Part 2-a

Android Environment SDK

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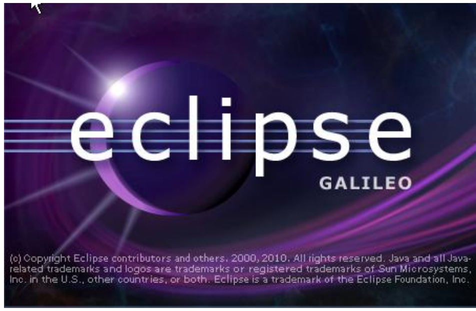
Notes are based on:

Android Developers
http://developer.android.com/index.html

2A. Android Environment: Eclipse & ADT

The **Android Development Tools** (ADT) plugin for Eclipse adds extensions to the Eclipse IDE.
It allows you to create and debug Android applications easier and faster.

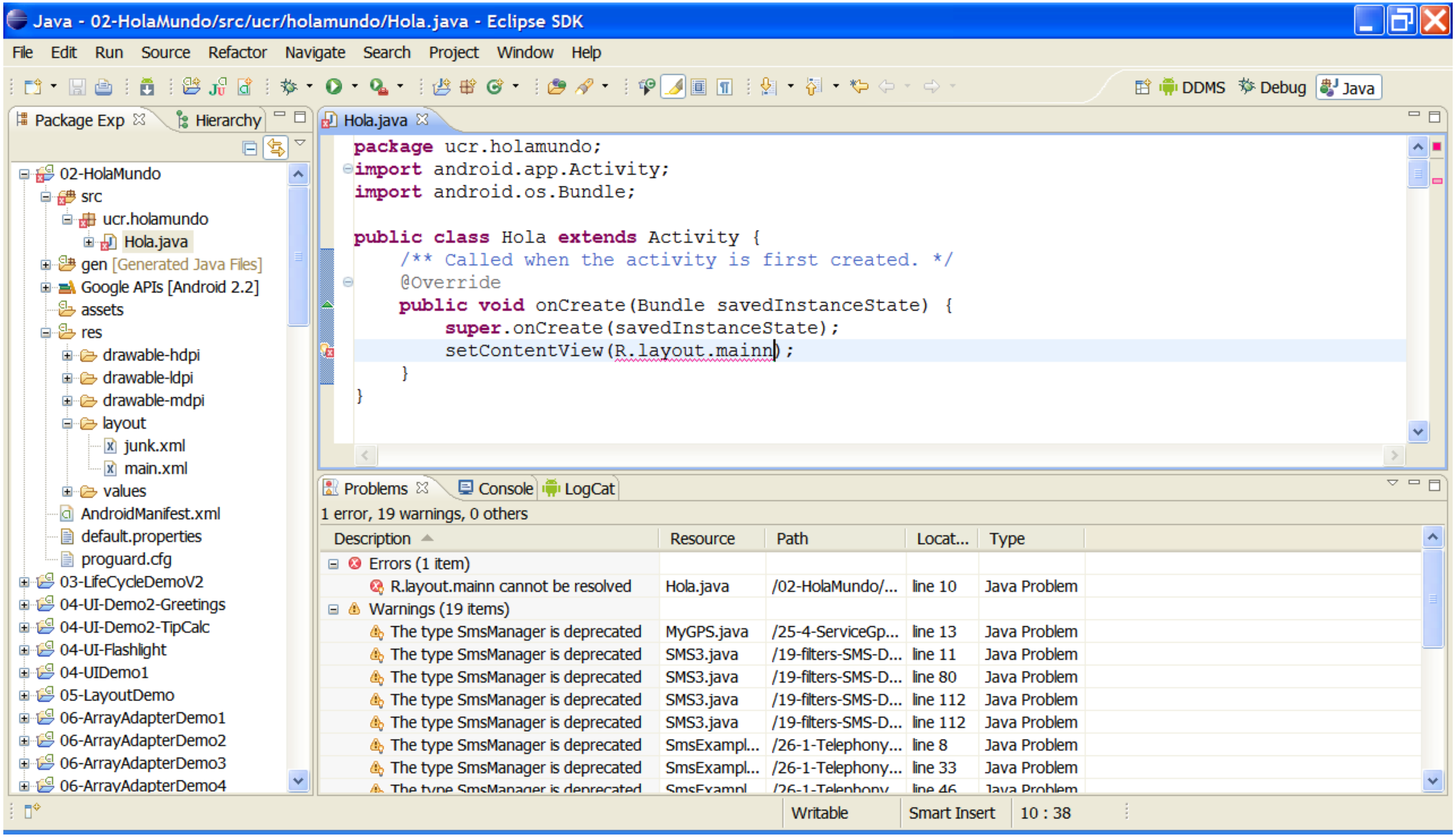


Advantages

1. It gives you access to other Android development tools from inside the Eclipse IDE. For example:
   - *take screenshots,*
   - *Debug / set breakpoints*, and
   - *view thread and process information* directly from Eclipse.
2. It provides a New *Project Wizard*, which helps you quickly create and set up all of the **basic files you'll need for a new Android application**.
3. It *automates and simplifies the process of building* your Android application.
4. It provides an *Android code editor* that helps you write valid XML for your *Android manifest* and *resource files*.
5. It will *export* your project into a signed APK, which can be distributed to users.

2A. Android Environment: Eclipse & ADT

Typical Layout of the Eclipse IDE for Android Development



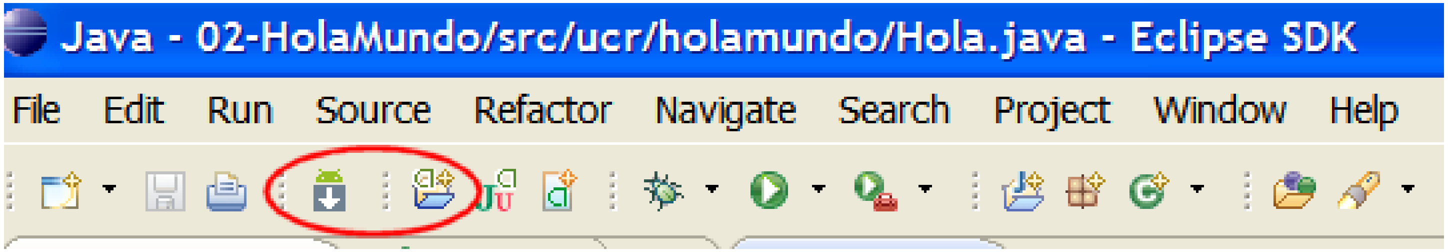
```java
package ucr.holamundo;
import android.app.Activity;
import android.os.Bundle;

public class Hola extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.mainn);
    }
}
```

1 error, 19 warnings, 0 others

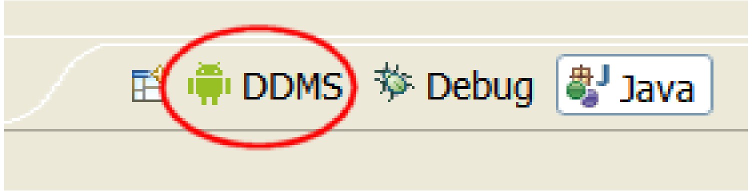
Description	Resource	Path	Locat...	Type
Errors (1 item)				
R.layout.mainn cannot be resolved	Hola.java	/02-HolaMundo/...	line 10	Java Problem
Warnings (19 items)				
The type SmsManager is deprecated	MyGPS.java	/25-4-ServiceGp...	line 13	Java Problem
The type SmsManager is deprecated	SMS3.java	/19-filters-SMS-D...	line 11	Java Problem
The type SmsManager is deprecated	SMS3.java	/19-filters-SMS-D...	line 80	Java Problem
The type SmsManager is deprecated	SMS3.java	/19-filters-SMS-D...	line 112	Java Problem
The type SmsManager is deprecated	SMS3.java	/19-filters-SMS-D...	line 112	Java Problem
The type SmsManager is deprecated	SmsExampl...	/26-1-Telephony...	line 8	Java Problem
The type SmsManager is deprecated	SmsExampl...	/26-1-Telephony...	line 33	Java Problem
The type SmsManager is deprecated	SmsExampl...	/26-1-Telephony...	line 46	Java Problem

