ICT02

In this course, we will cover some java programming and basic android app development. All the materials can be found in the following website.

http://stanlry.github.io/ictclass

If you want to learn more about android develop, I strongly recommend you to go through the following website.

- The official android tutorial: https://developer.android.com/training/index.html

# Introduction to Android Development

Android App

A native android app is usually written in Java. Google provides Android SDK (Standard Development Kit) which is the library for us to create android application. After generations of Android OS, the Android SDK also has different versions.
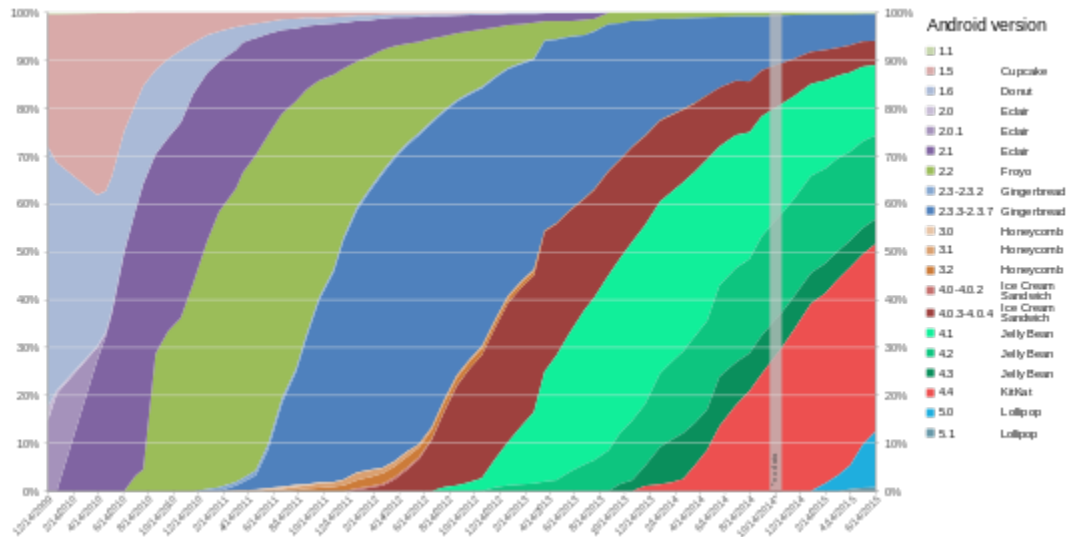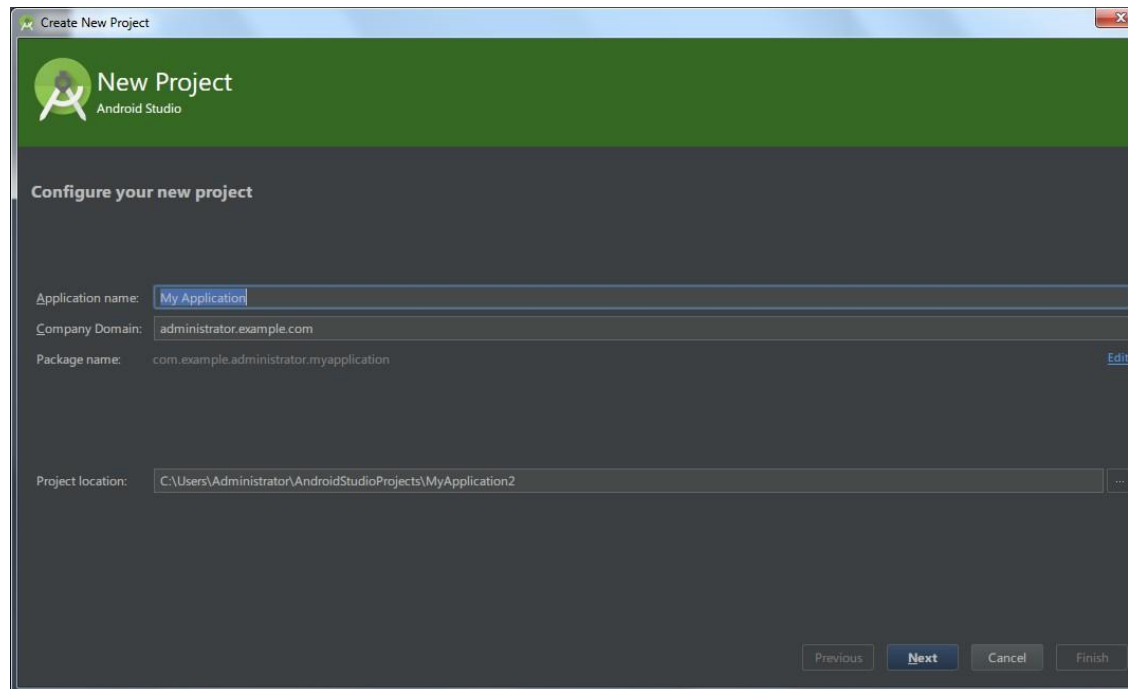
Android Studio

