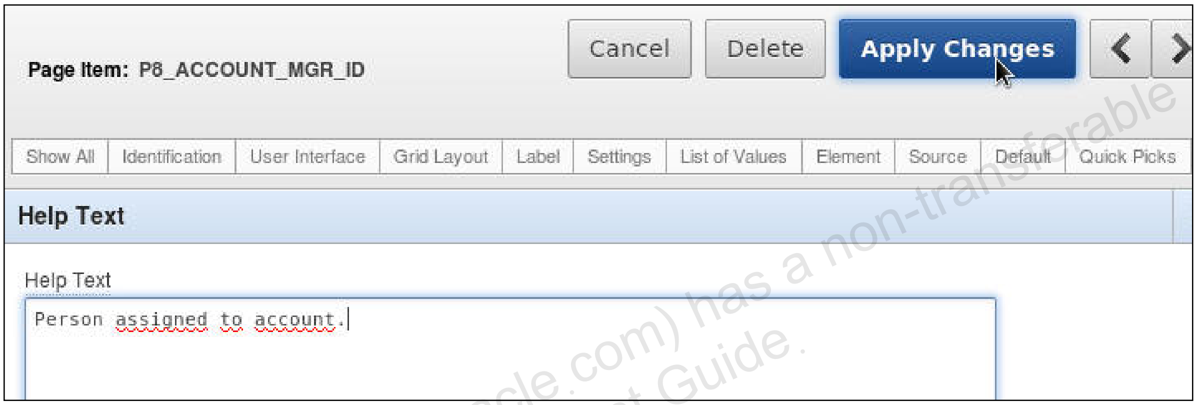
6) The three rows are updated. You want to add help text for P<n>_ACCOUNT_MGR_ID. Click the Edit icon for that row.



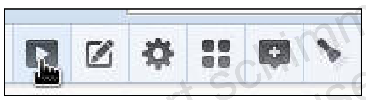
7) Click the **Help Text** subtab.



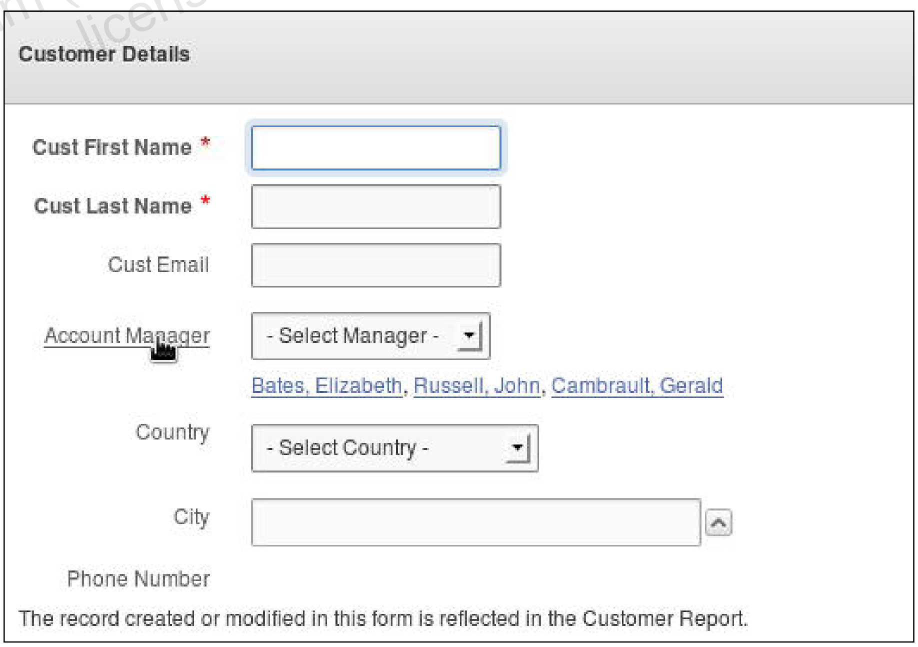
8) Enter **Person assigned to account.** for Help Text and click **Apply Changes**.



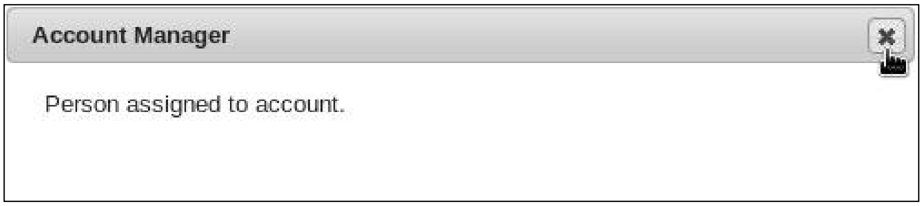
9) Click the **Run Page** icon.



10) Note that the three items for which you changed the width are displayed correctly. Select the **Account Manager** label.



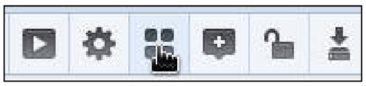
11) The Help Text window is displayed. Click the Close icon.



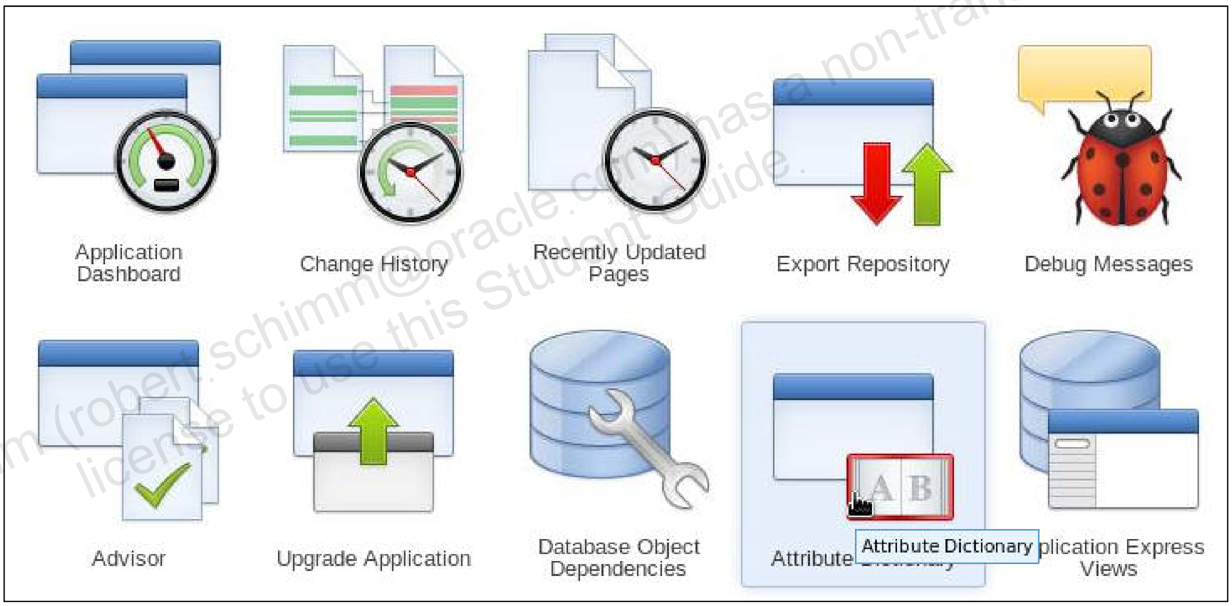
12) Click the Edit Page link on the Developer toolbar.

b. Add the items on the Customer Details page to the Attribute Dictionary.

1) Click the **Application Utilities** icon.



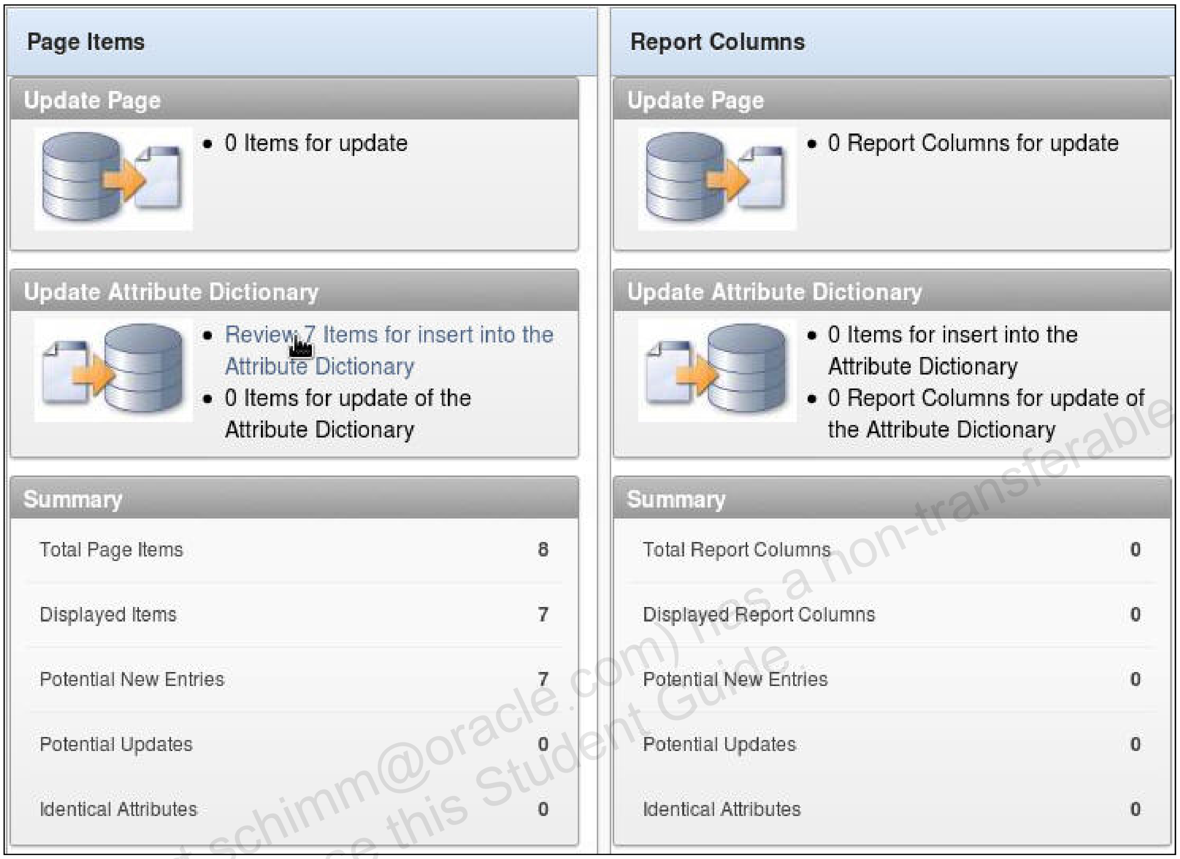
2) Click **Attribute Dictionary**.



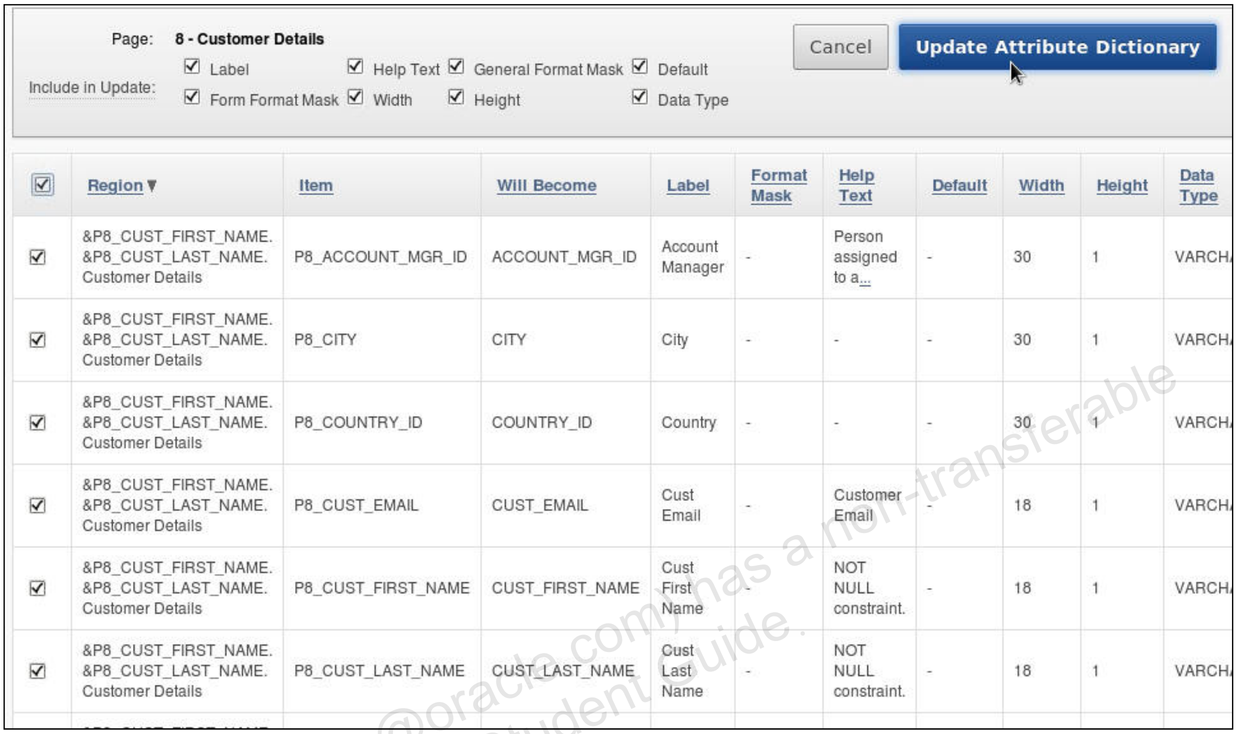
3) Click the link for the Customer Details page.

Page	Name	Page Type	Group Name	Displayed Items	Displayed Report Columns
0	Global Page - jQuery Mobile Smartphone	Global Page	Unassigned	0	0
1	Home	Home	Unassigned	0	0
2	Home	Static HTML	Unassigned	0	0
3	Customers	Interactive Report	Unassigned	0	14
4	Employee Commission	Interactive Report	Unassigned	0	4
5	Top Tier Salary	Report	Unassigned	2	3
6	Customer Address List	Report	Unassigned	0	6
8	Customer Details	DML Form	Unassigned	7	0
9	List of Orders	Report	Unassigned	0	7
10	Master Detail	DML Form	Unassigned	8	4
13	Update Employee Information	Tabular Form	Unassigned	0	5
16	Products	Report	Unassigned	0	5

4) You need to review the items that you want to add to the Attribute Dictionary. Click the **Review <n> items for insert into the Attribute Dictionary** link.



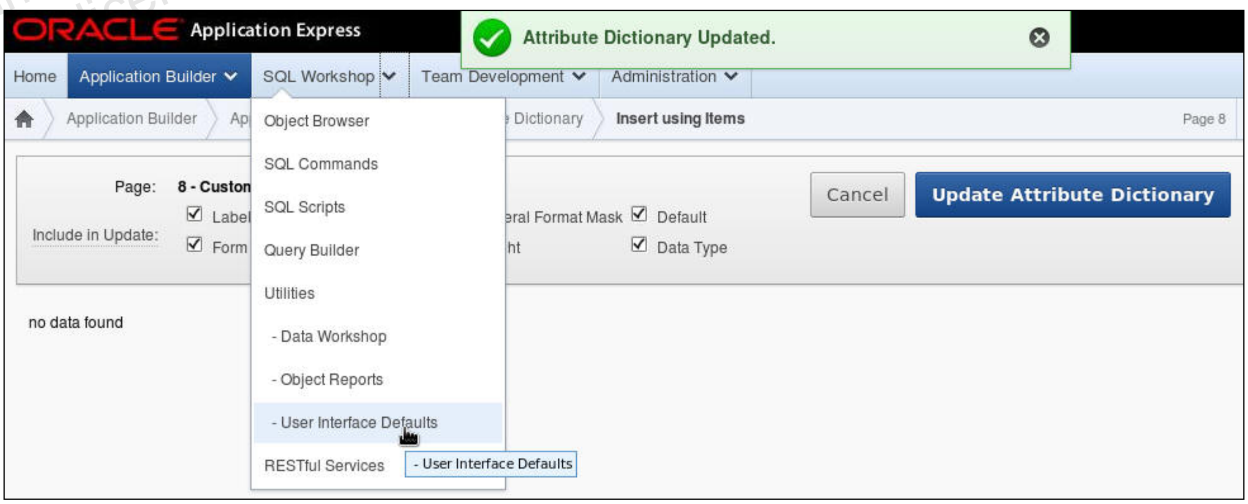
5) Note the items that you have on the page and the changes that you made previously. Select the check box in the header to the left of the Region header to select all the entries in the list, and click **Update Attribute Dictionary**.



	Region	Item	Will Become	Label	Format Mask	Help Text	Default	Width	Height	Data Type
☑	&P8_CUST_FIRST_NAME. &P8_CUST_LAST_NAME. Customer Details	P8_ACCOUNT_MGR_ID	ACCOUNT_MGR_ID	Account Manager	-	Person assigned to a...	-	30	1	VARCH
☑	&P8_CUST_FIRST_NAME. &P8_CUST_LAST_NAME. Customer Details	P8_CITY	CITY	City	-	-	-	30	1	VARCH
☑	&P8_CUST_FIRST_NAME. &P8_CUST_LAST_NAME. Customer Details	P8_COUNTRY_ID	COUNTRY_ID	Country	-	-	-	30	1	VARCH
☑	&P8_CUST_FIRST_NAME. &P8_CUST_LAST_NAME. Customer Details	P8_CUST_EMAIL	CUST_EMAIL	Cust Email	-	Customer Email	-	18	1	VARCH
☑	&P8_CUST_FIRST_NAME. &P8_CUST_LAST_NAME. Customer Details	P8_CUST_FIRST_NAME	CUST_FIRST_NAME	Cust First Name	-	NOT NULL constraint.	-	18	1	VARCH
☑	&P8_CUST_FIRST_NAME. &P8_CUST_LAST_NAME. Customer Details	P8_CUST_LAST_NAME	CUST_LAST_NAME	Cust Last Name	-	NOT NULL constraint.	-	18	1	VARCH

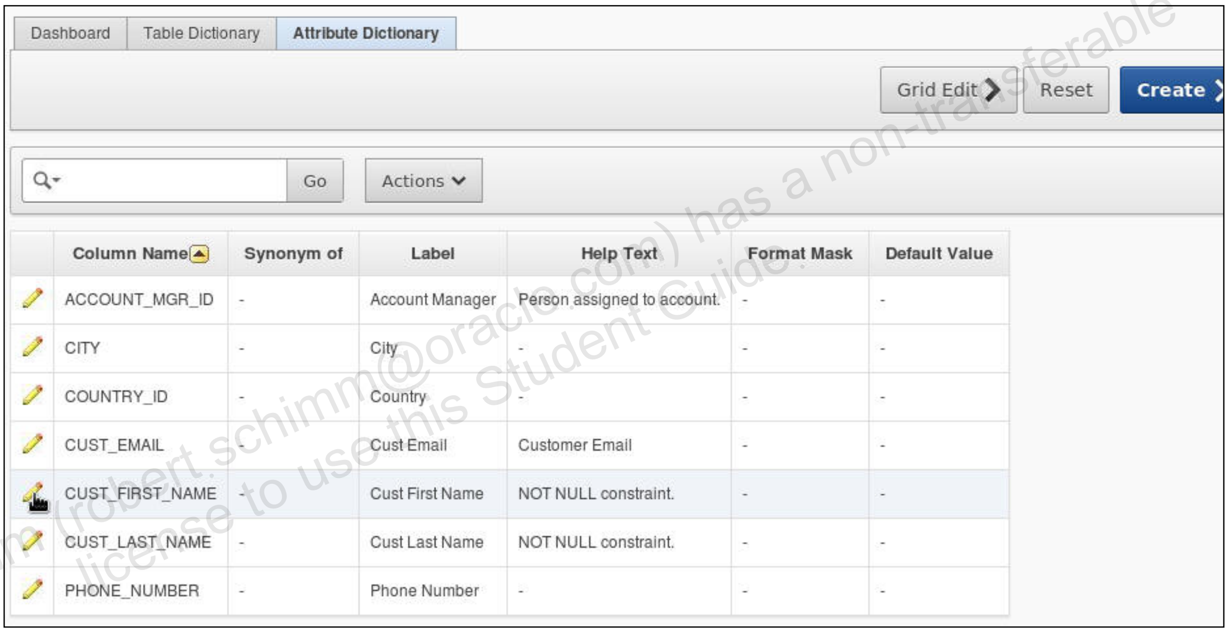
c. Review the UI defaults in SQL Workshop. Change the help text for `CUST_FIRST_NAME` to `Customer First Name` and add a synonym called `FIRST_NAME`.

