



Activity Lifecycle

Upon completion of this module, a student will be able to

- understand what an Activity is and how Android works with them
- understand what the Android Manifest is and how to manage activities in it
- understand the principle of the activity lifecycle
- understand the stages of the activity lifecycle



Project

- Task
 - For this project, you will tracking the lifecycle of each of the activities in your Image Viewer app. Start with your Image Viewer app override methods for all the activity states so that the system logs each time a state is entered.
- Repo
 - https://github.com/LambdaSchool/Android_Lifecycle
- Submission
 - Compress the project directory into a zip archive and then send it to your PM in a DM.



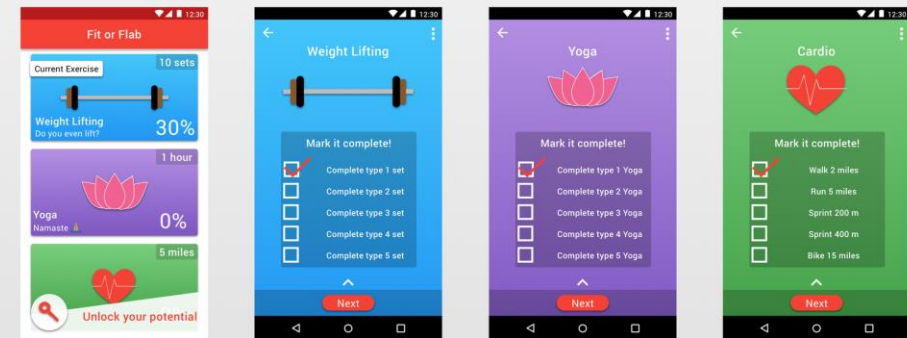


A Student Can

understand what an Activity is and how
Android works with them

Activities

- Entry point of App
- One UI Window
- Loosely bound to others





A Student Can

understand what the Android Manifest is
and how to manage activities in it

Android Manifest

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    package="com.lambdaschool.favoritepicturesgallery">

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="FavoritePicturesGallery"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme"
        tools:ignore="GoogleAppIndexingWarning">
        <activity android:name=".MainActivity">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER" />
            </intent-filter>
        </activity>
        <activity android:name=".DetailsActivity" />
        <activity
            android:name=".FullscreenActivity"
            android:configChanges="orientation|keyboardHidden|screenSize"
            android:label="FullscreenActivity"
            android:theme="@style/FullscreenTheme"/>
    </application>