Android Studio is an official IDE (Integrated Development Environment) released by Google. It's free to use, yeah ! We can download the android studio from the [Official Website](#).
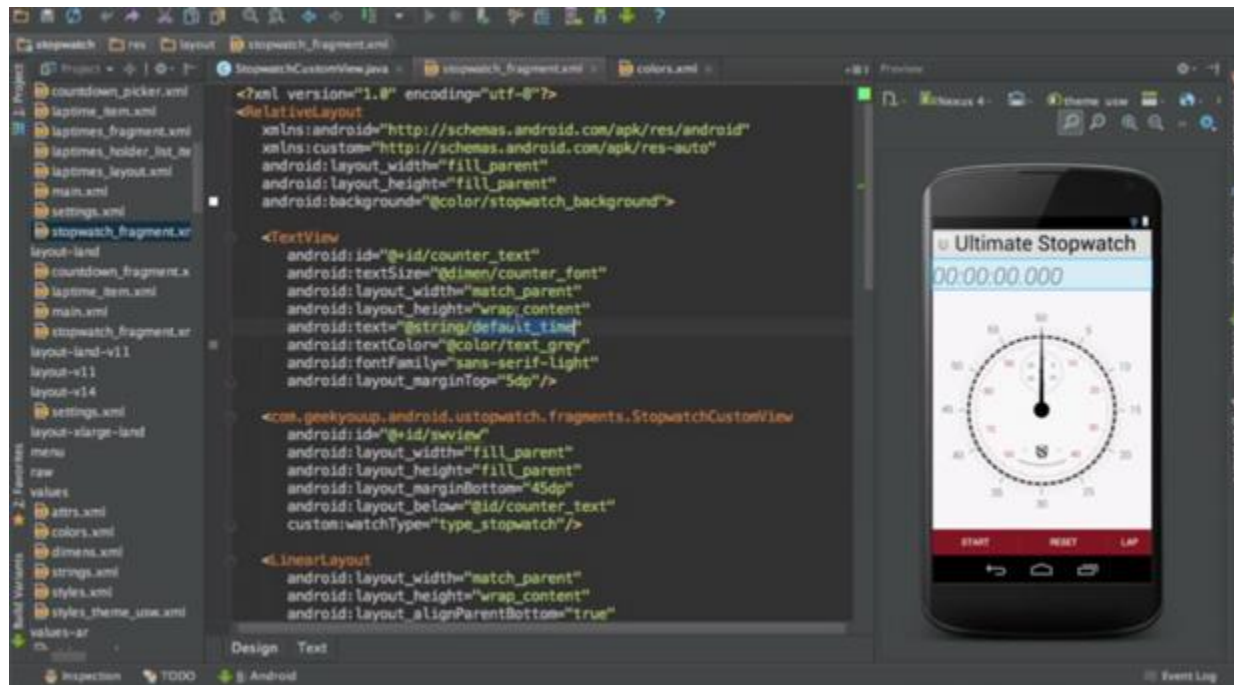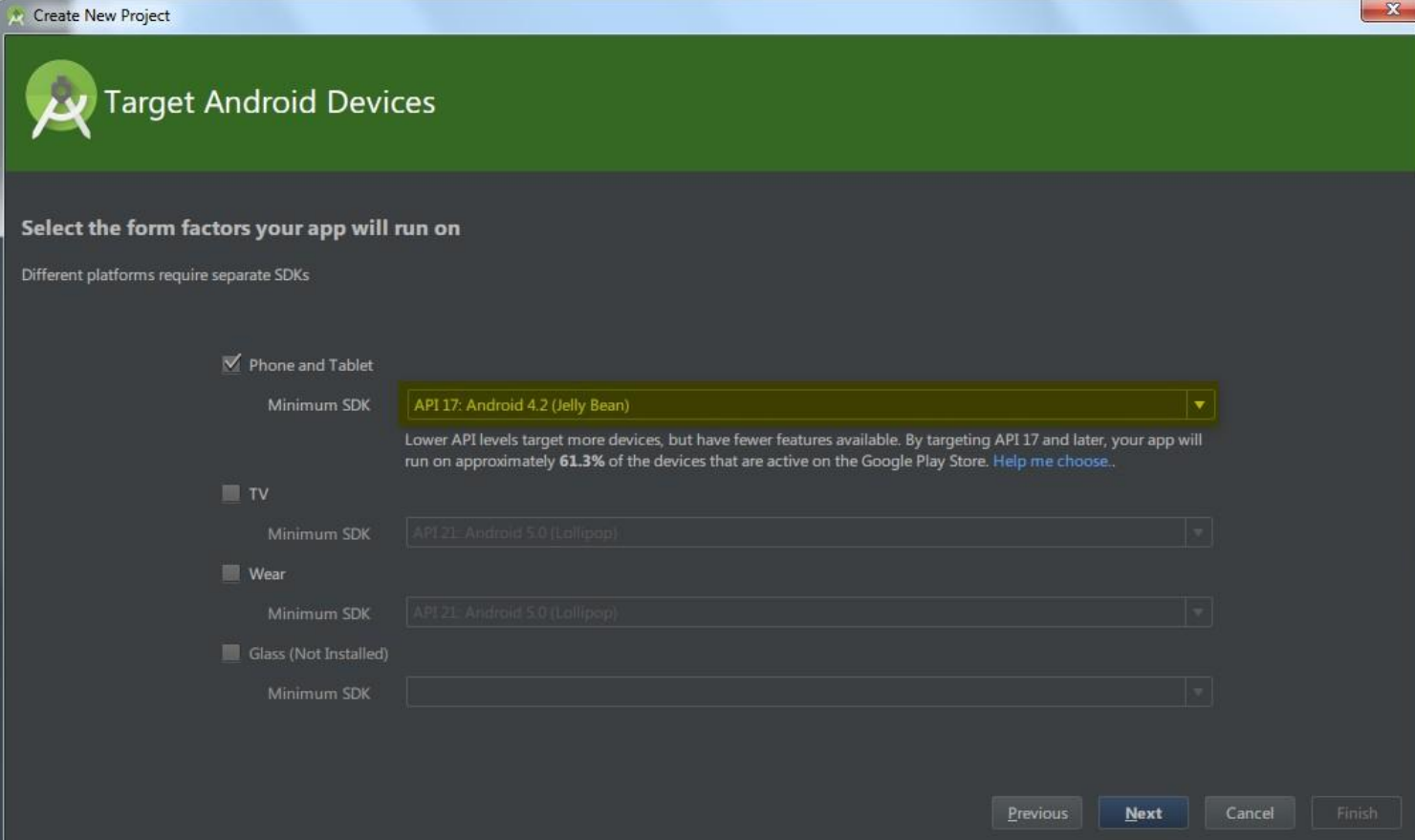
Create your first app