1) To view and make changes to the items in the Attribute Dictionary, select **SQL Workshop** > **User Interface Defaults**.

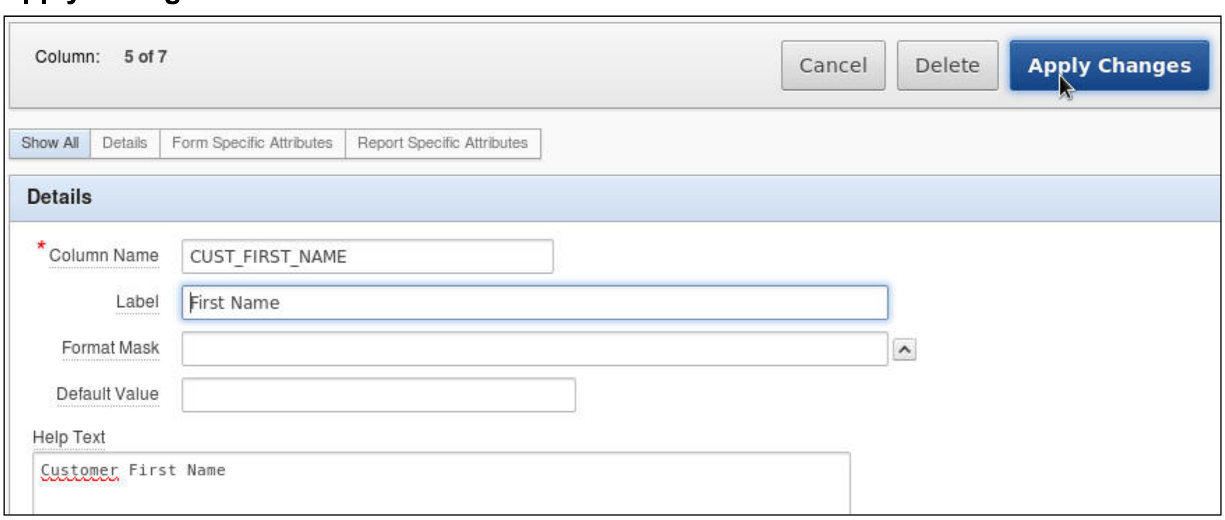


2) Click **Manage Attribute Dictionary**.

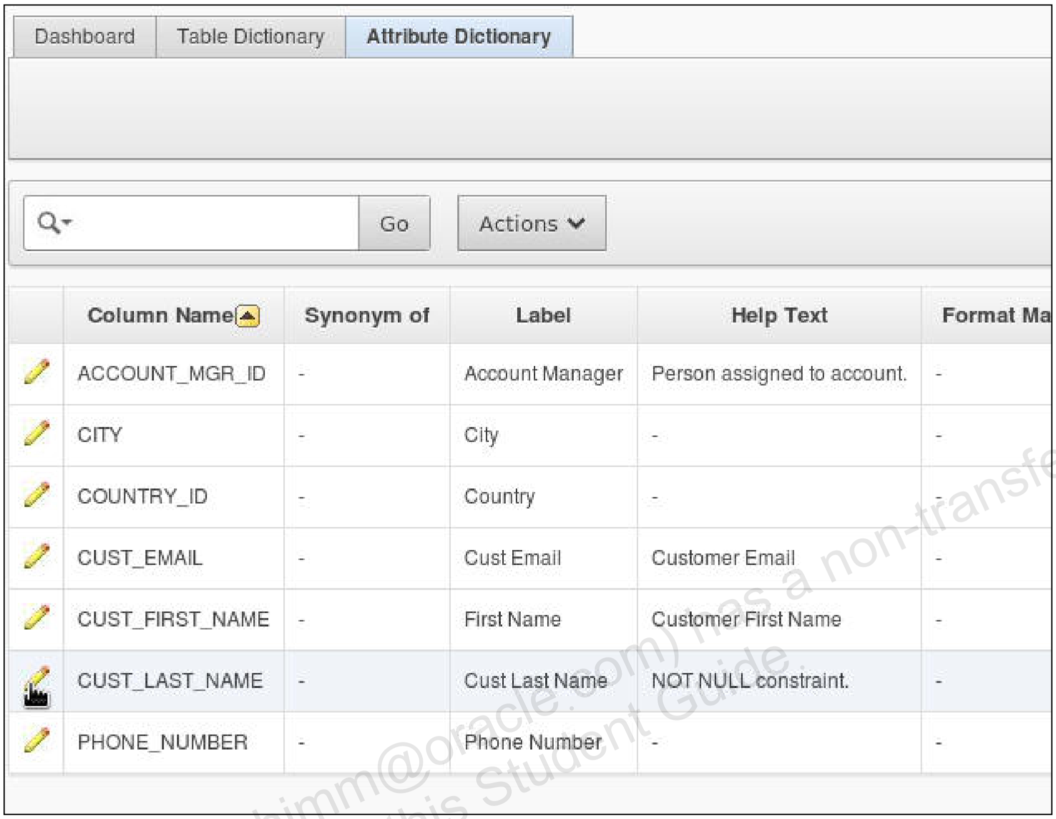
3) You see the attributes that you added to the dictionary. You can modify them here. Click the **Edit** icon for the `CUST_FIRST_NAME` column.



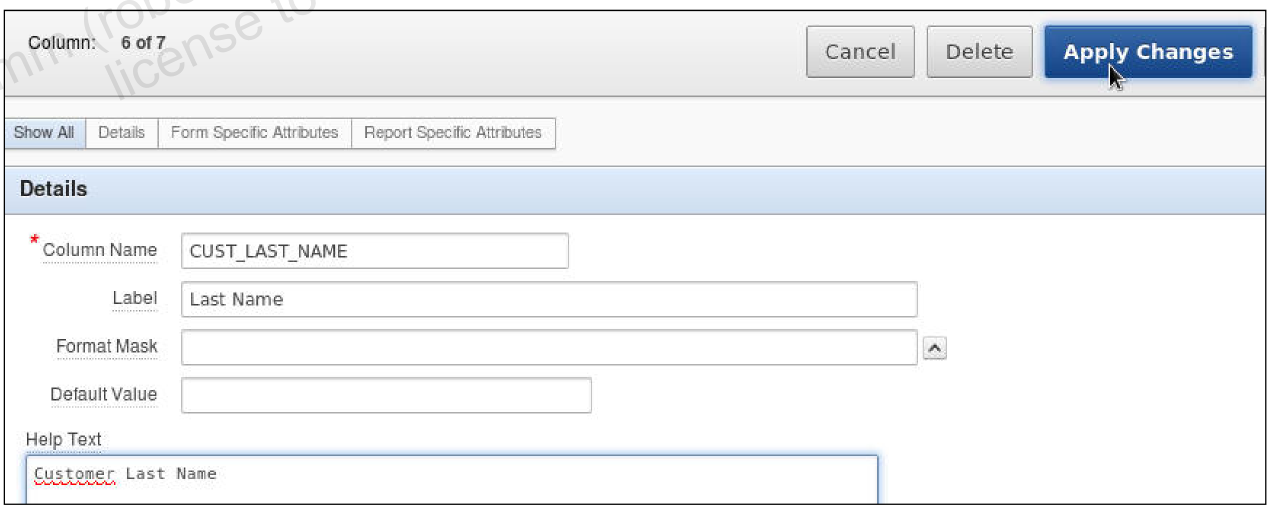
4) Change the Label to **First Name** and Help Text to **Customer First Name** and click **Apply Changes**.



5) The changes are reflected in the list. You want to also change the CUST_LAST_NAME. Click the Edit icon for that row.



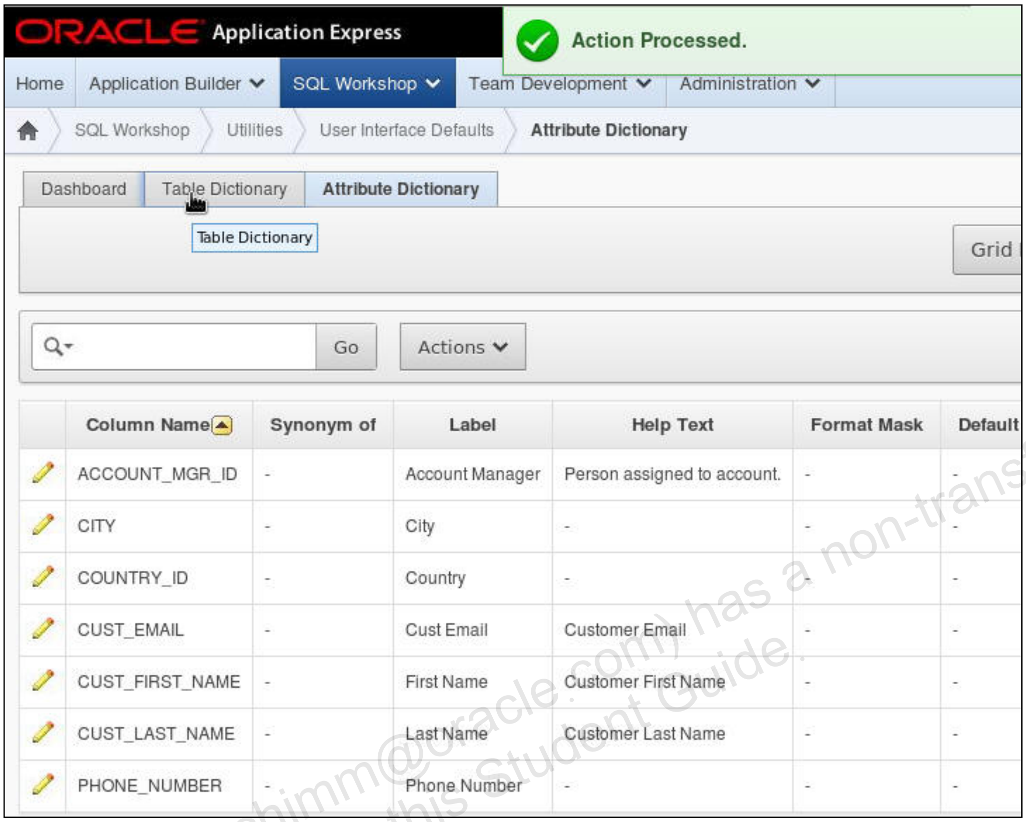
6) Change Label to **Last Name** and Help Text to **Customer Last Name**, and click **Apply Changes**.



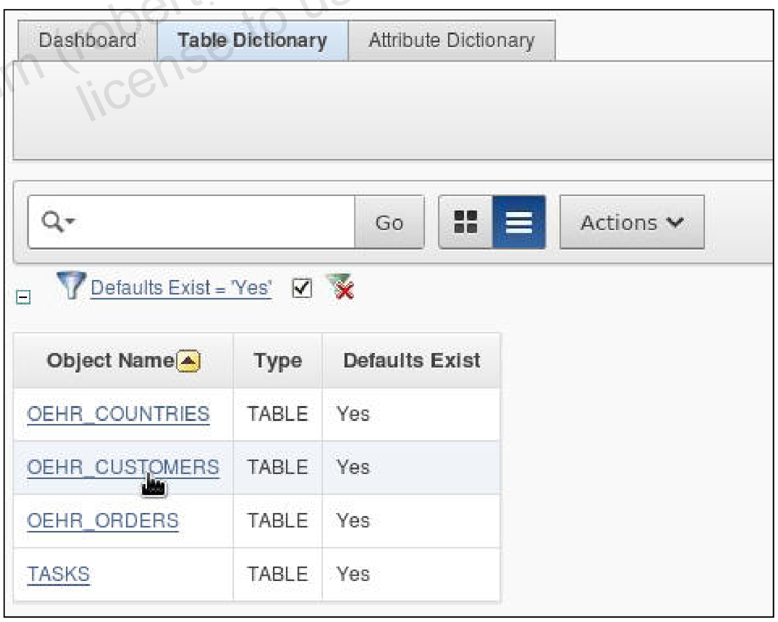
The changes are reflected in the list.

d. Make sure that `OEHR_CUSTOMERS` is not in the Table Dictionary.

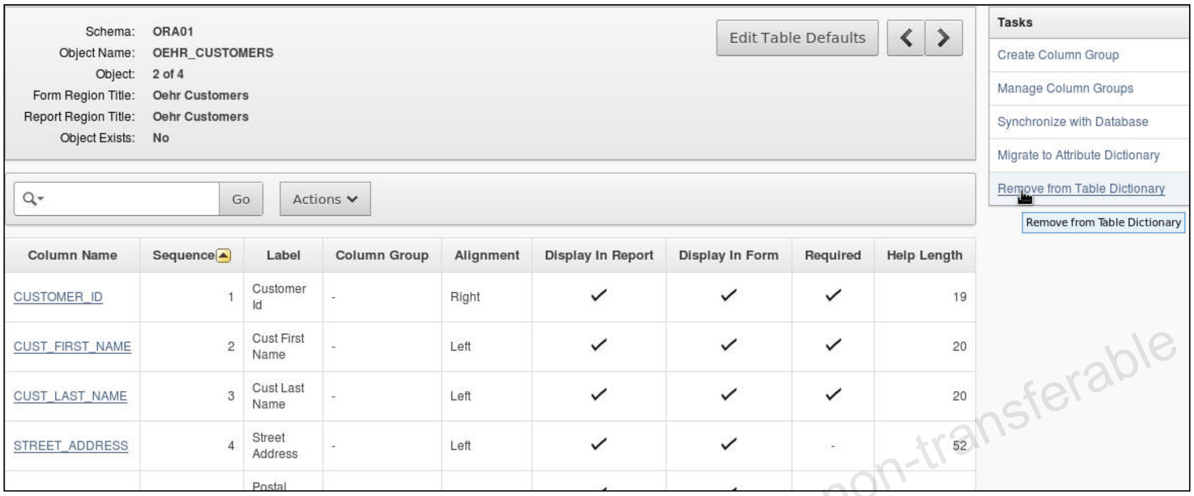
1) Click the **Table Dictionary** tab.



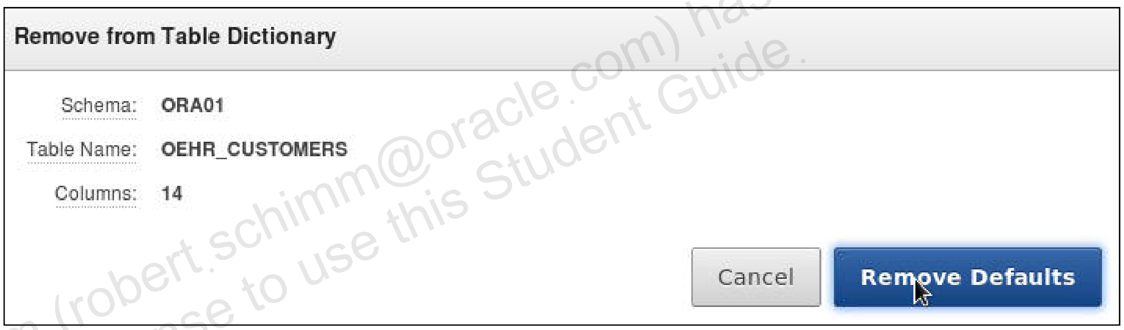
2) Notice that `OEHR_CUSTOMERS` is in the list. Select `OEHR_CUSTOMERS`.



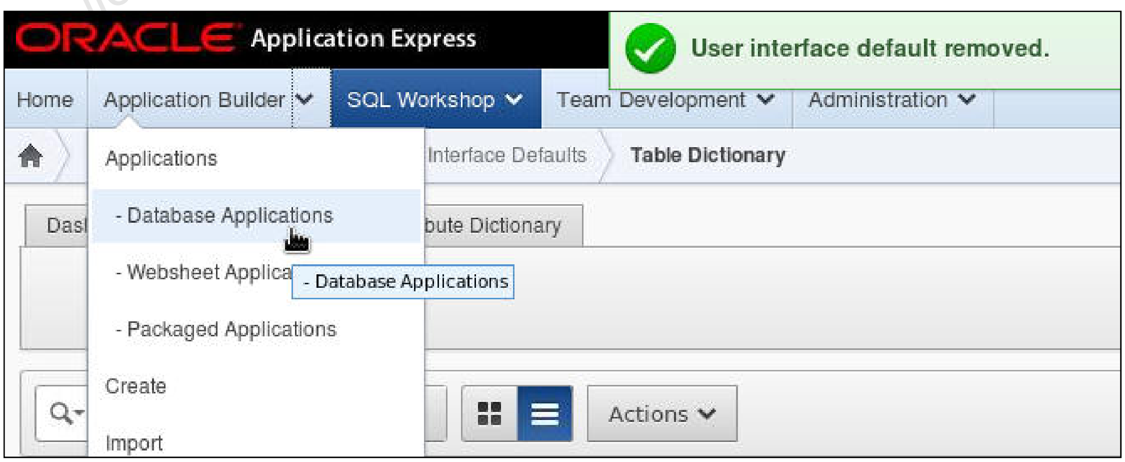
3) The Table Dictionary will override the Attribute Dictionary. Because you have changed the attributes for some columns in the Attribute Dictionary, you want to remove the table from the Table Dictionary. Under Tasks, click the **Remove from Table Dictionary** link.



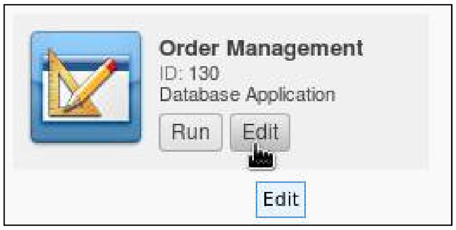
4) Click **Remove Defaults**.



5) The table is removed. Select **Application Builder** > **Database Applications**.

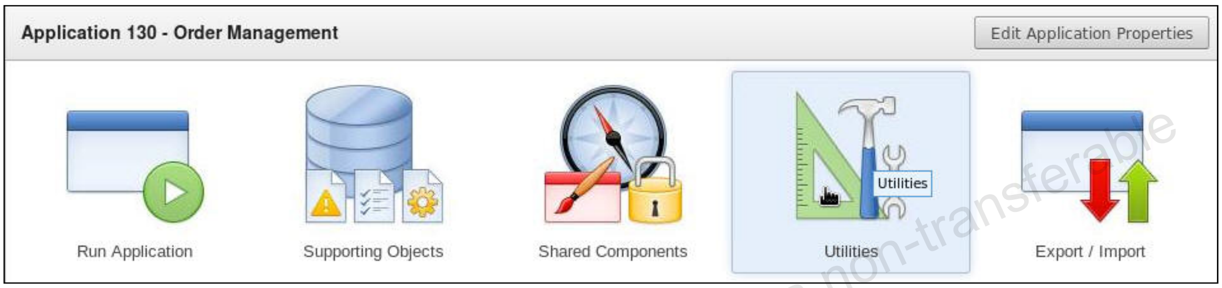


6) Select the **Order Management** application.

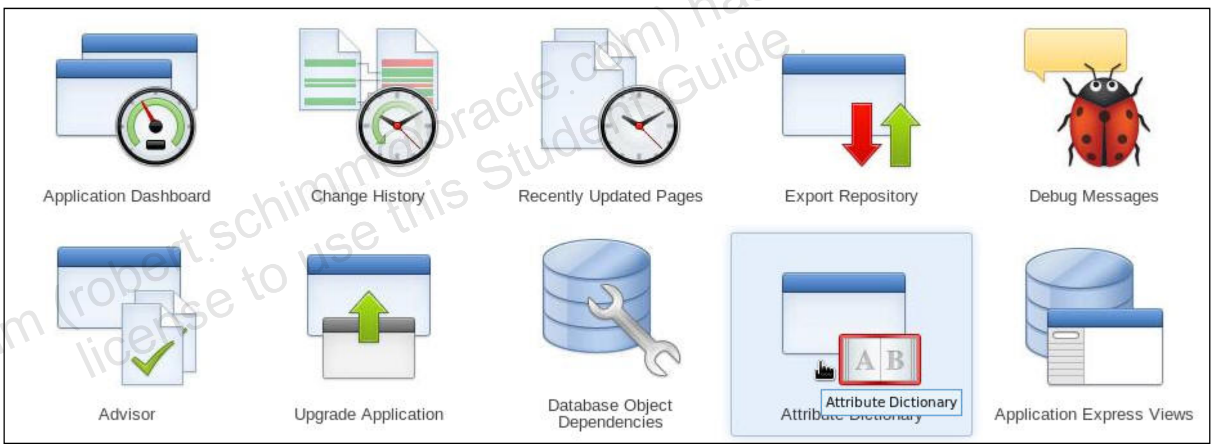


e. Update the Attribute Dictionary for the items on the Customer Detail page.