2A. Android Environment: Eclipse & ADT

Typical Layout of the Eclipse IDE for Android Development
(details…)


Java - 02-HolaMundo/src/ucr/holamundo/Hola.java - Eclipse SDK
File Edit Run Source Refactor Navigate Search Project Window Help

Android SDK and AVD Manager
New Android Project



DDMS Perspective
Dalvik Debugging Monitoring System

2A. Android Environment: Eclipse & ADT

SETUP

Download the Android SDK – Installing on Windows, Linux, Mac OS

This page is taken from http://developer.android.com

If you're already using the Android SDK, you should update to the latest tools or platform using the *Android SDK and AVD Manager*, rather than downloading a new SDK starter package.

Windows	installer_r08-windows.exe
Mac OS X (intel)	android-sdk_r08-mac_86.zip
Linux (i386)	android-sdk_r08-linux_86.tgz

Here's an overview of the steps you must follow to set up the Android SDK:

1. Prepare your development computer and ensure it meets the system requirements.
2. Install the SDK starter package from the table above. (If you're on Windows, download the installer for help with the initial setup.)
3. Install the ADT Plugin for Eclipse (if you'll be developing in Eclipse).
4. Add Android platforms and other components to your SDK.
5. Explore the contents of the Android SDK (*optional*).

To get started, download the appropriate package from the table above, then read the guide to Installing the SDK.

2A. Android Environment: Eclipse & ADT

Installing the SDK (Link: http://developer.android.com/sdk/installing.html)

This page describes how to install the Android SDK and set up your development environment for the first time.

Updating?

If you already have an Android SDK, use the *Android SDK and AVD Manager* tool to install updated tools and new Android platforms into your existing environment.

Step 1. Preparing Your Development Computer

1. Make sure you have already installed the most recent JDK.

2. Make sure you have Eclipse installed on your computer (3.4 or newer is recommended). Eclipse is available from: http://www.eclipse.org/downloads/ (For Eclipse 3.5 or newer, the "Eclipse Classic" version is recommended)

2A. Android Environment: Eclipse & ADT

Step 2. Downloading the SDK Starter Package

The SDK starter package *is not a full development environment*—it includes only the core SDK Tools, which you can use to download the rest of the SDK components (such as the latest Android platform).

If you downloaded the Windows installer (.exe file), run it now to install the SDK Tools into a default location (which you can modify, usually the folder is:
c:/your-chosen-*path/android-sdk-windows*

Make a note of the name and location of the SDK directory on your system—you will need to refer to the SDK directory later, when setting up the ADT plugin and when using the SDK tools from command line.

Step 3. Installing the ADT Plugin for Eclipse

Android offers a custom plugin for the Eclipse IDE, called Android Development Tools (ADT). This is the recommended platform. You may want to first read Installing the ADT Plugin for step-by-step installation instructions, then return here to continue the last step in setting up your Android SDK.

2A. Android Environment: Eclipse & ADT

Step 4. Adding Platforms and Other Components

You will use the *Android SDK and AVD Manager* (a tool included in the SDK starter package) to download essential SDK components into your development environment.

If you used the Windows installer, when you complete the installation wizard, it will launch the *Android SDK and AVD Manager* with a default set of platforms and other components selected for you to install. Simply click **Install** to accept the recommended set of components and install them.

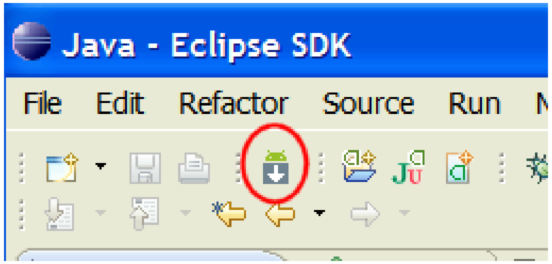
You can launch the Android SDK and AVD Manager in one of the following ways:
From within Eclipse, select **Window > Android SDK and AVD Manager**.
On Windows, double-click the SDK Manager.ext file at the root of the Android SDK directory.

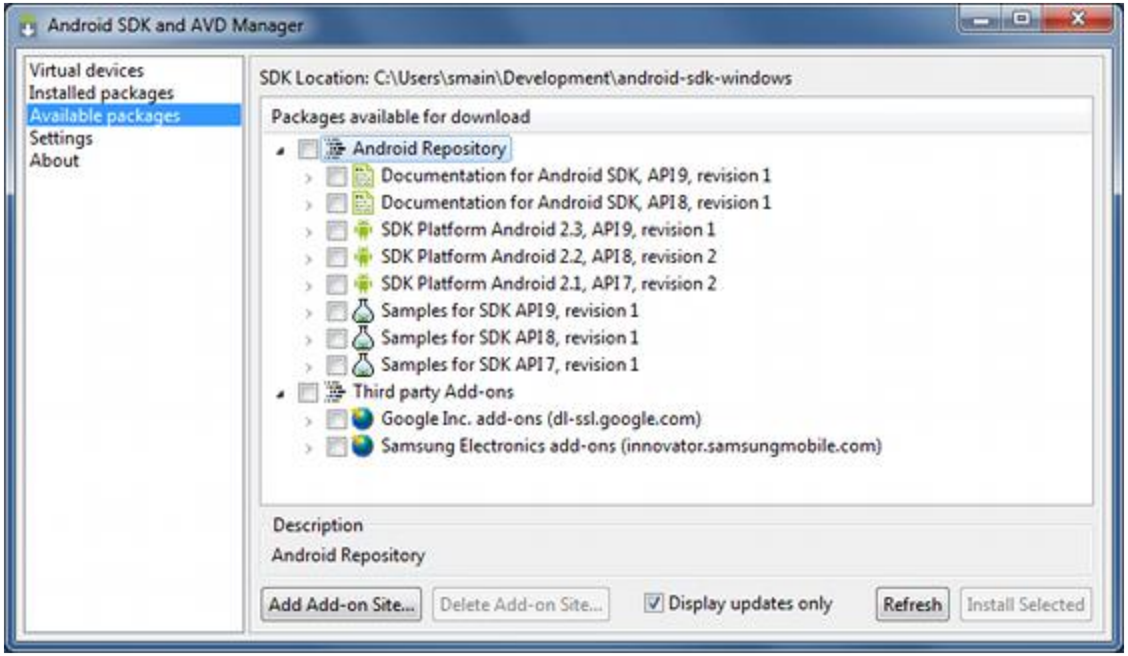
On Mac or Linux, open a terminal and navigate to the tools/ directory in the Android SDK, then execute: android

2A. Android Environment: Eclipse & ADT

Step 4. Adding Platforms and Other Components (cont.)

