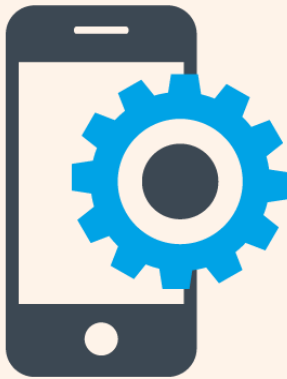


Diploma in Mobile App Development Part 1

LESSON 5

Storing Data with Apps



MA Instructor: Oisin Feely





Lesson 4: The Development Lifecycle

Software Development Lifecycle Models

The Iterative Process

Learning to Code

Taking it Further

Lesson 5: Storing Data with Apps

Data Storage Options

Introduction to TinyDB

Putting it all together

Summary

Competition

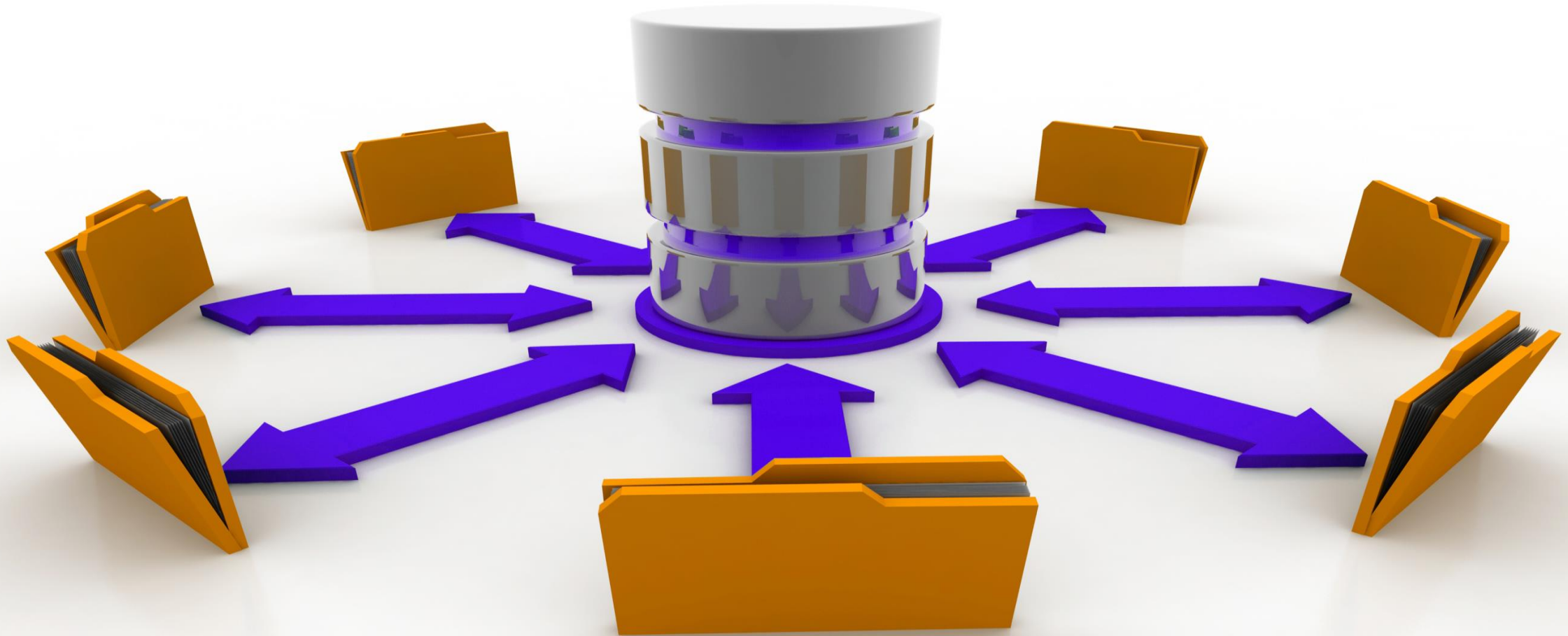
Q & A

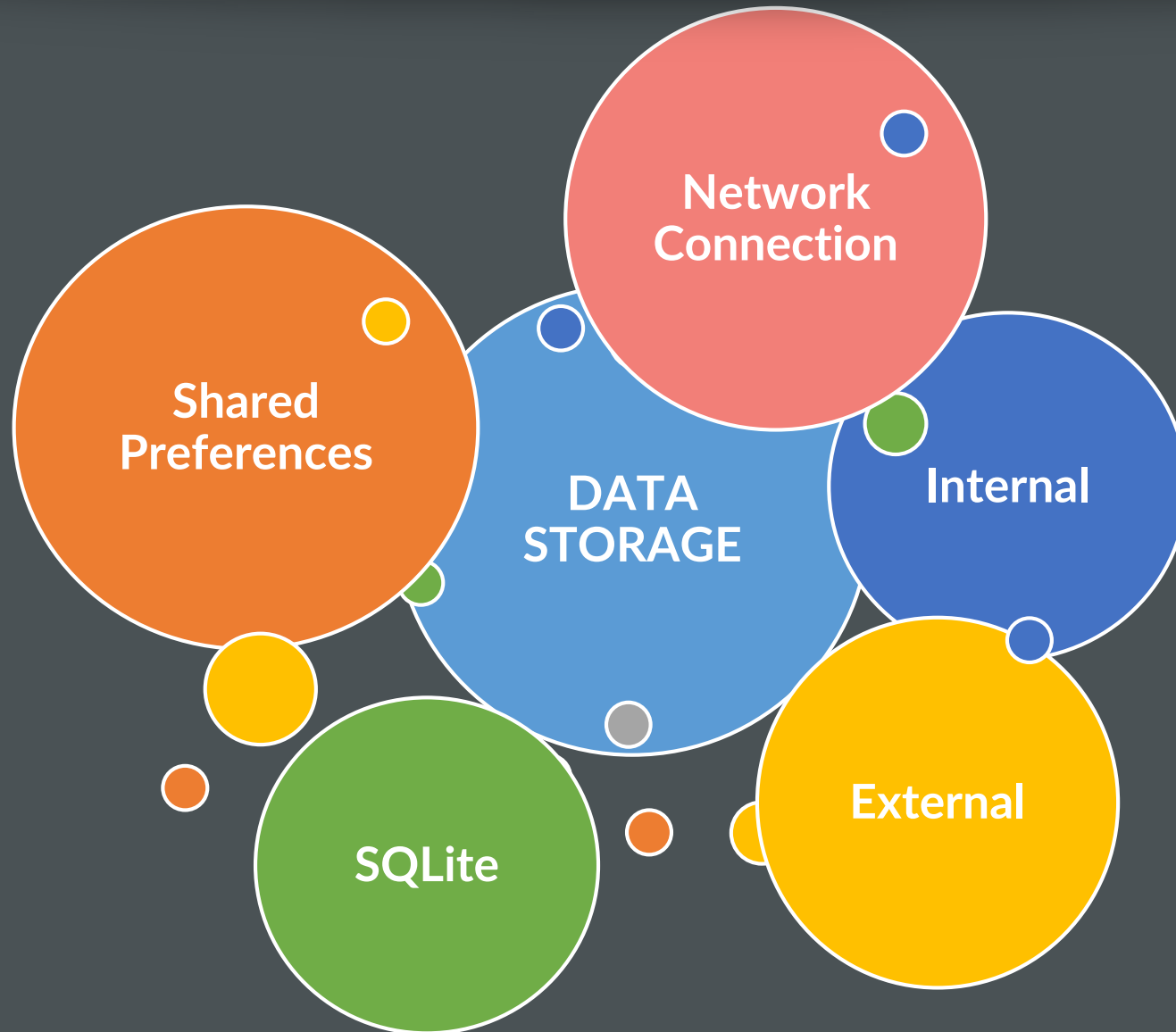
Let's Begin!