1) Click **Utilities**.



2) Click **Attribute Dictionary**.

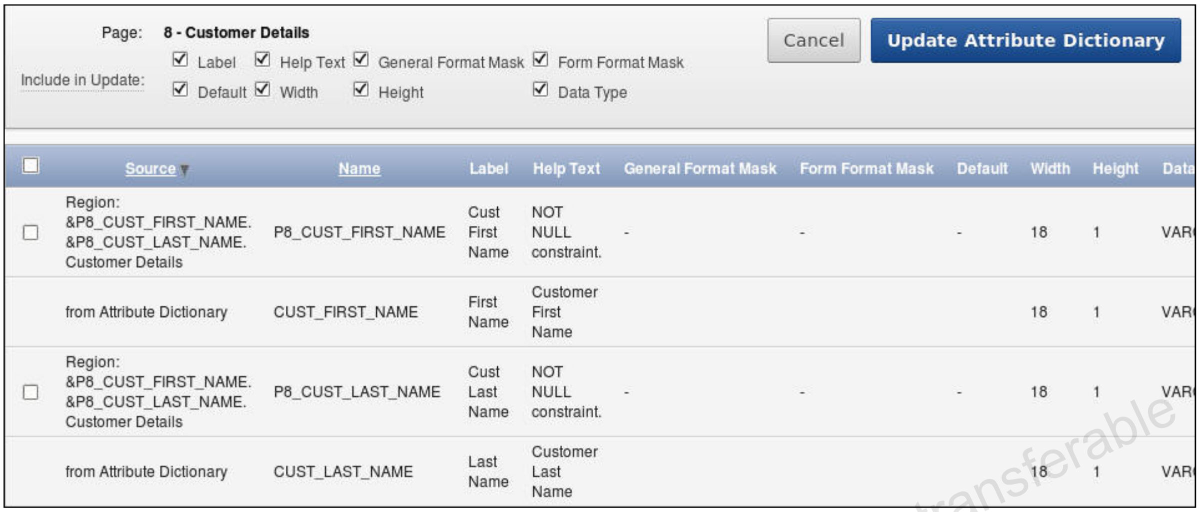


3) Click the link for the Customer Details page.

Page	Name	Page Type	Group Name	Displayed Items	Displayed Report Columns
0	Global Page - jQuery Mobile Smartphone	Global Page	Unassigned	0	0
1	Home	Home	Unassigned	0	0
2	Home	Static HTML	Unassigned	0	0
3	Customers	Interactive Report	Unassigned	0	14
4	Employee Commission	Interactive Report	Unassigned	0	4
5	Top Tier Salary	Report	Unassigned	2	3
6	Customer Address List	Report	Unassigned	0	6
8	Customer Details	DML Form	Unassigned	7	0
9	List of Orders	Report	Unassigned	0	7
10	Master Detail	DML Form	Unassigned	8	4
13	Update Employee Information	Tabular Form	Unassigned	0	5
16	Products	Report	Unassigned	0	5
17	Global Page - Desktop	Global Page	Unassigned	0	0
18	Customer Feedback	Navigation Form	Unassigned	3	0

4) Notice that you have two items to review for update to the Attribute Dictionary. Click the **Review 2 Items for update of the Attribute Dictionary** link.

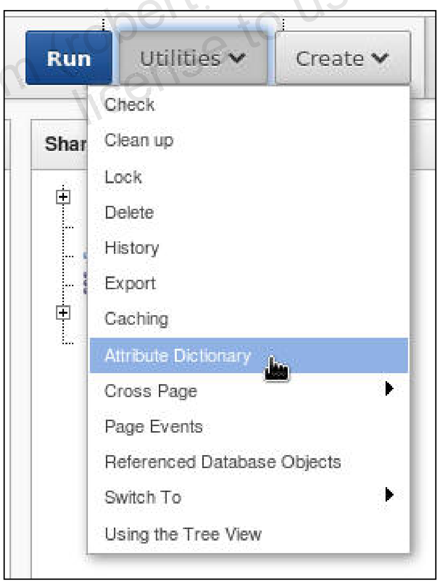
5) Notice that the column in the Attribute Dictionary is the one that you want, rather than the help text for the item. You will leave it as is.



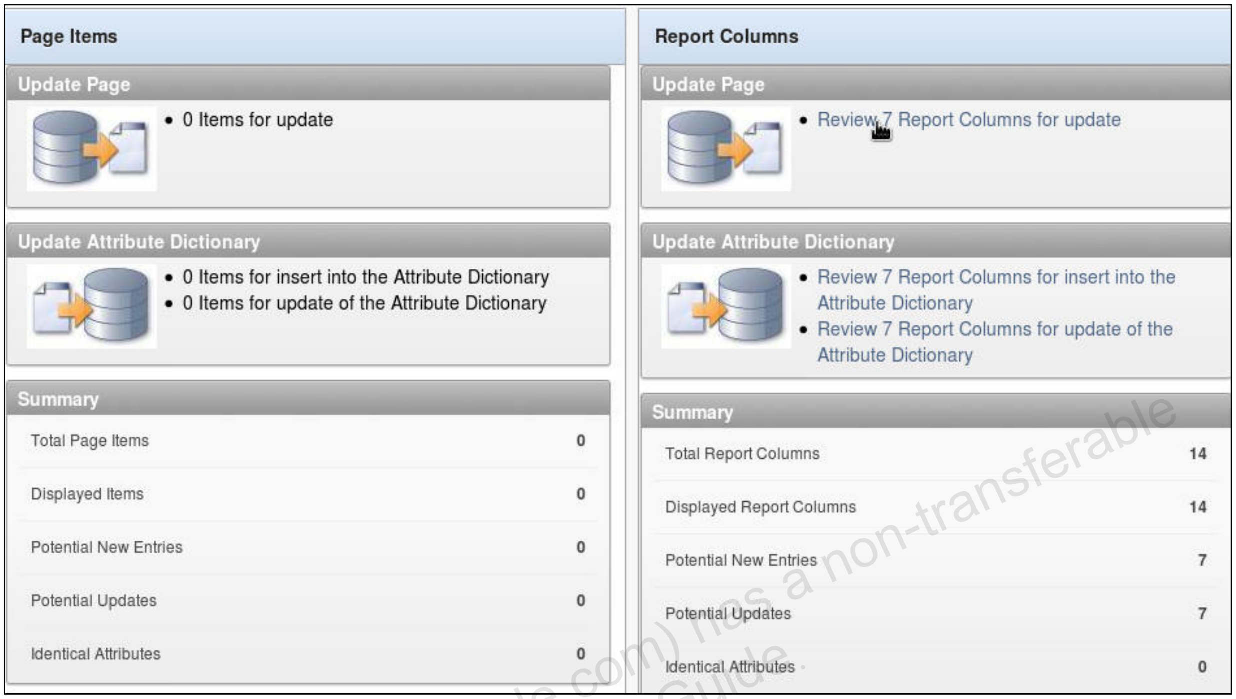
6) You also want to apply the attributes from the dictionary to your report page. In the search area, enter `<your Order Management application id>:3` (for the Customers page), and click the magnifying glasses.

f. Update the Customers page to use the Attribute Dictionary defaults. Verify by showing the help text for the First Name column in the report.

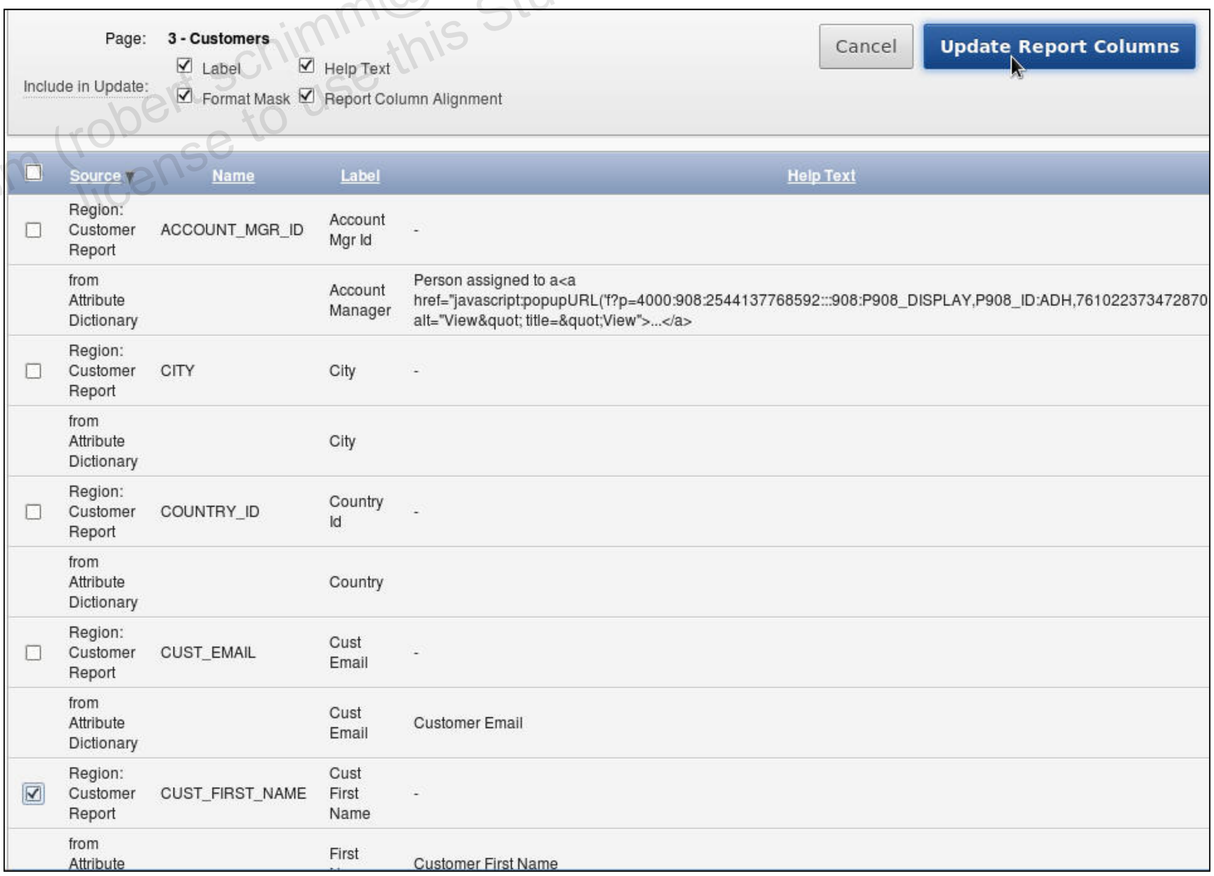
1) Notice that page 3 in your application is displayed. Click **Utilities** and select **Attribute Dictionary**.



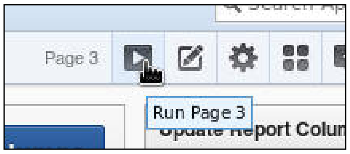
2) Because you want to update the page, you want to review the columns for update. Click the **Review <n> Report Columns for update** link.



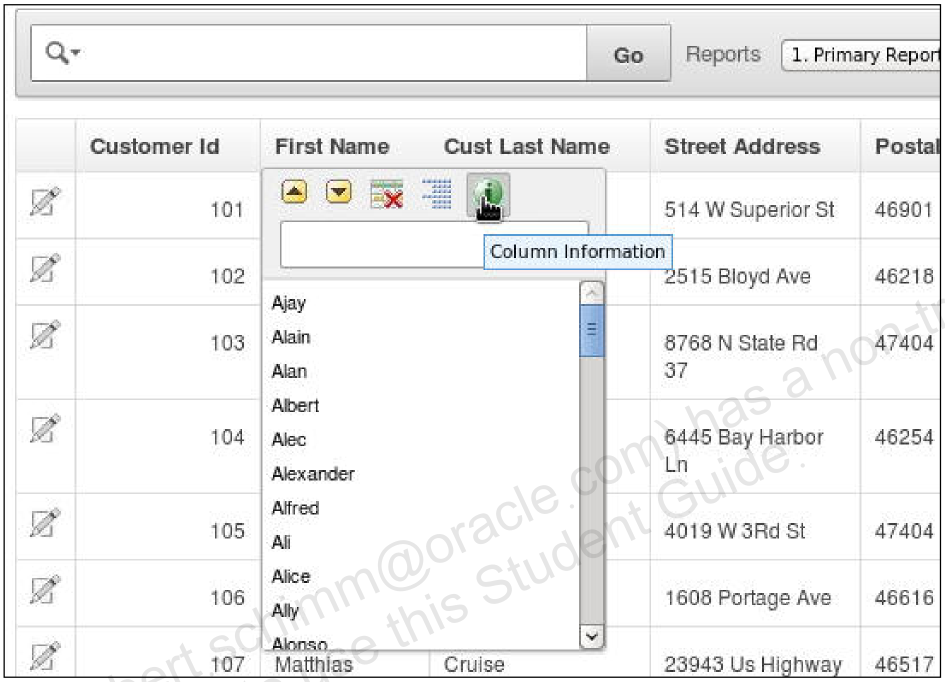
3) Review the list. Select the check box in front of the **CUST_FIRST_NAME** item and click **Update Report Columns**.



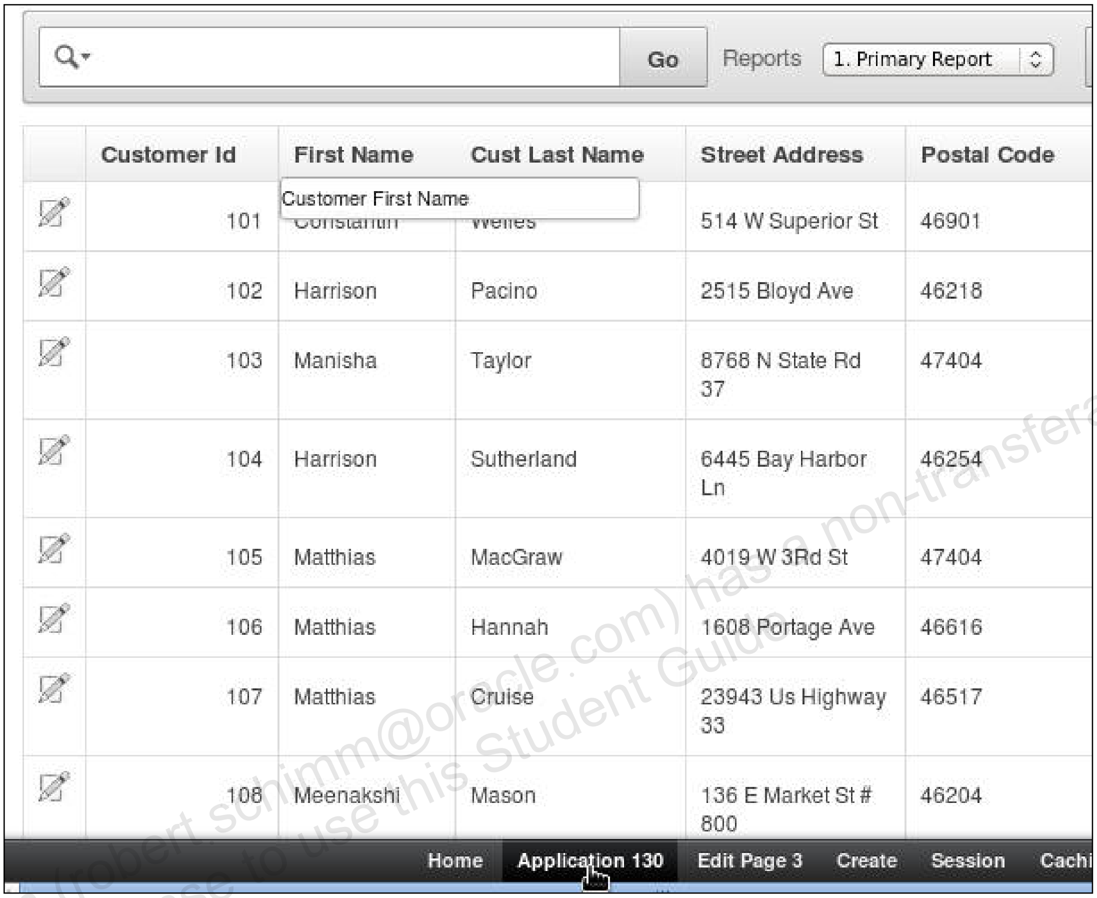
4) You can run the page to see the results. Click the **Run Page** icon.



5) To see the help text, select the **First Name** header in the report and click the **Information** icon.

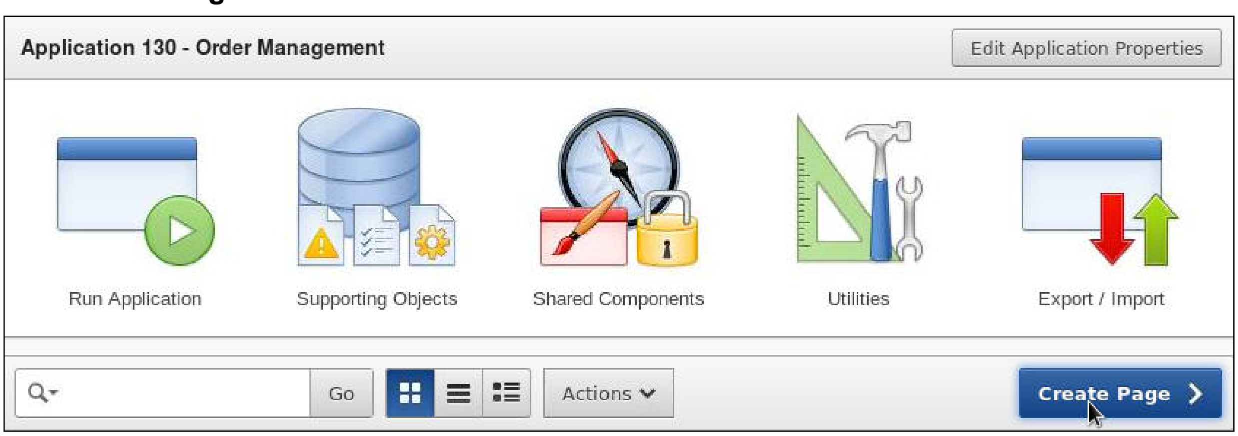


6) The help text from the Attribute Dictionary is displayed. You can also create a new page and use the UI defaults from the Attribute Dictionary. Click the **Application** link on the Developer toolbar.

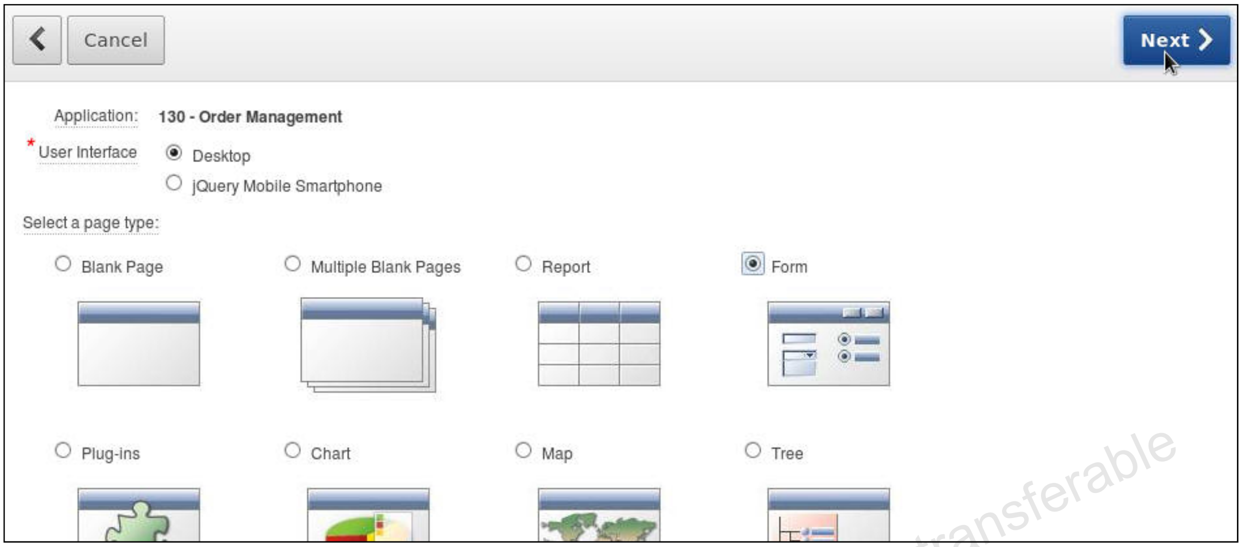


g. Create a new forms page based on the `OEHR_CUSTOMERS` table. Make sure that UI Defaults is enabled. Run the page to see that the Attribute Dictionary is used.