</manifest>
```

- Contains key information about app
- Describes app to
 - Build Tools
 - Operating System
 - Play Store
- Declare app components



A Student Can

understand the stages of the activity
lifecycle

Activity Lifecycle

- Activities managed through callbacks
- How the OS enforces memory and battery management
- Must implement onCreate

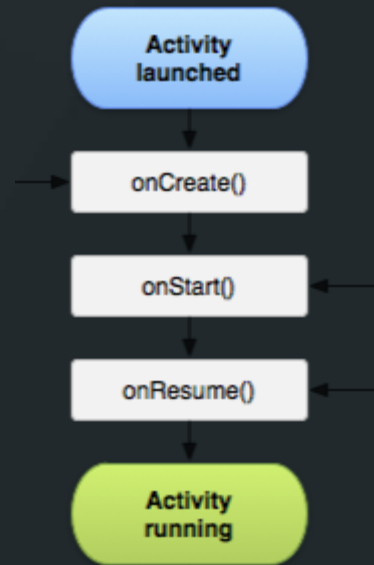




A Student Can

understand what to do in each stage of the
lifecycle

Startup Methods



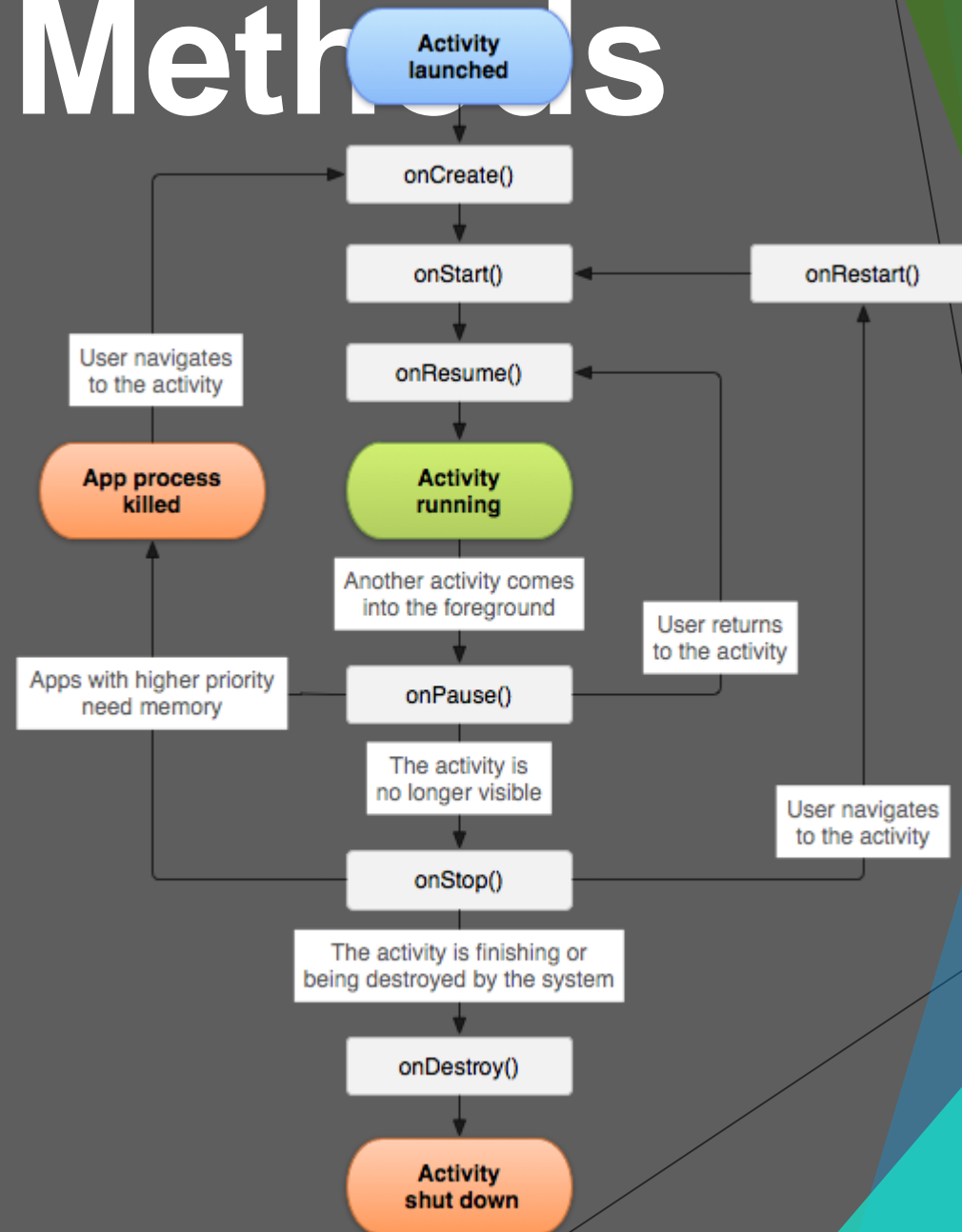
- onCreate
 - initialize components
 - set view layout
- onStart
 - final startup preparations
- onResume
 - core functionality

Shutdown Methods

- onPause
 - partially visible
 - short
- onStop
 - not visible
 - still in memory
- onDestroy
 - shut down
- onRestart
 - reactivates data from memory



Shutdown Methods



- ▶ onPause
 - ▶ partially visible
 - ▶ short
- ▶ onStop
 - ▶ not visible
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 - ▶ shut down
- ▶ onRestart