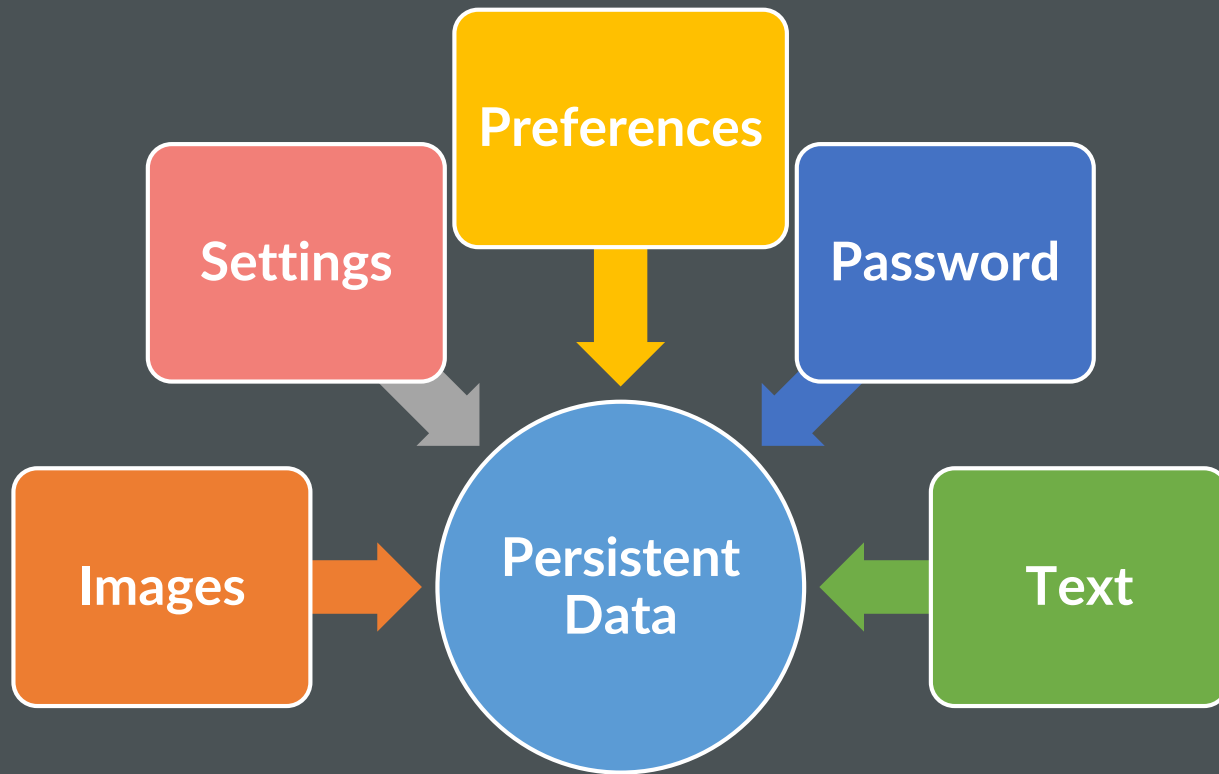


START

Data Storage Options







WHICH IS BETTER TO USE FOR STORING DATA ON THE DEVICE MEMORY?

1) Variables

```
initialize global passwordValue to "applInventor"
```

2) Internal Storage

```
call TinyDB1 .StoreValue  
tag "passwordValue"  
valueToStore "applInventor"
```

ANS: INTERNAL STORAGE

TinyDB is a simple “**database**” that stores data locally on the device’s **internal storage**.

TinyDB can store & retrieve data efficiently, it uses the programming concept “**tags**” to identify the stored data, and the **value**.

Tag/Value Pairing

Tag – Title of the Item

Value – Item to be Stored

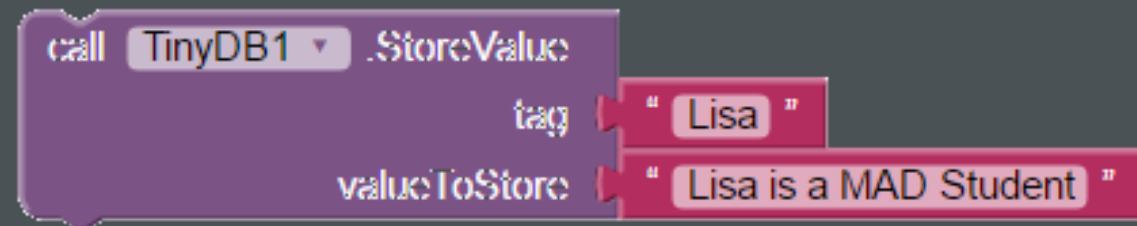
TinyDB locates the value information by searching for the “**tag**”

Oisin

Oisin is the MAD Educator

Lisa

Lisa is a MAD Student



Completing Our App



Completing Our App

Screen1:

```
when BearBtn .Click
do
  if
    BearBtn . Image = " Bear.png "
  then
    open another screen with start value screenName " Bear "
    startValue get global Player
  else
    call Notifier1 .ShowMessageDialog
    message " Go to the Cave "
    title " Further Info Required "
    buttonText " Go Back "

when ScanBtn .Click
do
  call AnimalScan .DoScan
```

Bear:

```
when Bear .Initialize
do
  set Title . Text to
  join
    " Look out "
    get start value
    " , a Bear! "
```