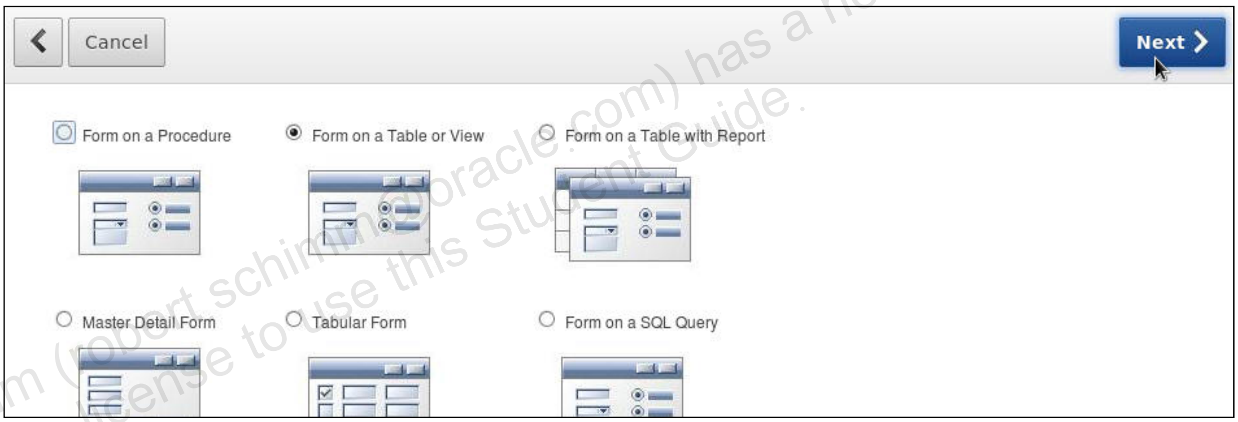
1) Click **Create Page >**.



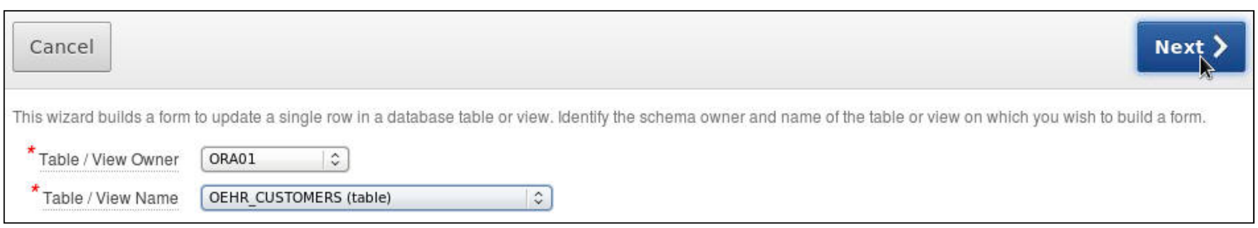
2) Select **Form** and click **Next >**.



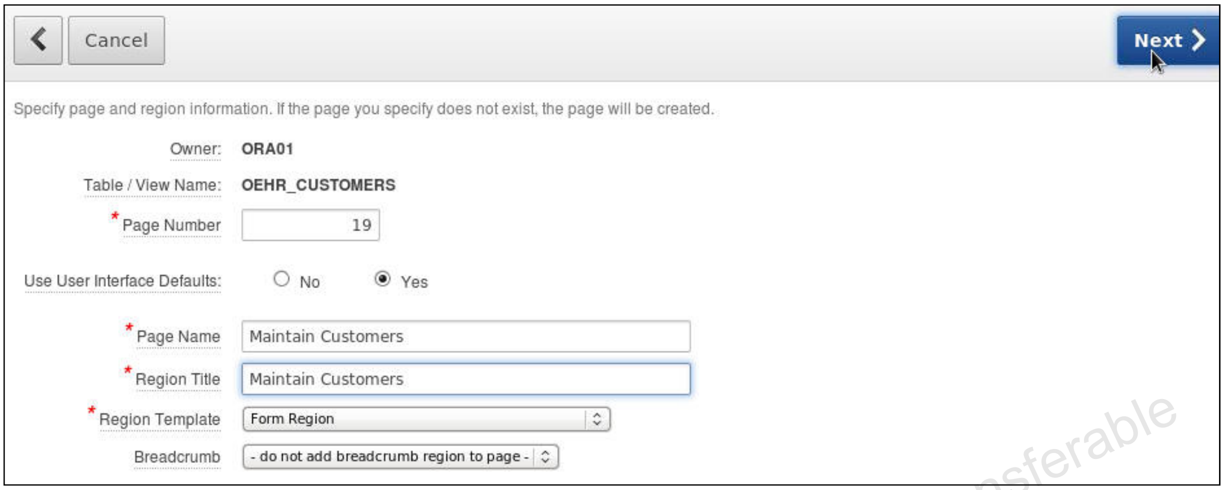
3) Select **Form on a Table or View** and click **Next >**.



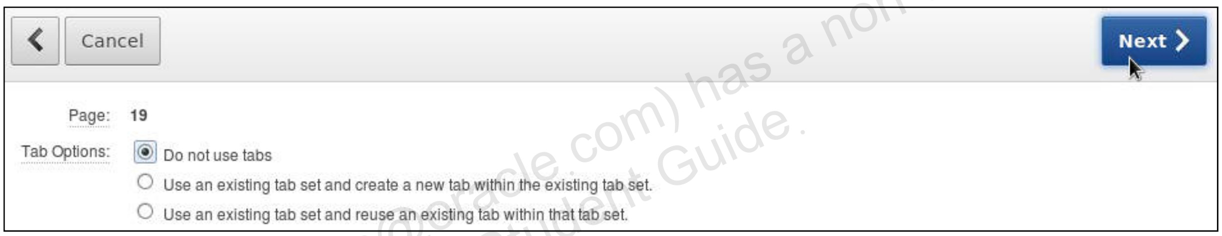
4) Select `OEHR_CUSTOMERS` for the Table Name and click **Next >**.



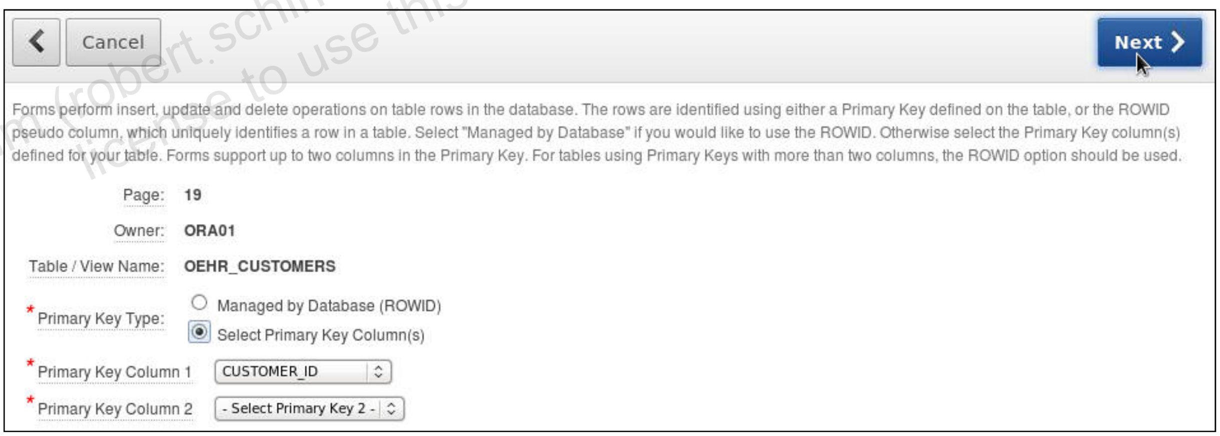
5) Enter **Maintain Customers** for Page Name and Region Title. Notice that Use User Interface Defaults is set to Yes. Click **Next >**.



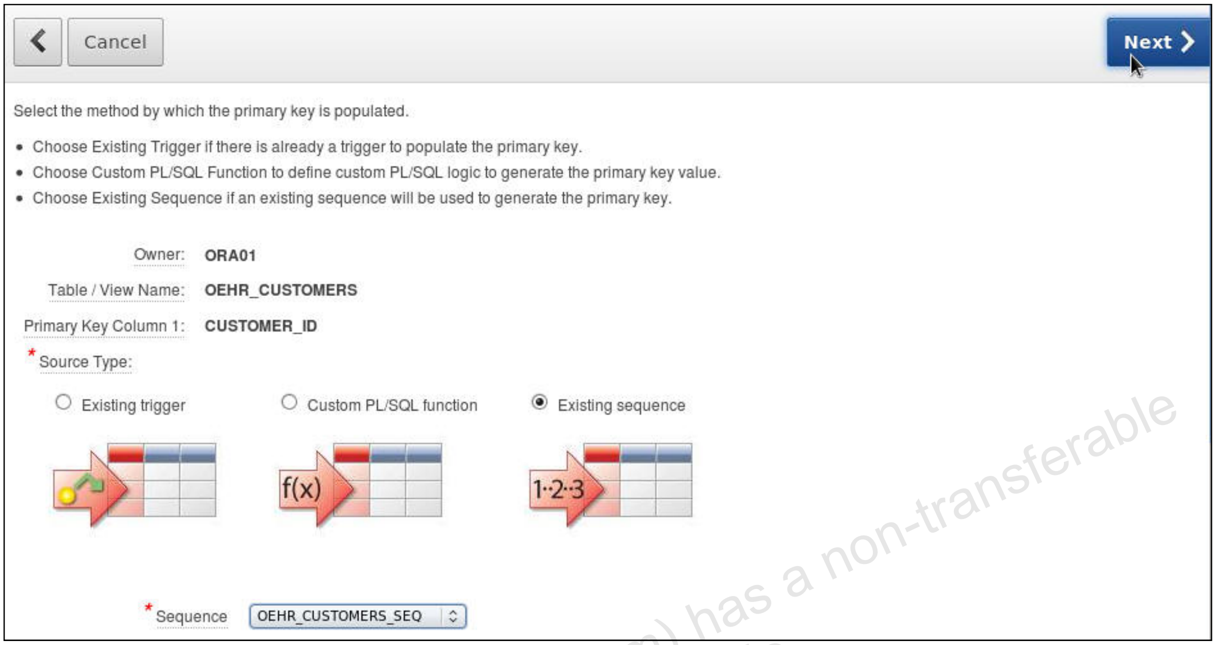
6) Accept the default and click **Next >**.



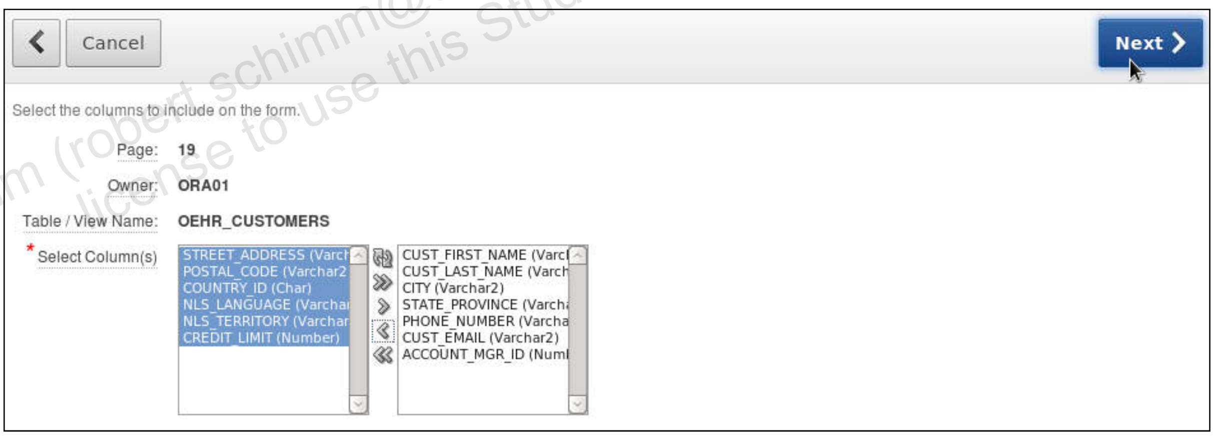
7) Select **Select Primary Key Column(s)** for Primary Key Type and click **Next >**.



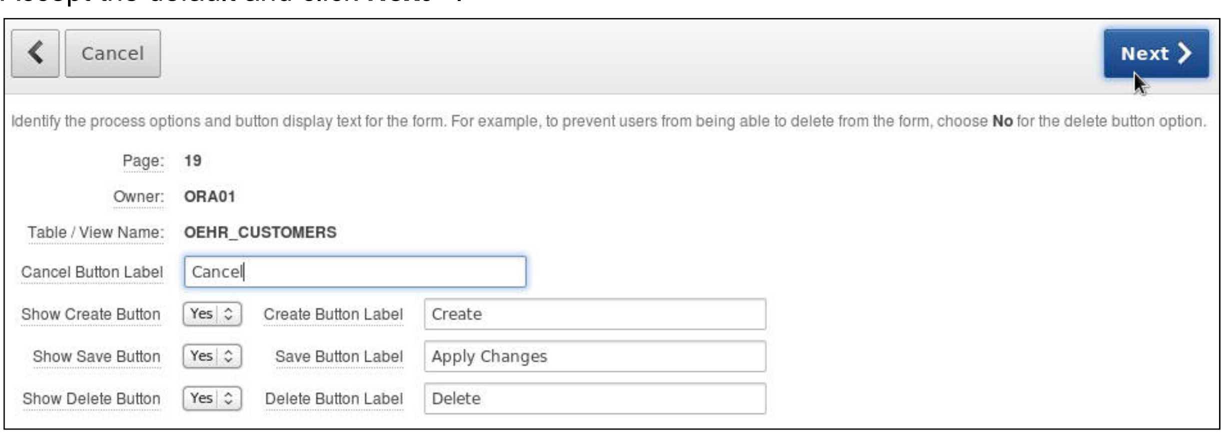
8) Select **Existing sequence**, select `OEHR_CUSTOMERS_SEQ` from the Sequence list, and click **Next >**.



9) Remove all the columns *except* `CUST_FIRST_NAME`, `CUST_LAST_NAME`, `CITY`, `STATE_PROVINCE`, `PHONE_NUMBER`, `CUST_EMAIL`, and `ACCOUNT_MGR_ID`, and click the right arrow (**>**). Click **Next >**.

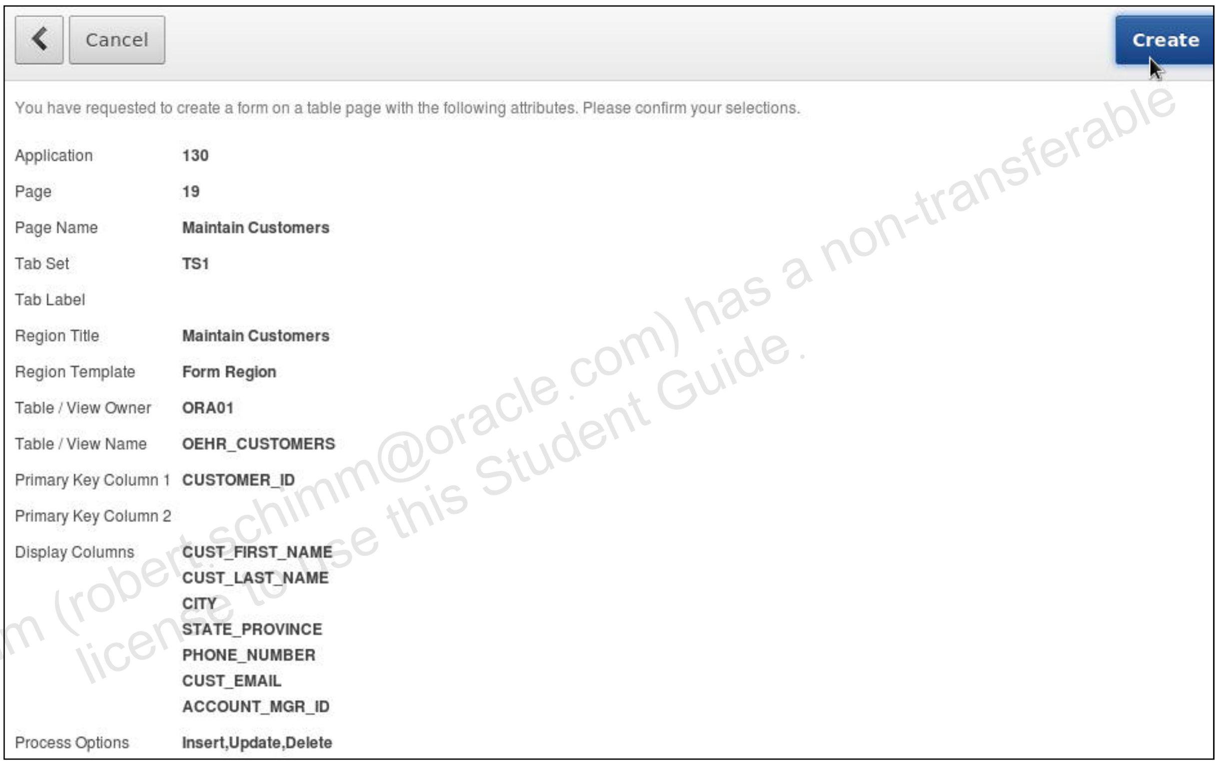


10) Accept the default and click **Next >**.

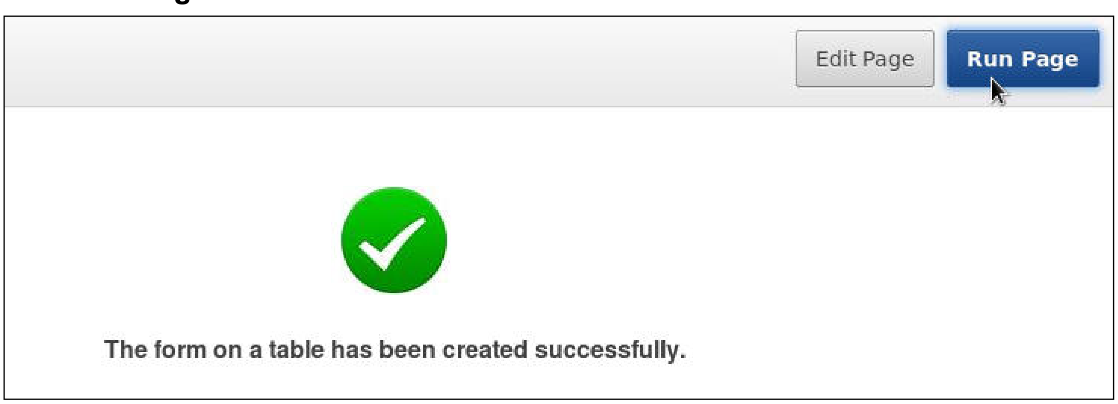


11) Enter your new page number for both branches and click **Next >**.

