

Dev Environment:

Android

Mobile and Ubiquitous Games

ICS 163

Donald J. Patterson



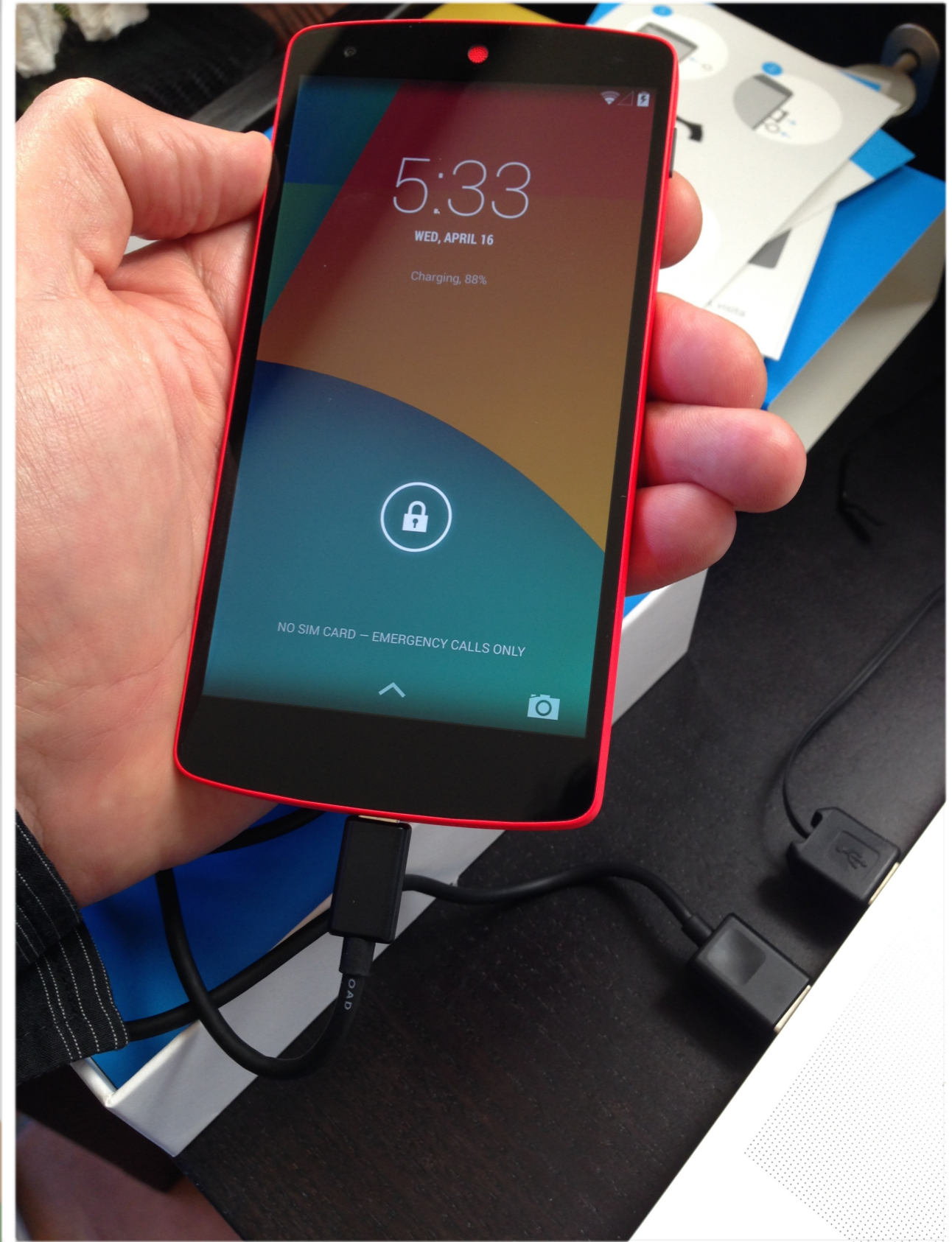
Out of the box experience



Out of the box experience



Out of the box experience



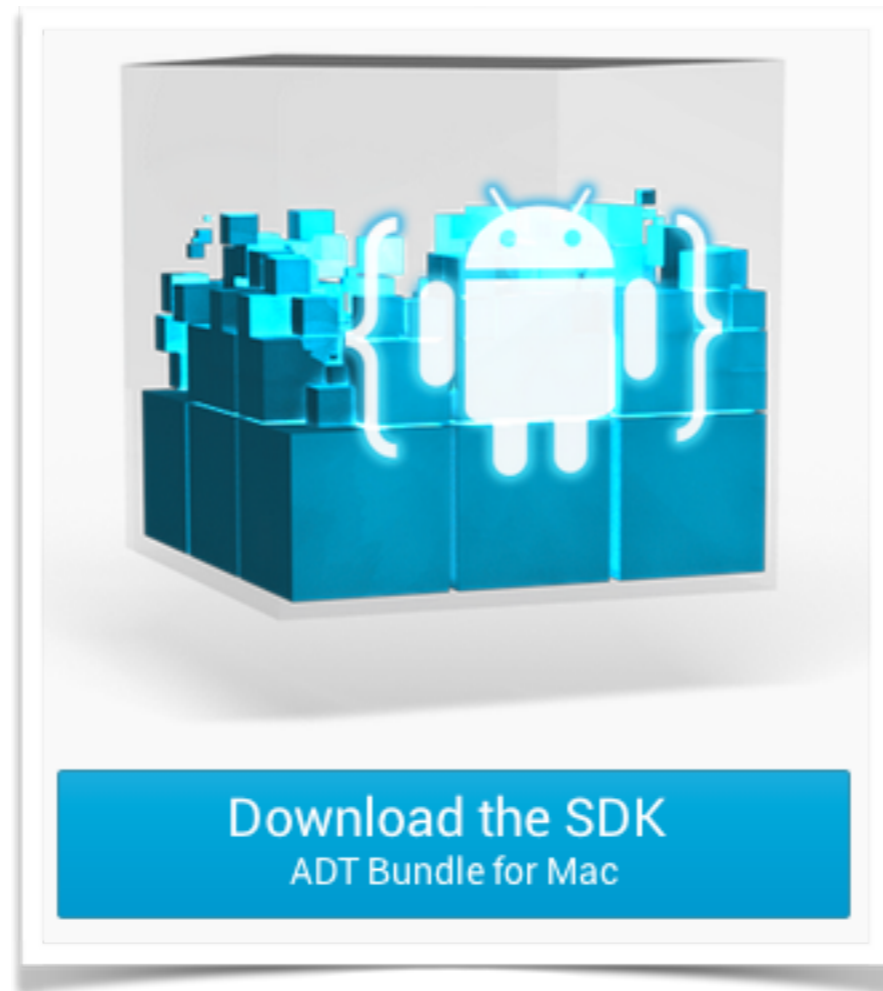
Out of the box experience

- Don't worry about SIM cards - wifi only
- Connect to Wifi
- Don't associate with your Google account
- Enable Location Services
- Personalize the phone with "Peter Anteater"
- Dial *##checkin##* to update phone
 - "checkin succeeded"
- Connect USB on phone to computer to charge it



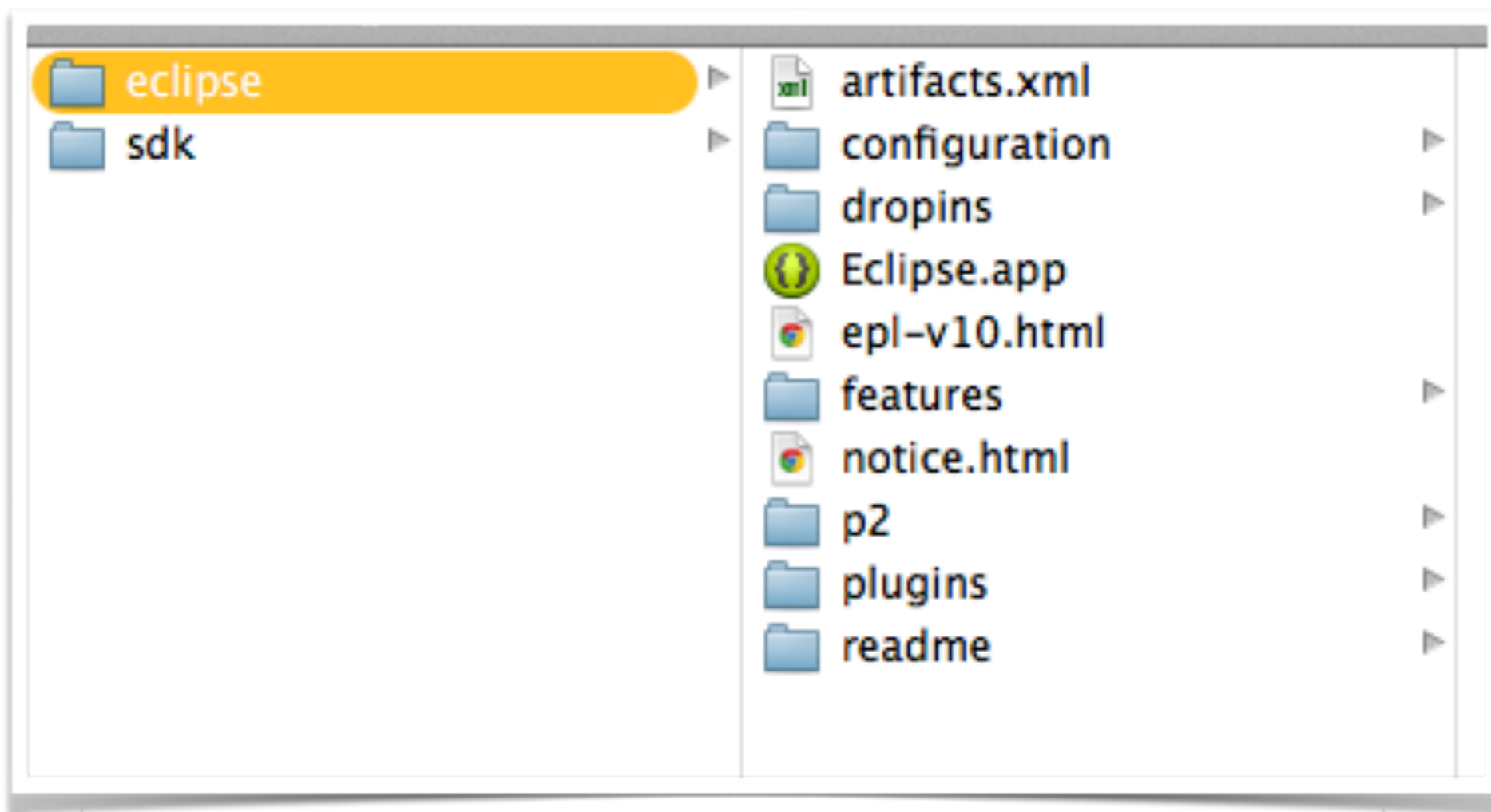
Setting up your environment

- <http://developer.android.com/>
- <http://developer.android.com/sdk/index.html>



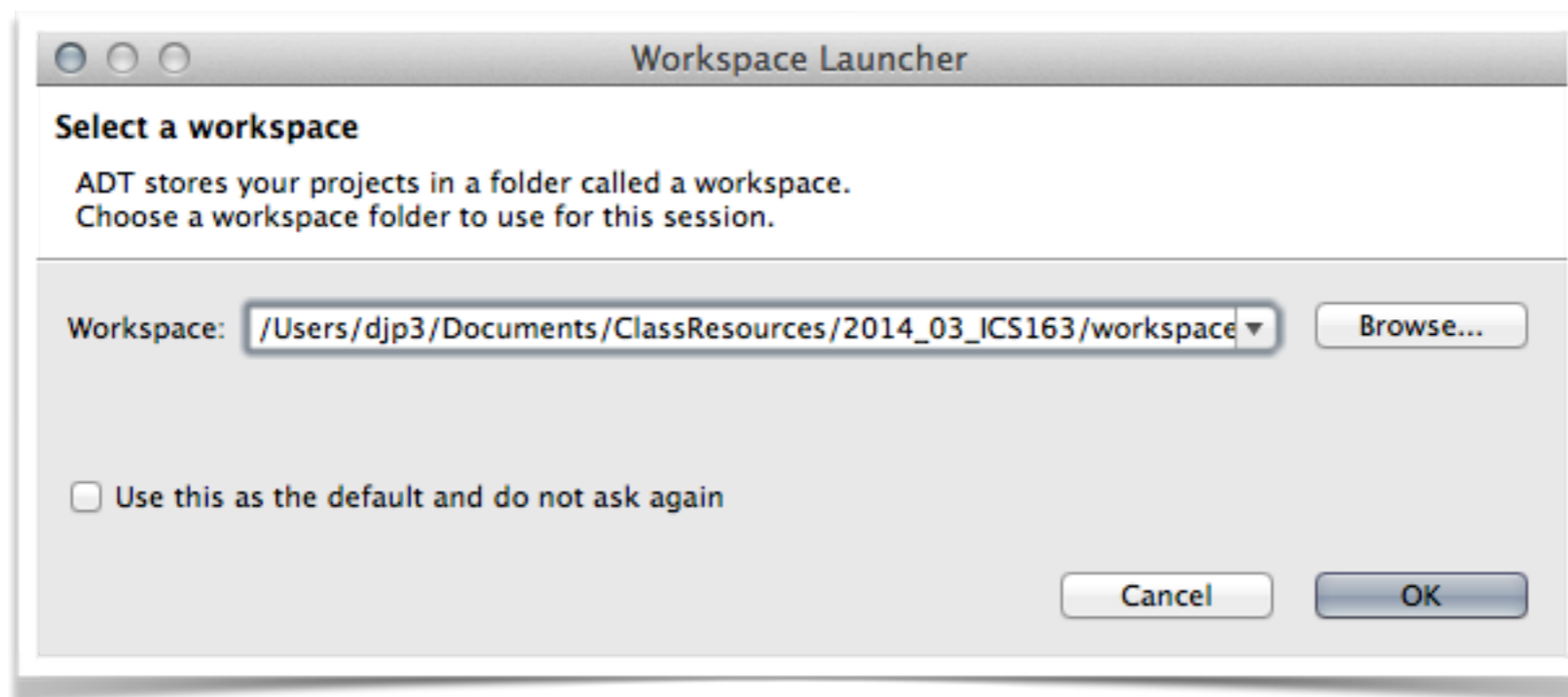
Setting up your environment

- Unpacks into a self-contained installation of Eclipse with Android Software development Kit (SDK) and plug-ins installed



