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

- 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/
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
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
Setting up your environment
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

![Image of package installation dialog]

- Android SDK License
  - Android Support Library, revision 19.1

**License**
Terms and Conditions

This is the Android Software Development Kit License Agreement.

1. Introduction

1.1 The Android Software Development Kit (referred to in this License Agreement as the "SDK" and specifically including the Android system files, packaged APIs, and Google APIs add-ons) is licensed to you subject to the

[Accept] [Reject] [Copy to clipboard] [Print] [Accept License]
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) dialog box]

- AVD Name: AVD_for_Nexus_5_by_Google
- Device: Nexus 5 (4.95", 1080 x 1920: xxhdpi)
- Target: Android 4.4.2 – API Level 19
- CPU/ABI: ARM (armeabi-v7a)
- Keyboard: Hardware keyboard present
- Skin: Skin with dynamic hardware controls
- Front Camera: Webcam0
- Back Camera: None
- Memory Options: RAM: 2048, VM Heap: 64
- Internal Storage: 200 MiB
- SD Card: Size: <blank>, 0 MiB
- Emulation Options: Snapshot: unchecked, Use Host GPU: checked
- Override the existing AVD with the same name: unchecked
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

- and boot, and wait,
Setting up your environment

• and boot, and wait,
Setting up your environment

- and boot, and wait,
Setting up your environment

- and boot, and wait,
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

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

http://developer.android.com/tools/device.html#setting-up
Setting up your environment

- Now the real phone and emulator are both options

```
<table>
<thead>
<tr>
<th>Serial Number</th>
<th>AVD Name</th>
<th>Target</th>
<th>Debug State</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AVD_for_Nexus_5_by_G</td>
<td>✔ Android 4.4.2</td>
<td>Yes</td>
<td>Online</td>
</tr>
<tr>
<td></td>
<td>Ige-nexus_5-0616d8c6f0e</td>
<td>✔ 4.4.2</td>
<td></td>
<td>Online</td>
</tr>
</tbody>
</table>
```

http://developer.android.com/tools/device.html#setting-up
Setting up your environment

- Now the real phone and emulator are both options
Setting up your environment