



Lab 1

Setting Up the Android Development Environment

CS 282

Principles of Operating Systems II
Systems Programming for Android

Installation

- See <http://developer.android.com/sdk/index.html>
- Steps
 - Install Java 6 JDK
 - Install Android SDK ADT Bundle
 - Based on Eclipse
 - (optional/alternative) Install Android Studio
 - Based on IntelliJ IDEA
 - Currently in beta

Installing the Java Platform SE

- Download the **Java Platform, Standard Edition** Java Development Kit (JDK) & Java Runtime Environment (JRE), version **6**
 - <http://www.oracle.com/technetwork/java/javase/downloads>

Android will not compile with Java 7 (though feel free to investigate it!!!)



Android SDK ADT Bundle

- Core tools needed to get started
 - <http://developer.android.com/sdk>
- Unpack files to a directory of your choice
 - By default: `adt-bundle-<os>/`
 - Includes android-sdk folder and eclipse folder
 - Add “`android-sdk/platform-tools`” and “`android-sdk/tools`” to your PATH environment variable to use the Android tools from the command line
- Launch eclipse via the executable in “`adt-bundle-<os>/eclipse/`”

Add Components to the SDK

- Launch the Android SDK & Android Virtual Device (AVD) Manager
 - <http://developer.android.com/tools/devices/managing-avds.html>
- Recommend selecting the latest version of Android, which is “Jelly Bean” (version 4.3.x)
- Source code is available at <http://source.android.com/>

Intel HAXM Virtualization Driver

- Requirements
 - Intel virtualization extensions (VT, VT-x, vmx)
 - AMD virtualization extensions (AMD-v, SVM) [only supported on Linux]
 - Download an x86 emulator image
- [WIN/OSX]
<sdk>/extras/intel/Hardware_Accelerated_Execution_Manager/IntelHAXM.exe/dmg
- [Linux] Install KVM and pass “-enable-kvm” flag to emulator when starting
- <http://developer.android.com/tools/devices/emulator.html#acceleration>