Completing Our App

```
when AnimalScan .AfterScan
  result
do
  if contains text get result
    piece "011"
  then
    set BearBtn . Image to "Bear.png"
    call TinyDB1 .StoreValue
      tag "BearImage"
      valueToStore BearBtn . Image
```



```
when AnimalScan .AfterScan
  result
do
  if contains text get result
    piece "011"
  then
    set BearBtn . Image to "Bear.png"
    call TinyDB1 .StoreValue
      tag "BearImage"
      valueToStore BearBtn . Image
  if contains text get result
    piece "504"
  then
    set FoxBtn . Image to "Fox.png"
    call TinyDB1 .StoreValue
      tag "FoxImage"
      valueToStore FoxBtn . Image
  if contains text get result
    piece "941"
  then
    set RhinoBtn . Image to "Rhino.png"
    call TinyDB1 .StoreValue
      tag "RhinoImage"
      valueToStore RhinoBtn . Image
  if contains text get result
    piece "000"
  then
    set EleBtn . Image to "Elephant.png"
    call TinyDB1 .StoreValue
      tag "EleImage"
      valueToStore EleBtn . Image
```

Completing Our App

```
when Screen1 .OtherScreenClosed
  otherScreenName result
do
  set BearBtn . Image to call AnimalDB .GetValue
                        tag "BearImage "
                        valueIfTagNotThere "BearSilhouette.png "
  set FoxBtn . Image to call AnimalDB .GetValue
                       tag "FoxImage "
                       valueIfTagNotThere "FoxSilhouette.png "
  set EleBtn . Image to call AnimalDB .GetValue
                      tag "EleImage "
                      valueIfTagNotThere "EleSilhouette.png "
  set Rhinobtn . Image to call AnimalDB .GetValue
                        tag "RhinolImage "
                        valueIfTagNotThere "RhinoSilhouette.png "
```

Completing Our App

```
when Notifier1 .AfterTextInput
  response
do
  set global Player to get response
  set Label1 . Text to join " Player: "
  get global Player
  if
    compare texts get global Player = call TinyDB1 .GetValue
      tag " playerName "
      valueIfTagNotThere " ERROR "
  then
    set BearBtn . Image to call TinyDB1 .GetValue
      tag " BearImage "
      valueIfTagNotThere " BearSilhouette.png "
  else
    call TinyDB1 .StoreValue
      tag " playerName "
      valueToStore get global Player
    set BearBtn . Image to " BearSilhouette.png "
```

Completing Our App

```
when Notifier1 .AfterTextInput
  response
do
  set global Player to get response
  set Label1 .Text to join " Player: "
                    get global Player
  if
    compare texts get global Player = call TinyDB1 .GetValue
      tag "PlayerName"
      valueIfTagNotThere "ERROR"
  then
    set BearBtn .Image to call TinyDB1 .GetValue
      tag "BearImage"
      valueIfTagNotThere "BearSilhouette.png"
    set FoxBtn .Image to call TinyDB1 .GetValue
      tag "FoxImage"
      valueIfTagNotThere "FoxSilhouette.png"
    set RhinoBtn .Image to call TinyDB1 .GetValue
      tag "RhinoImage"
      valueIfTagNotThere "RhinoSilhouette.png"
    set EleBtn .Image to call TinyDB1 .GetValue
      tag "EleImage"
      valueIfTagNotThere "ElephantSilhouette.png"
  else
    call TinyDB1 .StoreValue
      tag "PlayerName"
      valueToStore get global Player
    set BearBtn .Image to "BearSilhouette.png"
    set FoxBtn .Image to "FoxSilhouette.png"
    set RhinoBtn .Image to "RhinoSilhouette.png"
    set EleBtn .Image to "ElephantSilhouette.png"
```



Time to see what YOU have been Inventing! Post a Screenshot of Your App

- ✓ Go To Shaw Academy's Facebook Page
- ✓ Use the **#ShawMADProgress** and Tell Us What You've Made!
- ✓ Search **#ShawMADProgress** to find Past Examples



#ShawMADProgress



- ✓ Data Storage Options
- ✓ Introduction to TinyDB
- ✓ Putting it All Together

Congratulations you have taken the next step in **Android Development!**

- Attend Lessons **LIVE** to ask **Questions** in real time and benefit the most
- We're here to help, so contact us anytime!
- mobile.app@shawacademy.com



The next session is “Publishing Your App”

Getting Ready for Launch

The Final Checks

The Google Play Developer Console

Launching our MVP

Attend all of the lessons **LIVE** and your knowledge will grow

QUESTION TIME

See you back for **Lesson 6**
Publishing Your App



MAD Educator: Oisín Feely

Watching a Recording? Email Us:

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@ShawAcademy