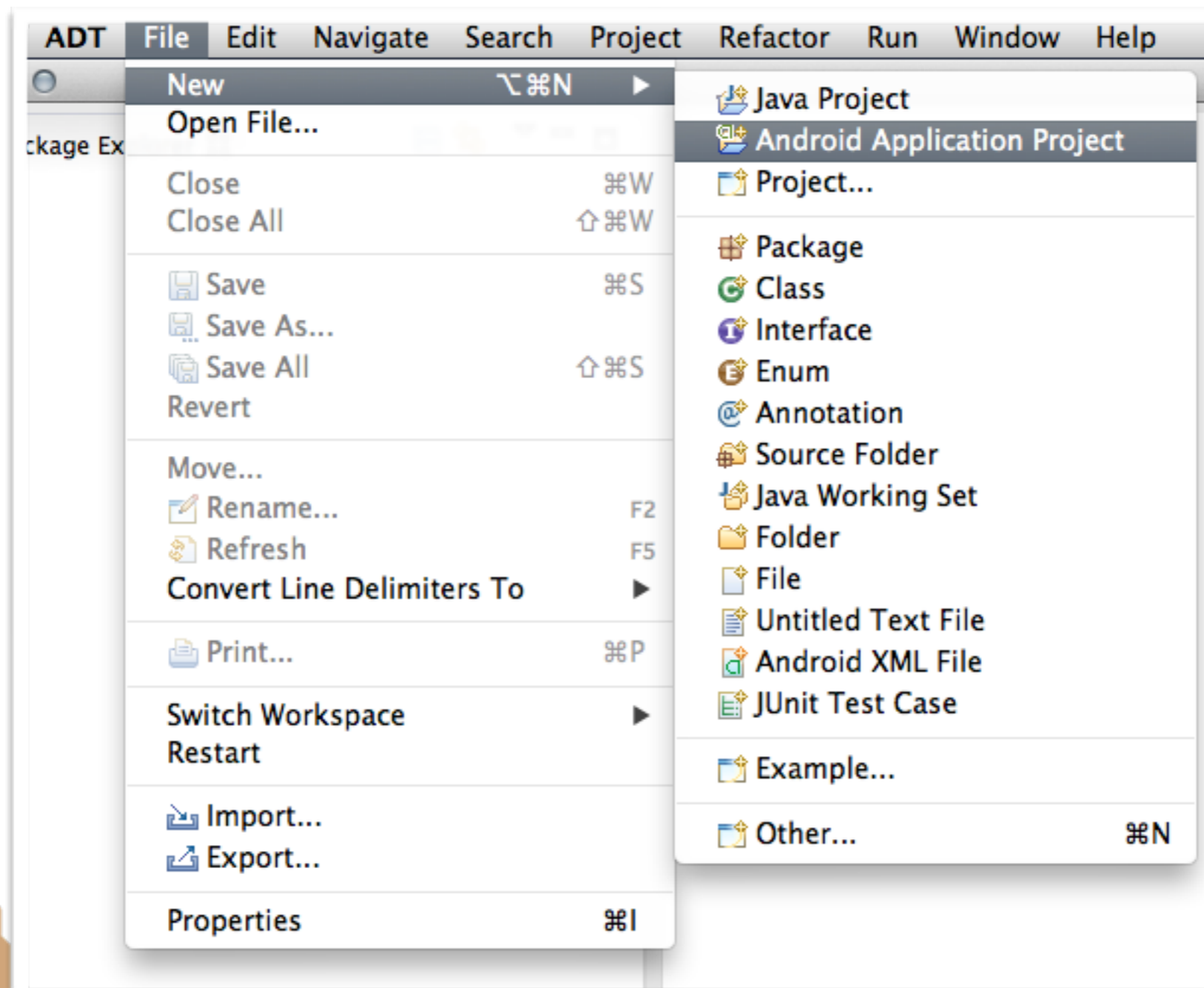
Setting up your environment

- Like any Eclipse project, set up a workspace
- Should be unique for this class



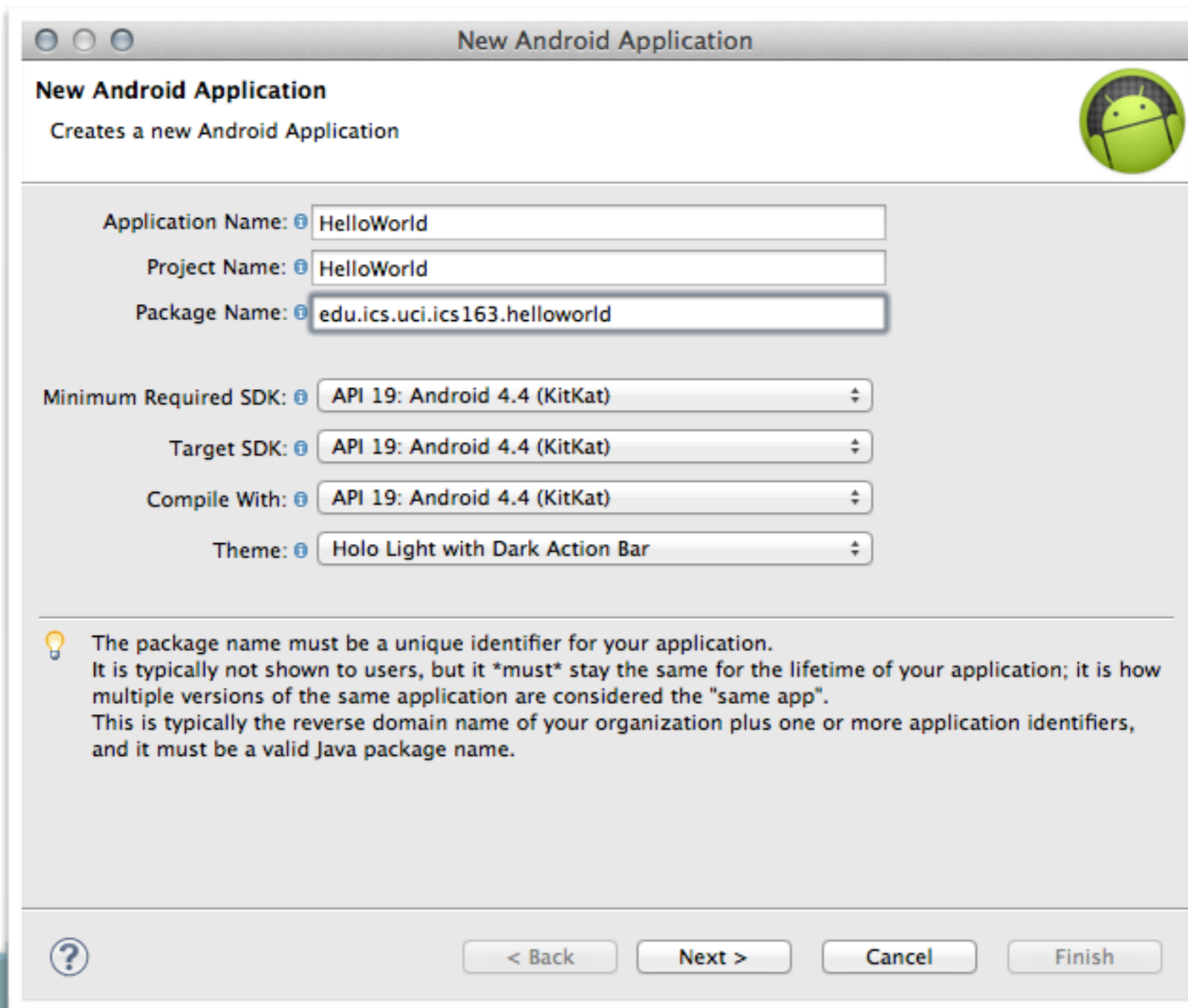
Setting up your environment

- There are Android specific options
- Start a new app



Setting up your environment

- Minimum SDK is the oldest phone your app will work with
- 2.2 is probably the oldest you should consider



New Android Application
Creates a new Android Application

Application Name:

Project Name:


Package Name:

Minimum Required SDK:

Target SDK:

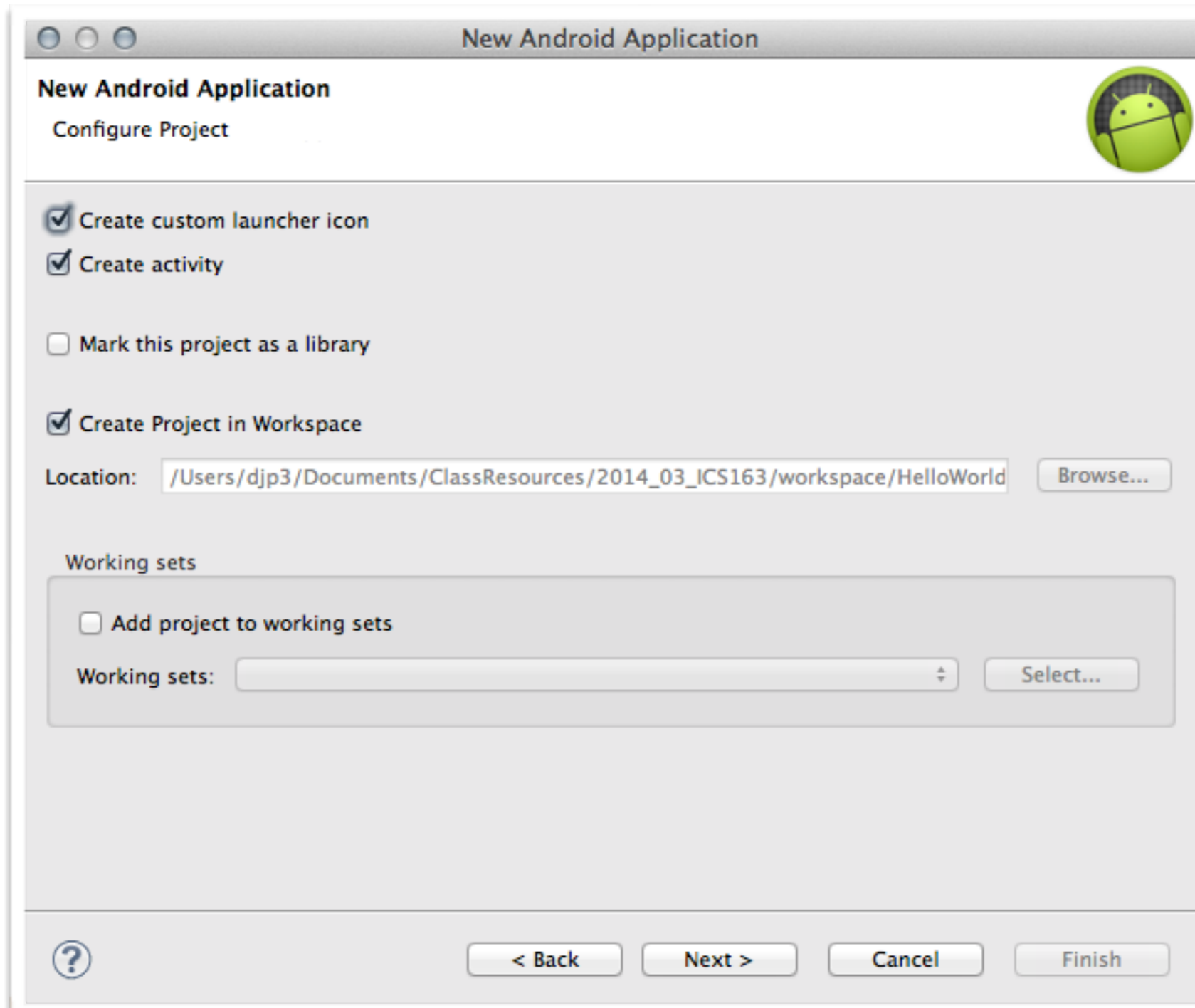
Compile With:

Theme:

 The package name must be a unique identifier for your application. It is typically not shown to users, but it *must* stay the same for the lifetime of your application; it is how multiple versions of the same application are considered the "same app". This is typically the reverse domain name of your organization plus one or more application identifiers, and it must be a valid Java package name.

