

Introduction

Wireless Mobile Software Engineering

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BINUS INTERNATIONAL

Some basic rules

- Phone should be silent at all time
- Laptop is fine
- Late policy
- All slides and handouts are available at github
(goo.gl/Lb2VQQ) (Corrections to them are encouraged)
- All materials are sourced from
<https://developer.android.com/guide/index.html>

Today's agenda

- News
- Brief tour of Android platform stack
- Android application fundamentals
- Application components
- Activity

News!

Android platform stack - Lower level

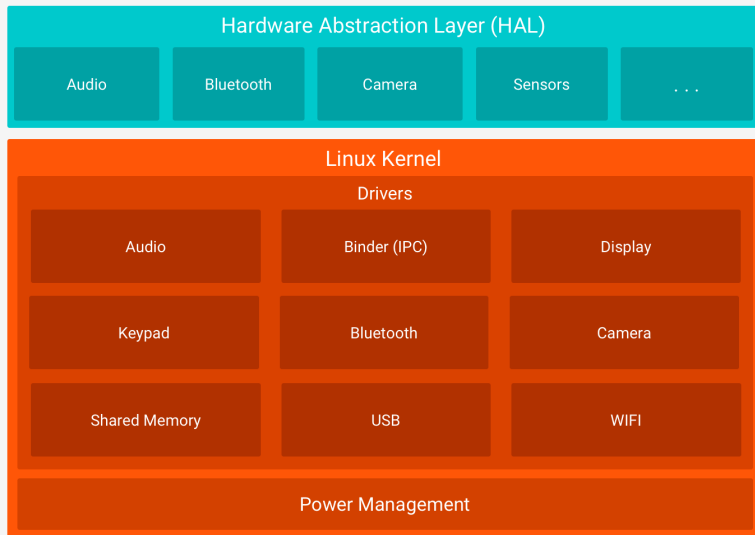


Figure 1: <https://developer.android.com/guide/platform/index.html>

Android platform stack - Higher level

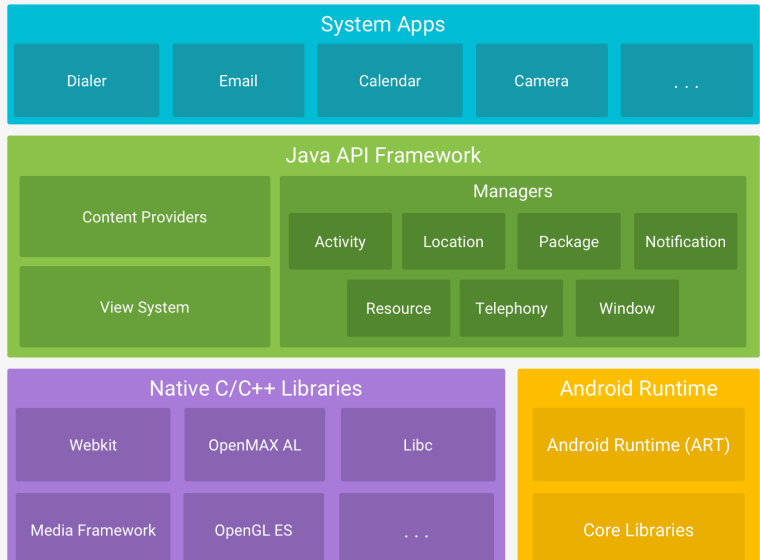


Figure 2: <https://developer.android.com/guide/platform/index.html>

Android platform stack - recap

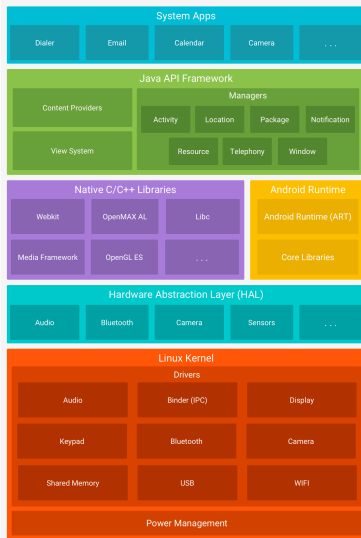


Figure 3: Overview of the platform architecture

Android application fundamentals in a nutshell

- Android OS is basically multi-user Linux system
- Each process lives on its own VM with its own Linux ID
- Android studio, take all your resources and code, compile and then archive it into an Android Package (.apk)
- Dalvik Virtual Machine will run the application byte code(.dex)

Entry point for system / user to enter your application

- **Activity**
- Service
- Content provider
- Broadcast receivers

Entry point for **user interaction** with your application

- Java class that inherits **android.app.Activity** class
- Android OS will start the main activity you choose in the manifest file
- Your application's activity will be available for other application when sending appropriate *intent*

Activity Lifecycle

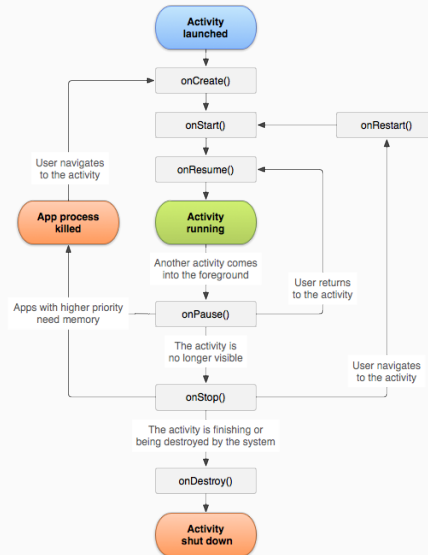


Figure 4: Activity lifecycle diagram [2]

Demo time

Lab today

- Tutorial to create messaging app (Will use this theme throughout the class)
- Check out your github repo, push your readme to your repo
- **Reminder:** Final project phase 1 - 20% **(21 March / in 3 weeks)**