Creating a first Android application
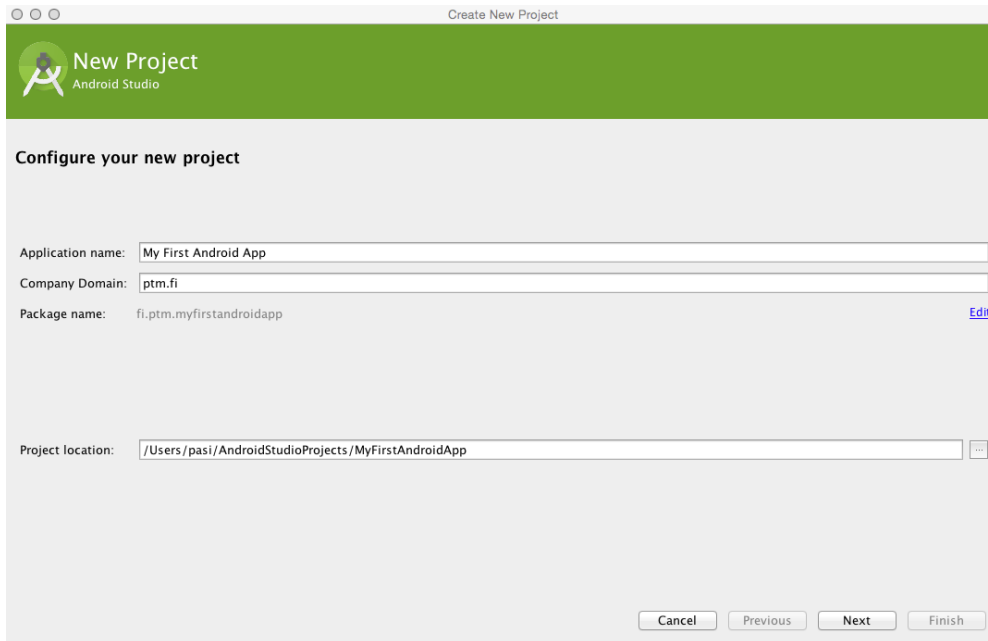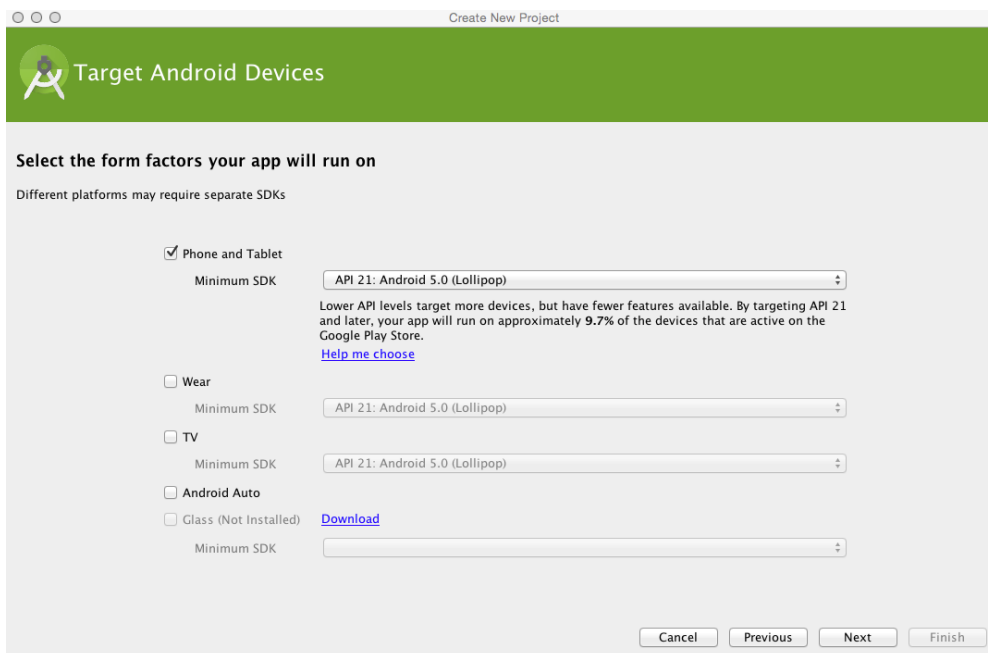
1. Launch Android Studio
2. Start a new Android Studio Project
3. Configure your new project
   a. Give unique application name
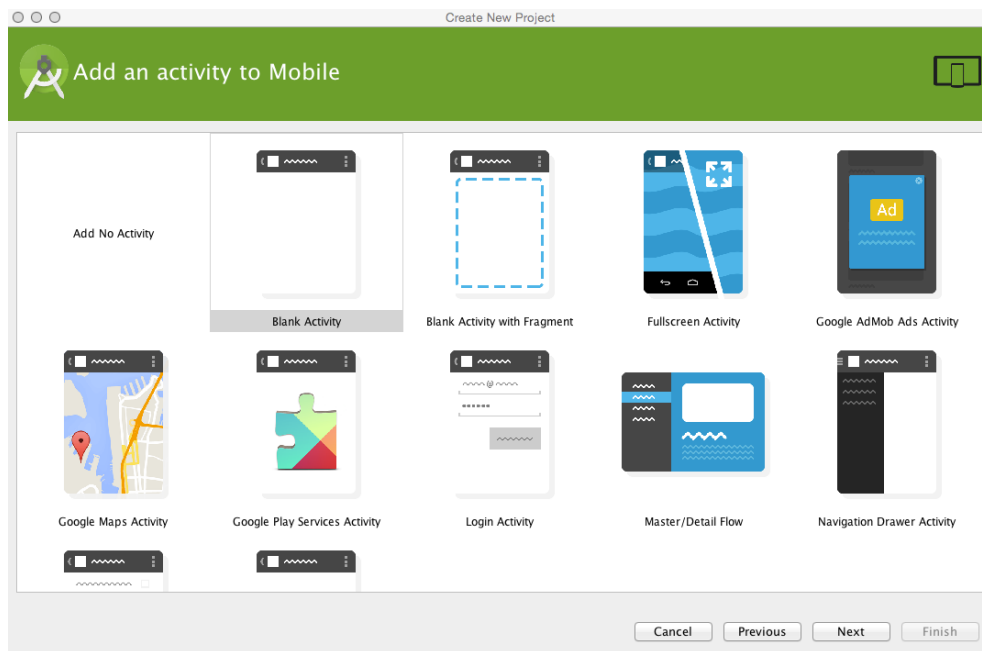   b. Use your own company domain name, or for example jamk.fi