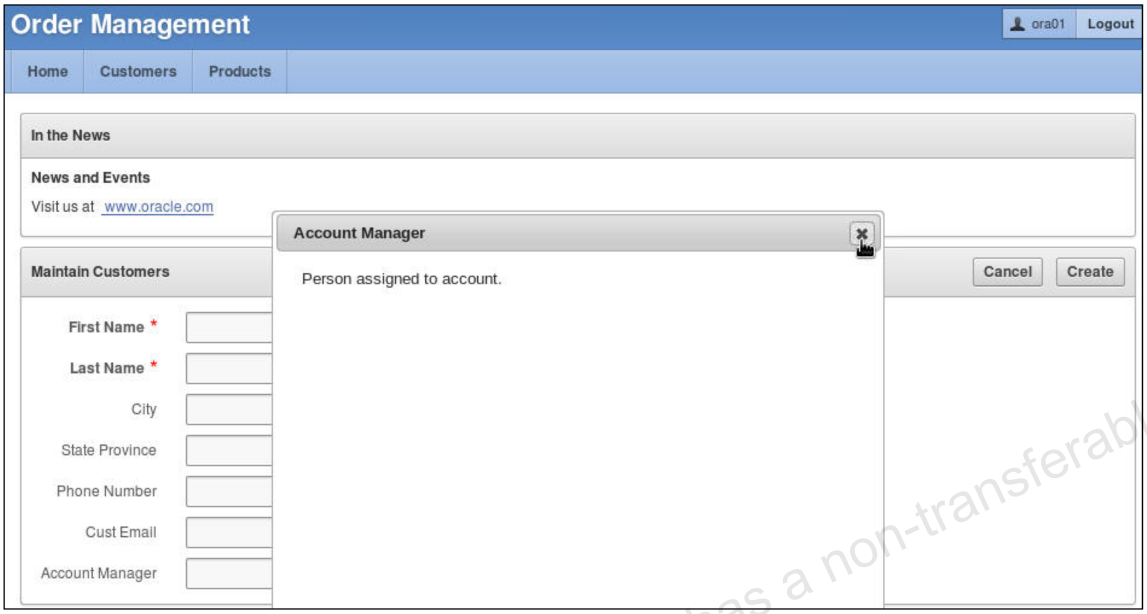
12) Click **Create**.



13) Click **Run Page**.



14) Notice that the labels are the same as from the Attribute Dictionary. Select the Account Manager label to see the help text.



Solution 11-3: Debugging and Troubleshooting Common Issues in Your Application

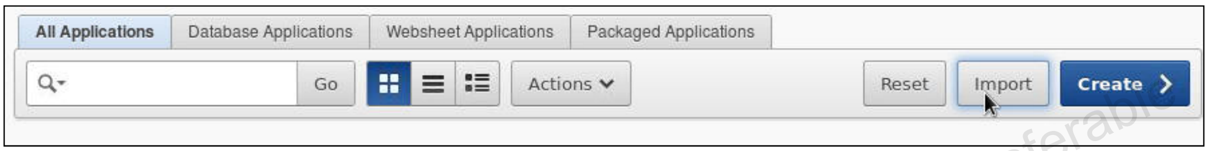
Overview

In this practice, you debug your application and resolve some common issues that may occur while developing your application.

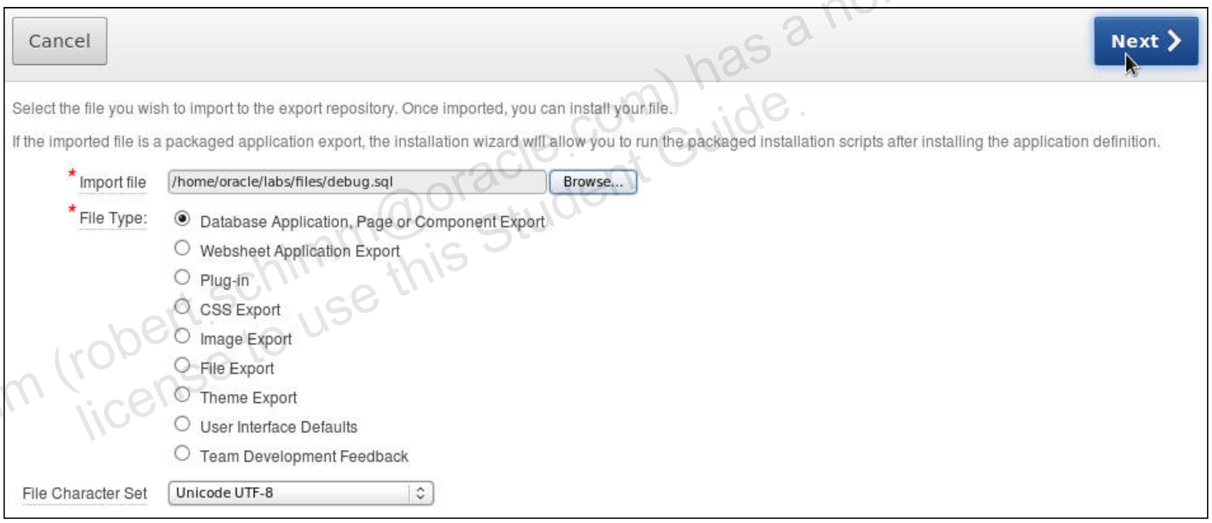
Steps

a. Import an application with some issues to resolve.

1) On the **Application Builder** page, click **Import**.

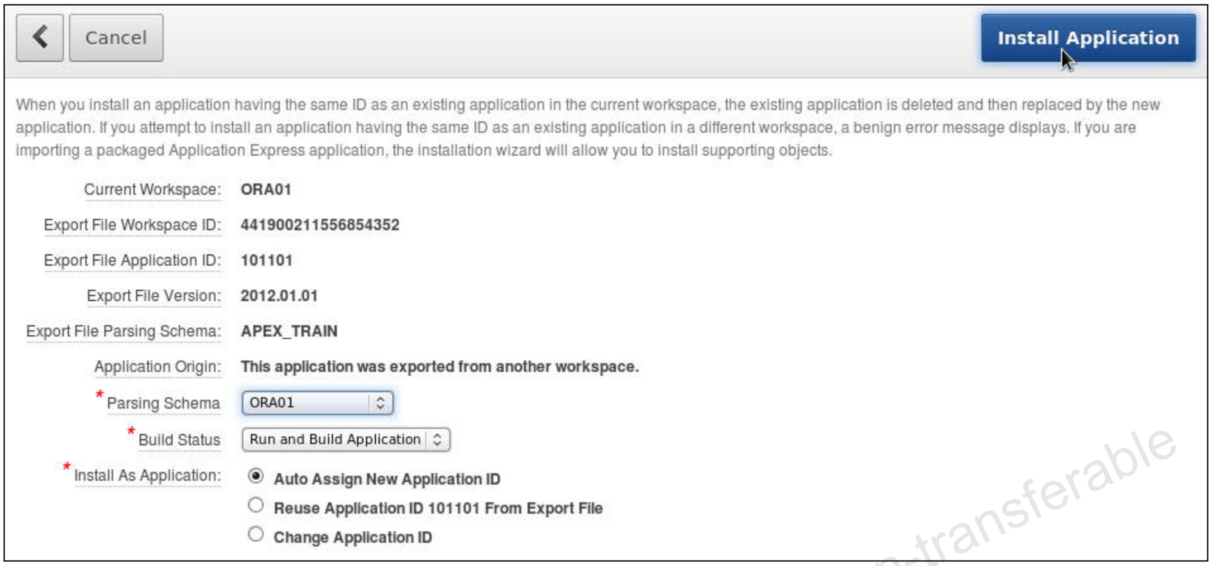


2) Click **Browse** and select the `debug.sql` file from the `/home/oracle/labs/files` directory, and click **Open**. Then click **Next >**.

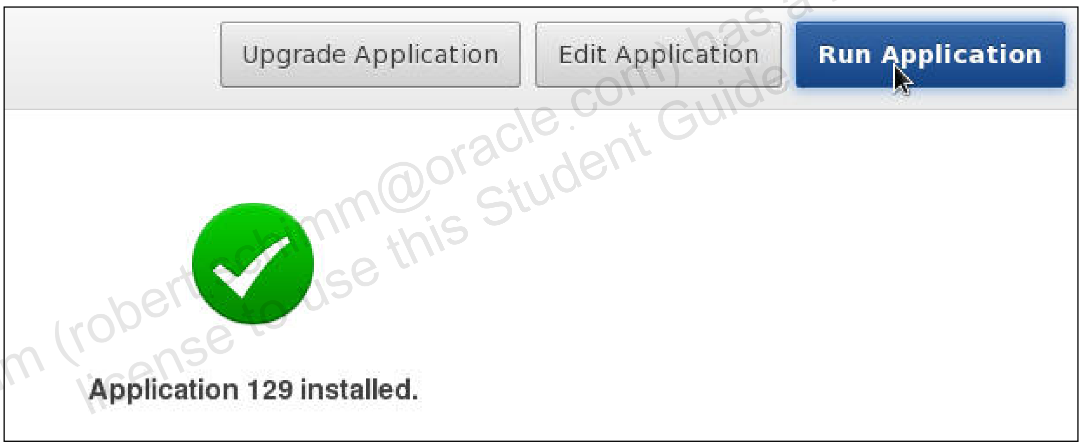


3) Click **Next >**.

4) Select the **ora<n>** schema and click **Install Application**.

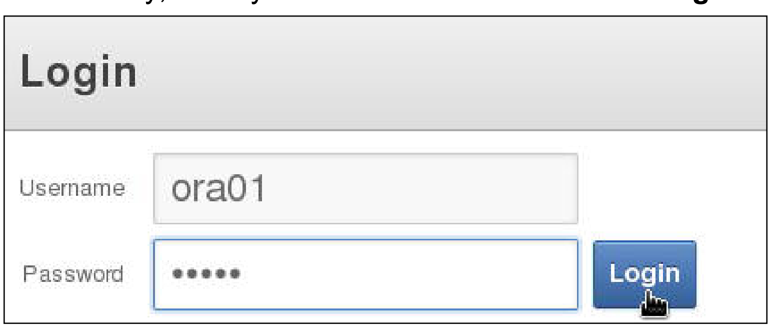


5) Click **Run Application**.

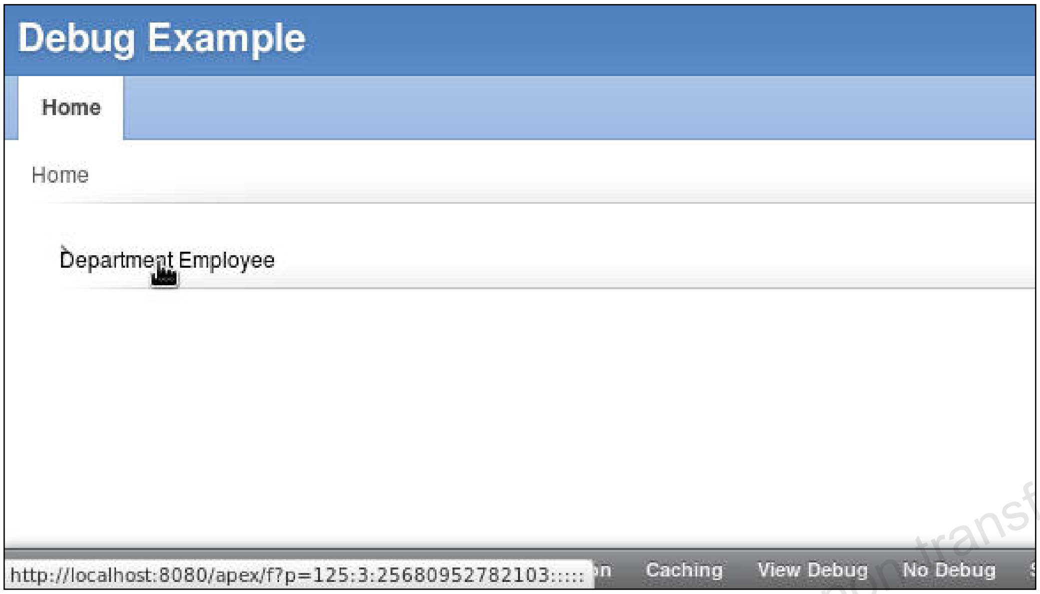


b. Debug the application.

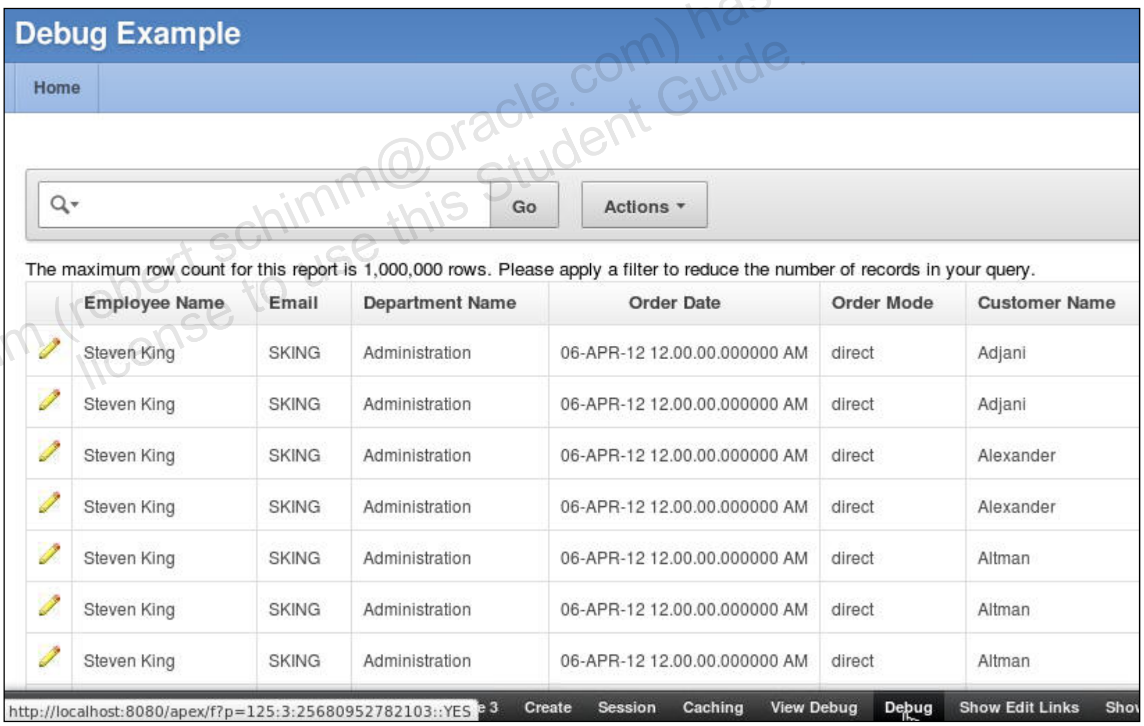
1) If necessary, enter your user information and click **Login**.



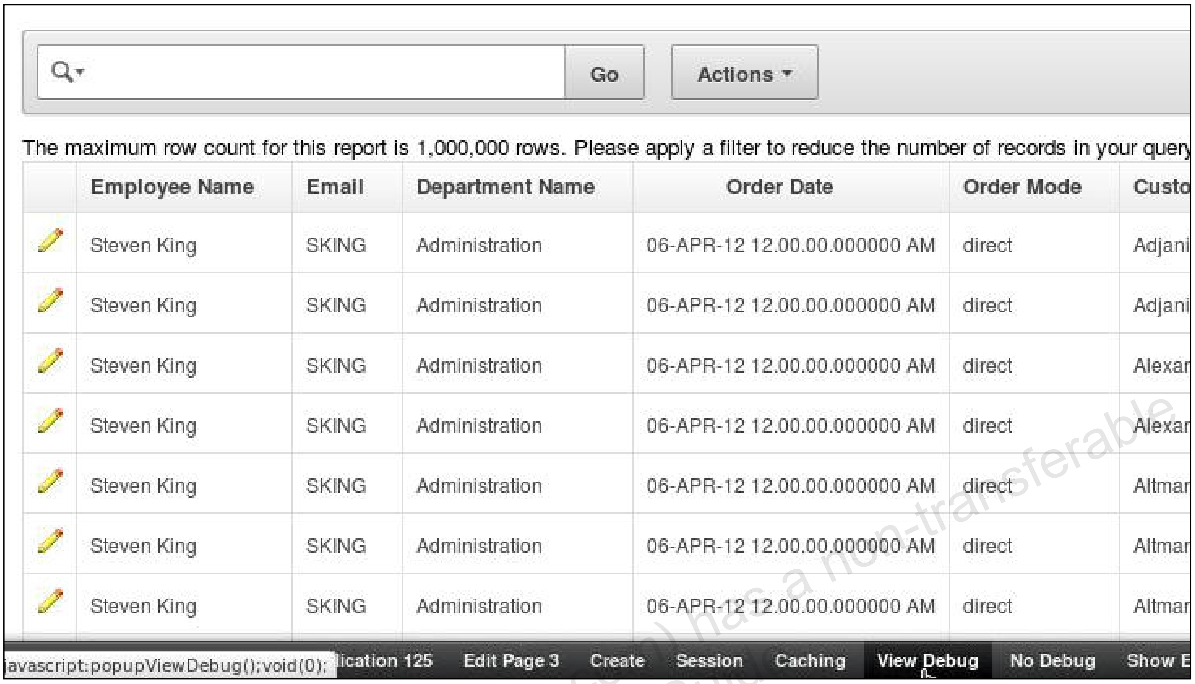
2) On the Home page, click the **Department Employee** link.



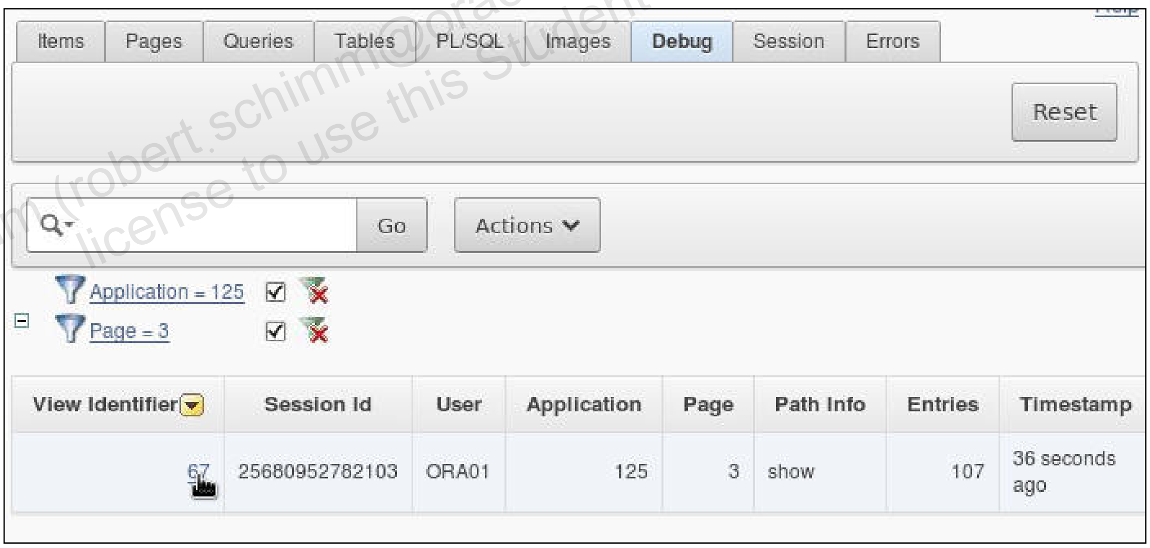
3) The report is displayed. Click the **Debug** link on the Developer toolbar.