Open a new project in android studio

- If you don't have a project opened, in the Welcome screen, click New Project.
- If you have a project opened, from the File menu, select New Project

Create your first app

Select appropriate android SDK version and continue with black activity.

Create your first app

Project Structure

- AndroidManifest.xml: app configuration and settings like permissions

- MainActivity.java: Java class that conains our program logics

- res: a resource folder
    - drawable: image folder
    - layout: description of user interface
    - menu: menu items
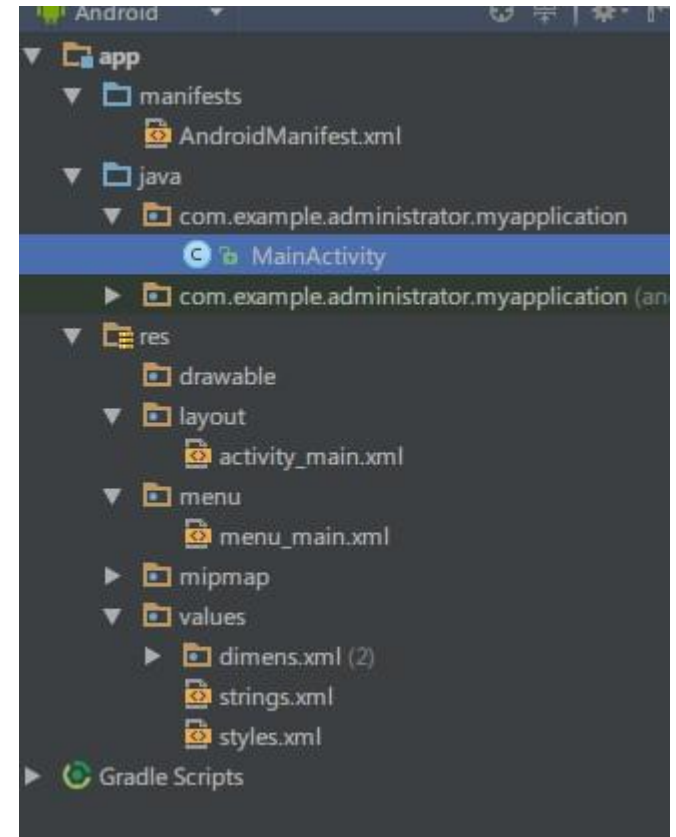   - values: a collections of resources of strings and colors

Run your app

Before you run your app, you need to provide a platform. It's either a real android device or an emulator. The emulator in android studio is called Android Virtual Device (AVD).