4. Target your project to Phone and Tablet
   a. Use Android 5.0 Lollipop (for example)

5. Add Activity for your application (first screen)
   a. Select Blank Activity

6. Customize your app
   a. For now, you can just use default naming
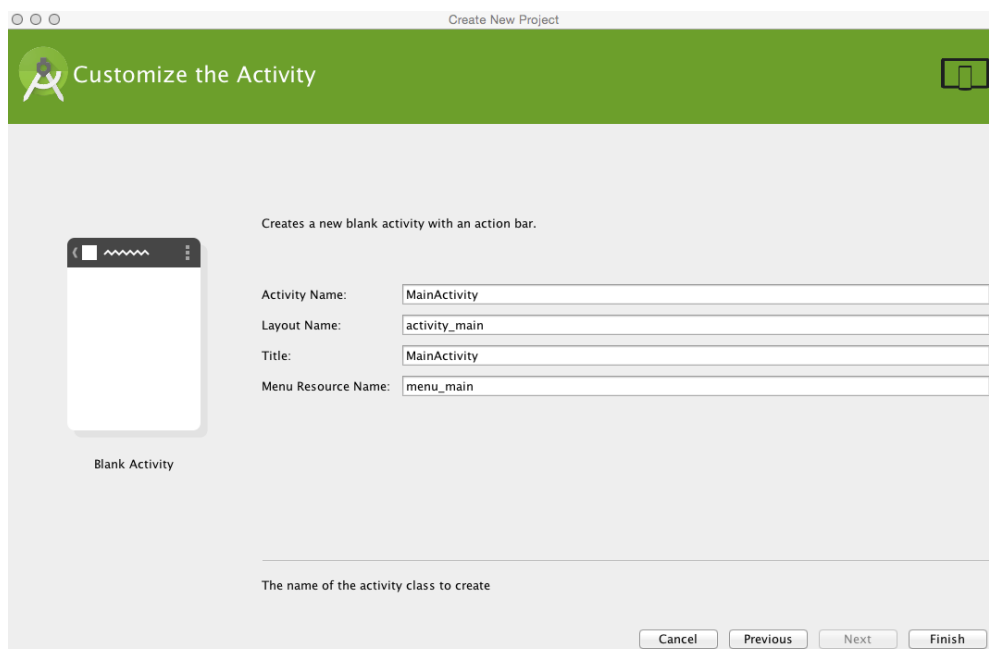
7. Click Finish and Android Studio will create project for you.