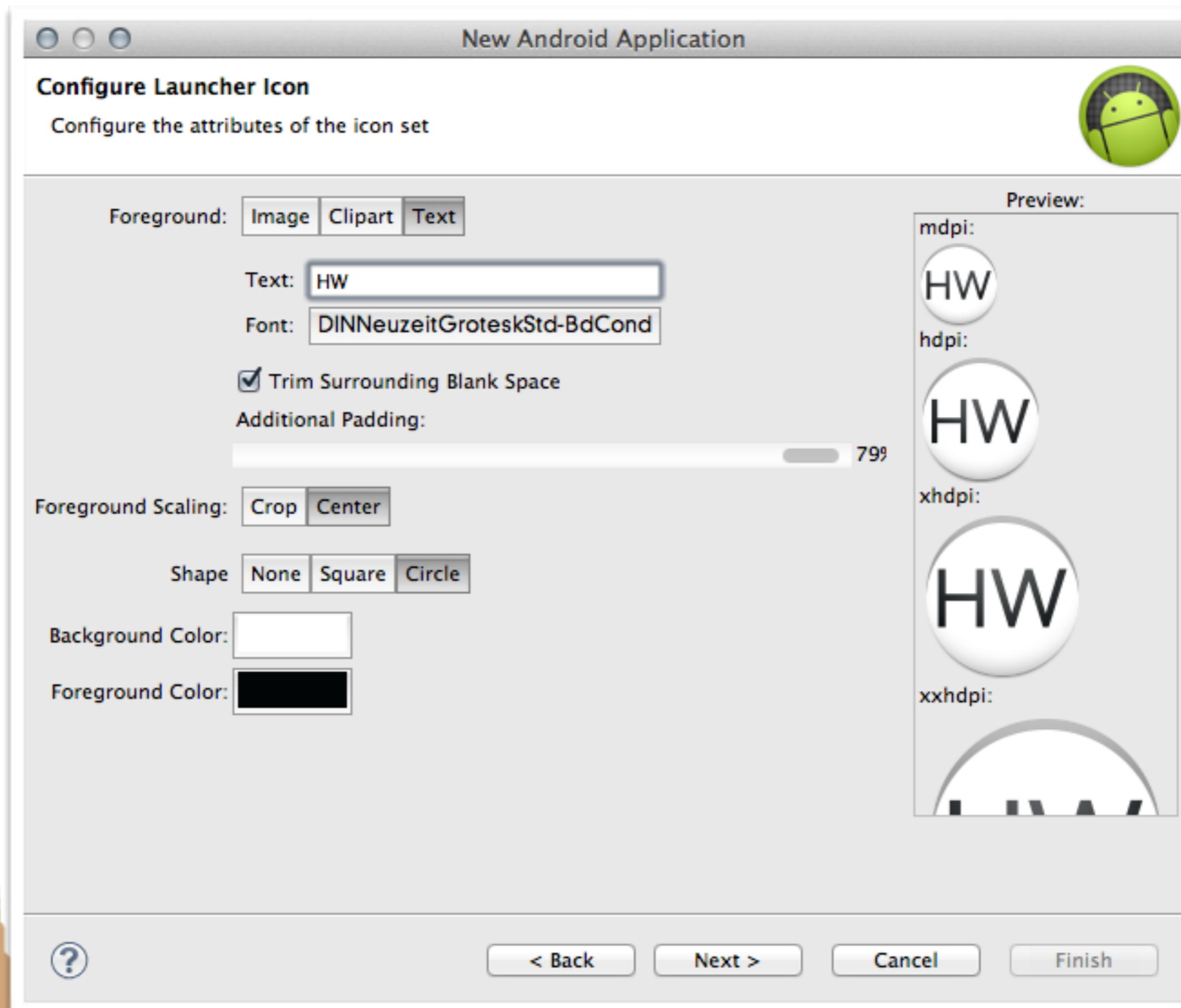
Setting up your environment

- note “library” option



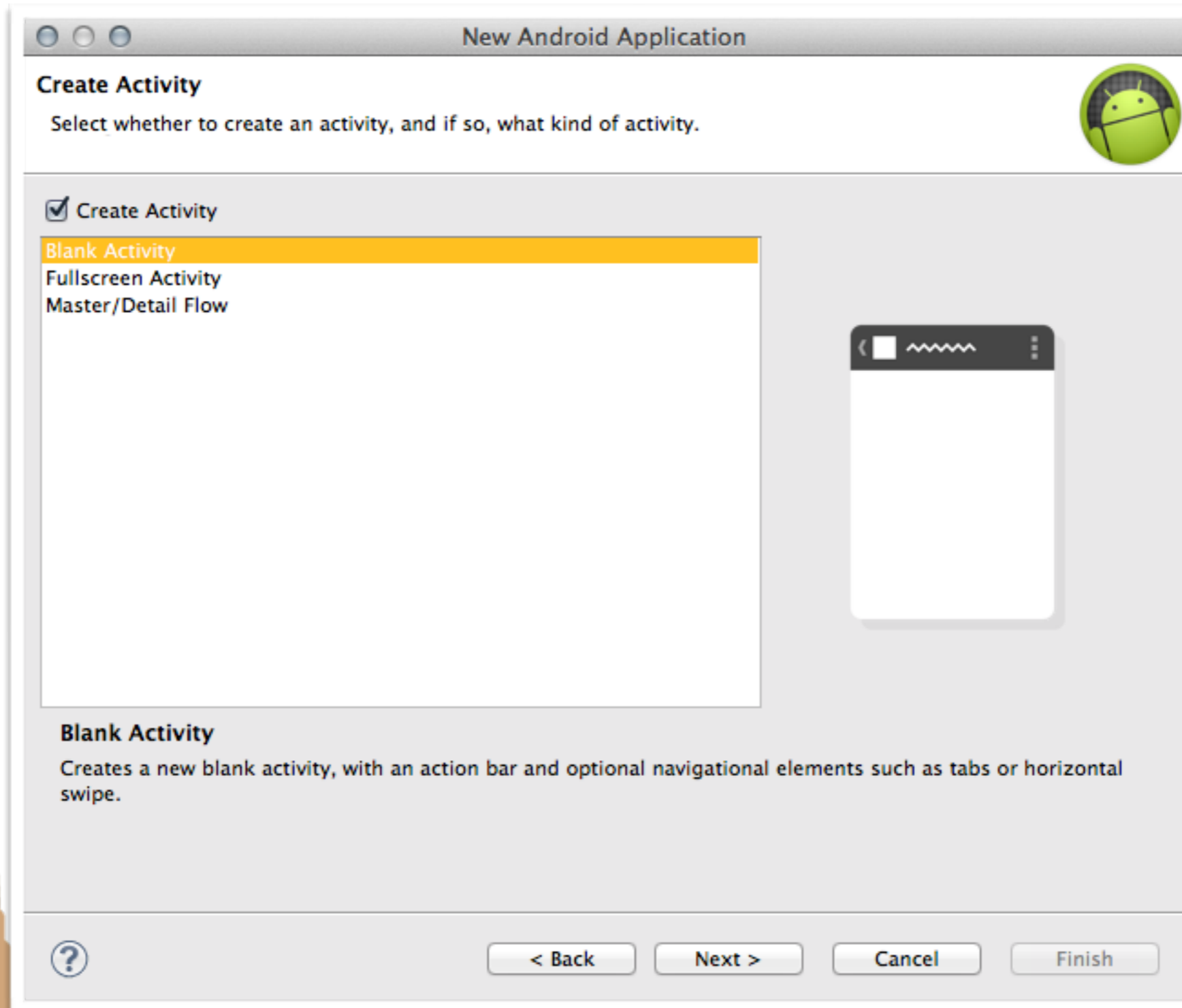
Setting up your environment

- icon set up



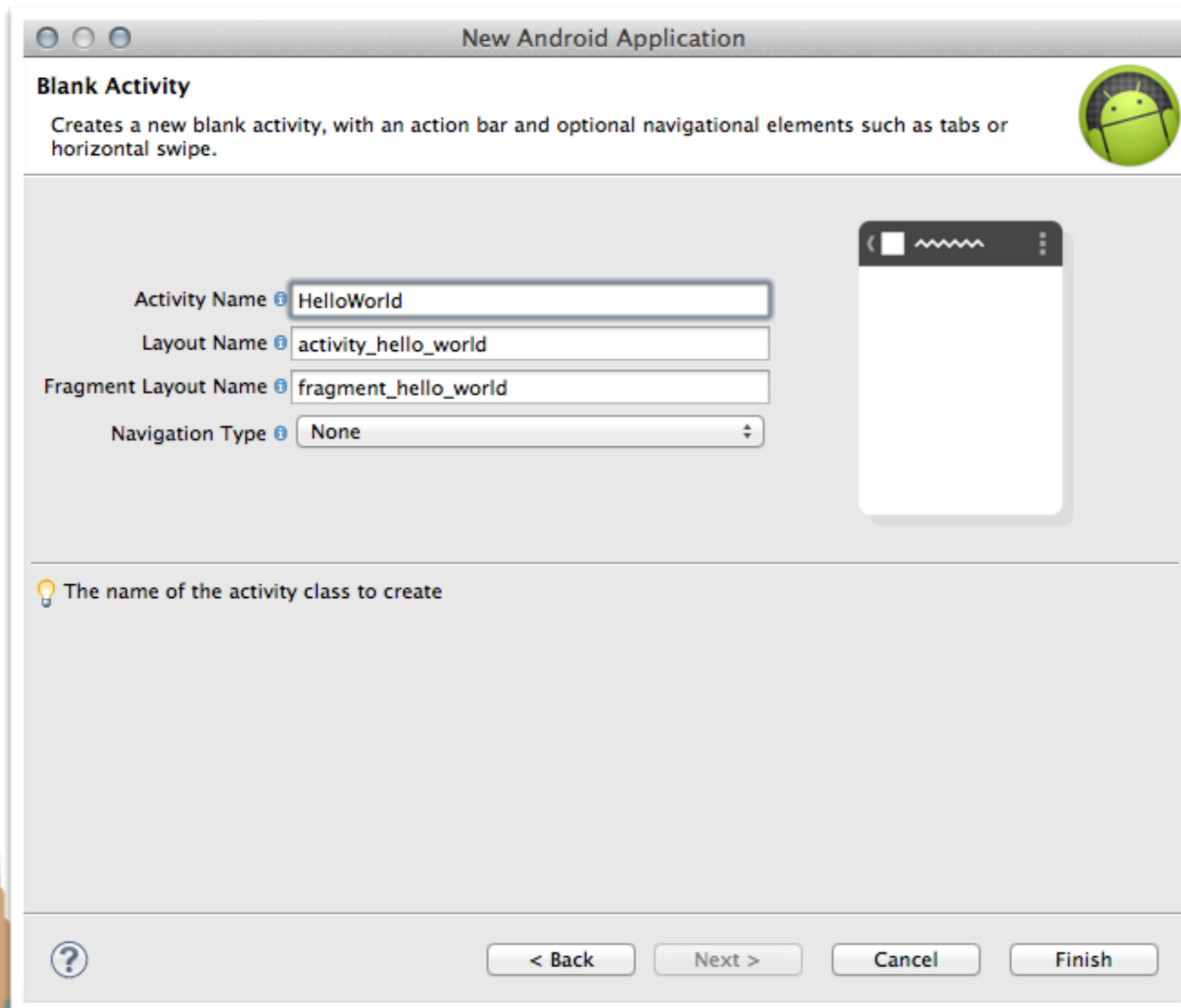
Setting up your environment

- icon set up



Setting up your environment

- navigation style



New Android Application


Blank Activity
Creates a new blank activity, with an action bar and optional navigational elements such as tabs or horizontal swipe.


Activity Name


Layout Name


Fragment Layout Name

Navigation Type





 The name of the activity class to create



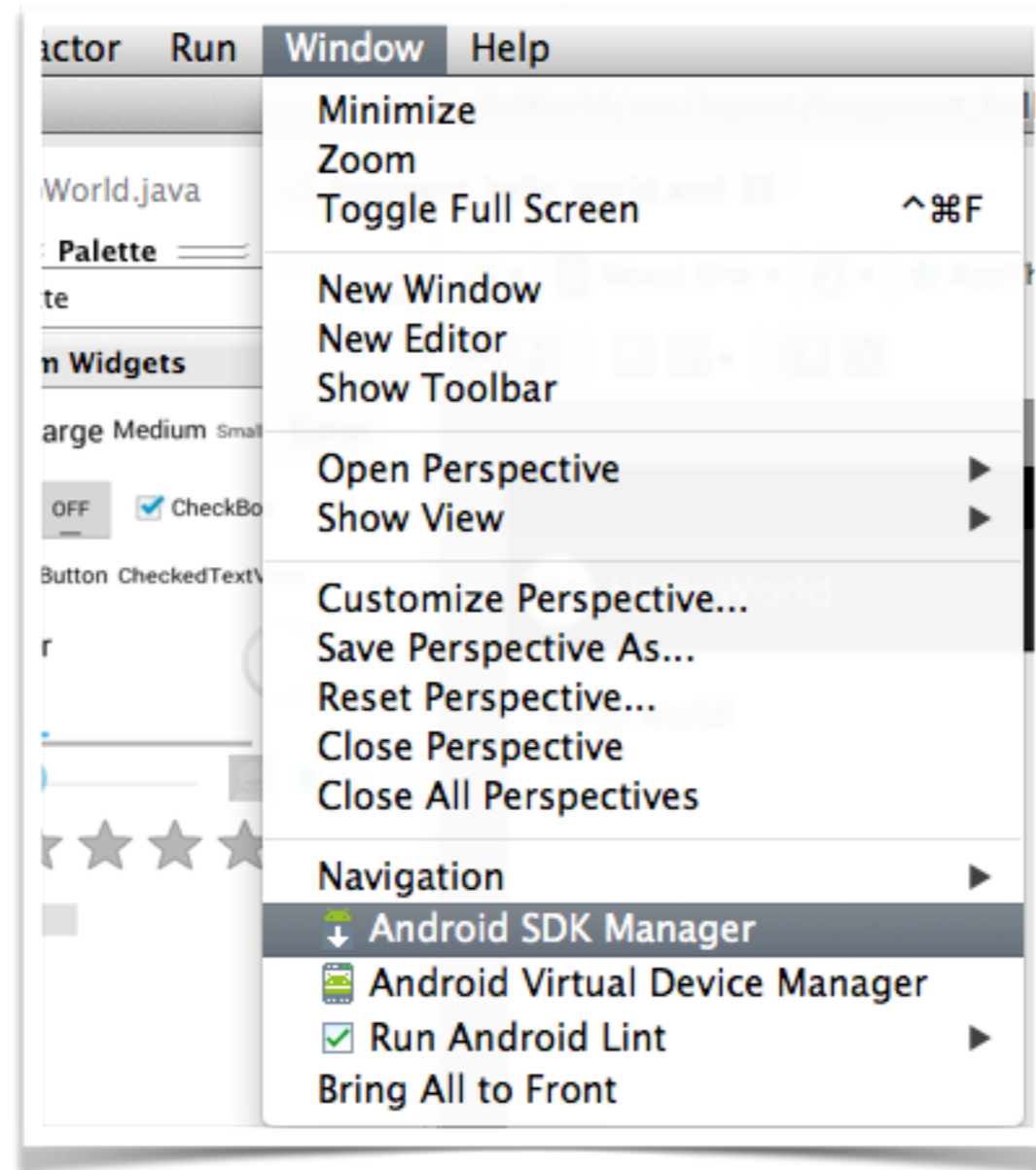
Setting up your environment

The screenshot displays an IDE interface for setting up an Android environment. The **Package Explorer** on the left shows the project structure for **HelloWorld**, including folders like **src**, **gen**, **Android 4.4.2**, **Android Private Libraries**, **assets**, **bin**, **libs**, and **res**. The **res** folder is expanded to show **drawable** and **layout** subfolders, with **fragment_hello_world.xml** selected. The **Palette** in the center shows various **Form Widgets** such as **TextView**, **Button**, **CheckBox**, **RadioButton**, **CheckedTextView**, and **Spinner**. The **Graphical Layout** view on the right shows a preview of the **fragment_hello_world.xml** layout, featuring a **HelloWorld** title bar and a **Hello world!** text view. The **Problems** view at the bottom indicates **0 errors, 2 warnings, 0 others**.

