



Mobile Programming Laboratory

ANDROID
IDE



Teachers

Ing. Tarquini Francesco, Ph.D

Ph.D in Computer Science Engineering

francesco.tarquini@univaq.it

Ing. D'Errico Leonardo

Ph.D Student in Computer Science Engineering

leonardo.derrico@graduate.univaq.it



Teaching Materials

Available on MOODLE platform

<http://www.didattica.univaq.it>

Google Drive Repository

<https://drive.google.com/drive/folders/1ISqZfn0i9Ub3eWNXbvW00rd0hD9ya8OL?usp=sharing>



Topics

- Android Studio
- Emulator
- Project Structure



Android Studio

This course give us the abilities to design and develop a basic Android application.

Every students must know:

- Java (source code)

- XML (layout)

- SQL (storage)

The development environment is Android Studio (a Google custom version of IntelliJ Idea) that is the main and recommended IDE.

The other most used IDE is Eclipse with the ADT plugin.



Android Studio

Download Android Studio* (~1 GB) from the follow link:

<https://developer.android.com/studio/>

The current version is **3.2**

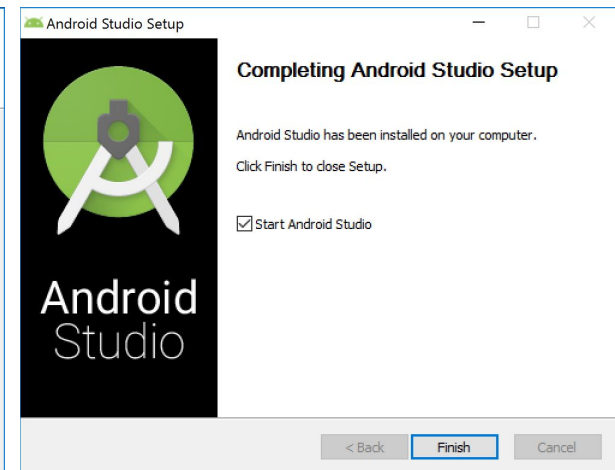
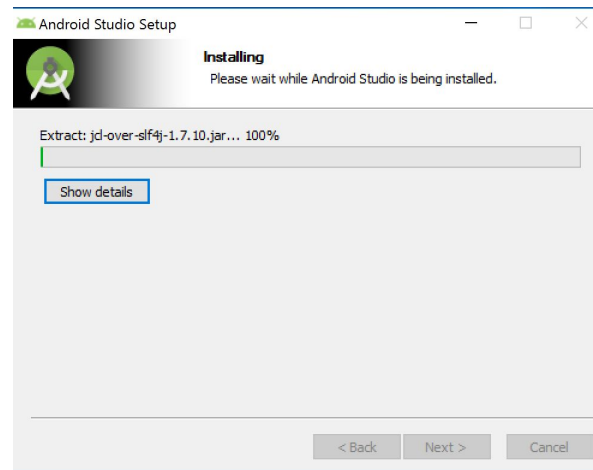
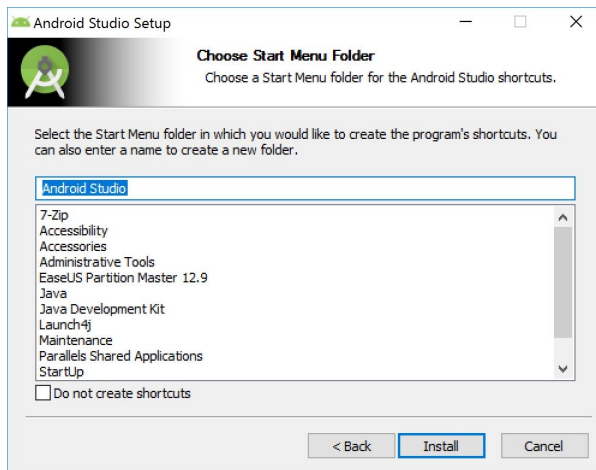
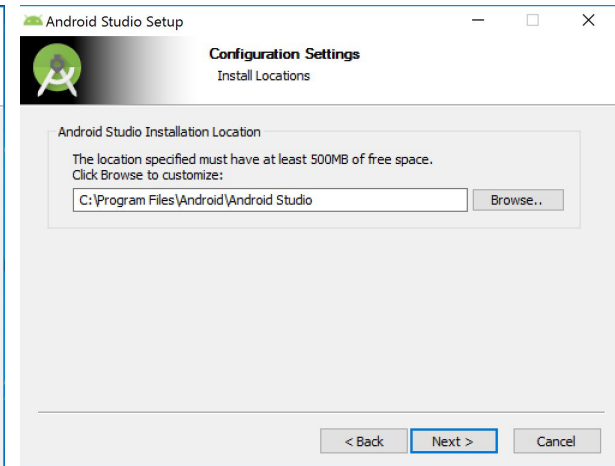
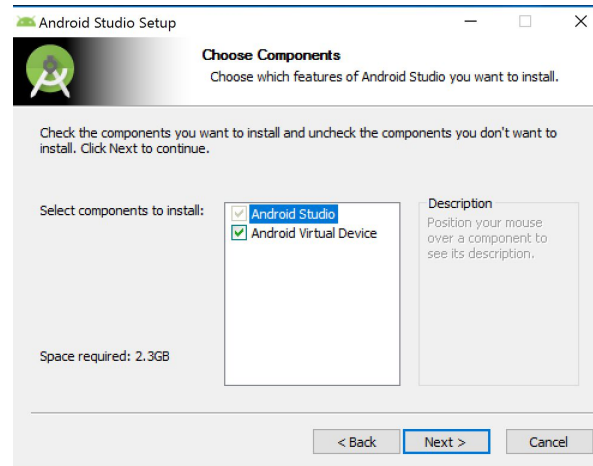
When install Android Studio you must install Android SDK (more over **1,7 GB**)