To download components, use the graphical UI of the *Android SDK and AVD Manager*. To begin with choose only the latest version of Android (include documentation, samples and USB driver) (Warning: this process is slow…)




Android SDK and AVD Manager

Virtual devices
Installed packages
Available packages
Settings
About

SDK Location: C:\Users\smain\Development\android-sdk-windows

Packages available for download

- □ Android Repository
  - □ Documentation for Android SDK, API 9, revision 1
  - □ Documentation for Android SDK, API 8, revision 1
  - □ SDK Platform Android 2.3, API 9, revision 1
  - □ SDK Platform Android 2.2, API 8, revision 2
  - □ SDK Platform Android 2.1, API 7, revision 2
  - □ Samples for SDK API 9, revision 1
  - □ Samples for SDK API 8, revision 1
  - □ Samples for SDK API 7, revision 1
- □ Third party Add-ons
  - □ Google Inc. add-ons (dl-ssl.google.com)
  - □ Samsung Electronics add-ons (innovator.samsungmobile.com)

Description

Android Repository

Add Add-on Site... | Delete Add-on Site... | ☑ Display updates only | Refresh | Install Selected

Figure 1. The Android SDK and AVD Manager's **Available Packages** panel, which shows the SDK components that are available for you to download into your environment.

2A. Android Environment: Eclipse & ADT

Installing the Eclipse ADT Plugin

(Link: http://developer.android.com/sdk/eclipse-adt.html#installing)

To simplify ADT setup, it is recommend installing the Android SDK prior to installing ADT.

Eclipse 3.5 (Galileo) and 3.6 (Helios)

1. Start Eclipse, then select **Help** > **Install New Software....**
2. Click **Add**, in the top-right corner.
3. In the *Add Repository* dialog that appears, enter "ADT Plugin" for the *Name* and the following URL for the *Location*:
   https://dl-ssl.google.com/android/eclipse/
   Note: If you have troubles try using "http" instead of "https”
   Click **OK**.
4. In the *Available Software* dialog, select the checkbox next to *Developer Tools* and click **Next**.
5. In the next window, you'll see a list of the tools to be downloaded. Click **Next**.
6. Read and accept the license agreements, then click **Finish**.
7. When the installation completes, restart Eclipse.

2A. Android Environment: Eclipse & ADT

Configuring the ADT Plugin

The next step is to modify your ADT preferences in Eclipse to point to the Android SDK directory:

1. Select **Window** > **Preferences...** to open the Preferences panel (Mac OS X: **Eclipse** > **Preferences**).
1. Select **Android** from the left panel.
2. For the *SDK Location* in the main panel, click **Browse...** and locate your downloaded SDK directory (c:/path/android-sdk-windows)
3. Click **Apply**, then **OK**.

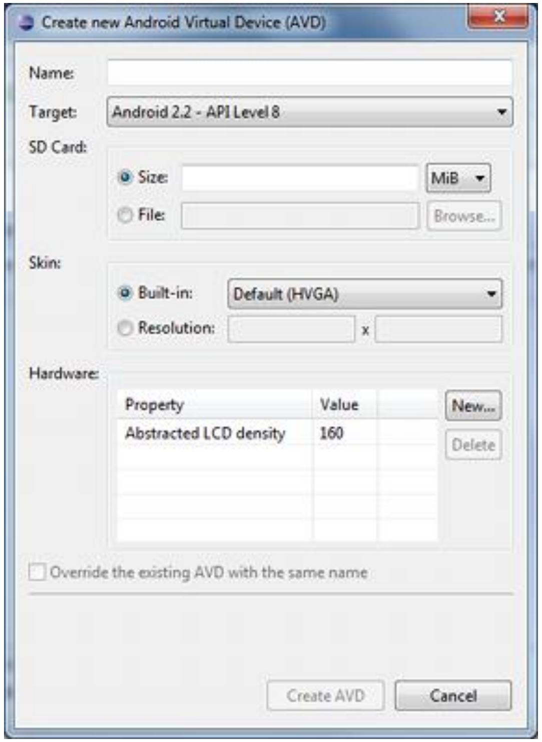
Done!

2A. Android Environment: Eclipse & ADT

Creating an Android Virtual Device (AVD)

Android Virtual Devices (AVDs) are configurations of emulator options that let you better model an actual device.

1. In Eclipse, choose **Window > Android SDK and AVD Manager**.
2. Select **Virtual Devices** in the left panel.
3. Click **New**.
4. The **Create New AVD** dialog appears.
5. Type the name of the AVD, such as “AVD23API9".
6. Choose a target (such as “Android 2.3 – API Level9”).
7. Optionally specify any additional settings (SD, camera, trackball, ….) YES to all.
8. Click **Create AVD**.



Create new Android Virtual Device (AVD)

Name:

Target: Android 2.2 - API Level 8

SD Card:
● Size: MiB
○ File:

Skin:
● Built-in: Default (HVGA)
○ Resolution: x

Hardware:

Property	Value
Abstracted LCD density	160

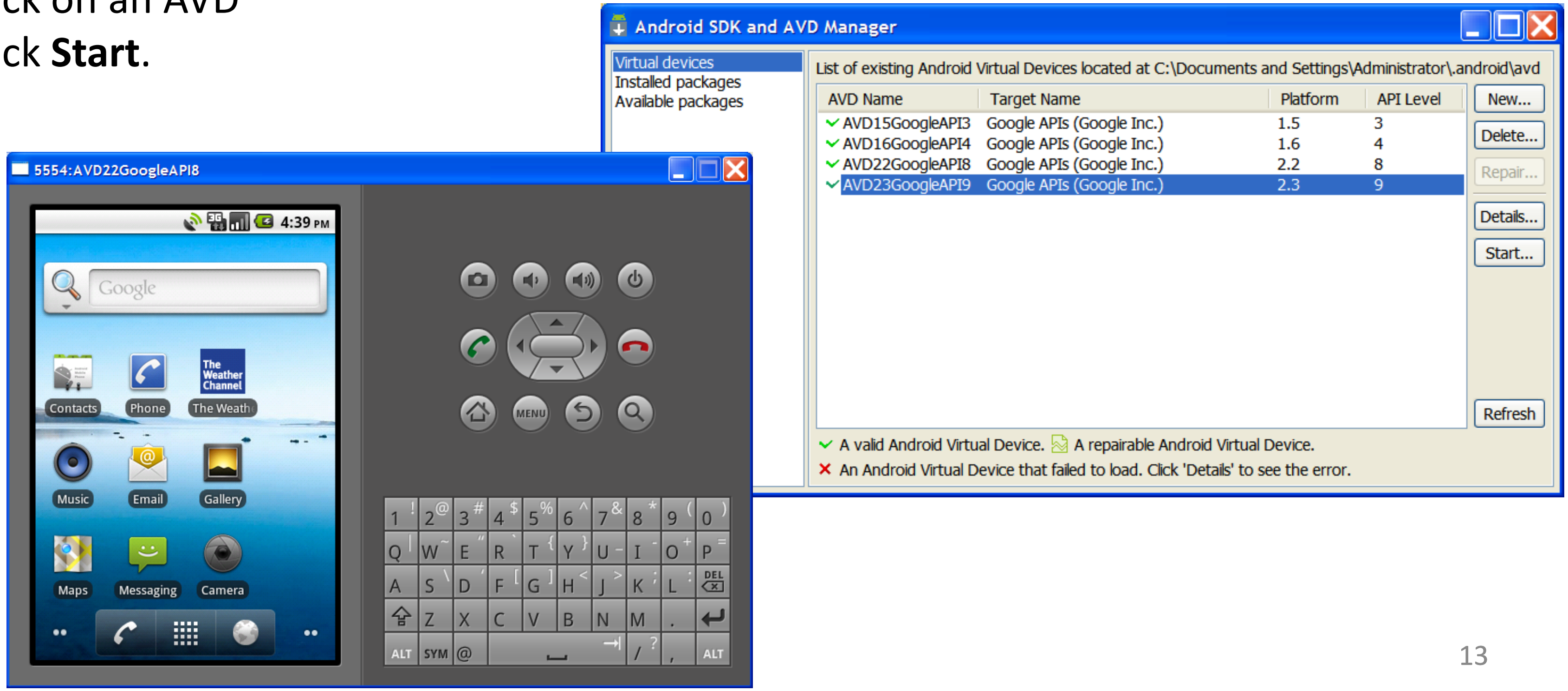
□ Override the existing AVD with the same name

2A. Android Environment: Eclipse & ADT

Testing the Emulator

Android Virtual Devices (AVDs) are configurations of emulator options that let you better model an actual device.