Description	Resource	Path	Location	Type
Warnings (2 items)				

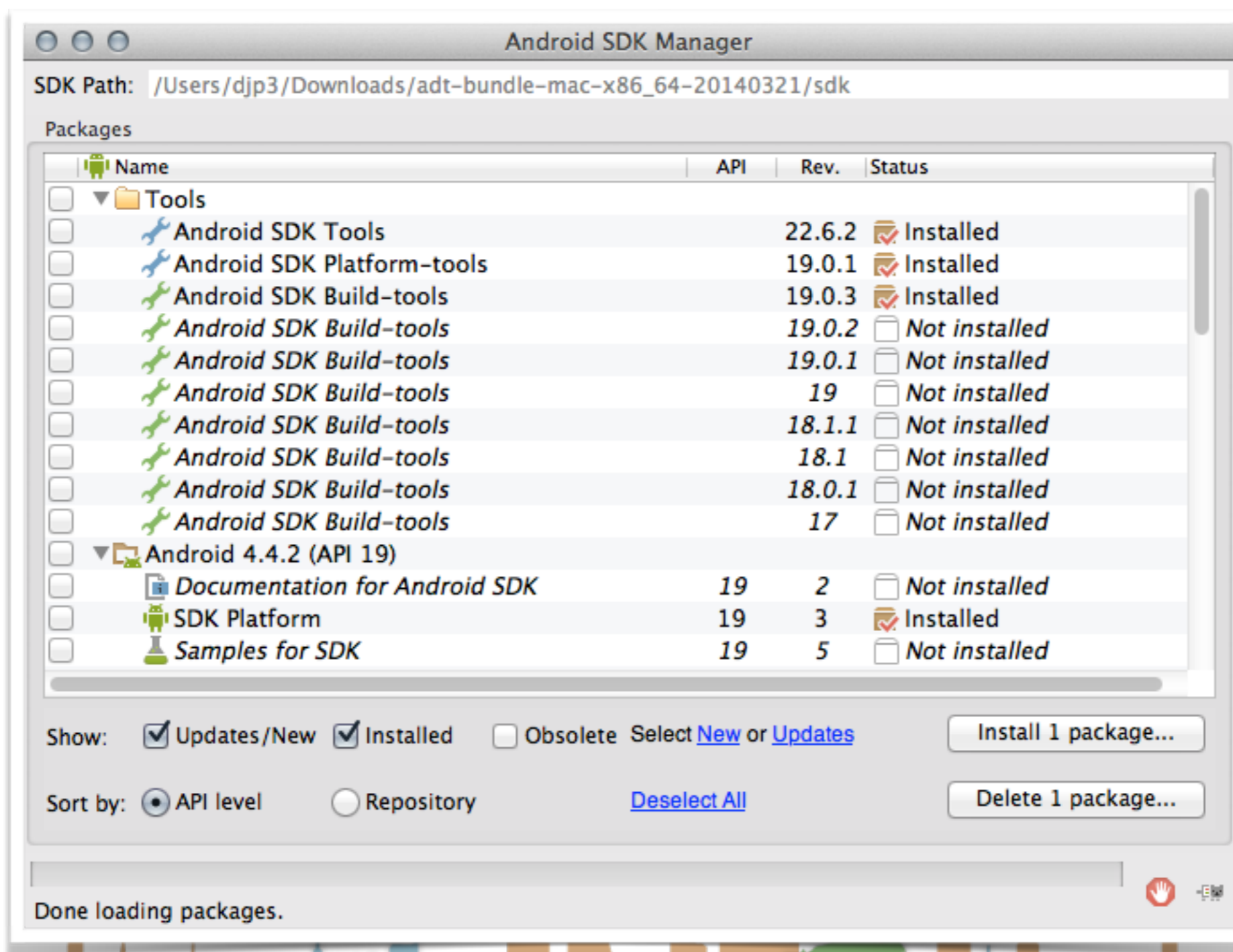
Setting up your environment

- Let's make sure we have everything we need in the SDK



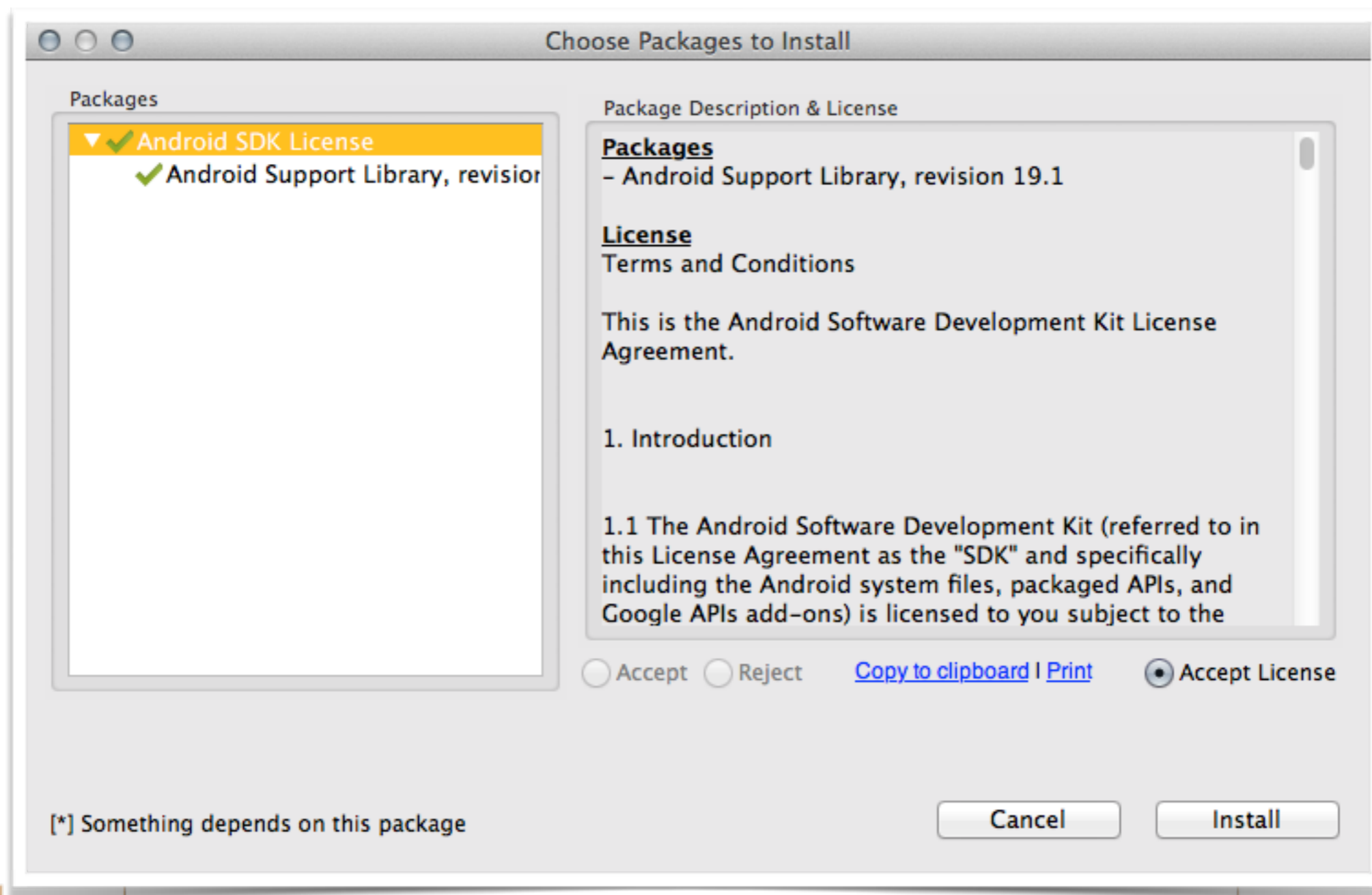
Setting up your environment

- Install updates -> 4.4.3



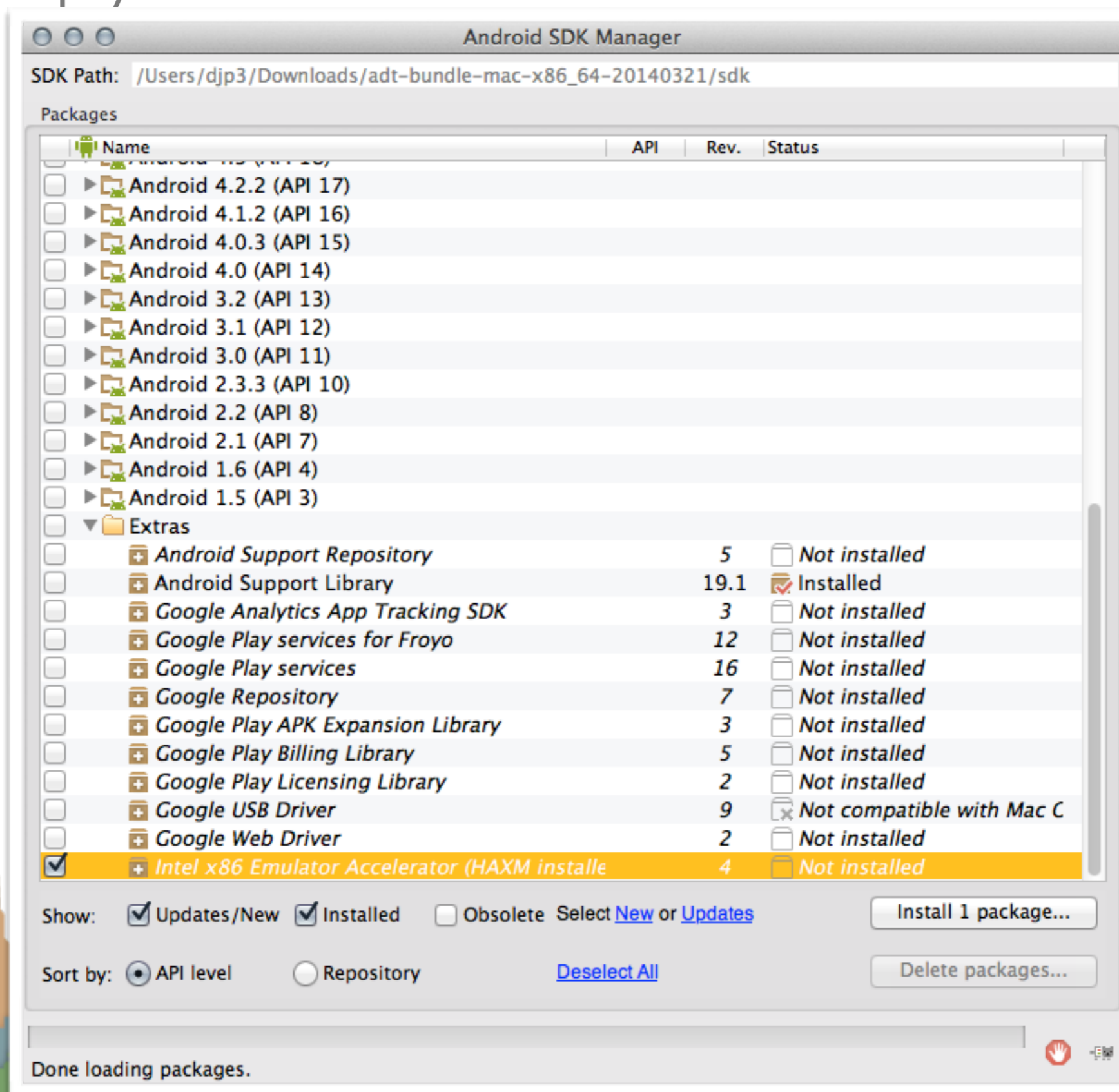
Setting up your environment

- Install updates -> 4.4.3



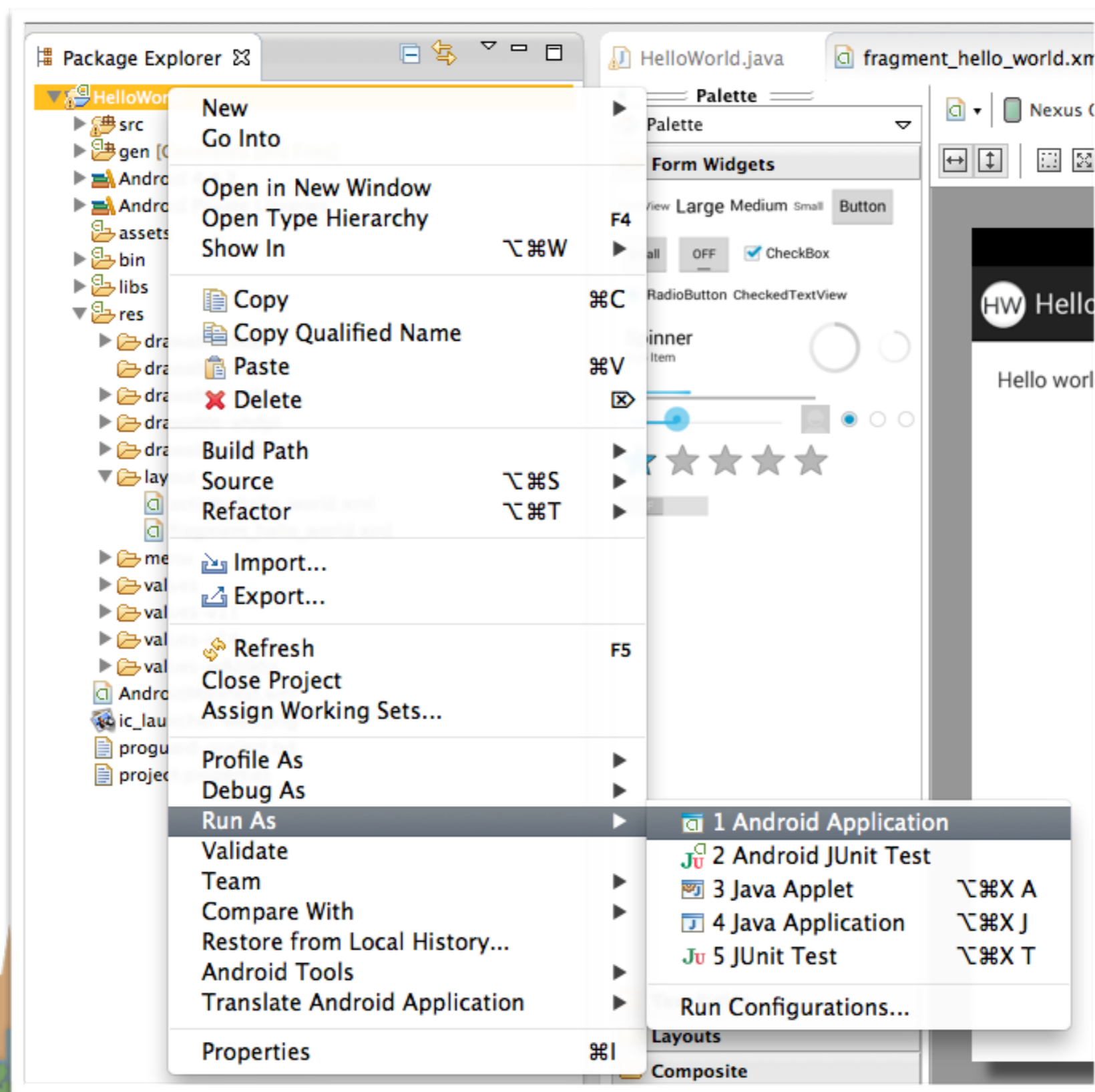
Setting up your environment

- Beef up your emulator



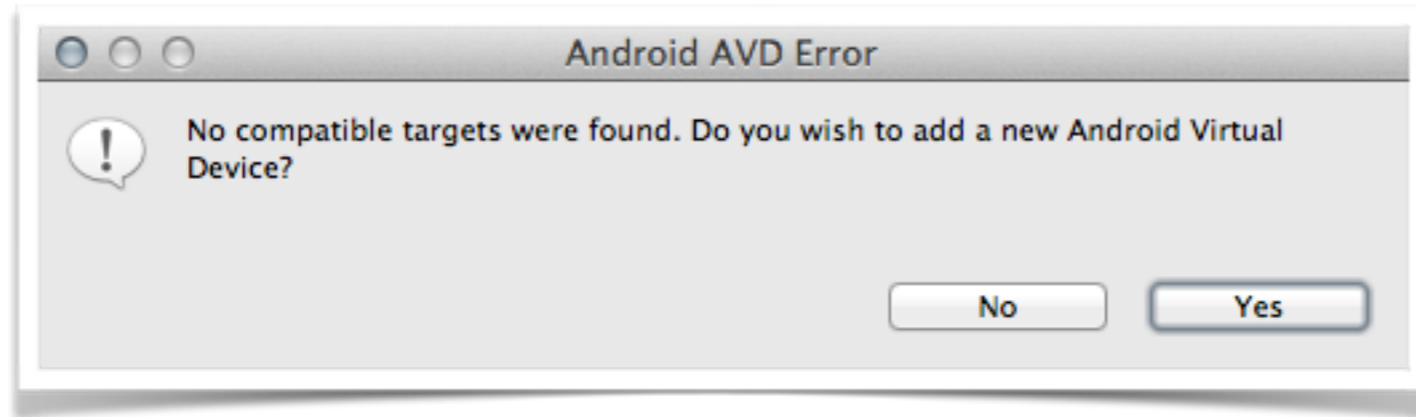
Setting up your environment

- Run your Hello World app



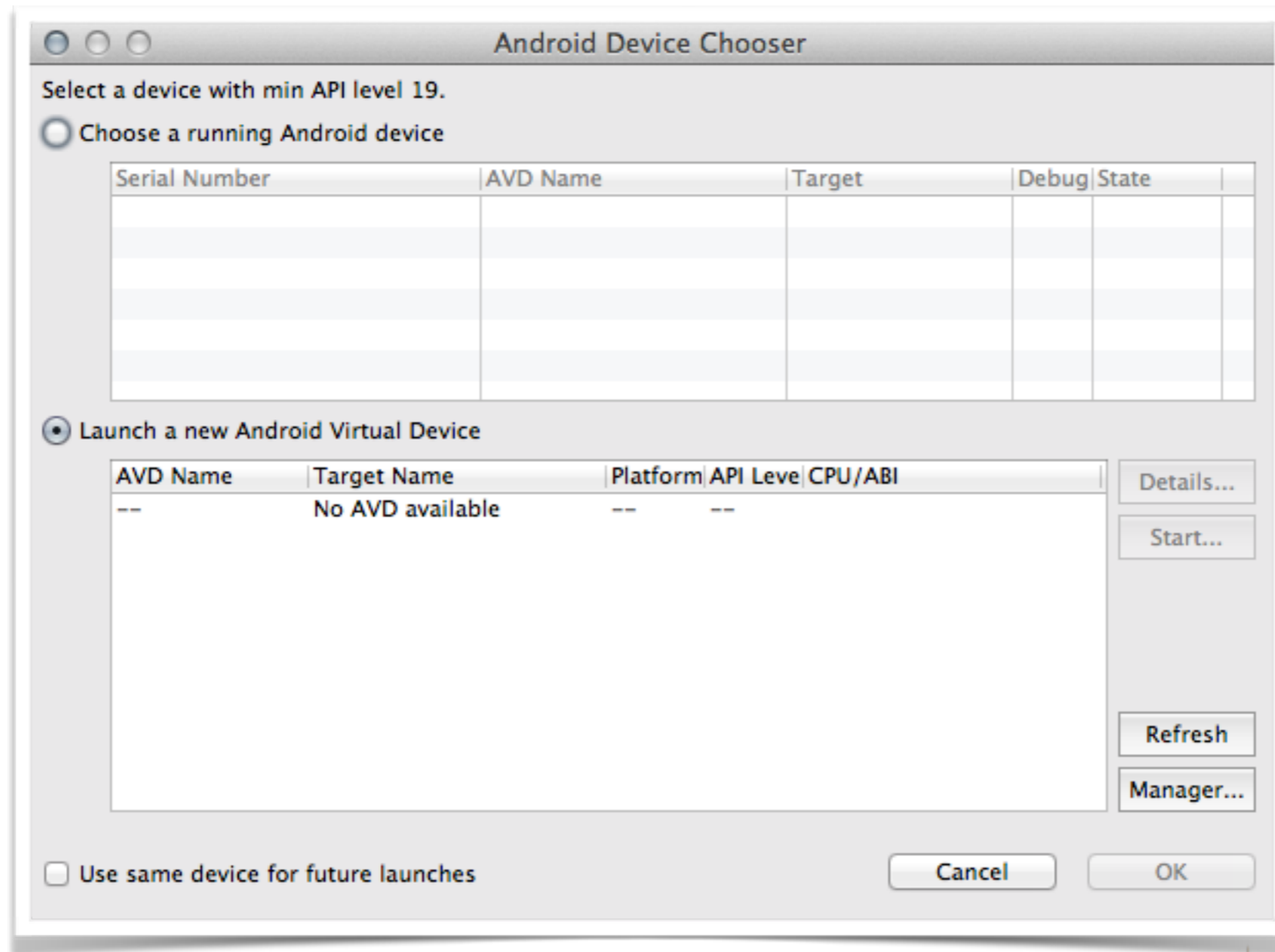