If your pc has Intel CPU you can install HAXM Technology for Emulator (better performances then standard Emulator)

*Available for Windows, MacOS, Linux

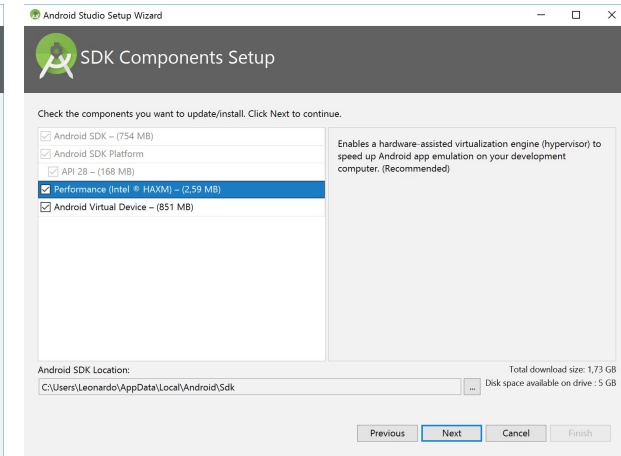
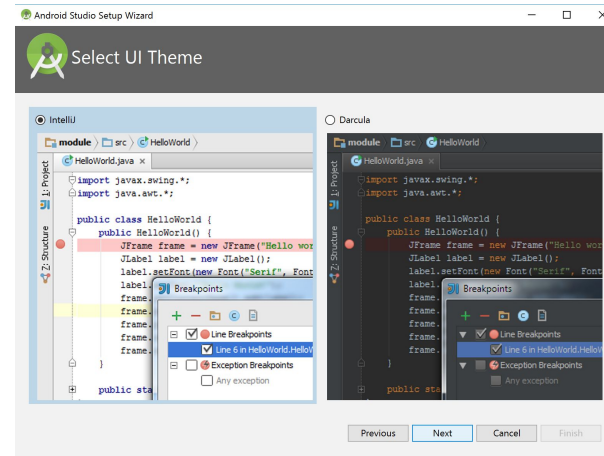
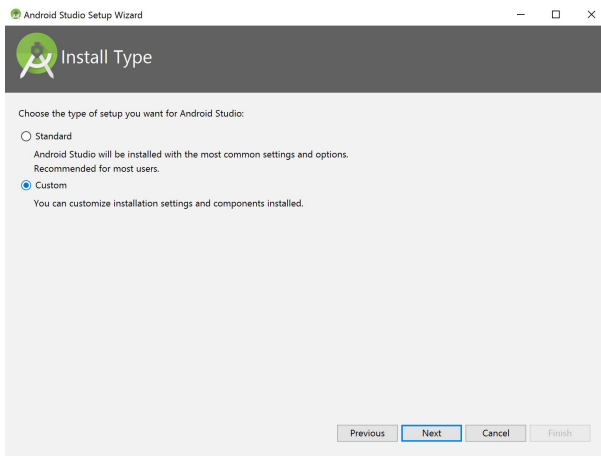