1. In Eclipse, choose **Window > Android SDK and AVD Manager**.
2. Select **Virtual Devices** in the left panel.
3. Click on an AVD
4. Click **Start**.



Android SDK and AVD Manager

- Virtual devices
- Installed packages
- Available packages

List of existing Android Virtual Devices located at C:\Documents and Settings\Administrator\.android\avd

AVD Name	Target Name	Platform	API Level
✓ AVD15GoogleAPI3	Google APIs (Google Inc.)	1.5	3
✓ AVD16GoogleAPI4	Google APIs (Google Inc.)	1.6	4
✓ AVD22GoogleAPI8	Google APIs (Google Inc.)	2.2	8
✓ AVD23GoogleAPI9	Google APIs (Google Inc.)	2.3	9

New... Delete... Repair... Details... Start... Refresh

✓ A valid Android Virtual Device. A repairable Android Virtual Device.

✕ An Android Virtual Device that failed to load. Click 'Details' to see the error.

2A. Android Environment: Eclipse & ADT

A Final Step

This seems to be a transitional issue, and may go away in future releases. For now, update the system's PATH variable to recognize two folders inside your **android-sdk-winwows**. The first is: **tools** and the second is **platform-tools**.

1. Windows > Start > Control Panel > System > Advanced > Environment Variables > System Variables > PATH > Edit
2. Add references to the sub-folders mentioned above. In this example: c:\android-sdk-windows\tools;C:\android-sdk-windows\platform-tools;
3. OK

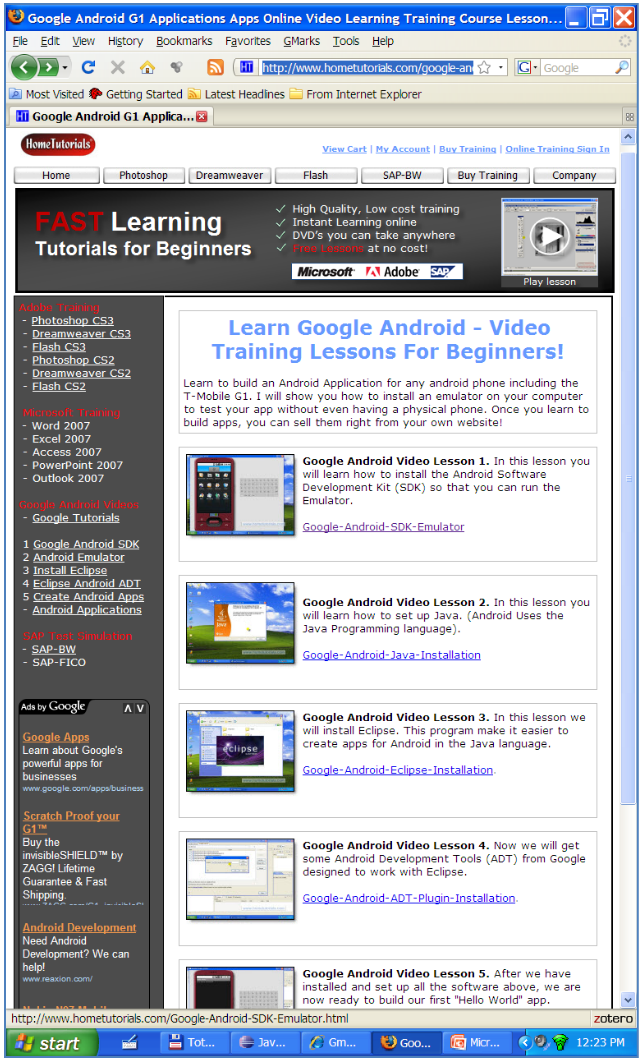
Android Setup Videos

Appendix. Web resources available at

http://www.hometutorials.com/google-android.html

Five videos, a bit older (SDK1.0) but useful nonetheless.

1. How to setup Java.
2. How to install Eclipse IDE
3. Application development: “Hello World” using Eclipse + Android



Google Android G1 Applications Apps Online Video Learning Training Course Lesson...
File Edit View History Bookmarks Favorites GMarks Tools Help
http://www.hometutorials.com/google-an
Google
Most Visited Getting Started Latest Headlines From Internet Explorer
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HomeTutorials
View Cart | My Account | Buy Training | Online Training Sign In
Home
Photoshop
Dreamweaver
Flash
SAP-BW
Buy Training
Company
FAST Learning
Tutorials for Beginners
✓ High Quality, Low cost training
✓ Instant Learning online
✓ DVD's you can take anywhere
✓ Free Lessons at no cost!
Microsoft Adobe SAP
Play lesson

Adobe Training
- Photoshop CS3
- Dreamweaver CS3
- Flash CS3
- Photoshop CS2
- Dreamweaver CS2
- Flash CS2

Microsoft Training
- Word 2007
- Excel 2007
- Access 2007
- PowerPoint 2007
- Outlook 2007

Google Android Videos
- Google Tutorials

1 Google Android SDK
2 Android Emulator
3 Install Eclipse
4 Eclipse Android ADT
5 Create Android Apps
- Android Applications

SAP Test Simulation
- SAP-BW
- SAP-FICO

Learn Google Android - Video Training Lessons For Beginners!

Learn to build an Android Application for any android phone including the T-Mobile G1. I will show you how to install an emulator on your computer to test your app without even having a physical phone. Once you learn to build apps, you can sell them right from your own website!

Google Android Video Lesson 1. In this lesson you will learn how to install the Android Software Development Kit (SDK) so that you can run the Emulator.

Google-Android-SDK-Emulator

Google Android Video Lesson 2. In this lesson you will learn how to set up Java. (Android Uses the Java Programming language).

Google-Android-Java-Installation

Google Android Video Lesson 3. In this lesson we will install Eclipse. This program make it easier to create apps for Android in the Java language.

Google-Android-Eclipse-Installation.

Google Android Video Lesson 4. Now we will get some Android Development Tools (ADT) from Google designed to work with Eclipse.

Google-Android-ADT-Plugin-Installation.