Setting up your environment

- on what? an emulator



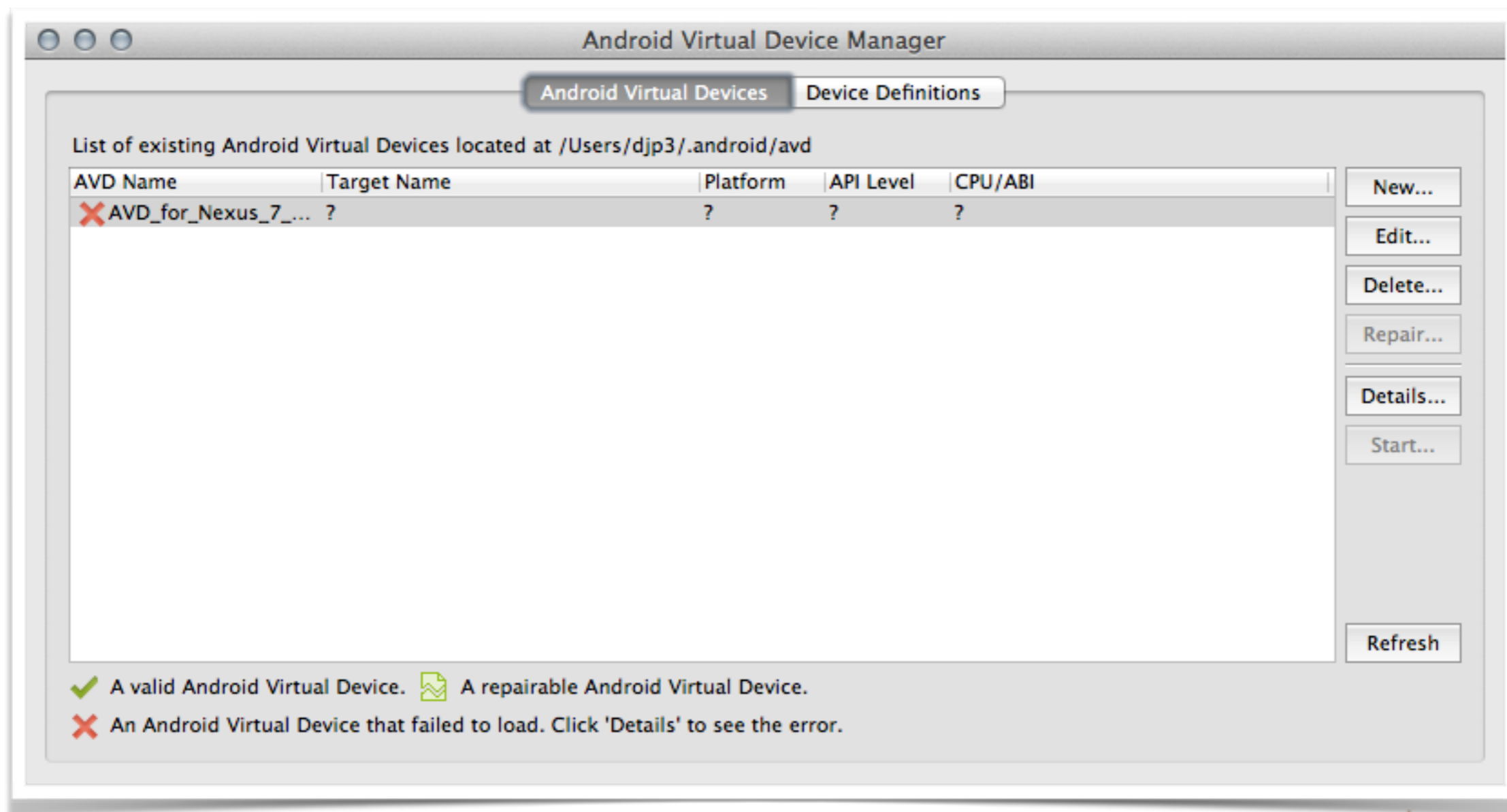
Setting up your environment

- on what? an emulator, aka an Android Virtual Device



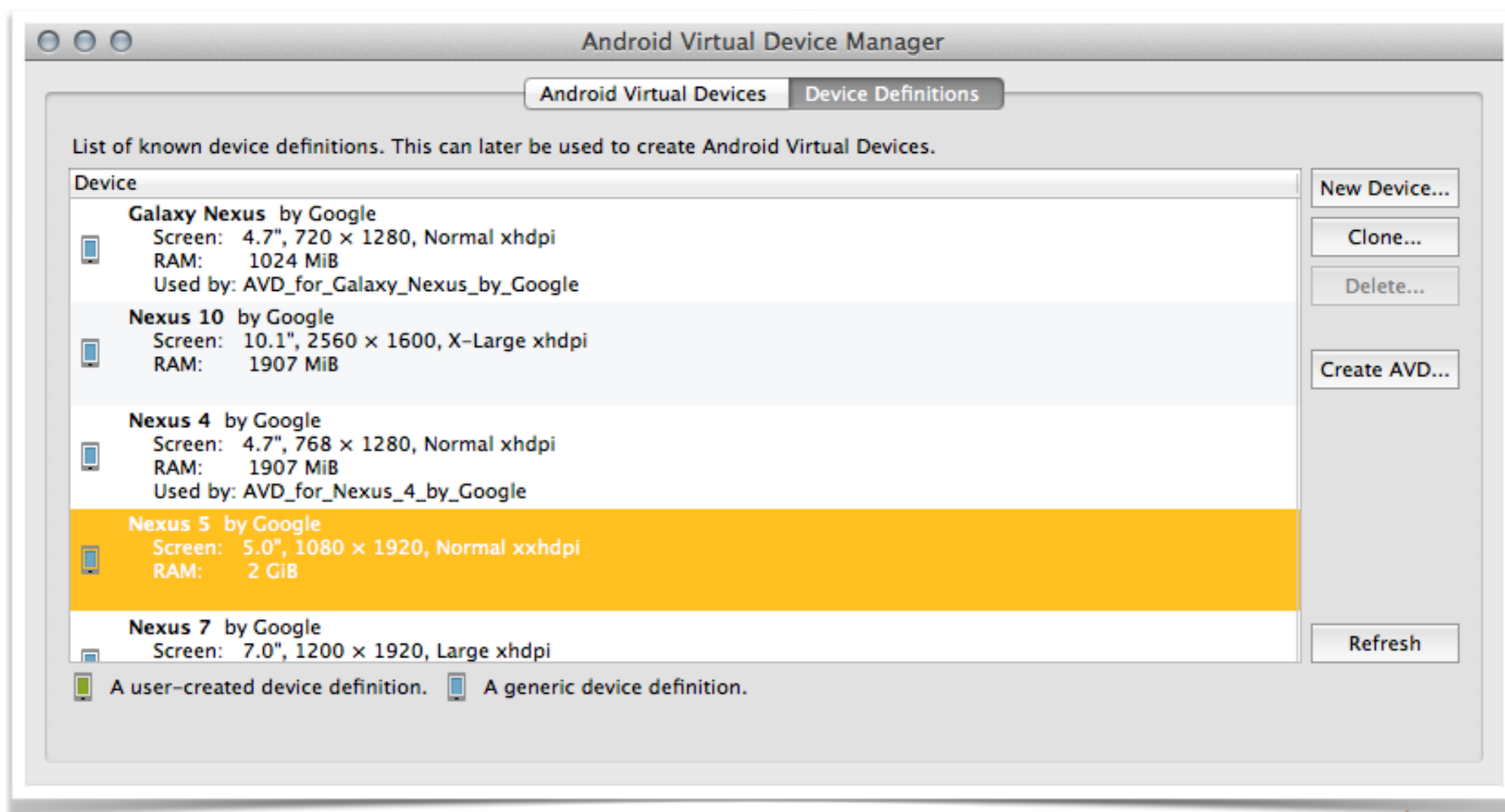
Setting up your environment

- set up the properties of your emulator



Setting up your environment

- set up the properties of your emulator



Setting up your environment

- set up the properties of your emulator

Create new Android Virtual Device (AVD)

AVD Name:

Device:

Target:

CPU/ABI:

Keyboard: Hardware keyboard present

Skin:

Front Camera:

Back Camera:

Memory Options: RAM: VM Heap:

Internal Storage:

SD Card:

Size:

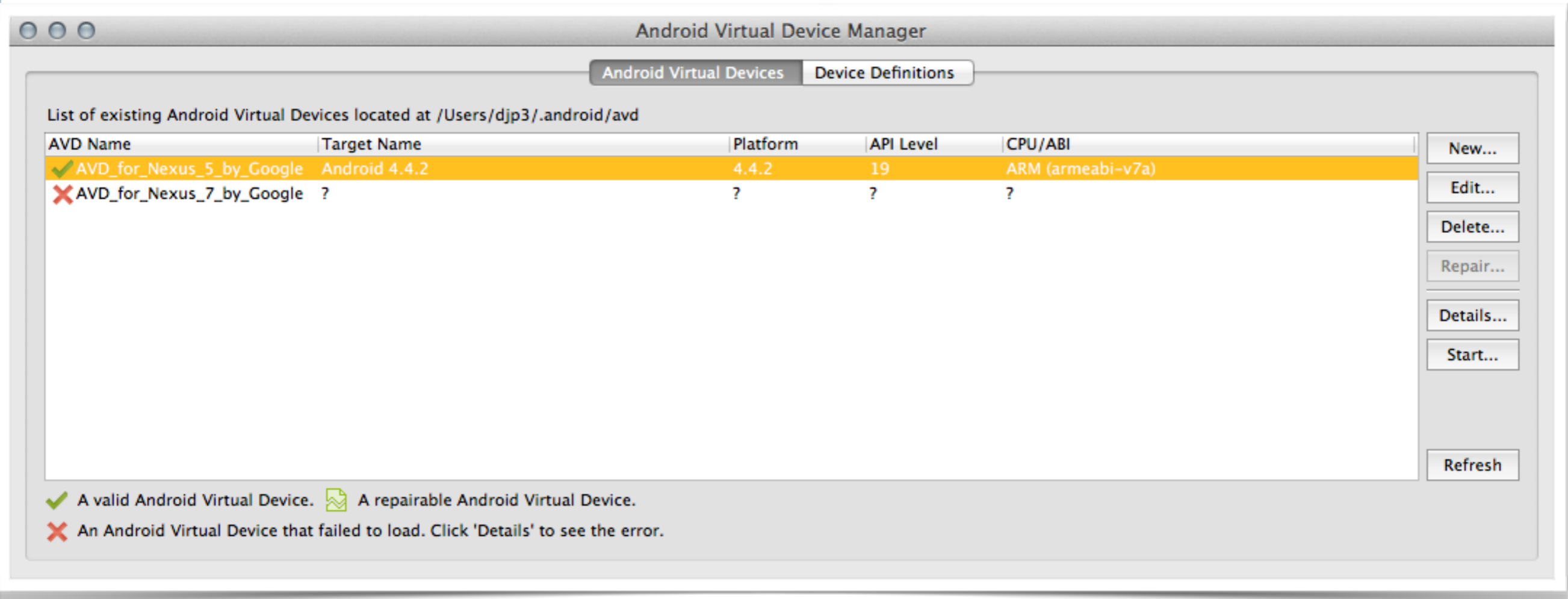
File:

Emulation Options: Snapshot Use Host GPU

Override the existing AVD with the same name

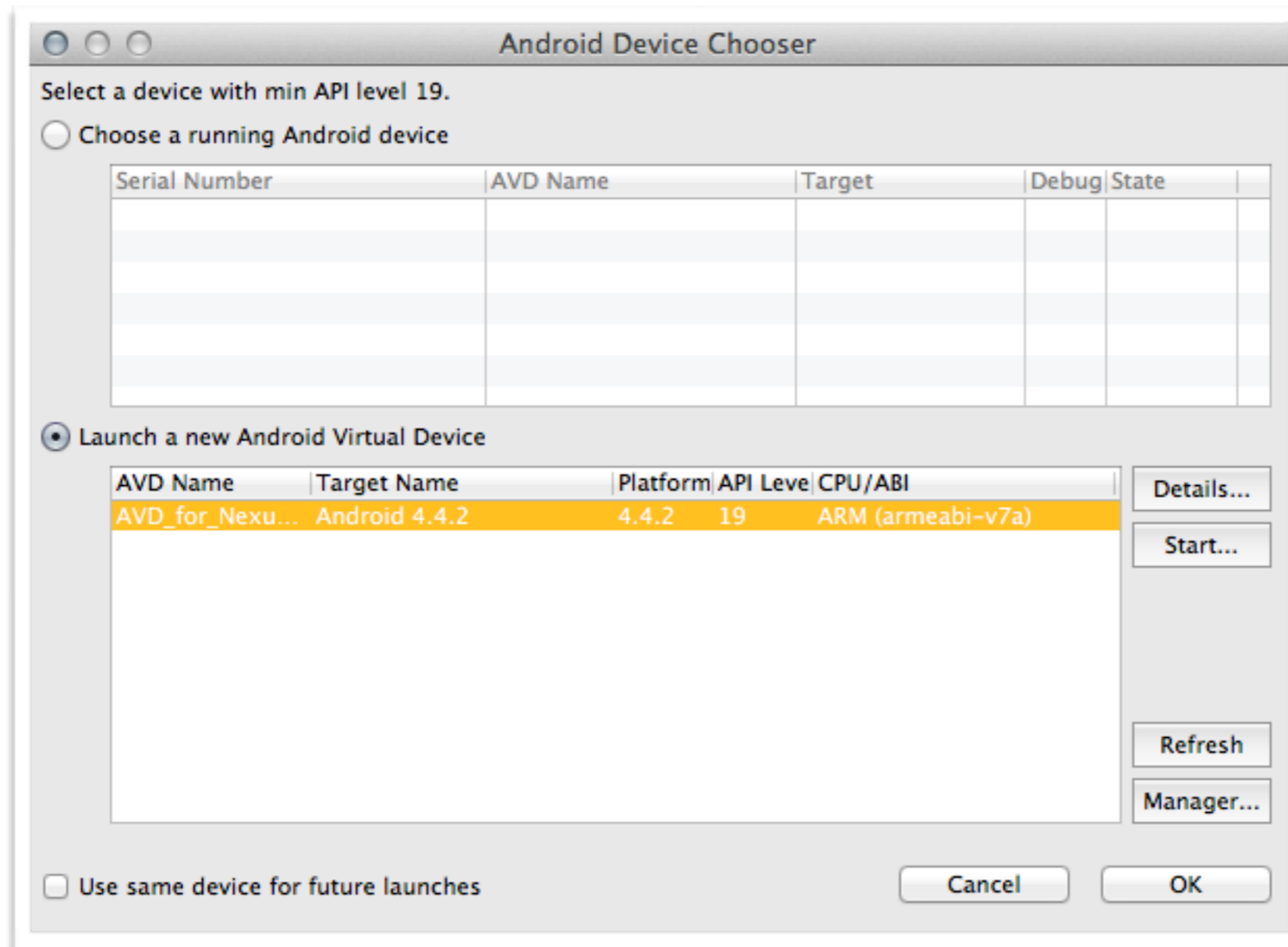
Setting up your environment

- set up the properties of your emulator



Setting up your environment

- choose the emulator



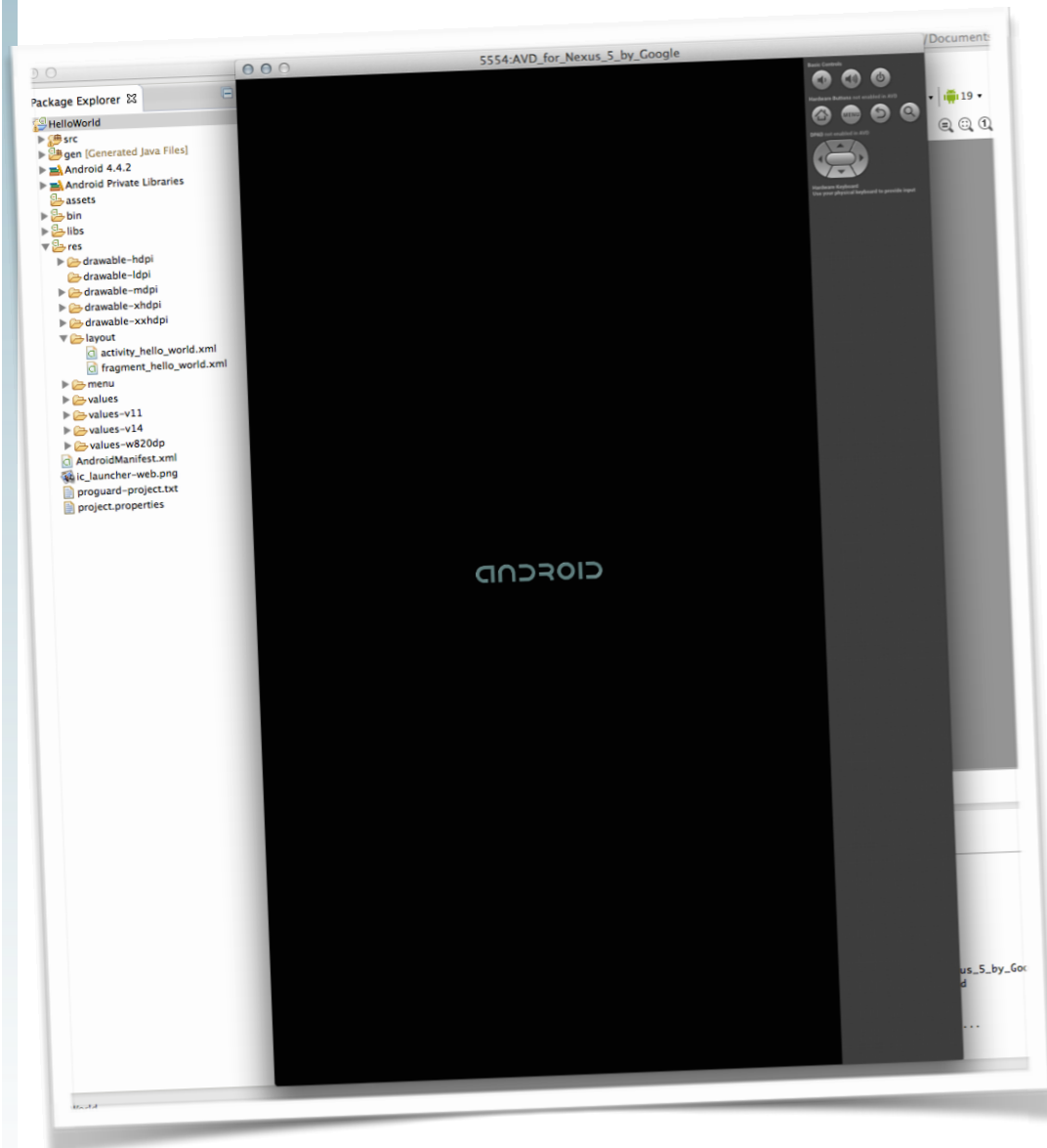
Setting up your environment

- and boot, and wait,



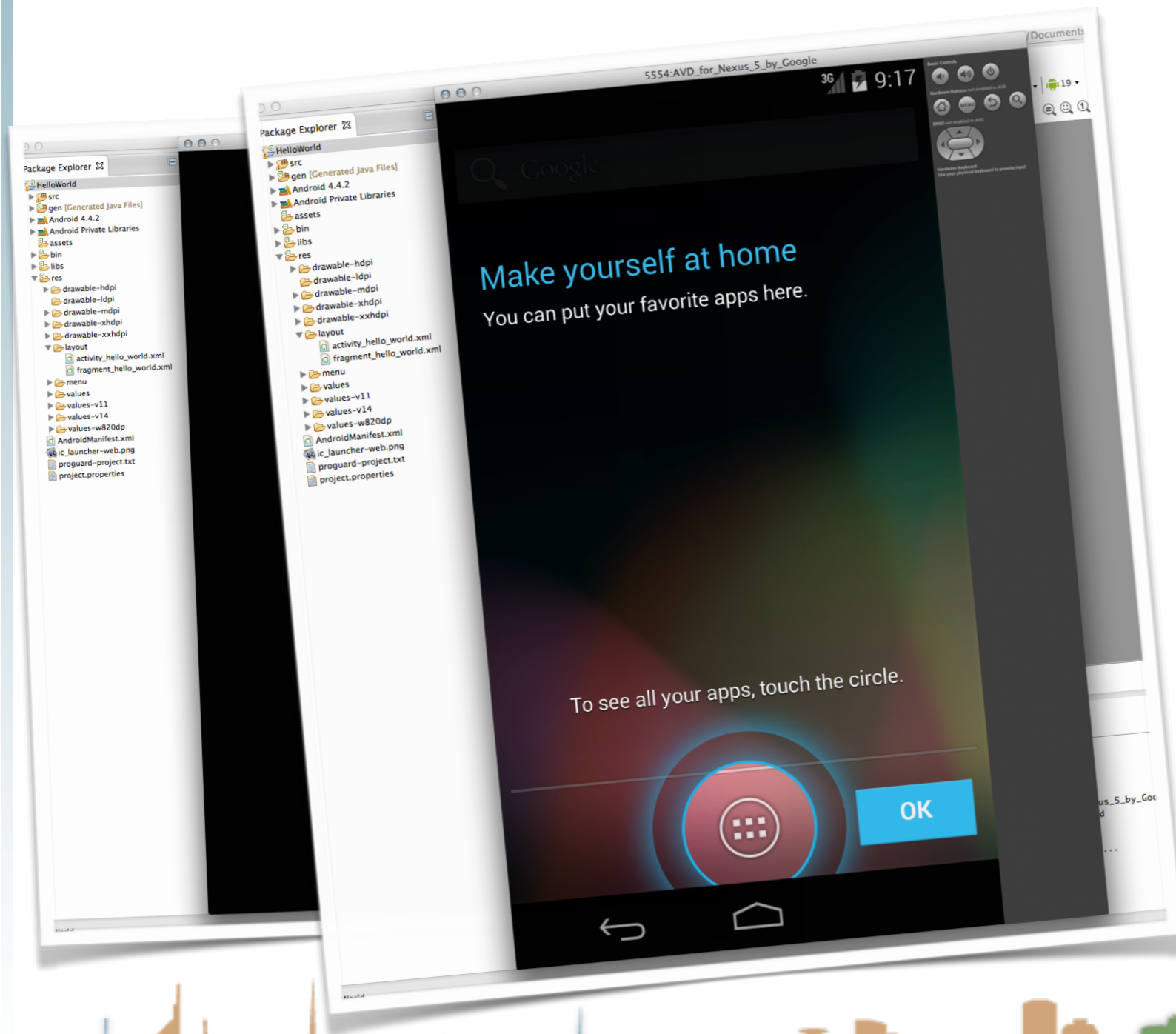
Setting up your environment

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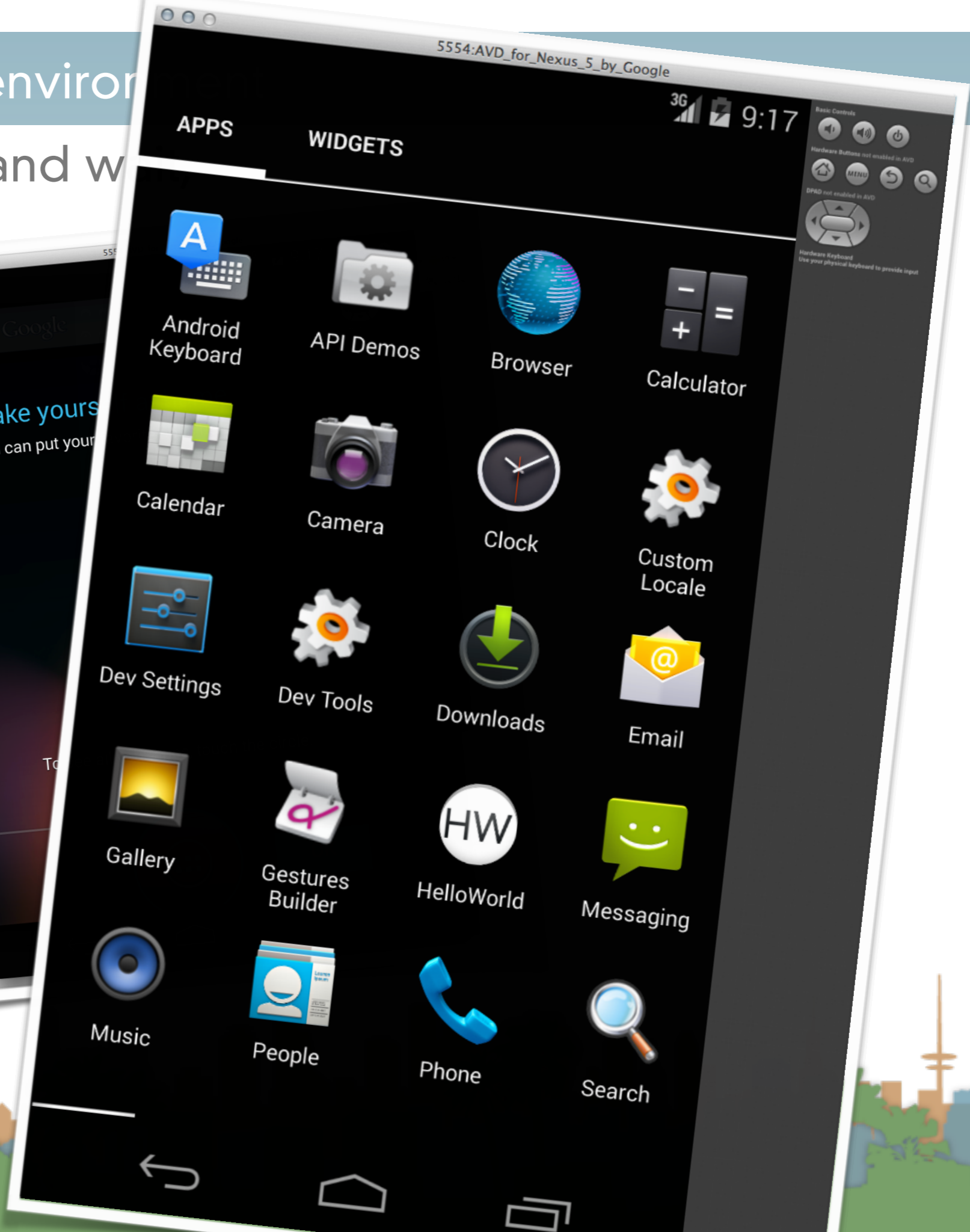
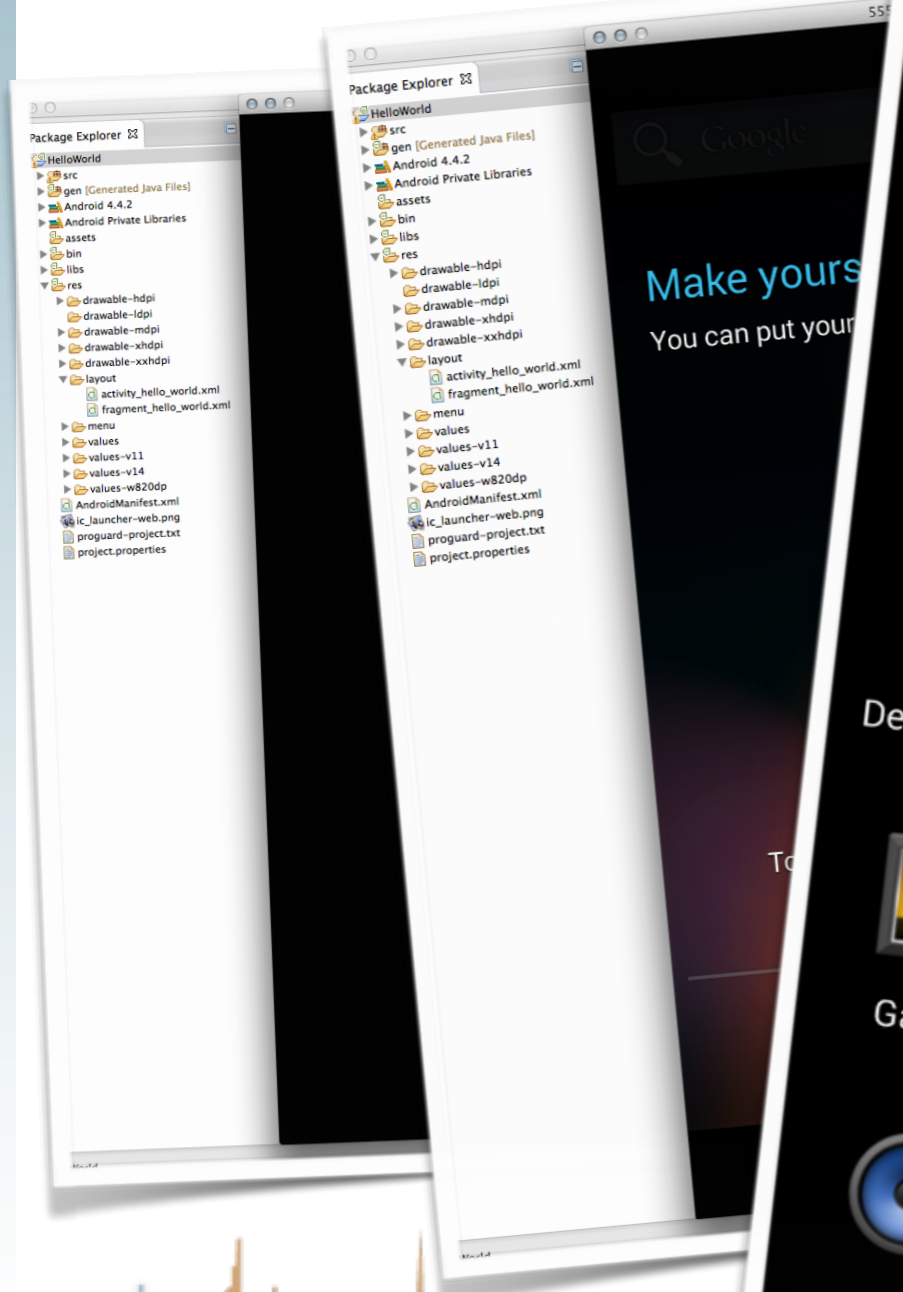
Setting up your environment

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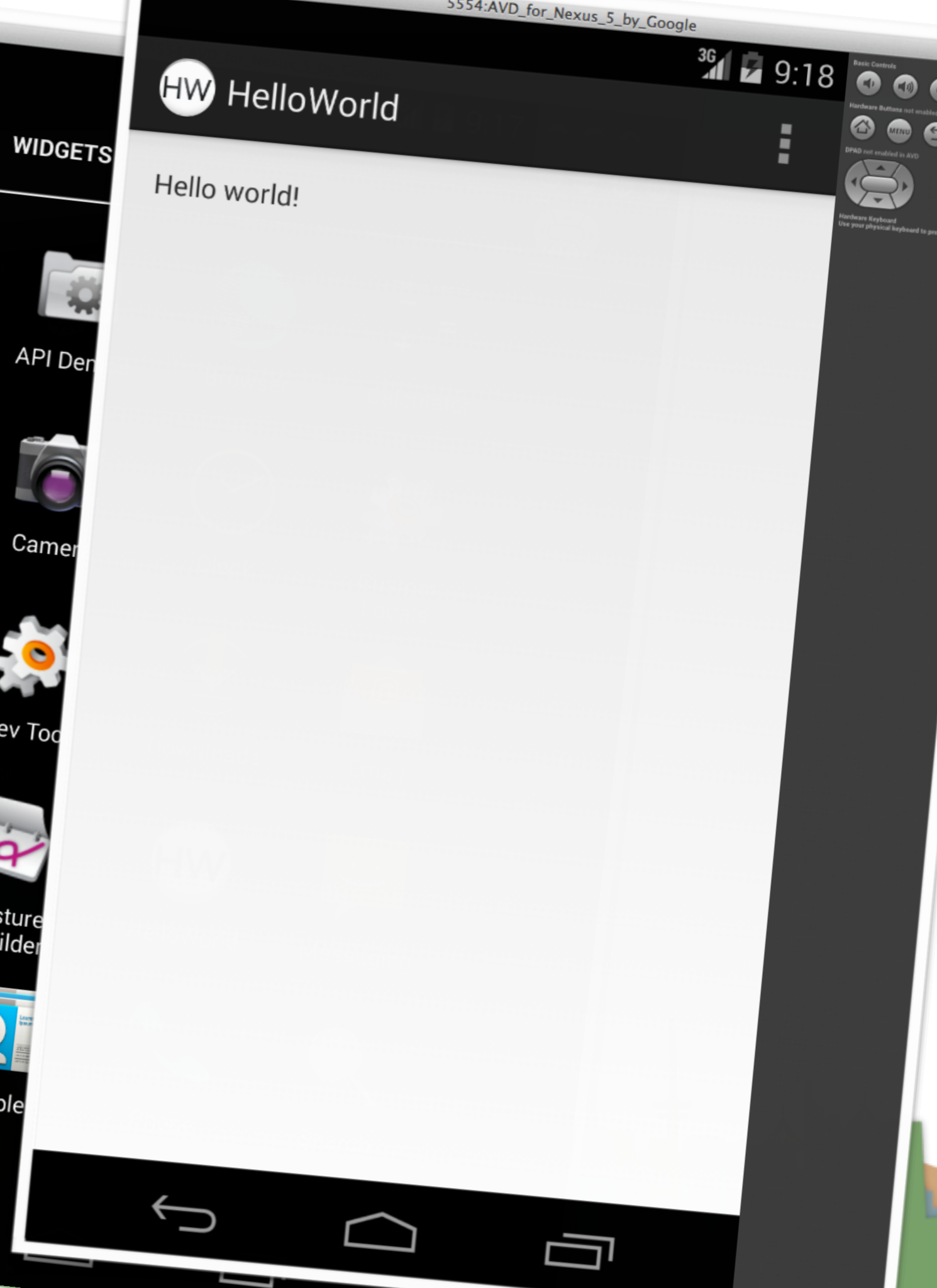
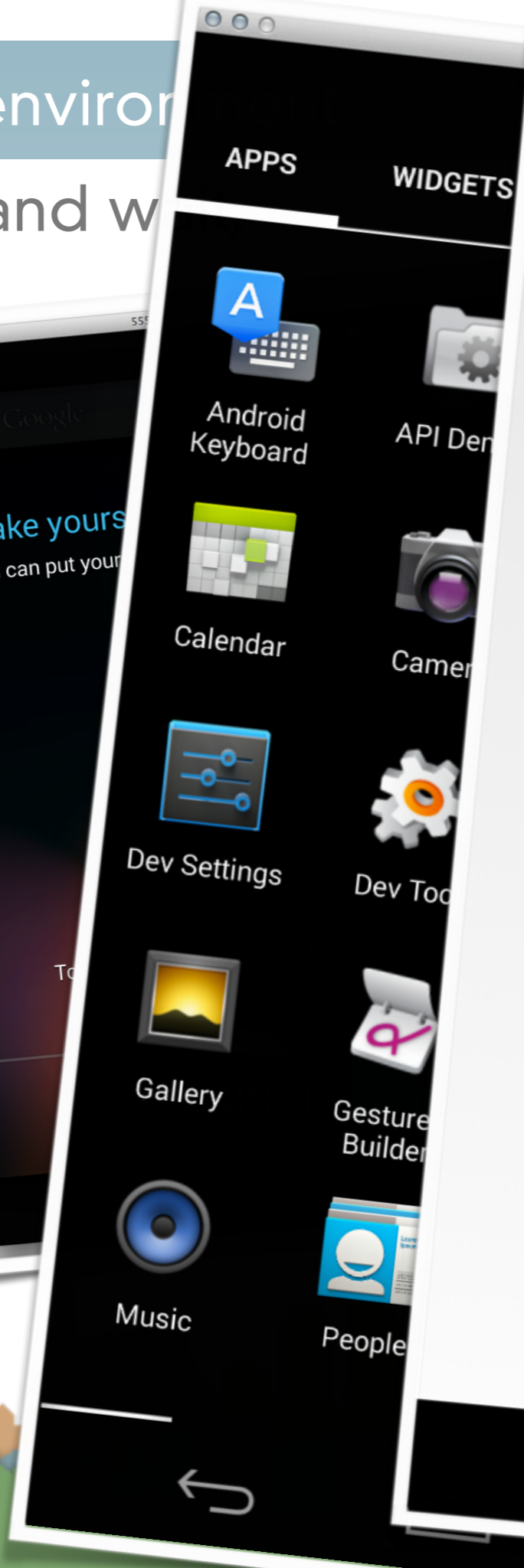
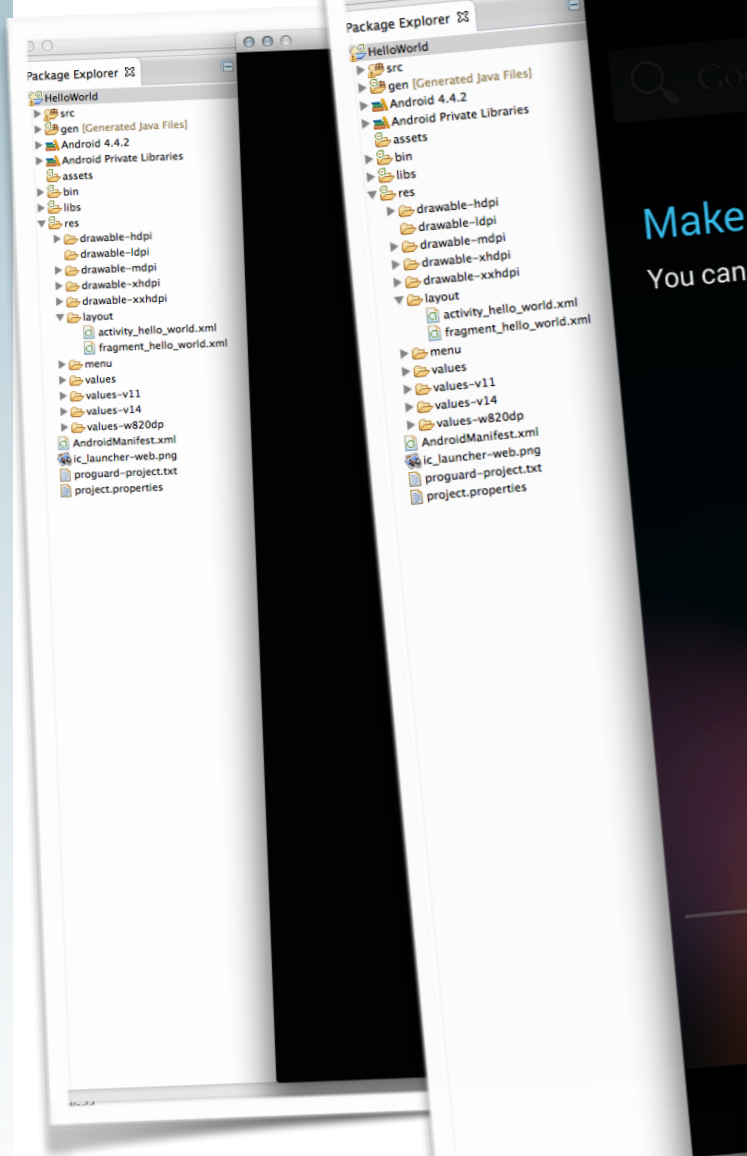
Setting up your environment