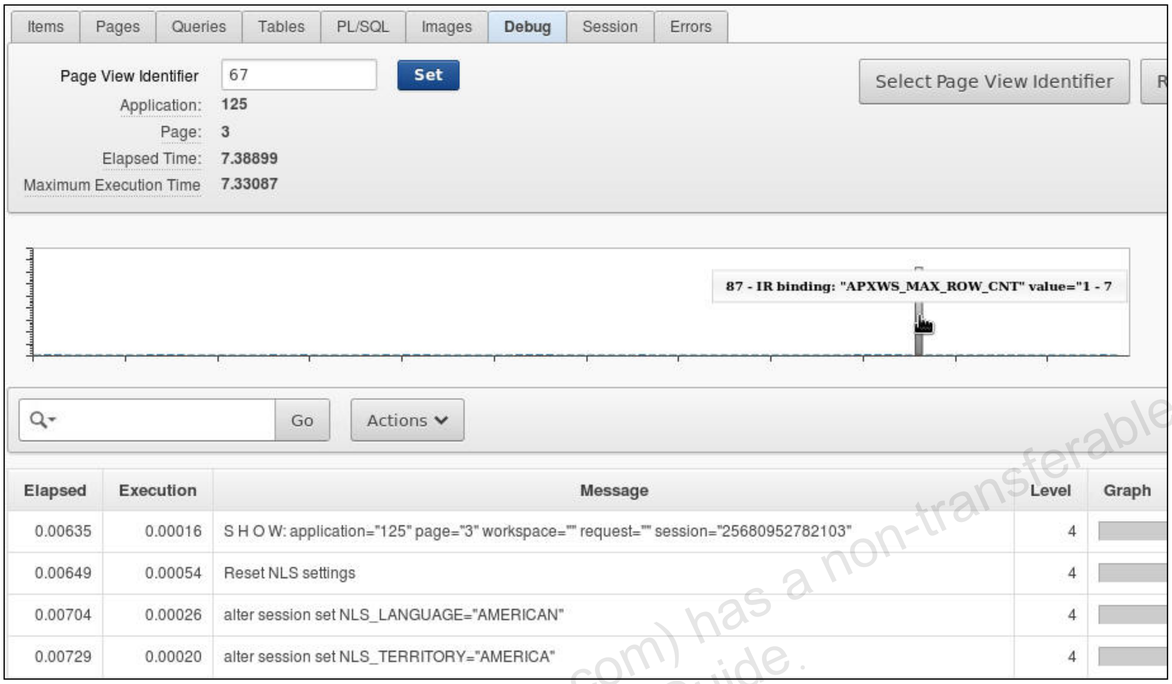
4) The page is refreshed in debug mode. To view the debug result, click **View Debug** on the Developer toolbar.



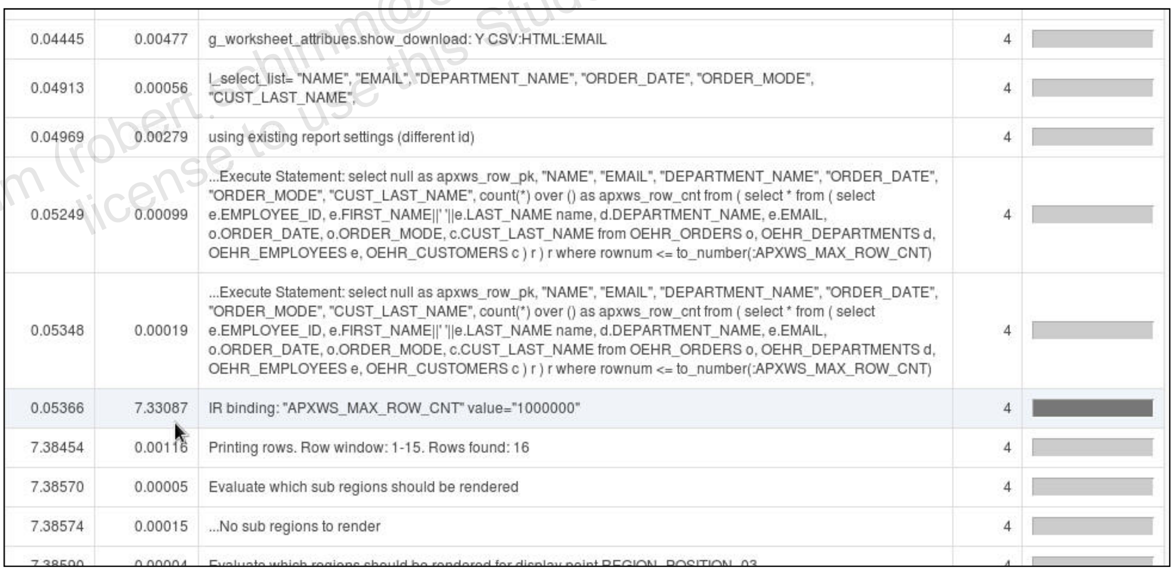
5) Select the **View Identifier** link number.



6) Notice in the graph that there is one statement that is taking a very long time to run.

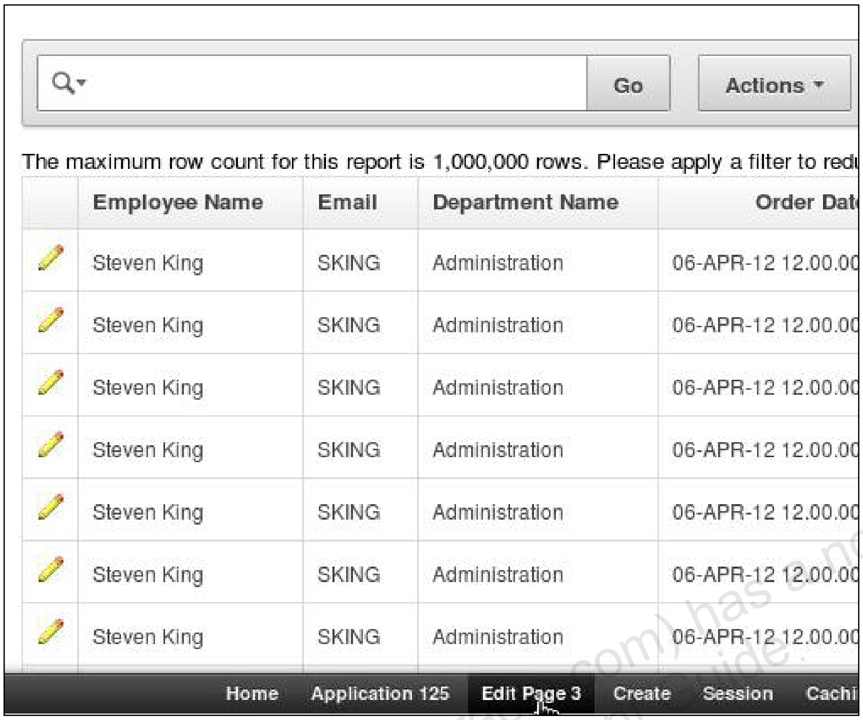


7) It appears that the query to produce the results is taking over 7 seconds to run. This is unacceptable.

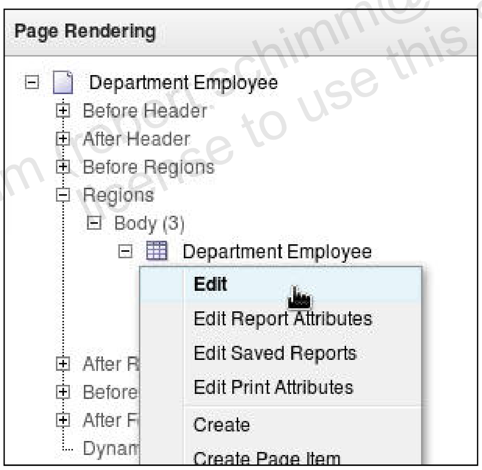


c. Review and make changes to the SQL Query in the Interactive Report.

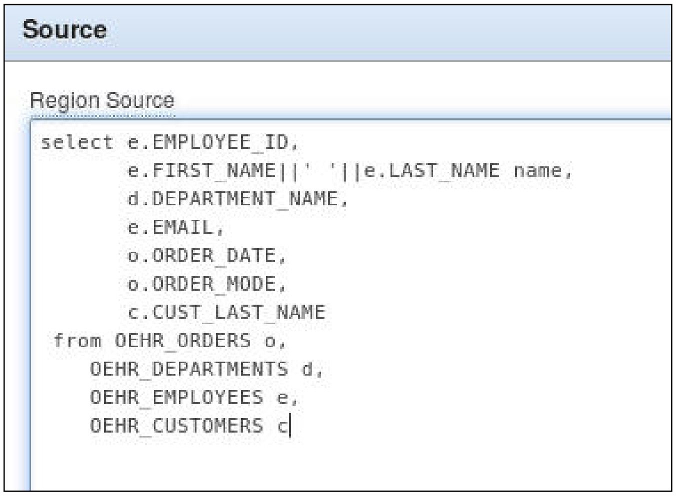
1) Switch to the Report and click the **Edit Page** link on the Developer toolbar.



2) Right-click **Department Employee** and select **Edit**.

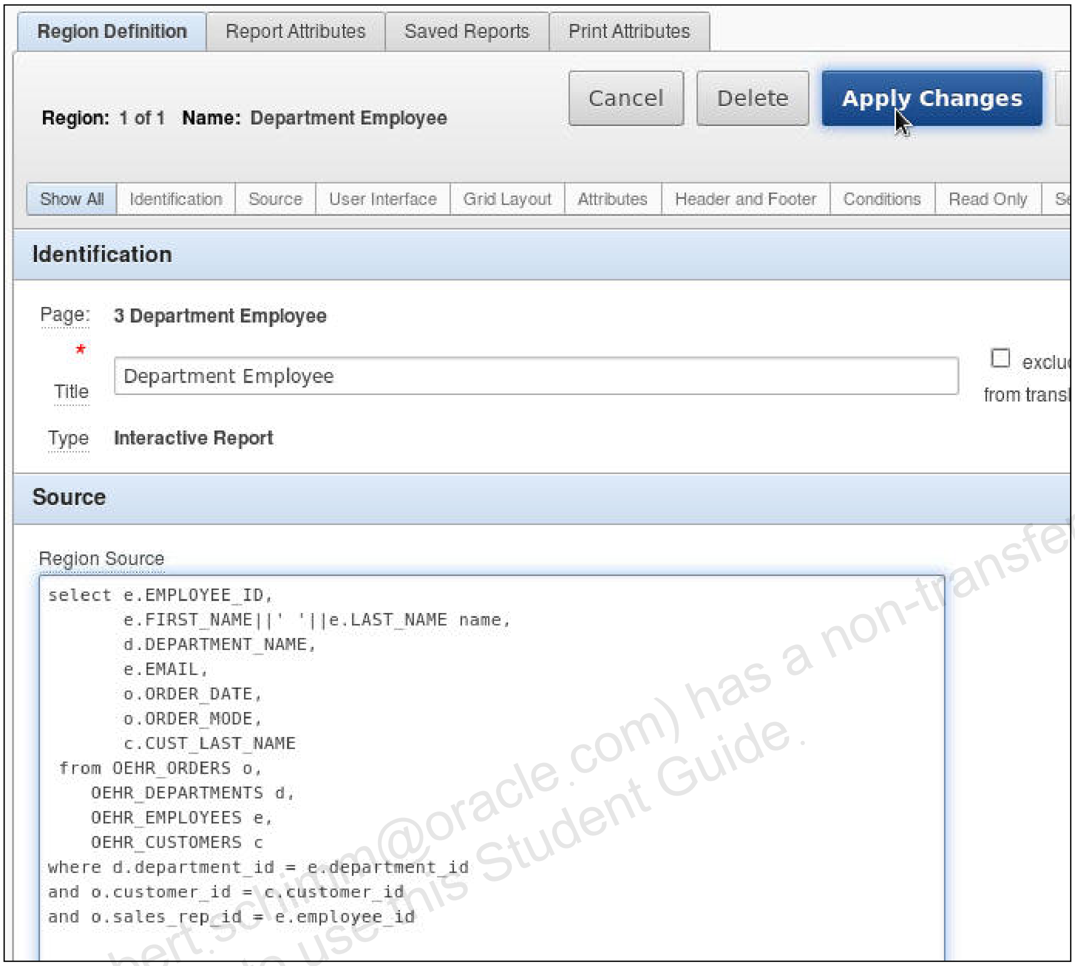


3) Note that the SQL is selecting from multiple tables without a `where` clause to join the tables.

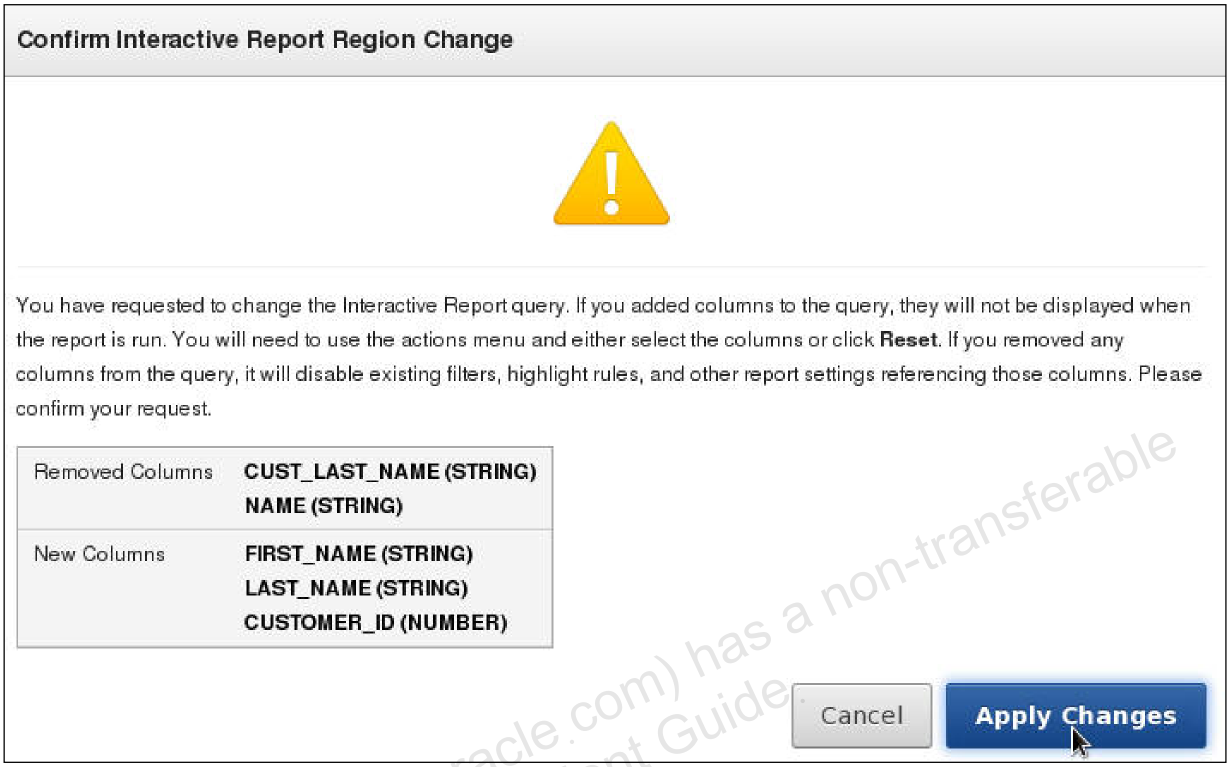


4) Change the SQL query to the following and click **Apply Changes**.

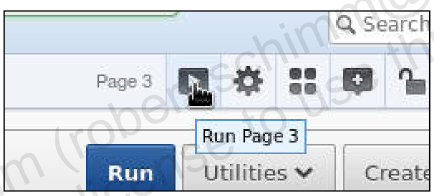
```
select e.EMPLOYEE_ID,
       e.FIRST_NAME,
       e.LAST_NAME,
       d.DEPARTMENT_NAME,
       e.EMAIL,
       o.ORDER_DATE,
       o.ORDER_MODE,
       c.CUSTOMER_ID
 from OEHR_ORDERS o,
    OEHR_DEPARTMENTS d,
    OEHR_EMPLOYEES e,
    OEHR_CUSTOMERS c
  where d.department_id = e.department_id
   and o.customer_id = c.customer_id
   and o.sales_rep_id = e.employee_id
```


Region Definition
Report Attributes
Saved Reports
Print Attributes
Cancel
Delete
Apply Changes
Region: 1 of 1 Name: Department Employee
Show All
Identification
Source
User Interface
Grid Layout
Attributes
Header and Footer
Conditions
Read Only
Identification
Page: 3 Department Employee
Title
Department Employee
Type
Interactive Report
Source
Region Source
select e.EMPLOYEE_ID,
e.FIRST_NAME||' '||e.LAST_NAME name,
d.DEPARTMENT_NAME,
e.EMAIL,
o.ORDER_DATE,
o.ORDER_MODE,
c.CUST_LAST_NAME
from OEHR_ORDERS o,
OEHR_DEPARTMENTS d,
OEHR_EMPLOYEES e,
OEHR_CUSTOMERS c
where d.department_id = e.department_id
and o.customer_id = c.customer_id
and o.sales_rep_id = e.employee_id

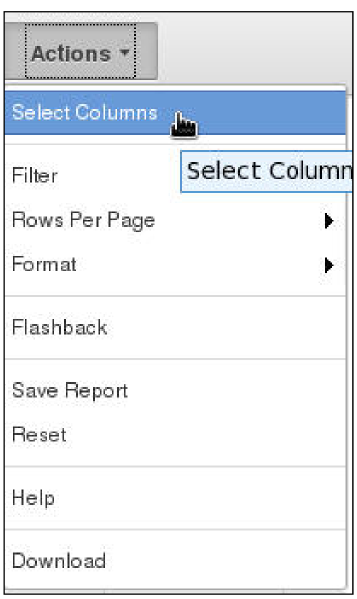
5) Click **Apply Changes** to confirm the interactive report changes.



6) You want to run the page again. Click the **Run Page** icon.

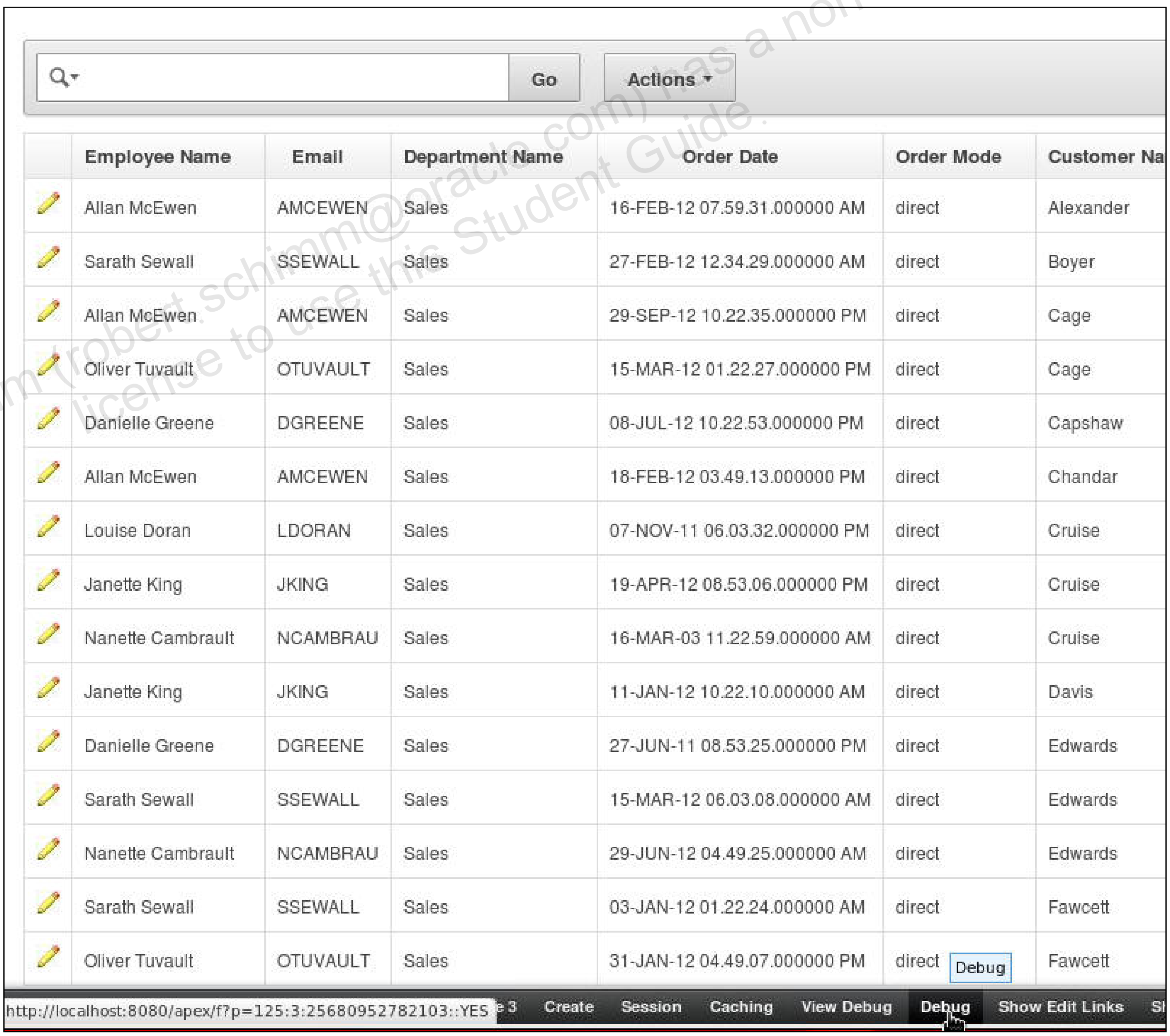


7) Add the columns you changed. Select **Actions > Select Columns**.