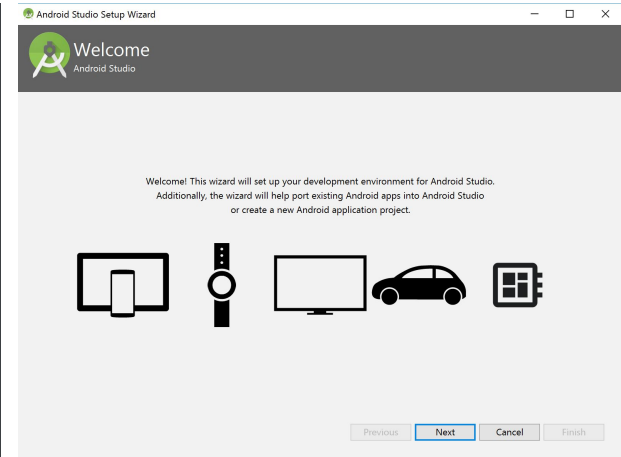
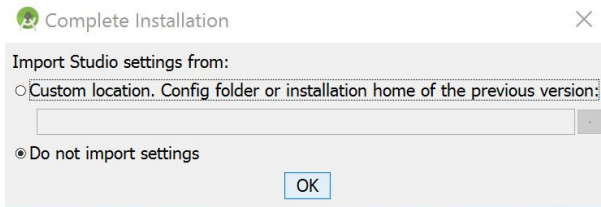


Android Studio - Installation





Android Studio - Configuration

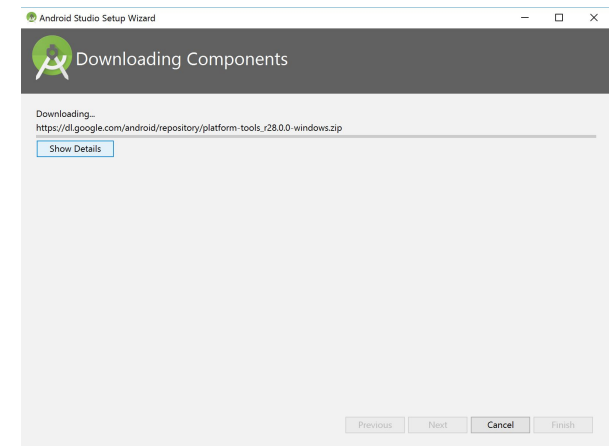
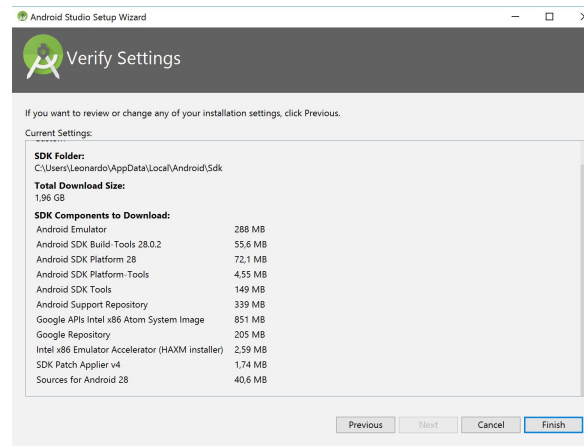
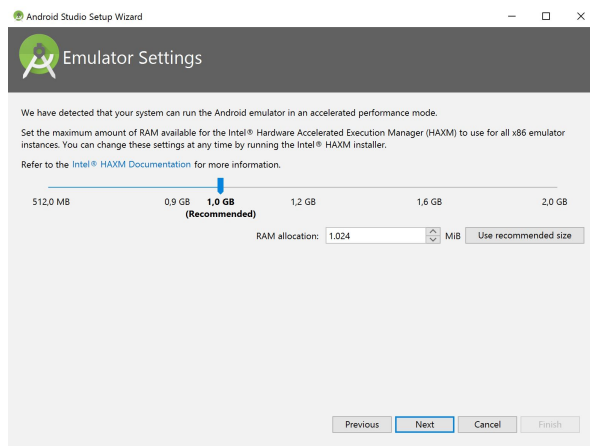