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Setting up your environment

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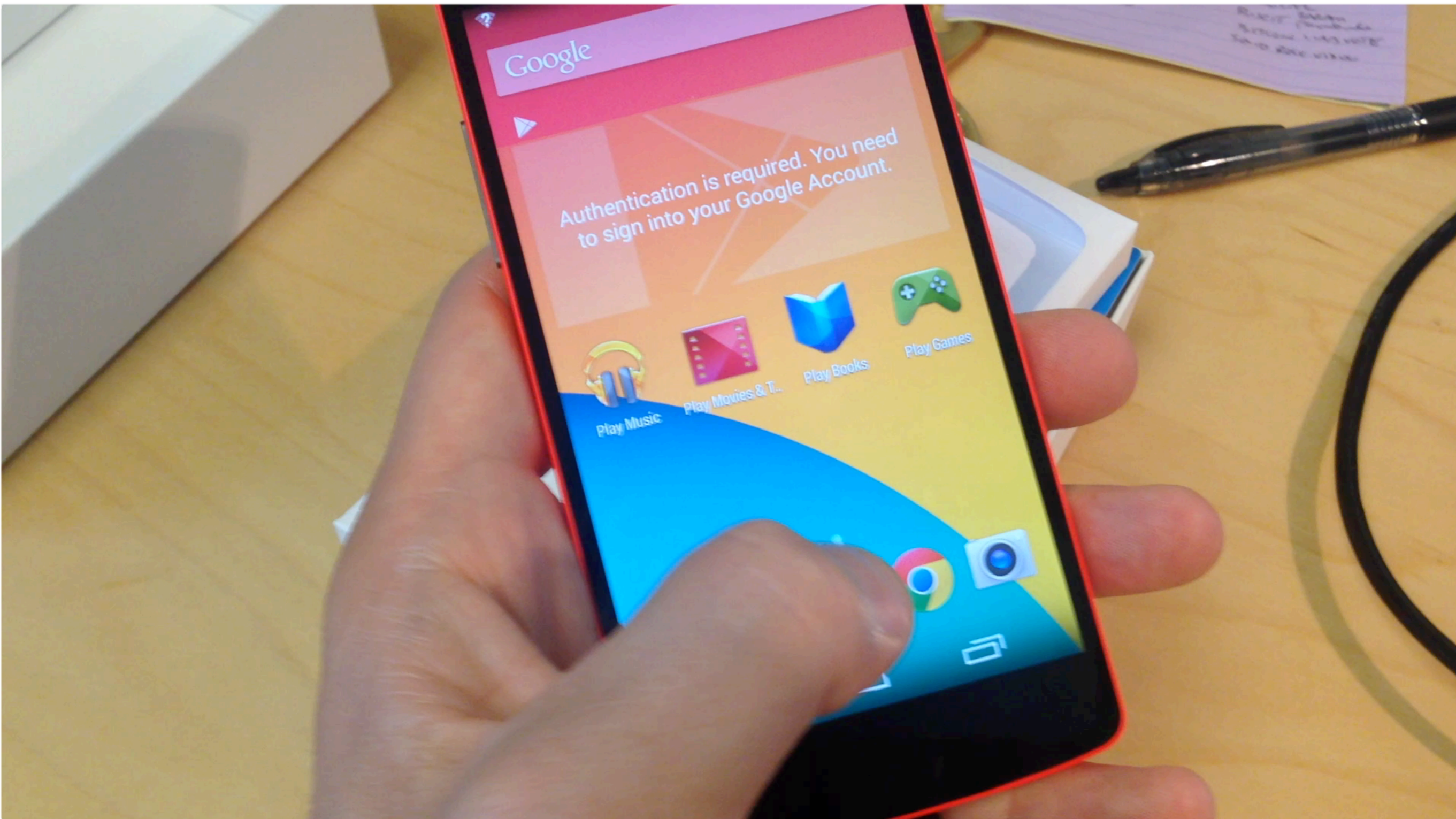
Setting up your environment

- Running on a real phone
 - Enable USB debugging in Developer settings



<http://developer.android.com/tools/device.html#setting-up>

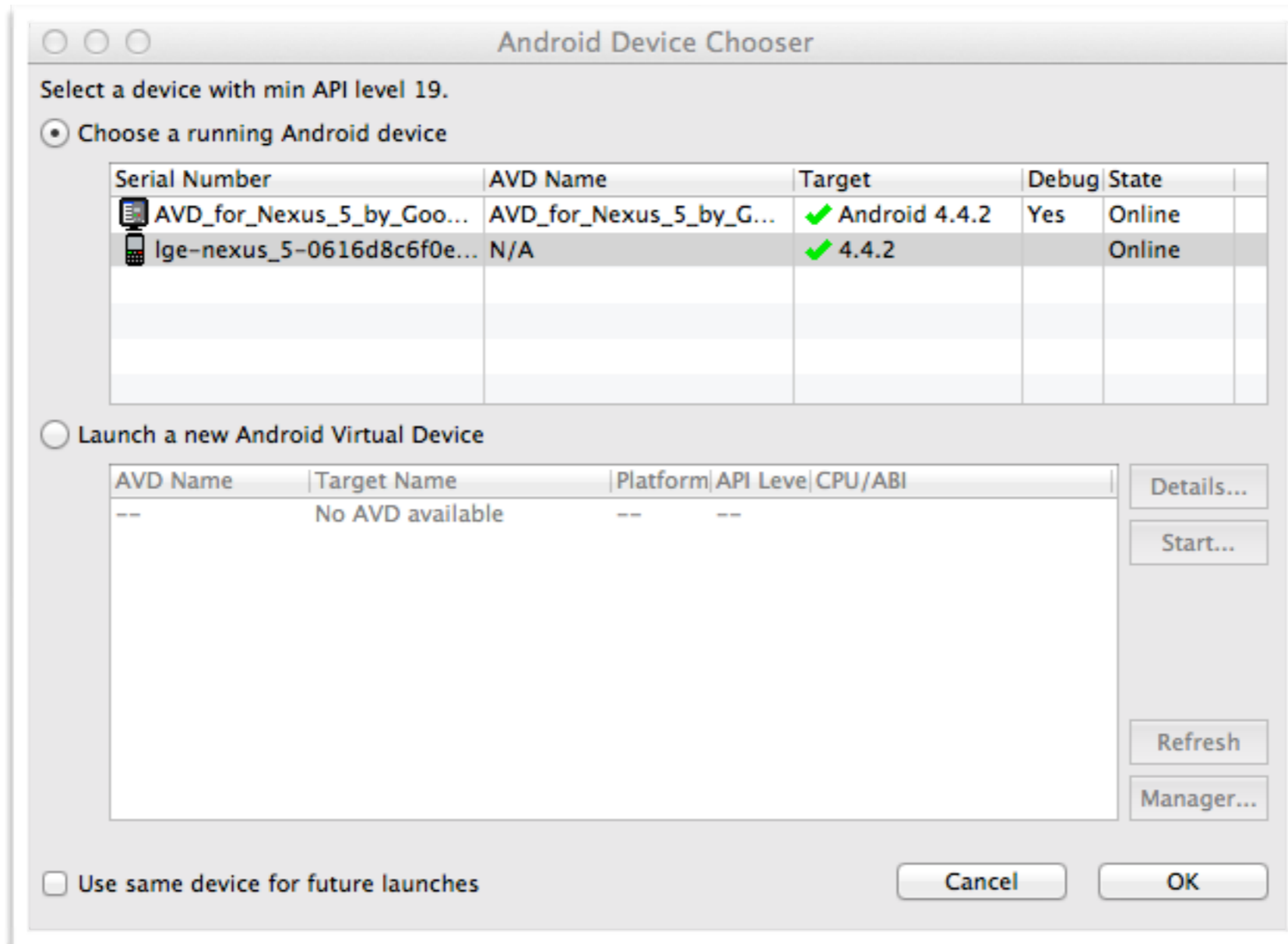
Setting up your environment



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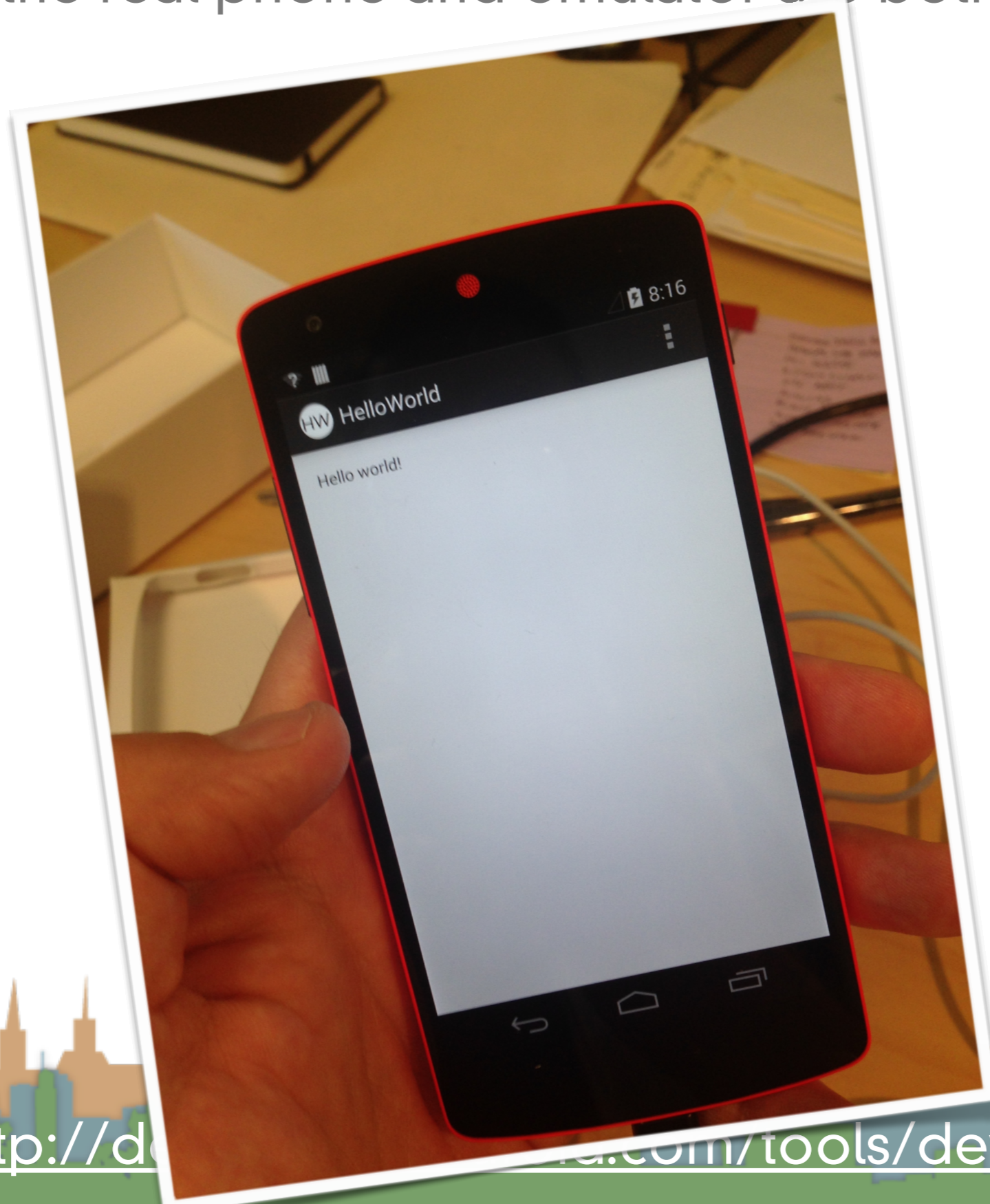
Setting up your environment

- Now the real phone and emulator are both options



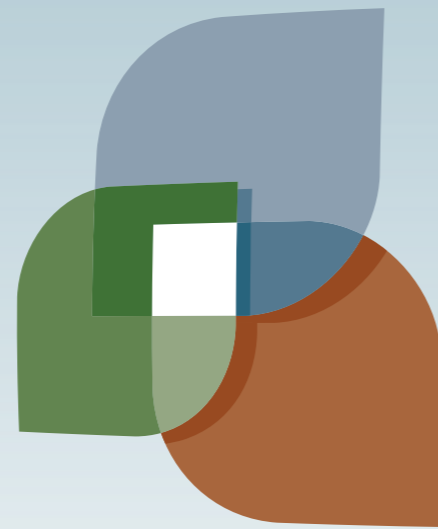
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Setting up your environment





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