AVD is a software simulation of the android environment. It provides almost all functions you need to test your applications.

You can also install the app onto your real android device through android studio easily. It will be much much faster than a AVD.

We are going to use emulator in this tutorial.

Create AVD

In your android studio, select tools > android > android device manager
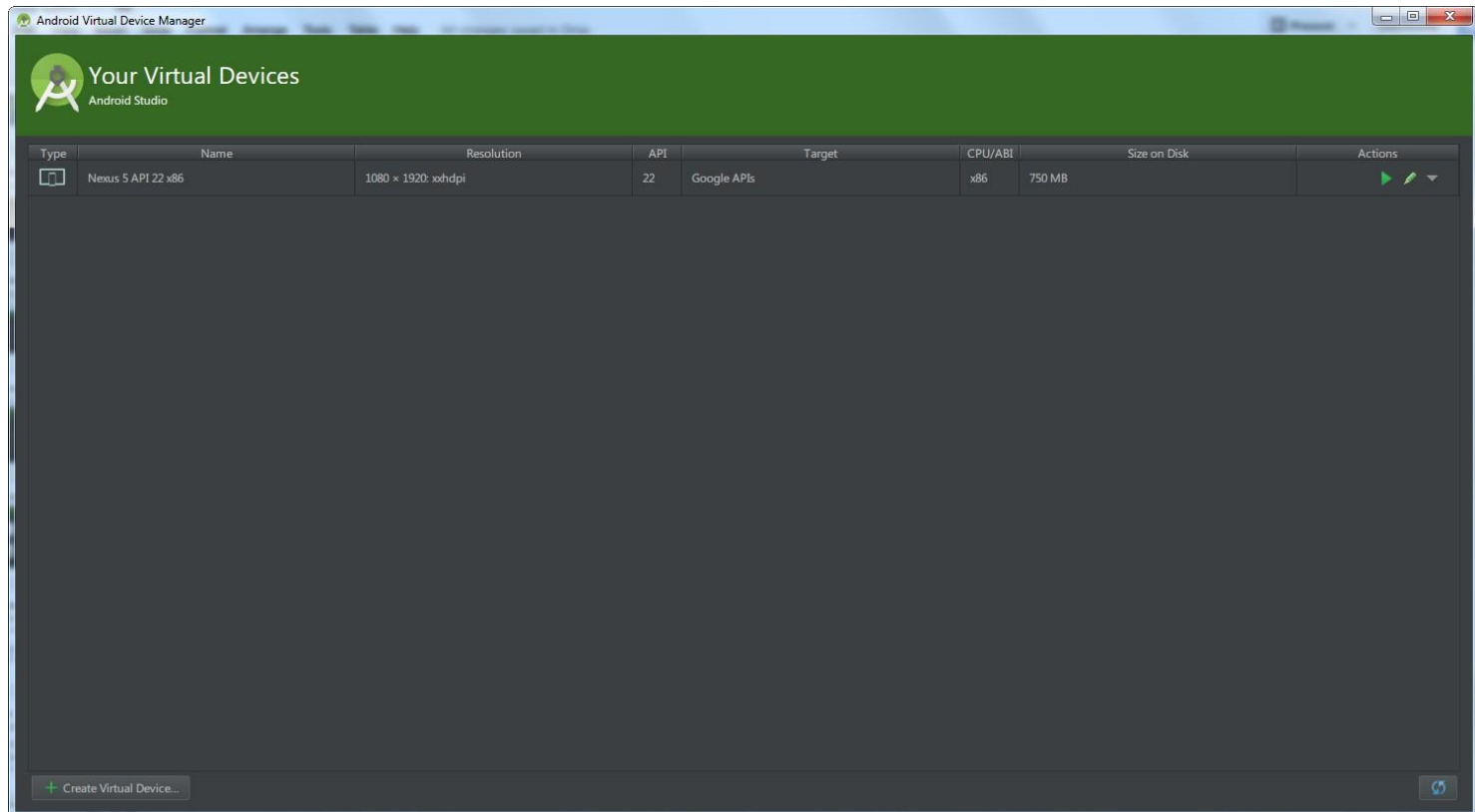
Run your app

In your android studio, click run > run "your project name". And select an AVD if it hasn't started yet.