Android Studio - Configuration

If your notebook have an Intel processor, you can configure the dedicated RAM for HAXM plugin.

Recommended 1,0 or 2,0 GB.





Emulator

You can execute your application on:

Real device

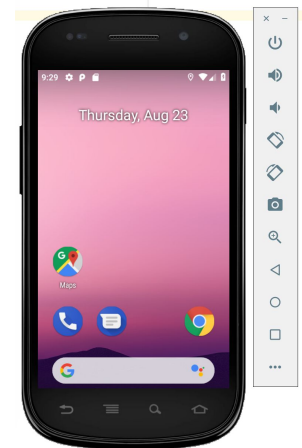
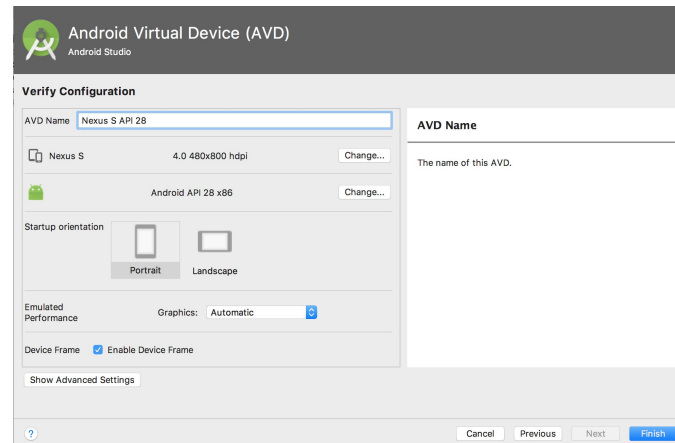
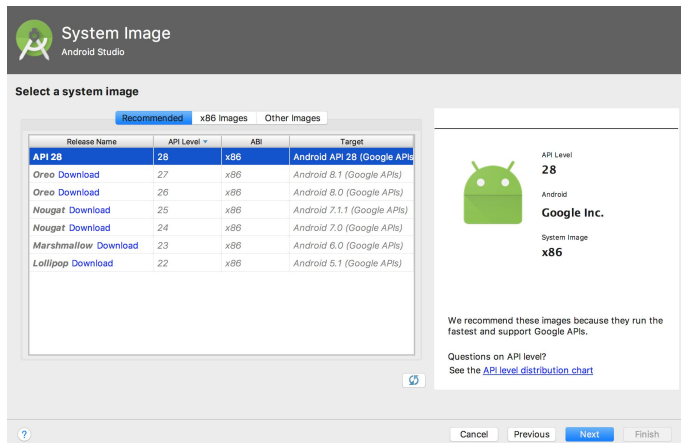
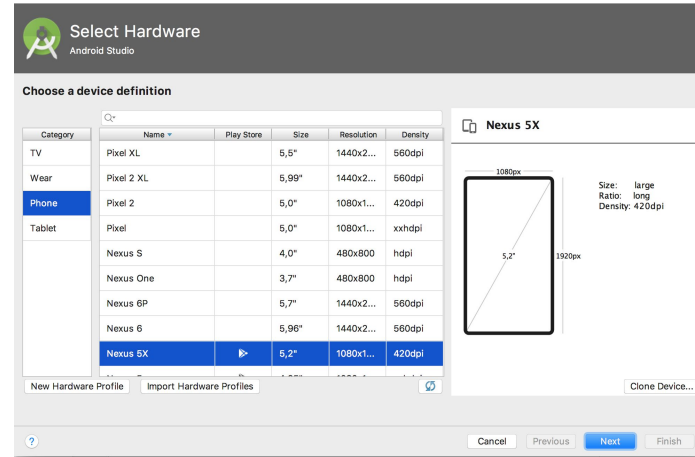
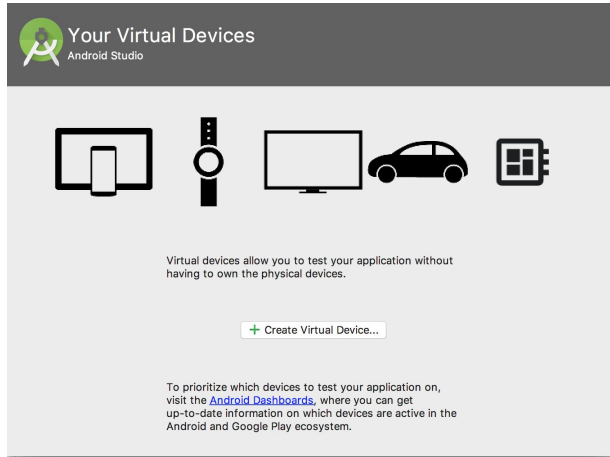
Emulator

