

Android for Beginners

Week 0

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A brief history of Android

How Android is different from iOS

**You need to do your own
research**

Java vs Kotlin

- Dalvik JVM (JIT)
- ART (Android Runtime) (AOT)
- Google vs Oracle lawsuit : [https://en.wikipedia.org/wiki/Google_v._Oracle_America]

Android Studio

Create your first Android Project

- start a new android studio project
- template: empty activity
- Set app name and package name
 - Why unique package name is important
- Set the minimum SDK
- Language: Java
- AndroidX

The project structure

- The MainActivity
- AndroidManifest.xml
- R.java
- Gradle and Gradle build
- The res folder [<https://developer.android.com/guide/topics/resources/providing-resources>]
 - Drawable
 - Layout
 - Minimap
 - Values
 - Raw
 - Xml
 - Font
 - menu

Layouts

- XML vs WYSIWYG
- View and ViewGroup
- Screen sizes
- How Android inflates xml views at runtime
- ConstraintLayout
- FrameLayout
- LinearLayout

Layouts contd..

- Layout component ids
- TextView
- Button
- EditText
- strings.xml
- Dp vs sp vs dip vs px vs in vs mm [<https://stackoverflow.com/questions/2025282/what-is-the-difference-between-px-dip-dp-and-sp>]
- FrameLayout with two TextViews doesn't work. Why?

<https://developer.android.com/reference/android/util/Log.html>

Log

`Log.v()`, `Log.d()`, `Log.i()`, `Log.w()`, `Log.e()`

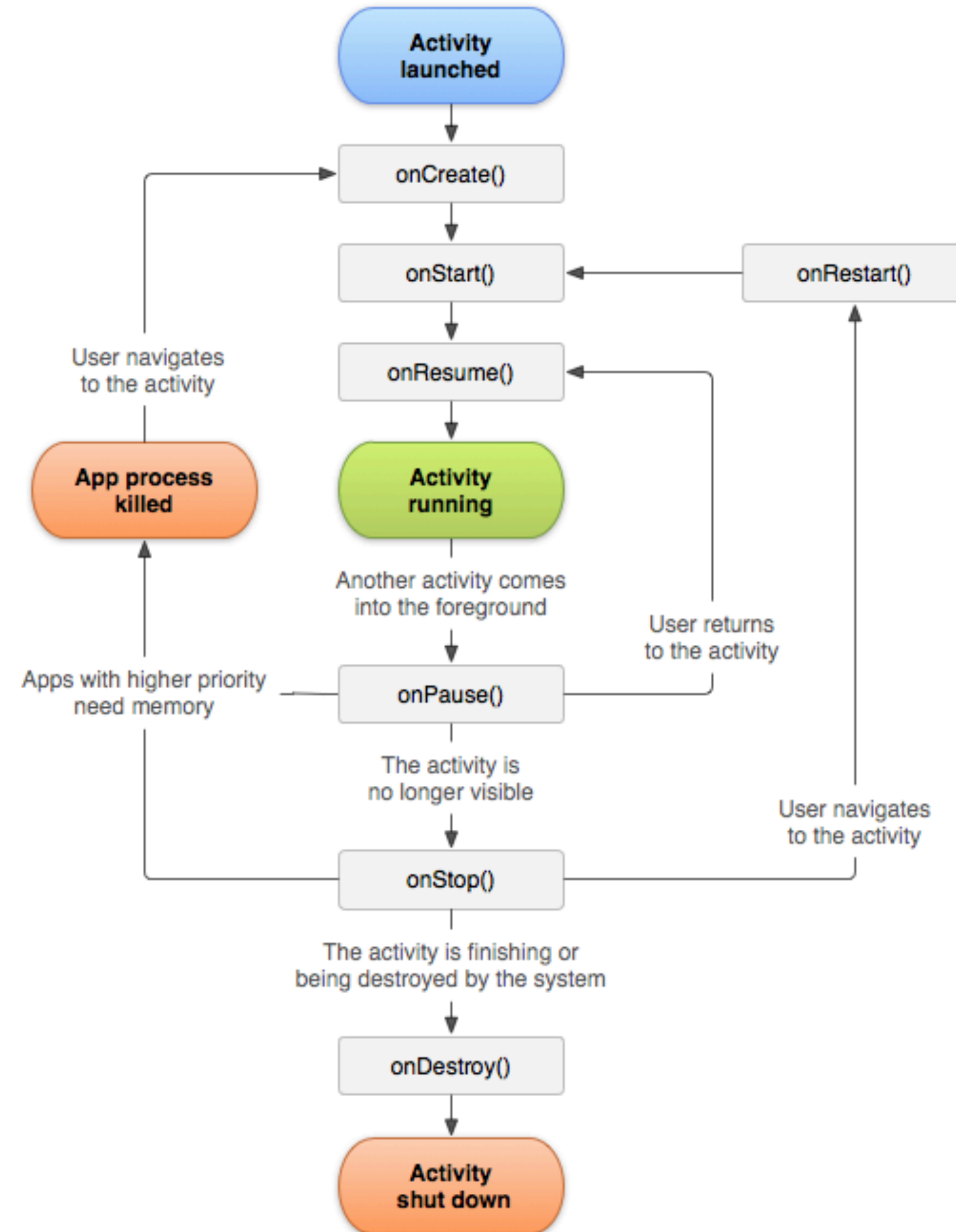
Activity vs AppCompatActivity

<https://developer.android.com/reference/android/app/Activity>

Activity

An activity is a single focused thing that a user can do.

The Activity Life-Cycle



- **setContentView**
- **R.layout.some_activity.xml**
- **Bundle savedInstanceState**

Changing device orientation