   Application and needed settings are now generated and it can be run.
   Before that you should create one Android Virtual Device or use your own
   phone with USB cable.

8. Creating a Android Virtual Device
    a. Select Tools > Android > AVD Manager
    b. Create a new Virtual Device (if needed)
        i. First select a hardware (for example Nexus 5)
        ii. Then select system image (for example Lollipop, 22, with google)
        iii. And finally accept default configuration and create AVD

9. Run and test your application in Android Virtual Device
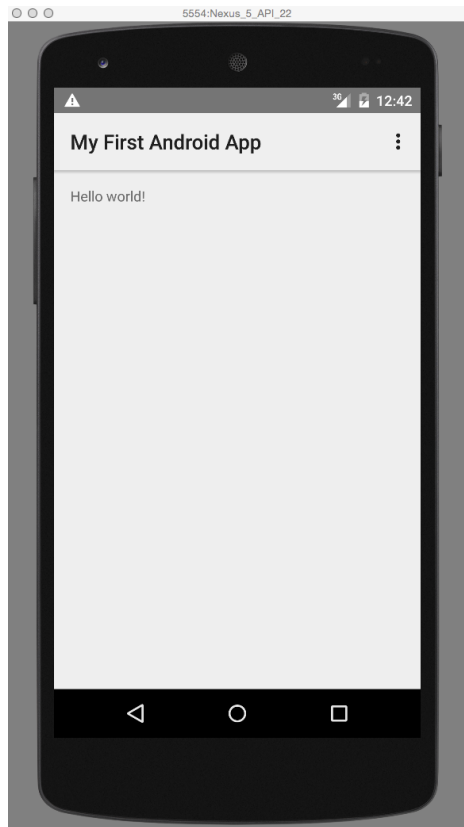
10. Add a new Activity for Landscape use.
    a. Create a new folder in res and name it layout-land
    b. Copy activity_main.xml from layout to layout-land
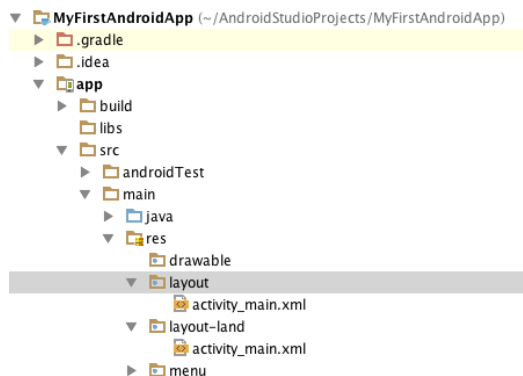
11. Add a new String to Strings.xml in values folder

```xml
<string name="hello_world_land">Hello landscape
world!</string>
```

Edit activity_main.xml from layout-land to use above string

```xml
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/hello_world_land" />
```

12. Run application again and switch emulator from portrait to landscape

In mac fn-ctrl-f11
In pc left-ctrl-f11
In linux ctrl-f11
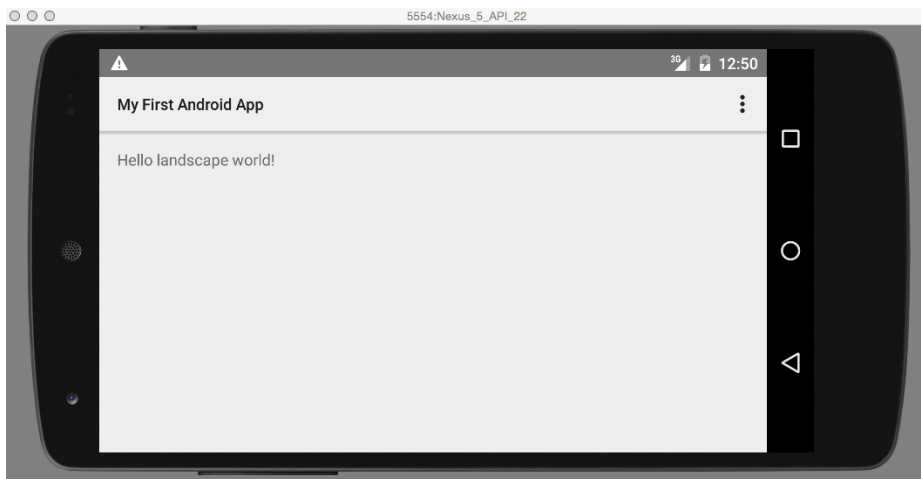
Note! Android switches layouts automatically!