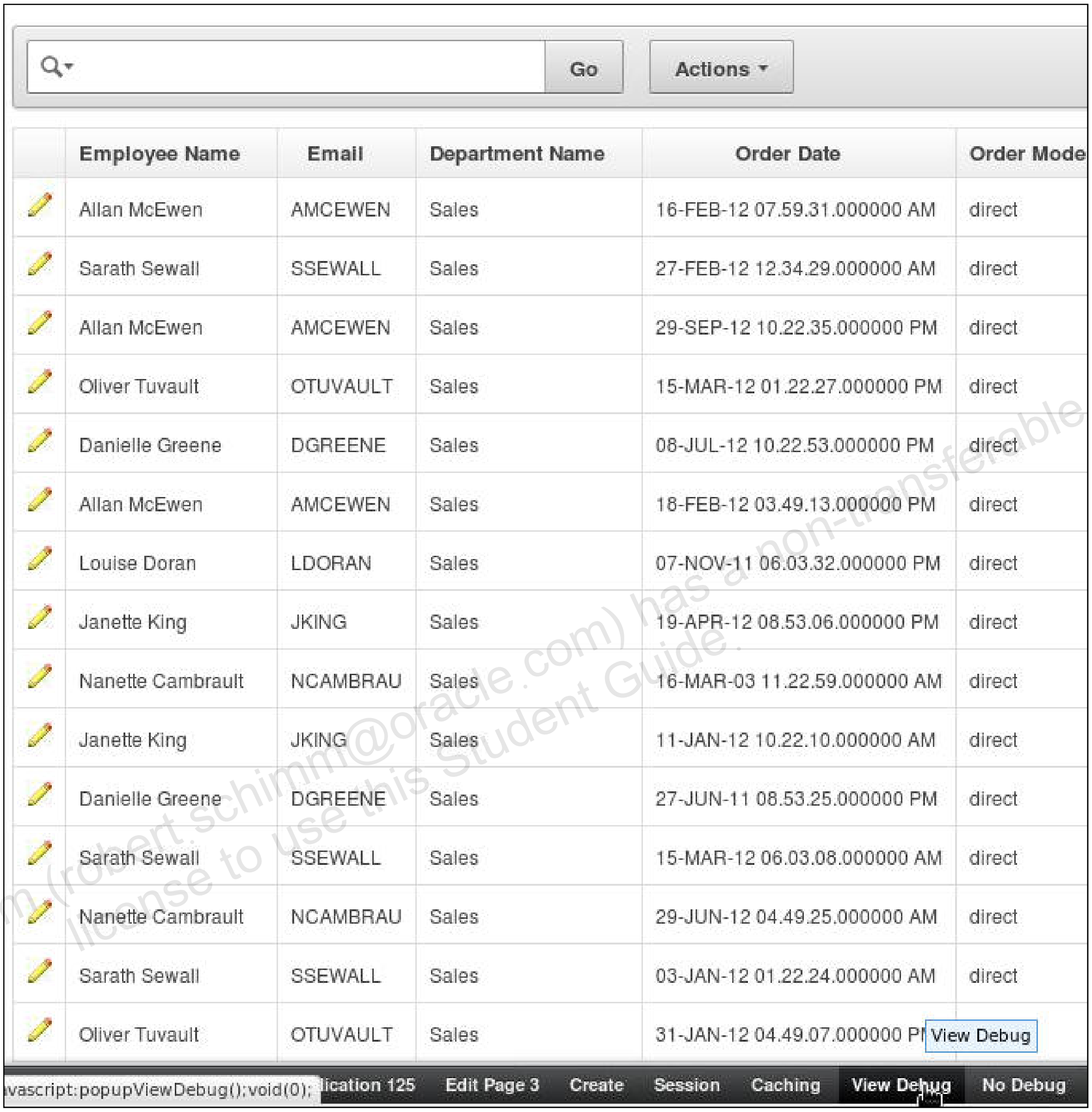


8) Add all the columns using the double right arrow (>>), and then move them all to the top. Then click **Apply**.

9) Click **Debug** on the Developer toolbar again.

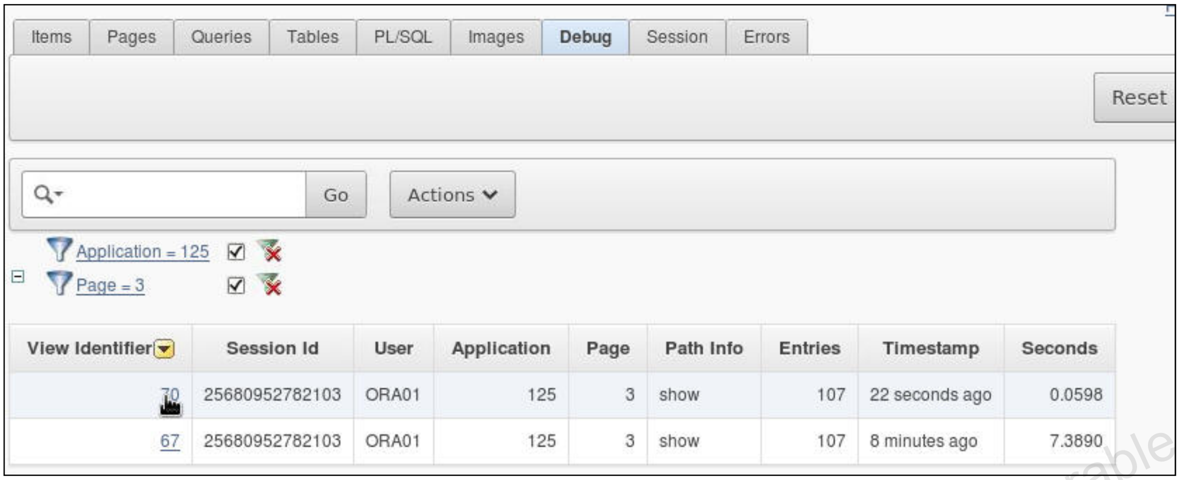


10) Click **View Debug** on the Developer toolbar again.

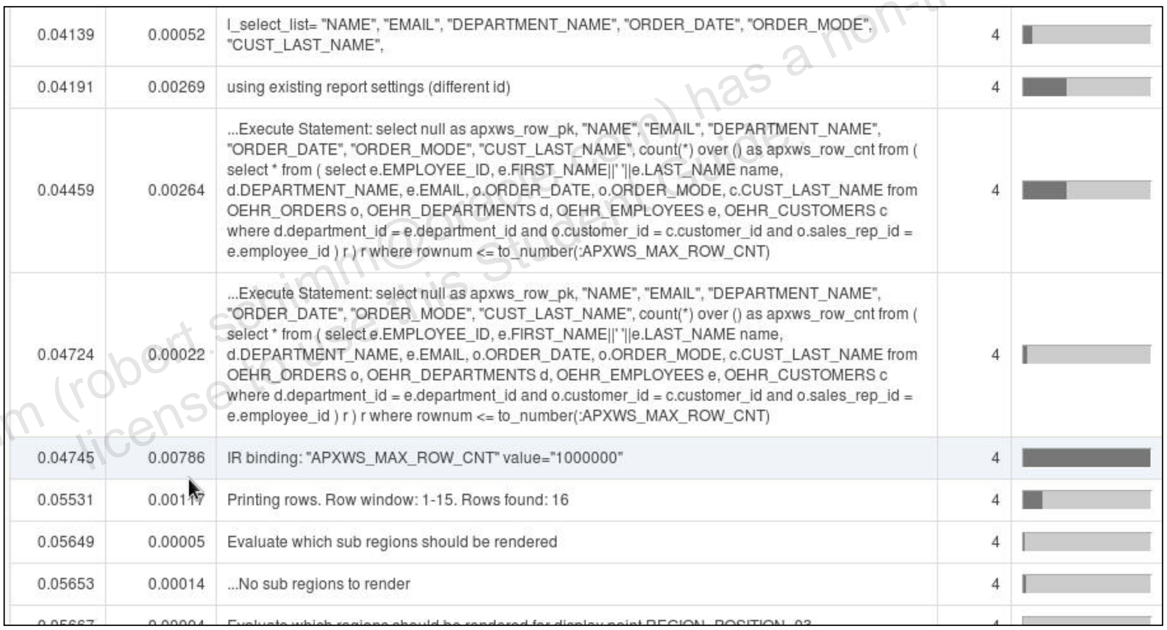


	Employee Name	Email	Department Name	Order Date	Order Mode
	Allan McEwen	AMCEWEN	Sales	16-FEB-12 07.59.31.000000 AM	direct
	Sarath Sewall	SSEWALL	Sales	27-FEB-12 12.34.29.000000 AM	direct
	Allan McEwen	AMCEWEN	Sales	29-SEP-12 10.22.35.000000 PM	direct
	Oliver Tuvault	OTUVAULT	Sales	15-MAR-12 01.22.27.000000 PM	direct
	Danielle Greene	DGREENE	Sales	08-JUL-12 10.22.53.000000 PM	direct
	Allan McEwen	AMCEWEN	Sales	18-FEB-12 03.49.13.000000 PM	direct
	Louise Doran	LDORAN	Sales	07-NOV-11 06.03.32.000000 PM	direct
	Janette King	JKING	Sales	19-APR-12 08.53.06.000000 PM	direct
	Nanette Cambrault	NCAMBRAU	Sales	16-MAR-03 11.22.59.000000 AM	direct
	Janette King	JKING	Sales	11-JAN-12 10.22.10.000000 AM	direct
	Danielle Greene	DGREENE	Sales	27-JUN-11 08.53.25.000000 PM	direct
	Sarath Sewall	SSEWALL	Sales	15-MAR-12 06.03.08.000000 AM	direct
	Nanette Cambrault	NCAMBRAU	Sales	29-JUN-12 04.49.25.000000 AM	direct
	Sarath Sewall	SSEWALL	Sales	03-JAN-12 01.22.24.000000 AM	direct
	Oliver Tuvault	OTUVAULT	Sales	31-JAN-12 04.49.07.000000 PI	

11) Select the most recent **View Identifier** link which should be the first one in the list.

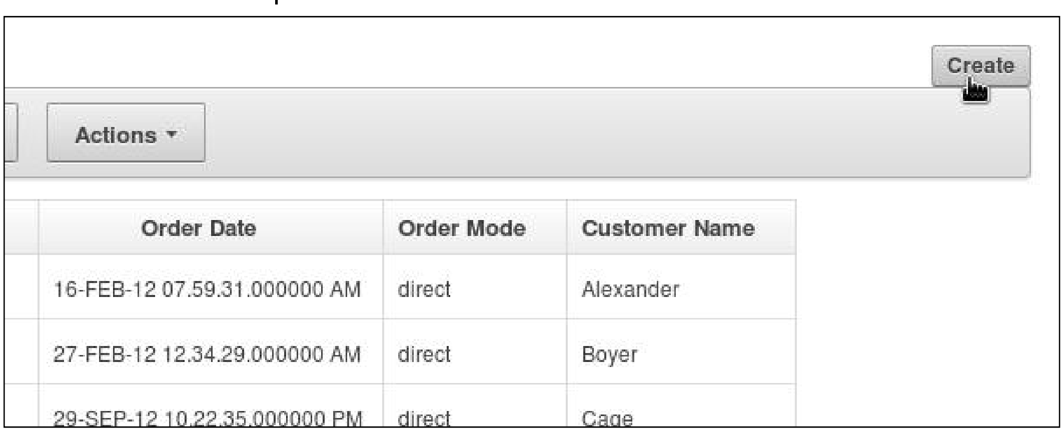


12) If you scroll down to the same statement as before, you see that the time taken to execute the query has been drastically reduced.

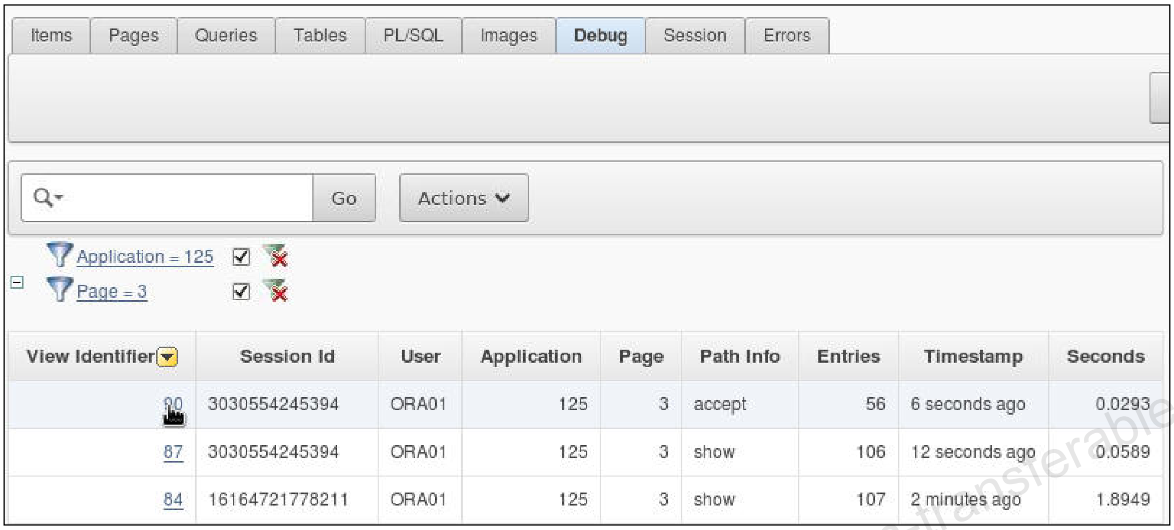


d. Why does the Create button not do anything when you click it?

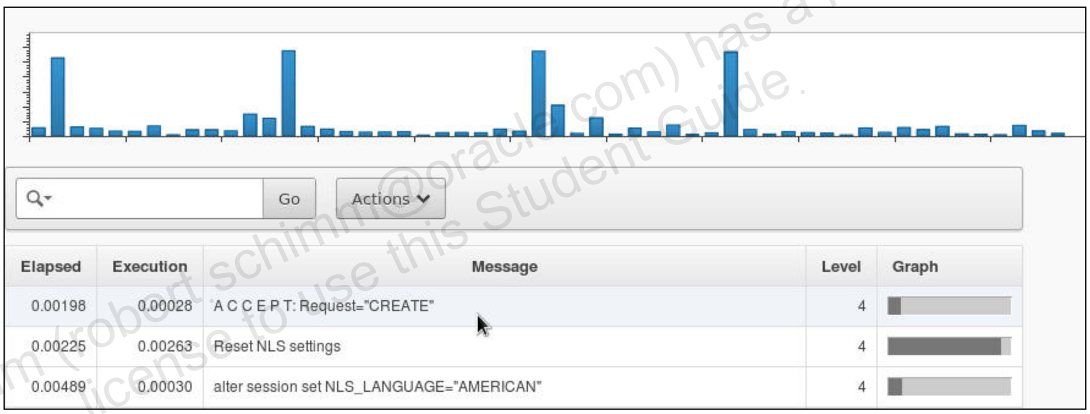
1) Switch back to the report and click the **Create** button.



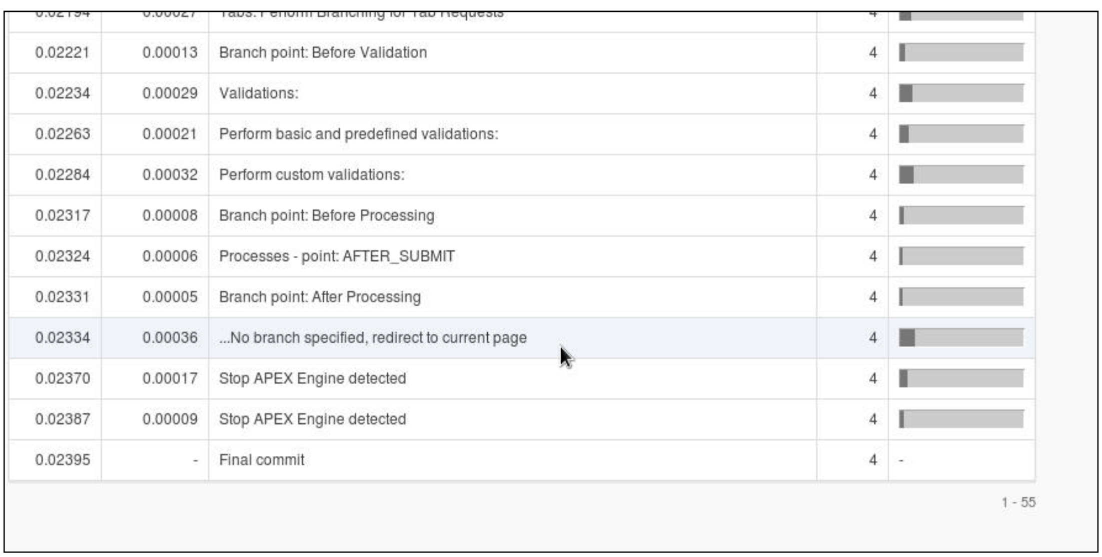
2) Click View Debug on the Developer toolbar again and select **View Identifier** for the accept Path Info row.



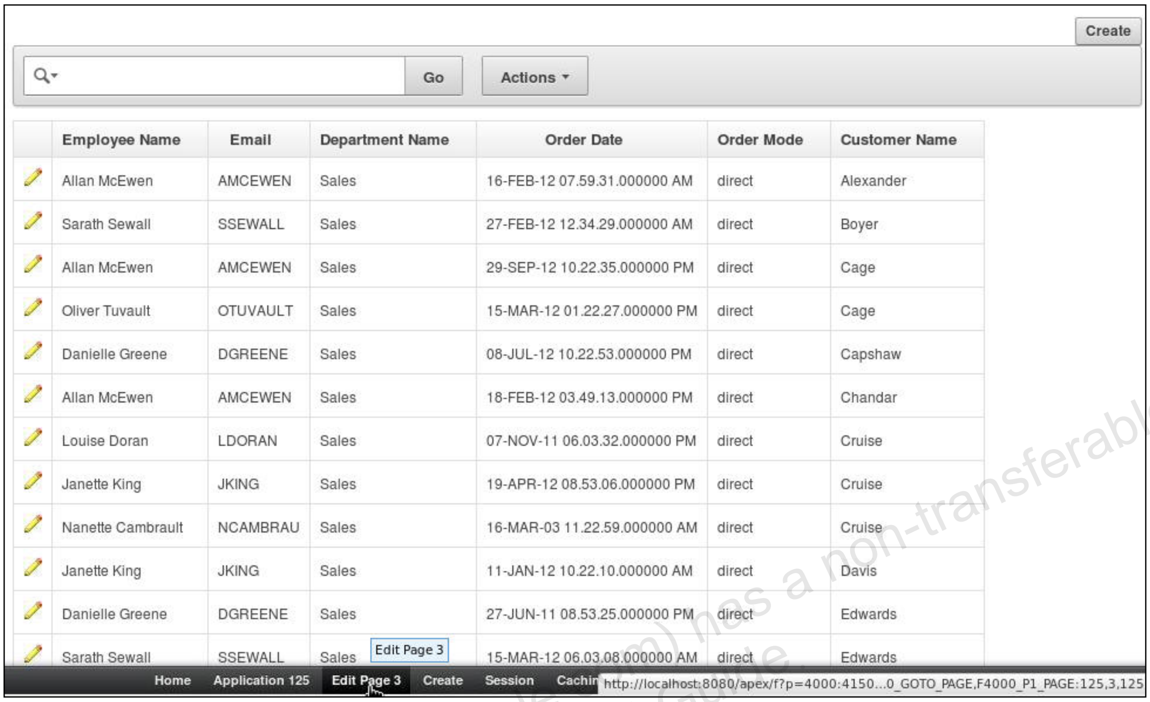
3) Notice that Request=CREATE. Scroll down to the bottom of the page.



