

INTRODUCTION TO THE ANDROID PLATFORM

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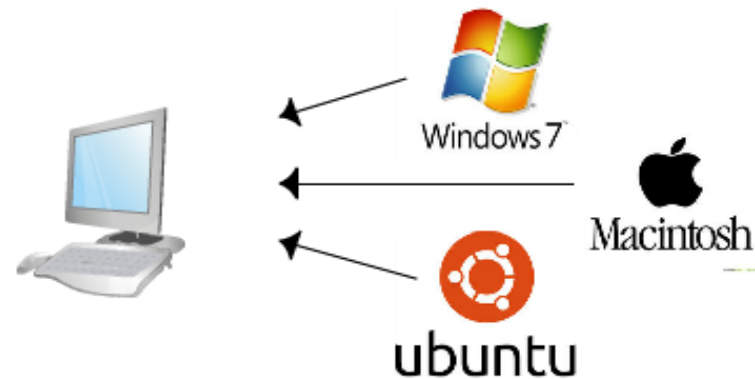
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Operating Systems

- For a PC



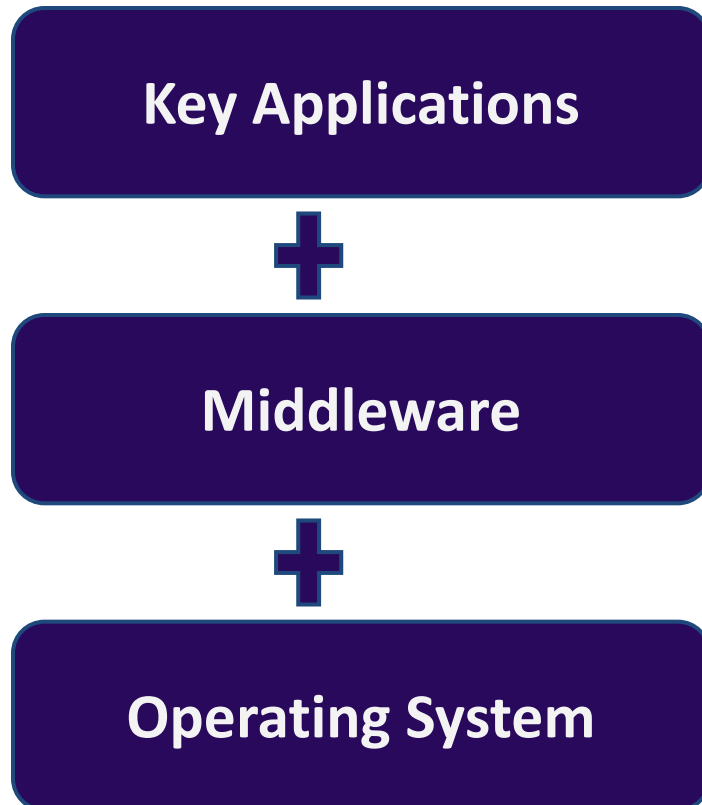
- For Smart Devices : Additional Support





What is Android ?

- Software stack for mobile devices



**Phone, Contacts,
Browsers**

**Application framework,
run-time environment for
apps**

Linux Kernel

Open Handset Alliance (OHA)

- Alliance of companies
 - to develop open standards for mobile devices

Mobile Operators



Handset Manufacturers



Semiconductor Companies



Software Companies



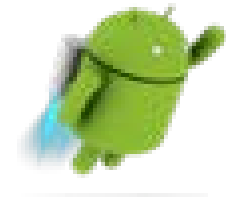
Commercialization Companies



*Image source: <http://androidland.pl/android-news/poznajcie-open-handset-alliance/>

Why Android ?