Google Android Video Lesson 5. After we have installed and set up all the software above, we are now ready to build our first "Hello World" app.

http://www.hometutorials.com/Google-Android-SDK-Emulator.html

Android Setup Tutorial

MAC OS Users

1. In a terminal window send the command: **sudo su**. You will act as the superuser.

1. Enter superuser’s password. After accepted, you will issue commands from a shell line.

2. Locate the file **.profile** and edit (pico, vi,…) its path contents as follows:

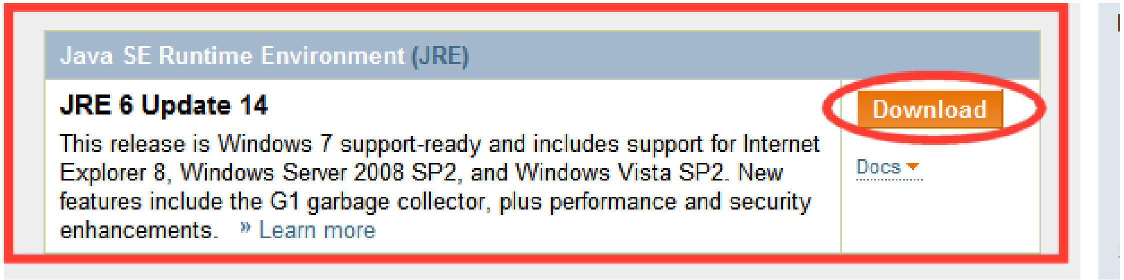
```
export PATH="/Users/myfolder/android-sdk-mac_86 3/tools":$PATH
```

where "/Users/myfolder/android-sdk-mac_86 3/tools" (including the quotes) is the location of the /tools directory in our Android SDK folder.

Android Setup Tutorial

Appendix. Install Java

1. Go to http://developers.sun.com/downloads/
2. Expand choice **Java SE.**
3. Click on: **Java SE (JDK) 6**
4. From the list of choices select the most recent *Java SE JDK* (Update 14 in our case).
5. Click on the *Download* button



Java SE Runtime Environment (JRE)

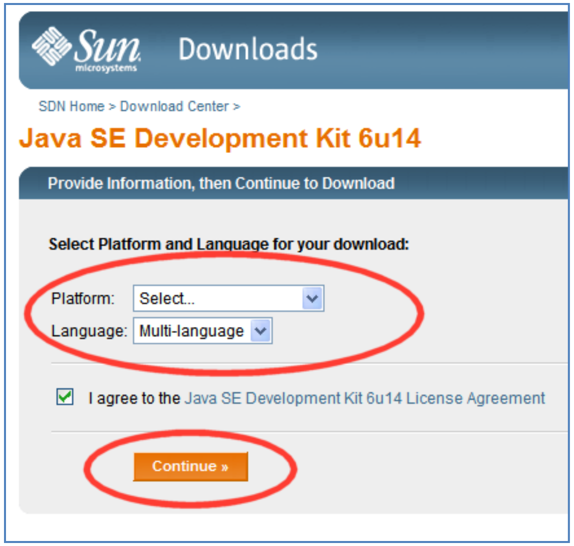
JRE 6 Update 14

This release is Windows 7 support-ready and includes support for Internet Explorer 8, Windows Server 2008 SP2, and Windows Vista SP2. New features include the G1 garbage collector, plus performance and security enhancements. » Learn more

Android Setup Tutorial

Appendix. Install Java

1. On the next screen select *Platform* (Windows) and accept license agreement.
2. Hit the *Continue* button.
3. Check box: *Java SE Development Kit 6u14* and click on the *download* (arrow) symbol
4. Save file to c:\



SDN Home > Download Center >

Java SE Development Kit 6u14

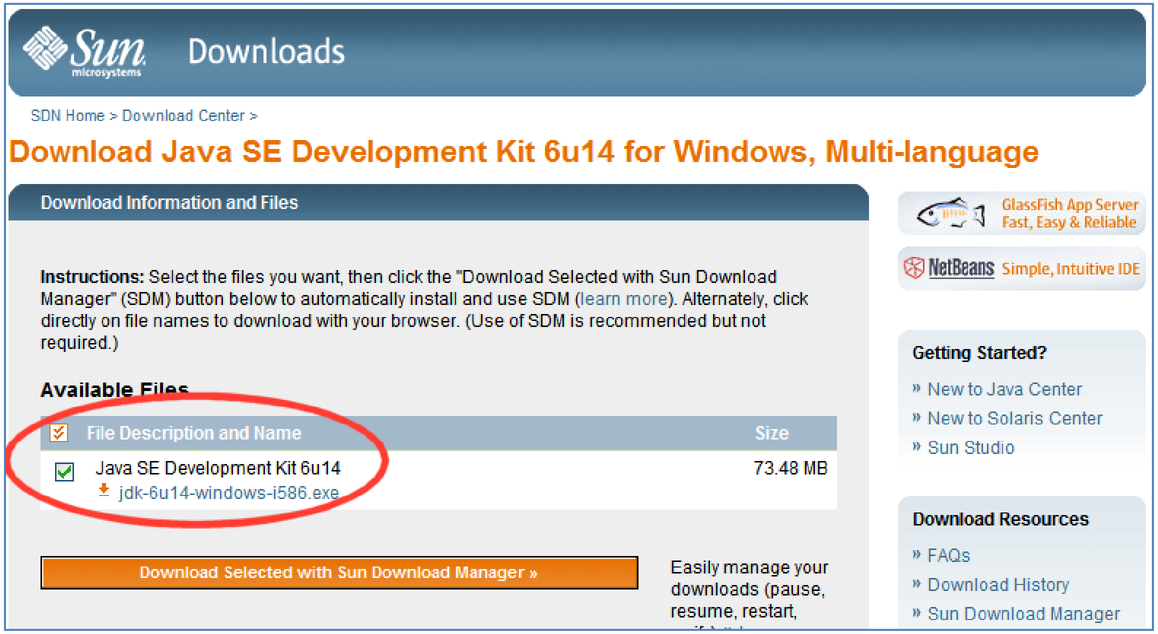
Provide Information, then Continue to Download

Select Platform and Language for your download:

Platform: Select...

Language: Multi-language

☑ I agree to the Java SE Development Kit 6u14 License Agreement



SDN Home > Download Center >

Download Java SE Development Kit 6u14 for Windows, Multi-language

Download Information and Files

Instructions: Select the files you want, then click the "Download Selected with Sun Download Manager" (SDM) button below to automatically install and use SDM (learn more). Alternately, click directly on file names to download with your browser. (Use of SDM is recommended but not required.)

Available Files

☑ File Description and Name	Size
☑ Java SE Development Kit 6u14 jdk-6u14-windows-i586.exe	73.48 MB

Easily manage your downloads (pause, resume, restart,

GlassFish App Server Fast, Easy & Reliable
NetBeans Simple, Intuitive IDE

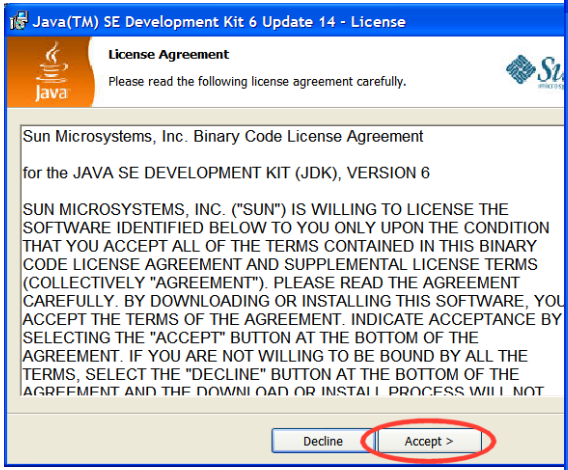
Getting Started?
» New to Java Center
» New to Solaris Center
» Sun Studio

Download Resources
» FAQs
» Download History
» Sun Download Manager

Android Setup Tutorial

Appendix. Install Java

5. Execute the downloaded file: *jdk-6u14-windows-i586.exe*
6. Click on *Accept* button to agree on licensing.
7. Note the Java folder location. Click on *Next* to complete installation.