Android Studio permits us to create an AVD (Android Virtual Device) with a real device setup.

In this course we will use an old Nexus S setup for the emulator because it has the best performances in most cases of our computers.



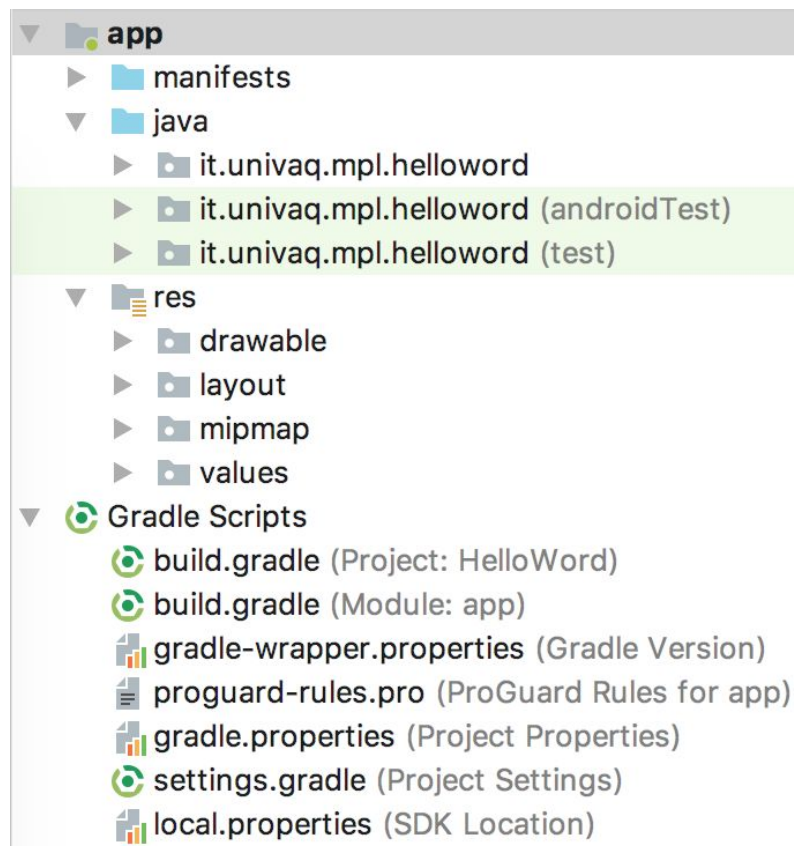
Emulator





Project Structure

Android Studio create an application with the following structure:





Project Structure

java: source code of the application

res: resources as Strings, Images, Layouts, Styles and etc.

manifest: application index where define the map of the app and the user permissions

build.gradle: configuration file of the application or project.