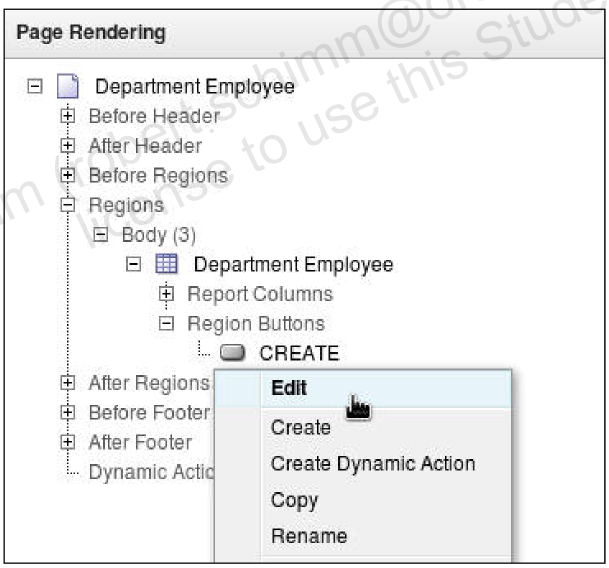
4) There is no branch so the button redirects to the current page.



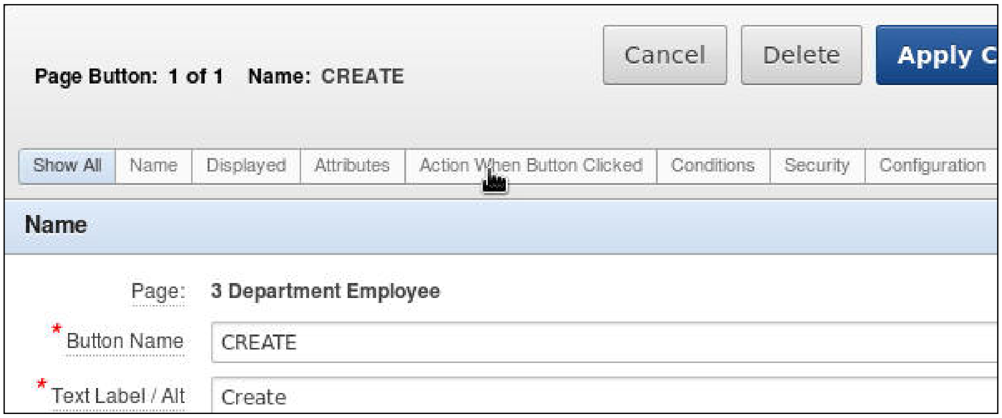
5) You want to review the definition for the button. Click **Edit Page** on the Developer toolbar.



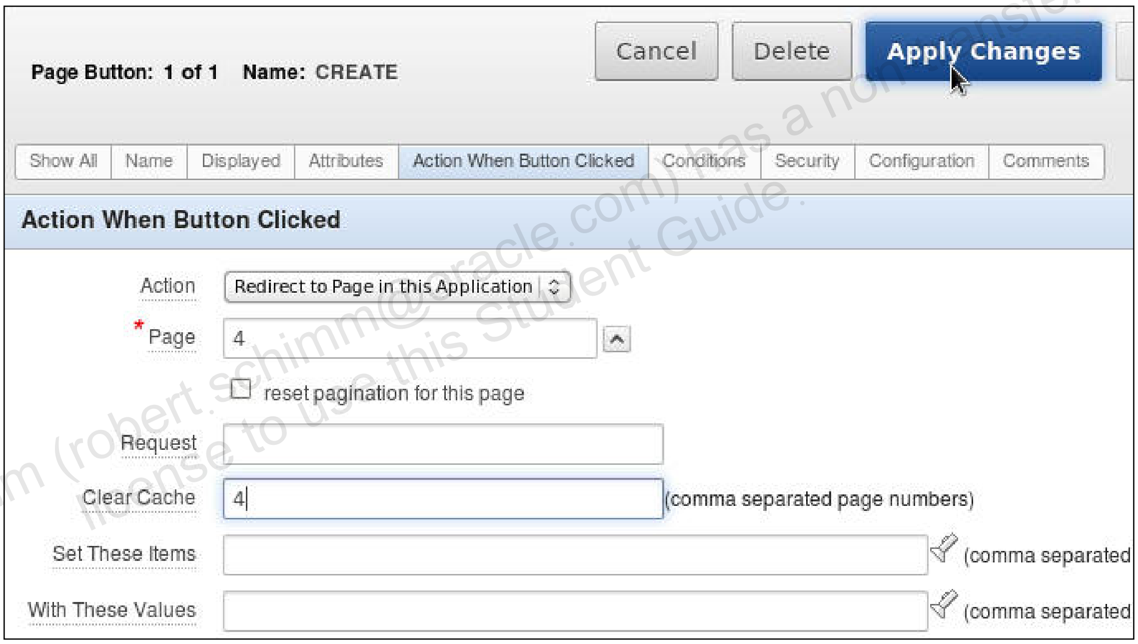
6) Right-click **CREATE** and select **Edit**.



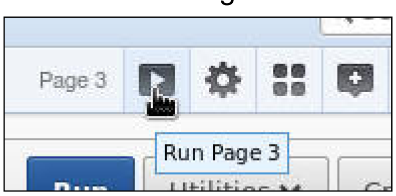
7) Click the **Action When Button Clicked** subtab.



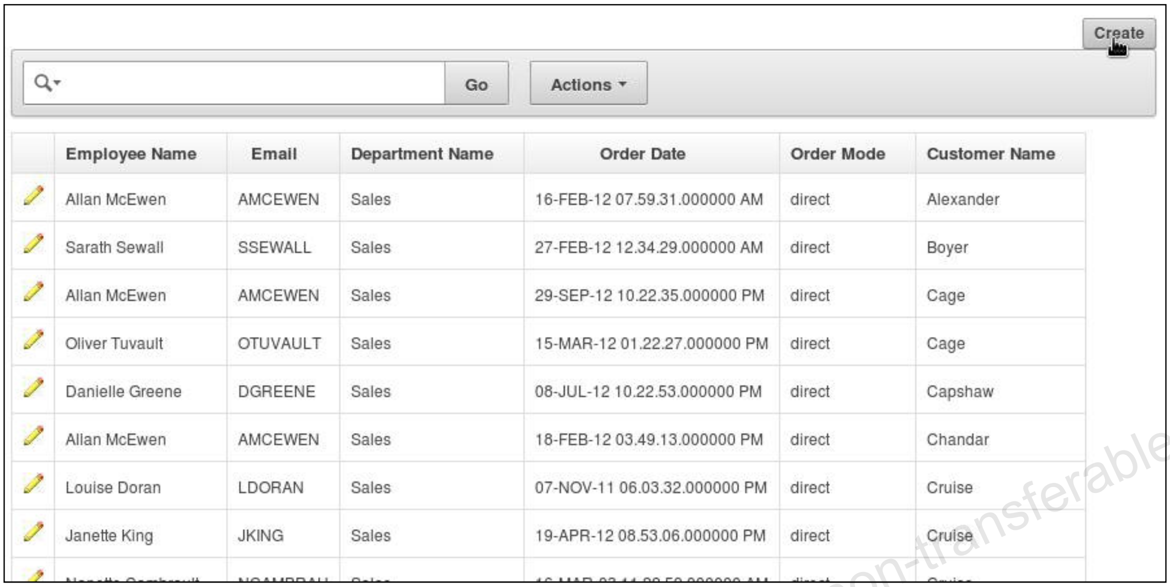
8) Change Action to **Redirect to Page in this Application**. Enter **4** for Page and Clear Cache and click **Apply Changes**.



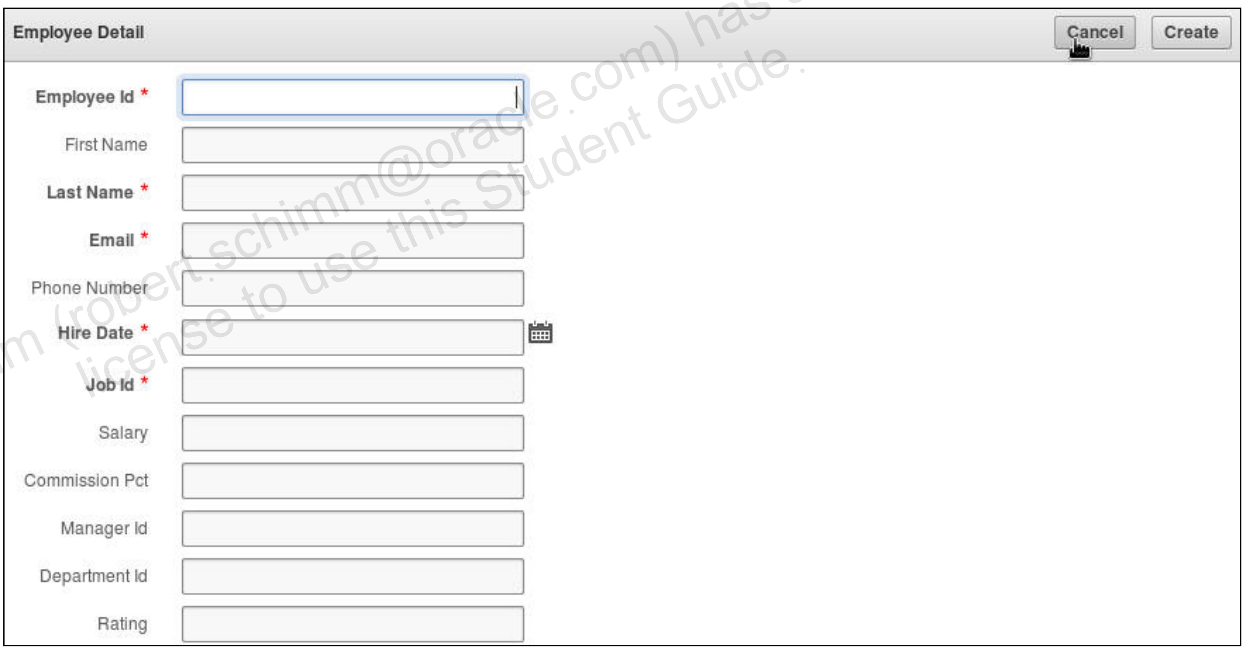
9) Click the Run Page icon.



10) Click the **Create** button again.

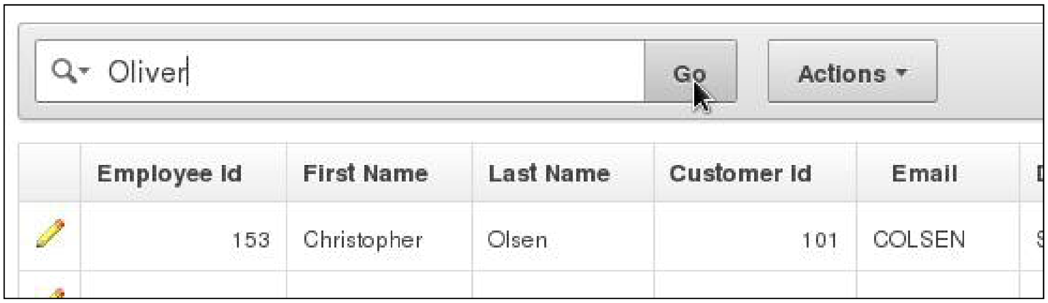


11) Page 4 to create a new Employee is displayed.

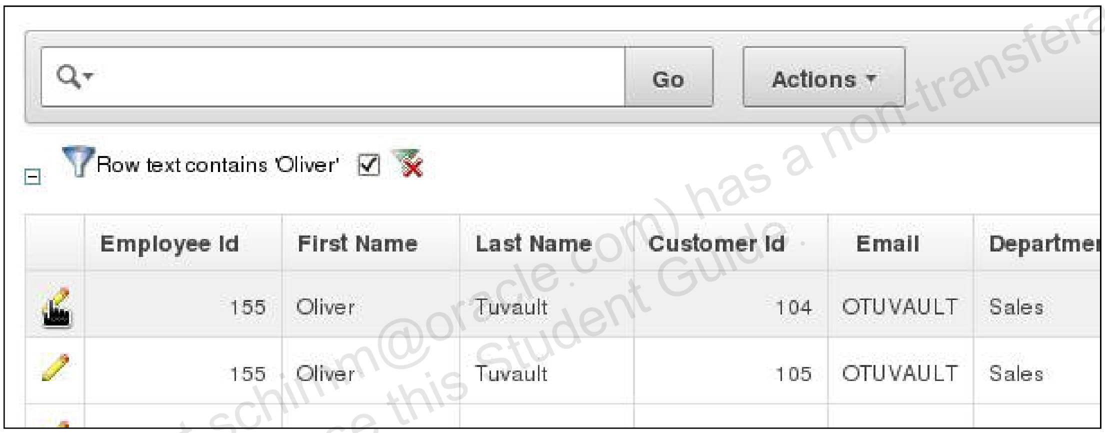


e. Optional: When you edit an employee on page 3 (the Employee Report), why is the employee record not displayed on page 4? See if you can figure this out on your own without looking at the solution.

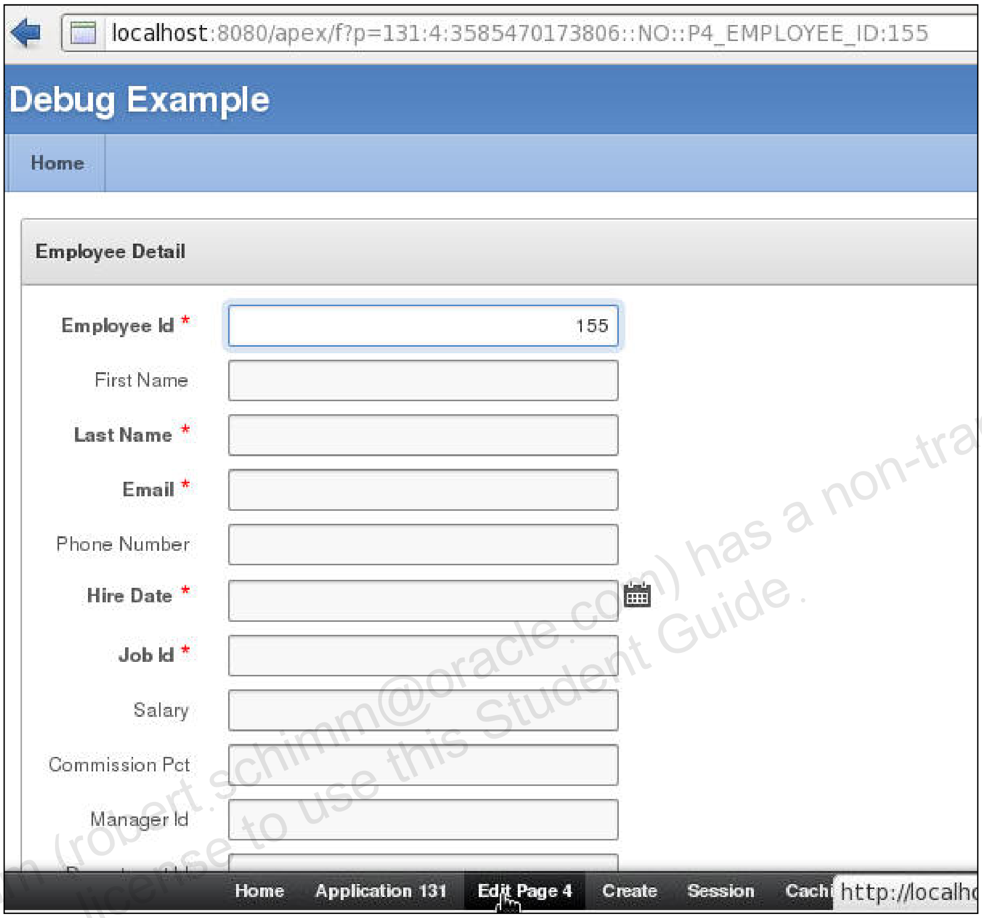
1) Enter **Oliver** in the search area and click **Go**.



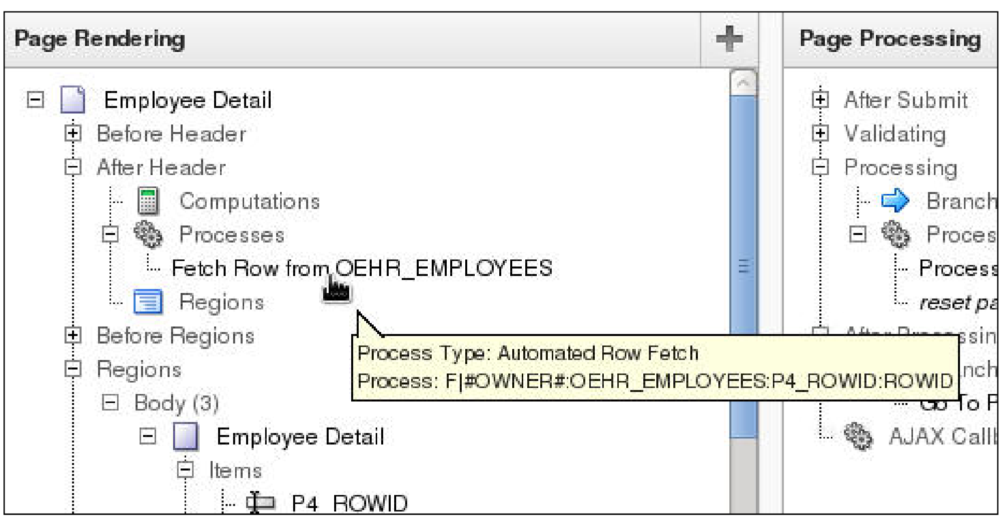
2) Click the Edit icon in the first row.



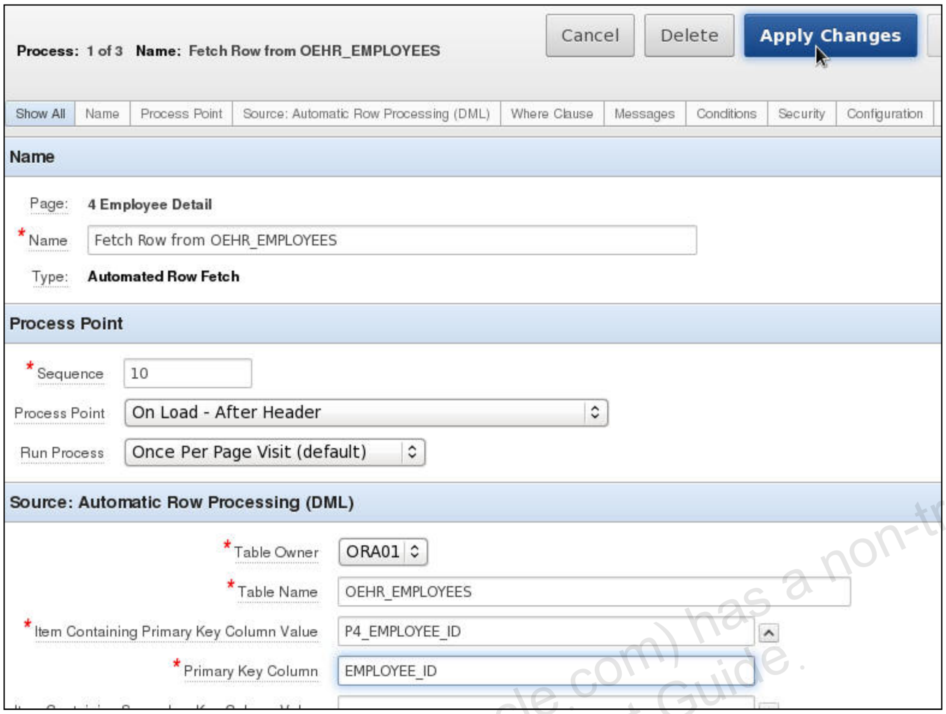
3) Notice that all the employee information is not retrieved and displayed. You will examine why this happened and how to correct it. Review the URL. Notice that the value being passed into the form is P4_EMPLOYEE_ID. Let us see what is being fetched. Click the **Edit Page** link on the Developer toolbar.



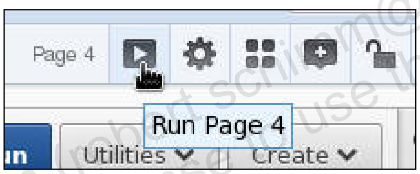
4) You can see that the Automated Row Fetch is using ROWID not EMPLOYEE_ID. Double-click **Fetch Row from OEHR_EMPLOYEES**.



5) Change the Item Containing Primary Key Column Value to **P4_EMPLOYEE_ID** and Primary Key Column to **EMPLOYEE_ID**, and click Apply Changes.



6) Run the page.



7) Notice that the fetch retrieves the information correctly now.