

Introduction to Android Programming

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Outline

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 - Android Studio
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What is Android?

- **Open-source** and **Linux-based** Operating System by Google
- Feature-rich
- Runs on various architectures and platforms
- Support for various hardware, like sensors

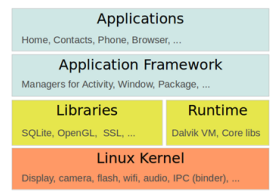
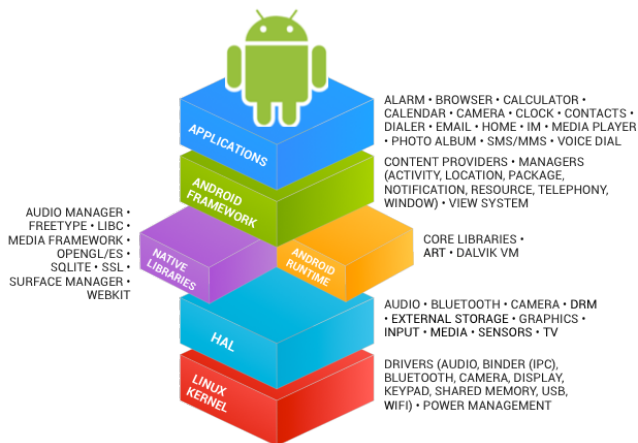


Android Versions

- Version code names are confectionery-themed in alphabetical order
- Latest stable version is **Oreo** (Android 8.1) next version is **Android P**
- Learn more at https://en.wikipedia.org/wiki/Android_version_history



Android Platform



Find more at <https://developer.android.com/guide/platform/>



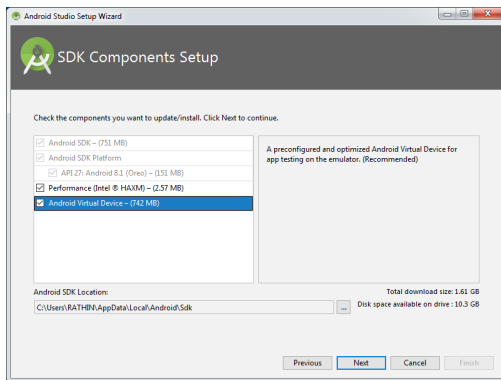
Android Studio

- Official Android App development **IDE** by Google
- Old IDE was eclipse with ADT plugin, currently deprecated
- Android studio uses **IntelliJ IDEA** by JetBrains
- Available freely at <https://developer.android.com/studio/>



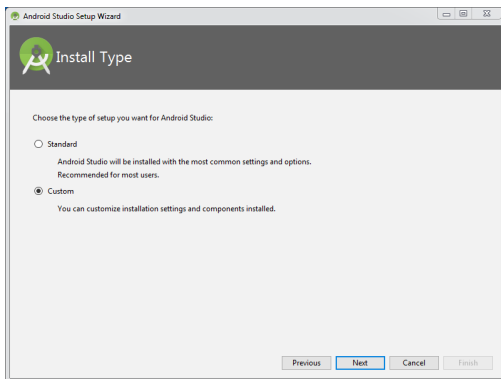
Installing Android Studio

- Download the setup file
- Run the installer
- Check **HAXM** and **AVD**



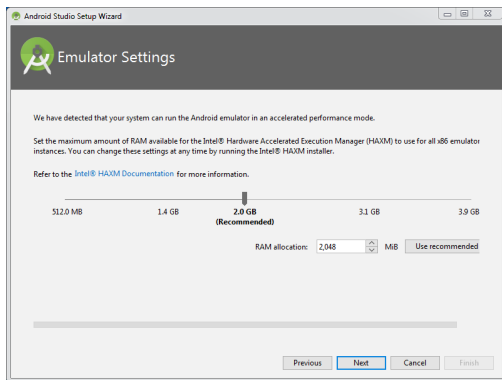
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- Select Custom installation



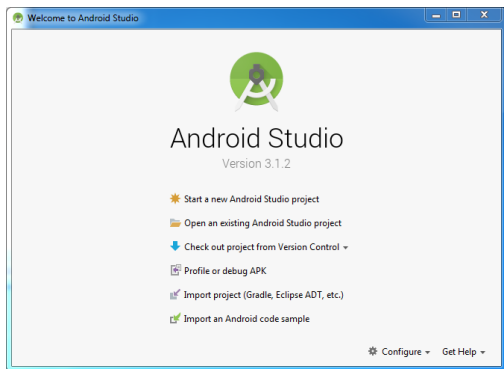
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- Select Custom installation
- Select preferred Theme
- Adjust RAM for HAXM
- Finish the installation



Installing Android Studio

- Download the setup file
- Run the installer
- Check **HAXM** and **AVD**
- Select Custom installation
- Select preferred Theme
- Adjust RAM for HAXM
- Finish the installation
- Finally this will showup



System Requirements

- Minimum 3 GB RAM (8 GB RAM is recommended)
- At least 1 GB for Android Emulator (AVD)
- Minimum 2 GB of available disk space (4 GB is recommended)
- 500 MB for IDE + 1.5 GB for SDK and AVD system image

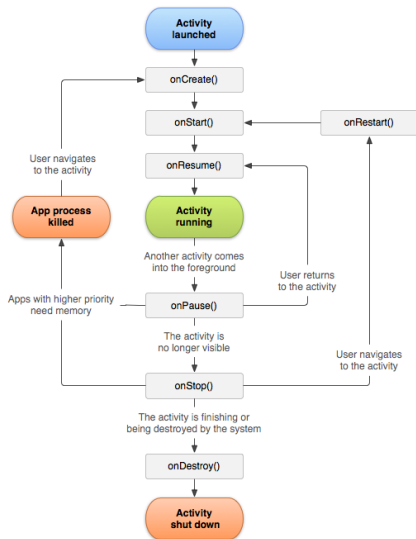


Hello World!!

- Create a new project with the Start new project wizard
- Running an app both in AVD & actual phone
- Learning a bit about files and project structure



Activity Lifecycle



- Understand the lifecycle
- Hands-on experience
- Refer to example lifecycle
- Using Toast messages



Even/Odd Testing

- Using `EditText`, `TextView`, `Button` & activity designer
- Revising event handling, anonymous inner class, final & exception handling
- Refer to example `even_odd`
- **Home work:** build a simple calculator (+ - * /) (alert if division by zero via Toast)