13. Supporting different languages
   a. Create a new folder values-fi (or other language) in res folder
   b. Copy Strings.xml from values folder to values-fi folder
   c. Edit both hello_world lines to contains finnish (or other language) words


```xml
<string name="hello_world">Terve Maailma!</string>
```
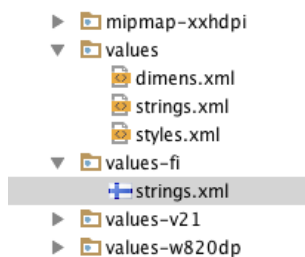
```xml
<string name="hello_world_land">Terve vaakatasoinen
maailma!</string>
```

14. Switch your Emulator to use Finnish (Suomi) as a default language (or other language), install and run your application again
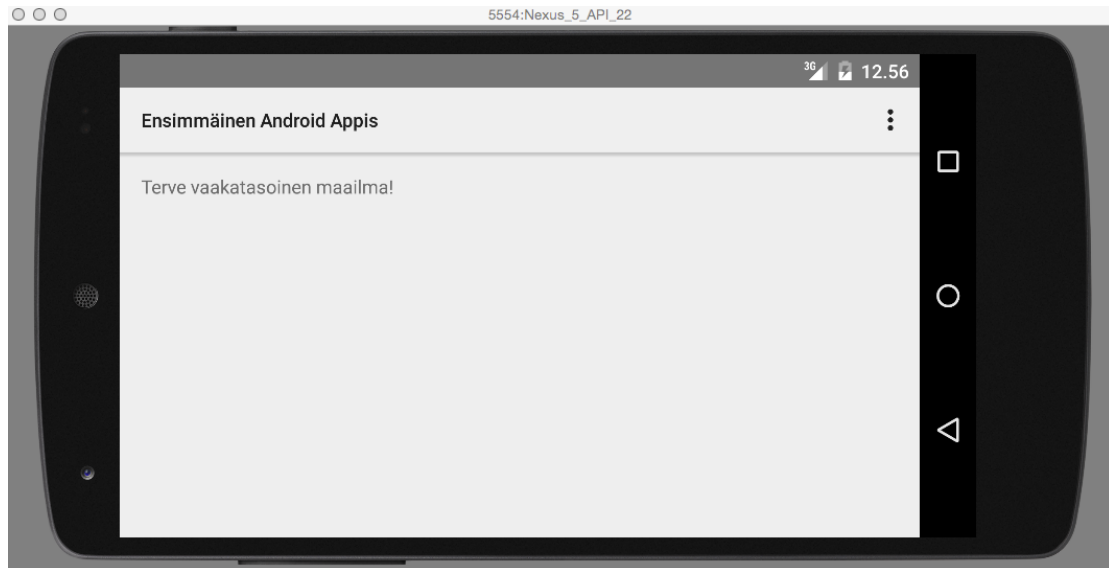
So these application resources are very important in Android application development.

15. Add a few more TextViews and colors

Add a new colors.xml file to your res/values folder.
Define a few colors:

```xml
<?xml version="1.0" encoding="utf-8"?>
<resources>
     <color name="blue">#0000FF</color>
     <color name="red">#FF0000</color>
</resources>
```

Add a new String to strings.xml file to contain some sample text.

```xml
<string name="another_string">Here is a another sample
text.</string>
```

Edit activity_main.xml (layout folder) and add a new TextView to contain above new text and use for example blue text color. Use designer or text view to add a new TextView.

```xml
<TextView
        android:id="@+id/textView1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@id/textView"
```

```
    android:layout_below="@id/textView"
    android:layout_marginTop="16dp"
    android:text="@string/another_string"
        android:textColor="@color/blue" />
```

Test!