Java(TM) SE Development Kit 6 Update 14 - License

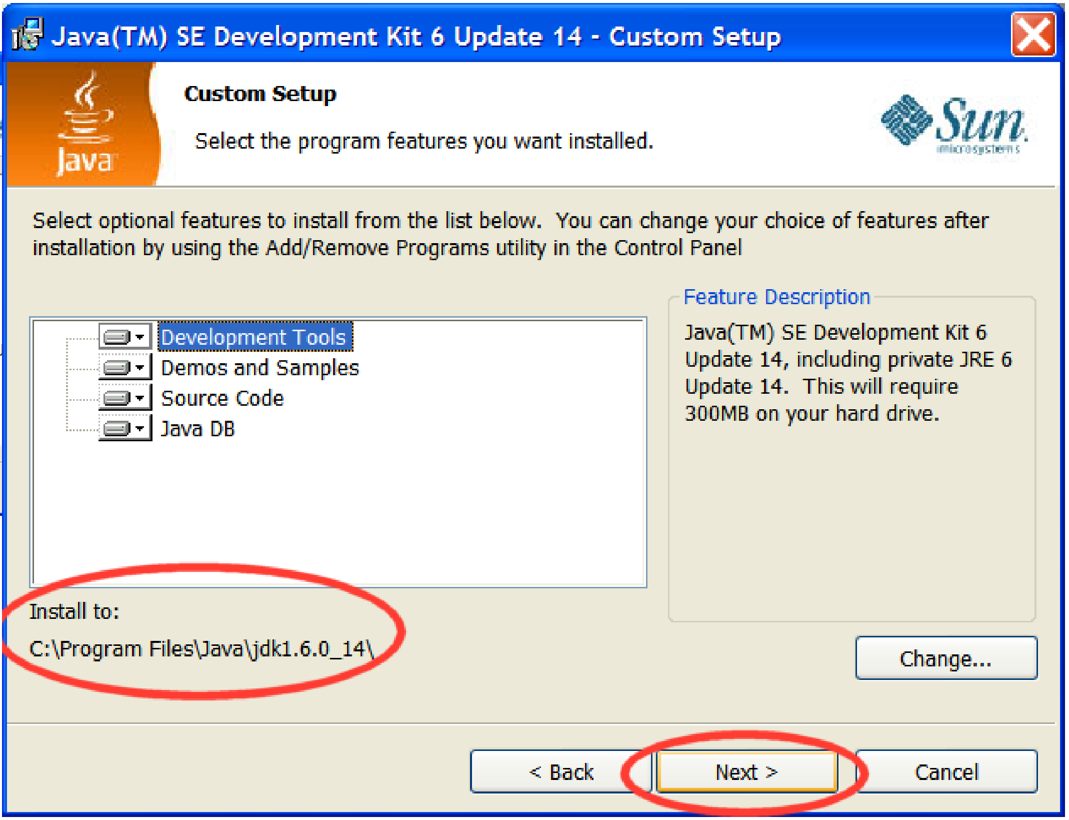
License Agreement

Please read the following license agreement carefully.

Sun Microsystems, Inc. Binary Code License Agreement

for the JAVA SE DEVELOPMENT KIT (JDK), VERSION 6

SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE SOFTWARE IDENTIFIED BELOW TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY DOWNLOADING OR INSTALLING THIS SOFTWARE, YOU ACCEPT THE TERMS OF THE AGREEMENT. INDICATE ACCEPTANCE BY SELECTING THE "ACCEPT" BUTTON AT THE BOTTOM OF THE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND BY ALL THE TERMS, SELECT THE "DECLINE" BUTTON AT THE BOTTOM OF THE AGREEMENT AND THE DOWNLOAD OR INSTALL PROCESS WILL NOT



Java(TM) SE Development Kit 6 Update 14 - Custom Setup

Custom Setup

Select the program features you want installed.

Select optional features to install from the list below. You can change your choice of features after installation by using the Add/Remove Programs utility in the Control Panel

Feature Description

Java(TM) SE Development Kit 6 Update 14, including private JRE 6 Update 14. This will require 300MB on your hard drive.

Install to:

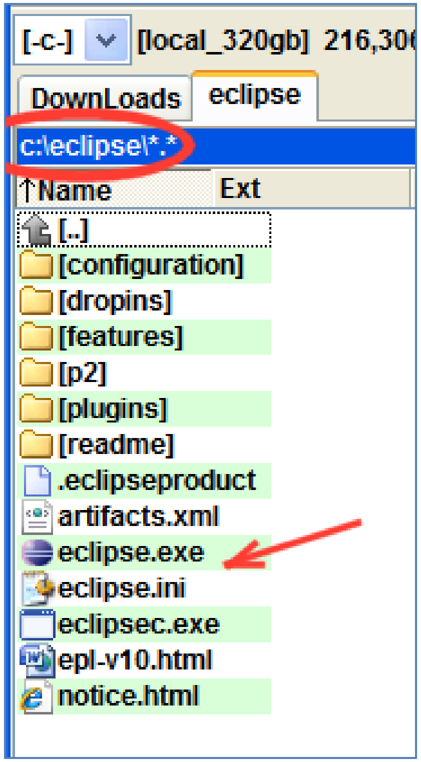
C:\Program Files\Java\jdk1.6.0_14\

Android Setup Tutorial

Appendix. Install Eclipse IDE

Eclipse is a multi-language software development platform comprising an IDE and a plug-in system to extend it. It can be used to develop applications in Java and, by means of the various plug-ins, in other languages *(from Wikipedia)*

1. Go to http://www.eclipse.org/downloads/.
2. Download the current version (*Galileo* at the time of writing) and save it to drive C:\.
3. Unzip the compress file to your hard drive (c:\eclipse)
4. For convenience create a Shortcut to *eclipse.exe* and place it on your Desktop.

