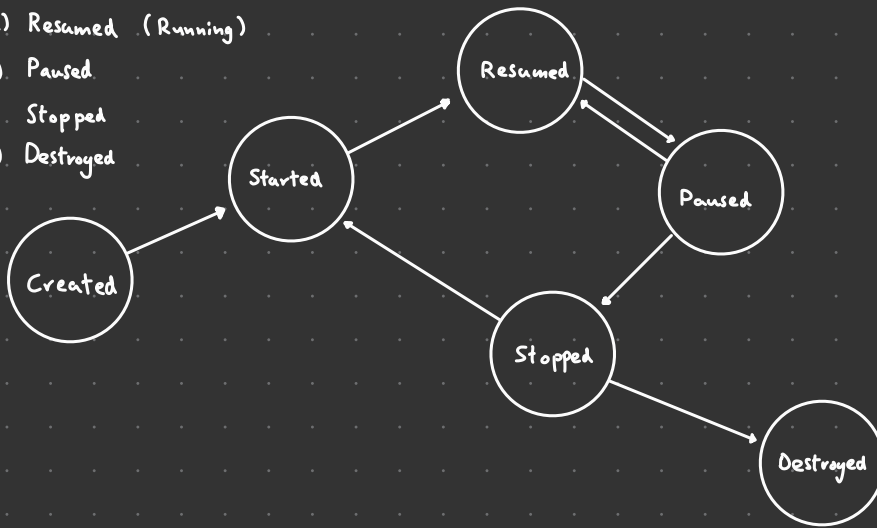# BO7 Nov 15 Lec 1 Notes

There are 6 states an activity can have

    (i) Create

    (ii) Started

    (iii) Resumed (Running)

    (iv) Paused

    (v) Stopped

    (vi) Destroyed
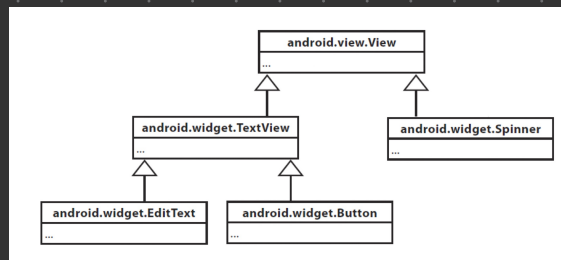

Folder Structure

    ↳ Manifest file

       ↳ Defines the structure and meta data of an application, its components, and its requirements.

       ↳ Stored in the root of its project hierarchy as an XML file.

    ↳ Java Files

    ↳ Resource files

       ↳ Resources are maintained in sub-directories of the app/res directory.

       ↳ A resource can be accessed in the code using its resource ID.

    ↳ Gradle scripts

       ↳ Used to automate the build process.

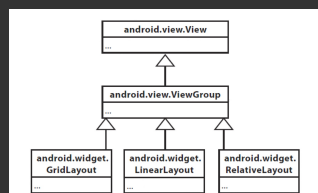## View

    ↳ Most GUI components are instances of the View class or one of its subclasses.

View Group

    ↳ A special type of view that contain other views

    ↳ A layout is a type of view group.

Intents
↳ An intent is an object that can be used to bind activities together at run time.
↳ An activity can start another one by sending an intent to Android. Android will start the second activity and pass it the intent.
↳ Data can be passed between activities using intent extras.

Android - Storing Data

Data Storage Options
↳ File system
↳ Shared Preferences
↳ Databases
  ↳ SQLite
  ↳ Firebase

File System
↳ Android's file system consists of six main partitions
  ↳ /boot
  ↳ /system
  ↳ /recovery
  ↳ /data
  ↳ /cache
  ↳ /misc
↳ Reading / writing data to a file on internal storage can be done using
  ↳ open File Input ()
  ↳ open File Output ()

Shared Preferences
↳ Suitable for simple data that could be stored as key/value pairs
↳ A Shared preferences object refers to a file containing key/value pairs and provides methods to read and write them.
↳ Creating / accessing shared preference can be done using:
  ↳ getPreferences ()
  ↳ get Shared Preferences ()

SQLite
↳ Relational database
↳ Serverless
↳ Zero - configuration
↳ File- based
↳ Widely used

Firebase Realtime Database
↳ Cloud-hosted
↳ Employs data synchronization
↳ Data is stored as JSON
↳ The Fire Base SDK provides many classes and methods to store and sync data, e.g.
  ↳ Database Reference, Data snapshot, Value Event Listener.