- ~900M active devices,
 - 1M daily activation



- Open
 - Open-source
 - Users control their experience, installed applications
 - Developers do not need any permission for delivering applications



Android Versions

- Android versions are named after desserts or sweets and are alphabetically ordered



Android 1.0



**Cupcake
Android 1.5**



**Donut
Android 1.6**



**Eclair
Android 2.0**



**Froyo
Android 2.2**



**Jelly Bean
Android 4.1**



**Ice Cream Sandwich
Android 4.0**



**Honeycomb
Android 3.0**



**Gingerbread
Android 2.3**

Update Process

- Google releases the Android
 - The code is ready for flagship devices of google
- For other devices, updates are released by their manufacturers (HTC, Samsung, etc.)
 - Need to configure the new version for device capabilities, manufacturer apps
 - Updates for old devices might not be available soon, (not a priority for manufacture)

Android Architecture



Android Apps

- Applications for Android platform
 - App Model vs Web
 - 975000+ Apps



Angry Birds



Duolingo



Facebook



Twitter



Maps

- All apps are equal
 - Run in a sandbox given by Android run-time environment
- Where do we get them?

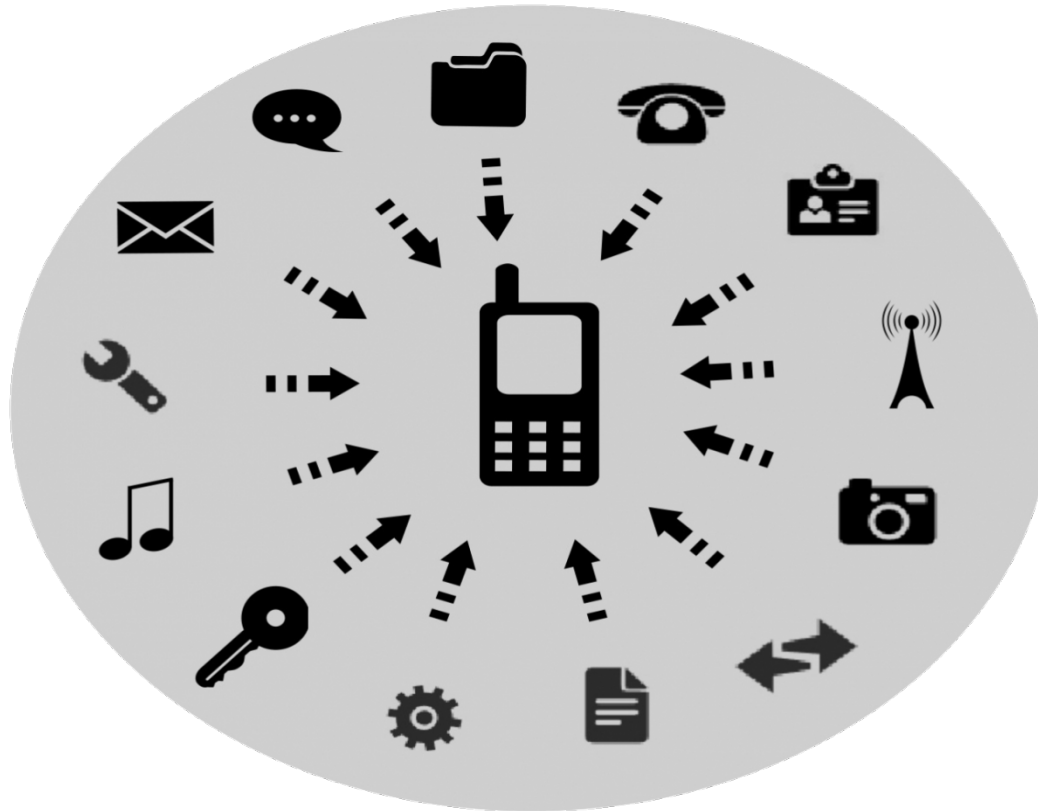
App Stores

- Repository for apps



- Google Play:
 - ~ 1 million apps and ~50 billion downloads

Android Permissions



- 100+ permissions to protect sensitive resources
- User needs to grant these permissions explicitly to the apps

Summary

THANK YOU



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