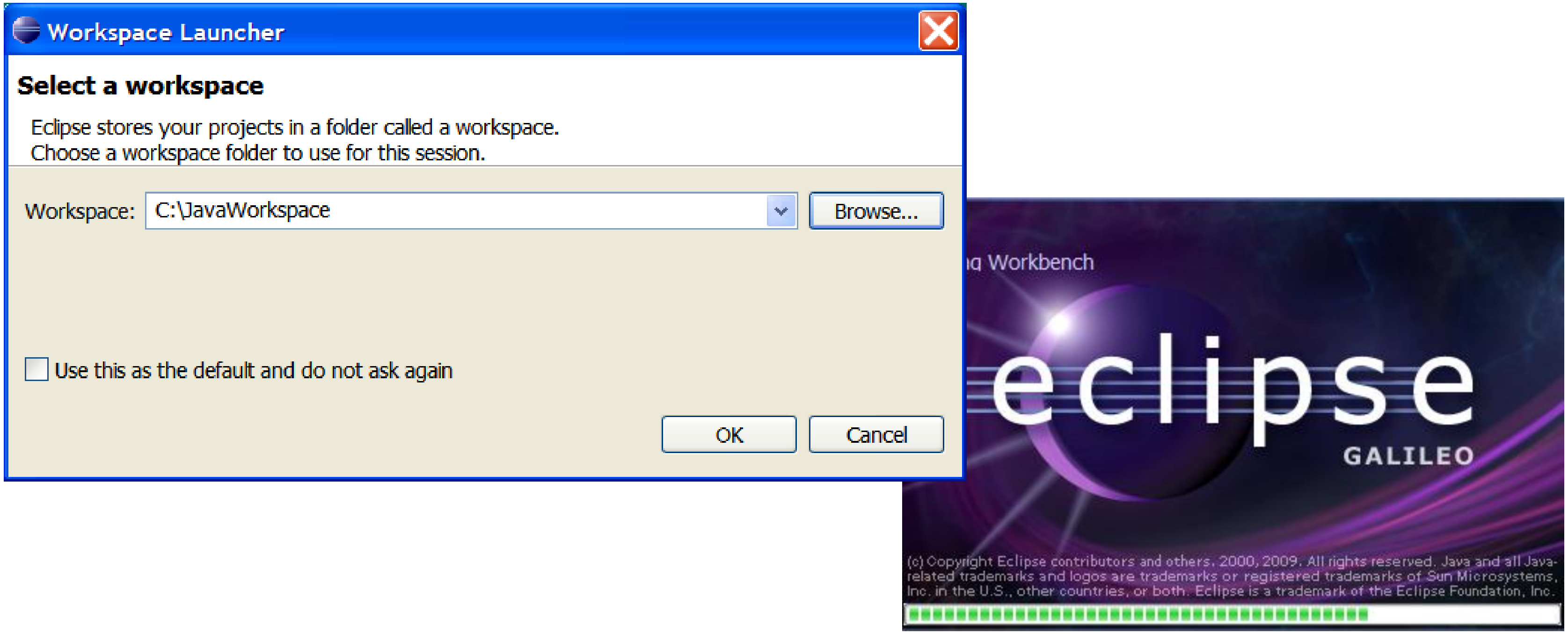


```
[-c-]  [local_320gb]  216,30
DownLoads | eclipse
c:\eclipse\*.*
↑Name                Ext
[..]
[configuration]
[dropins]
[features]
[p2]
[plugins]
[readme]
.eclipseproduct
artifacts.xml
eclipse.exe
eclipse.ini
eclipsec.exe
epl-v10.html
notice.html
```

Android Setup Tutorial

Appendix. Install Eclipse IDE

1. Launch *eclipse* application.
2. Create a folder to be your workspace



Workspace Launcher

Select a workspace

Eclipse stores your projects in a folder called a workspace.
Choose a workspace folder to use for this session.

Workspace: C:\JavaWorkspace

□ Use this as the default and do not ask again

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Android Setup Tutorial

Appendix. Creating an Android Project (made for 1.5)

Reference: http://developer.android.com/guide/developing/eclipse-adt.html

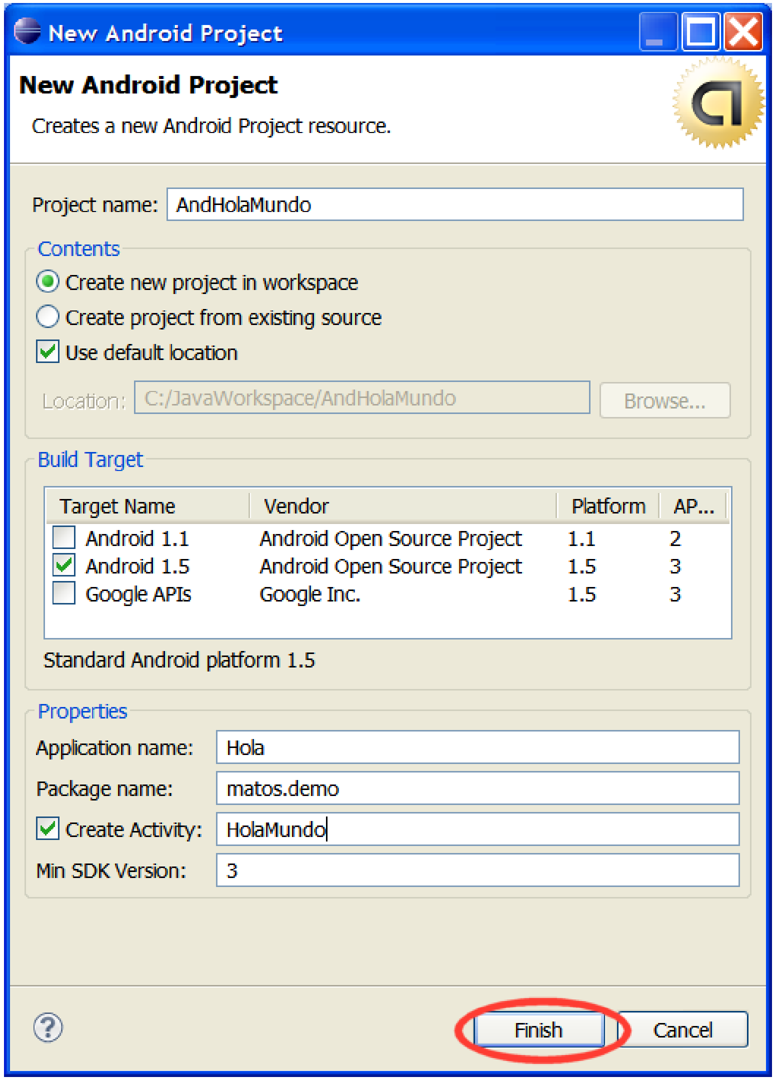
Hola Mundo

Android Setup Tutorial

Creating an Android Project

To create a new project:

1. Start **Eclipse**
2. Select **File** > **New** > **Project**.
3. Select **Android** > **Android Project**, and click **Next**.
4. Enter Project name: *AndHolaMundo.*
5. Select Target *Android 1.5.*
6. Application name: *Hola*.
7. Package name: *cis493.demo.*
8. Create Activity: *HolaMundo*.
9. Min SDK Version: *3*.
10. Click *Finish*.



New Android Project

New Android Project

Creates a new Android Project resource.

Project name: AndHolaMundo

Contents

● Create new project in workspace

○ Create project from existing source

☑ Use default location

Location: C:/JavaWorkspace/AndHolaMundo

Build Target

	Target Name	Vendor	Platform	AP...
□	Android 1.1	Android Open Source Project	1.1	2
☑	Android 1.5	Android Open Source Project	1.5	3
□	Google APIs	Google Inc.	1.5	3

Standard Android platform 1.5

Properties

Application name: Hola

Package name: matos.demo

☑ Create Activity: HolaMundo

Min SDK Version: 3

Android Setup Tutorial

Creating an Android Project

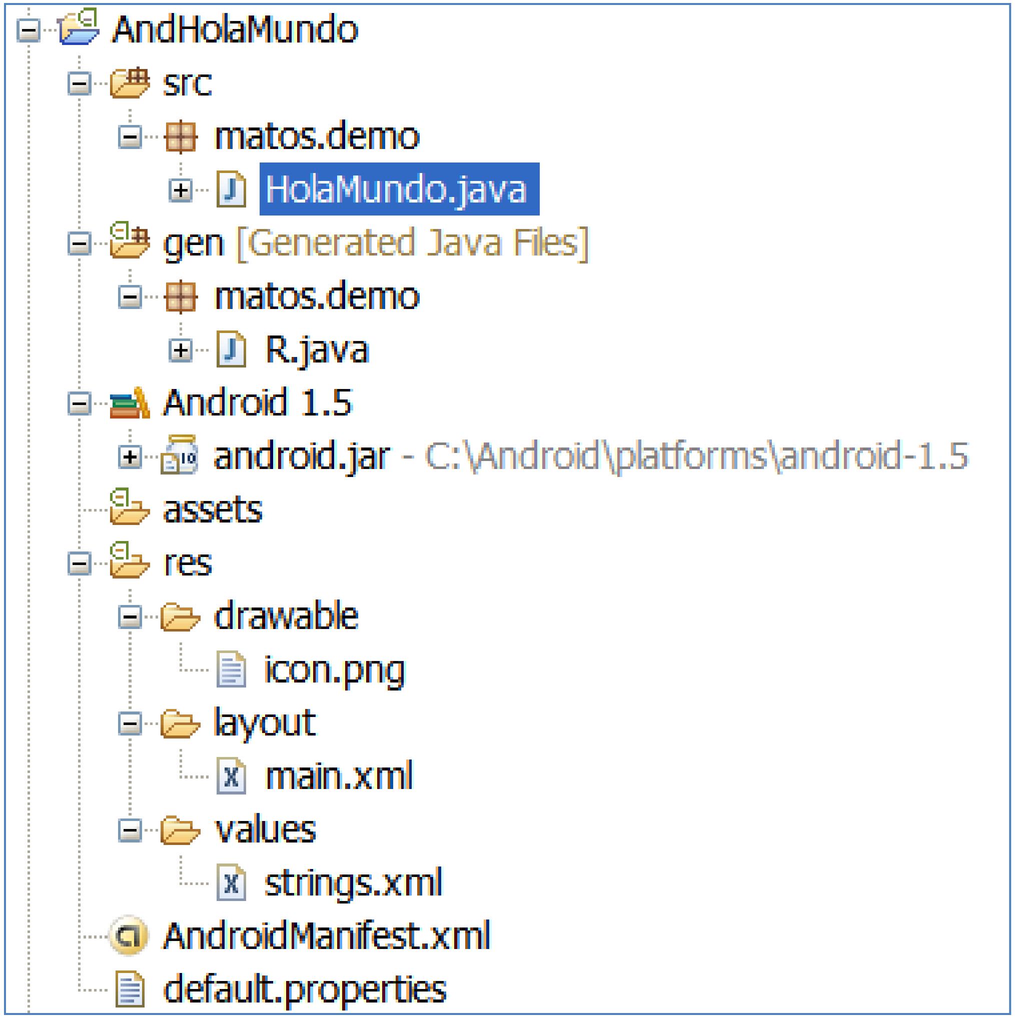
Once you complete the New Project Wizard, ADT creates the following folders and files in your new project:

- **src/** Includes your stub Activity Java file. All other Java files for your application go here.
- ***<Android Version>/*** (e.g., Android 1.5/) Includes the android.jar file that your application will build against.
- **gen/** This contains the Java files generated by ADT, such as your R.java file and interfaces created from AIDL files.
- **assets/** This is empty. You can use it to store raw asset files.
- **res/** A folder for your application resources, such as *drawable* files, *layout* files, *string* values, etc.
- **AndroidManifest.xml** The Android Manifest for your project.
- **default.properties** This file contains project settings, such as the build target.

Android Setup Tutorial

Creating an Android Project

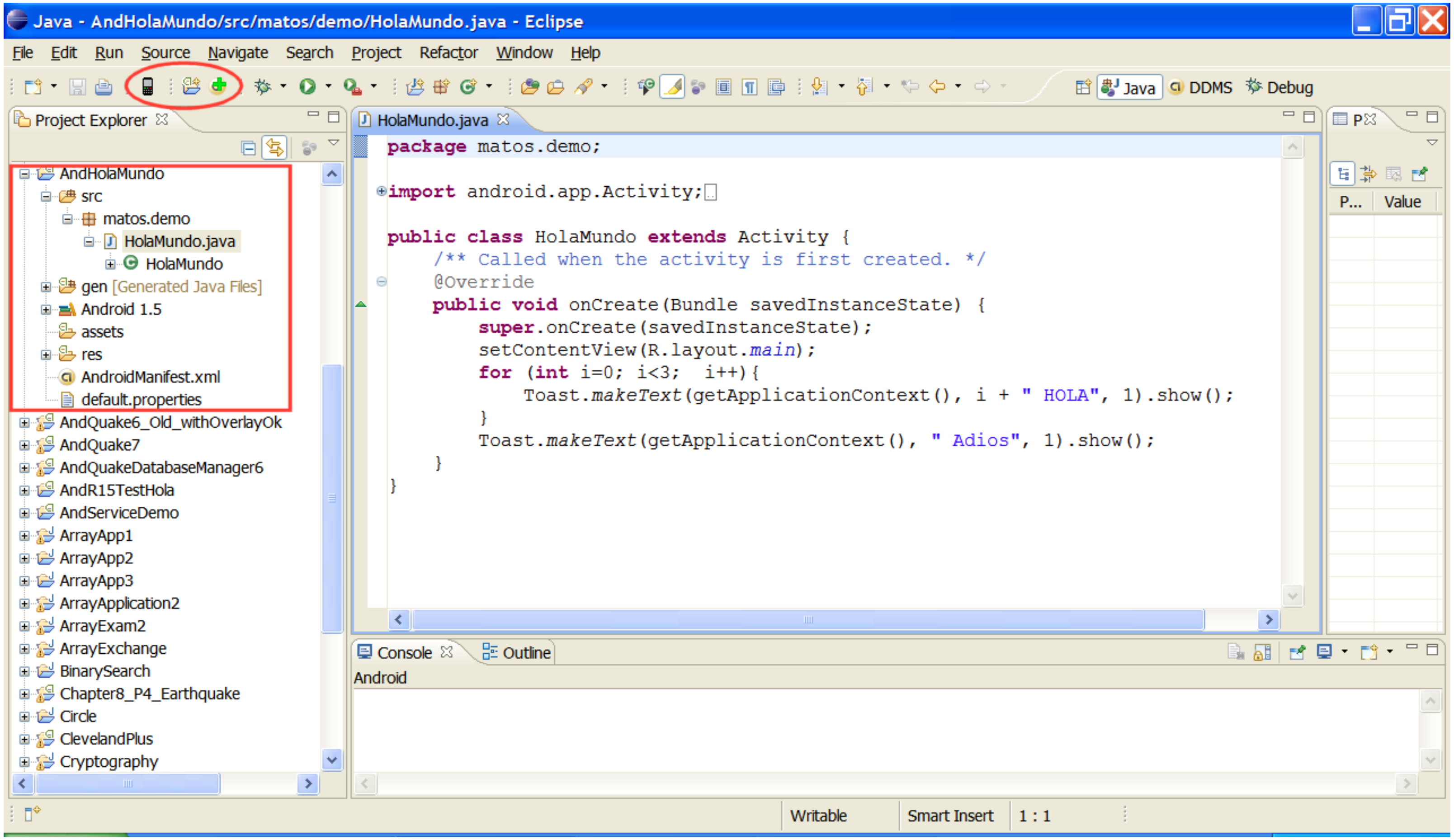
Once you complete the New Project Wizard, ADT creates the following folders and files in your new project:



```
AndHolaMundo
  src
    matos.demo
      HolaMundo.java
  gen [Generated Java Files]
    matos.demo
      R.java
  Android 1.5
    android.jar - C:\Android\platforms\android-1.5
  assets
  res
    drawable
      icon.png
    layout
      main.xml
    values
      strings.xml
  AndroidManifest.xml
  default.properties
```

Android Setup Tutorial

Creating an Android Project



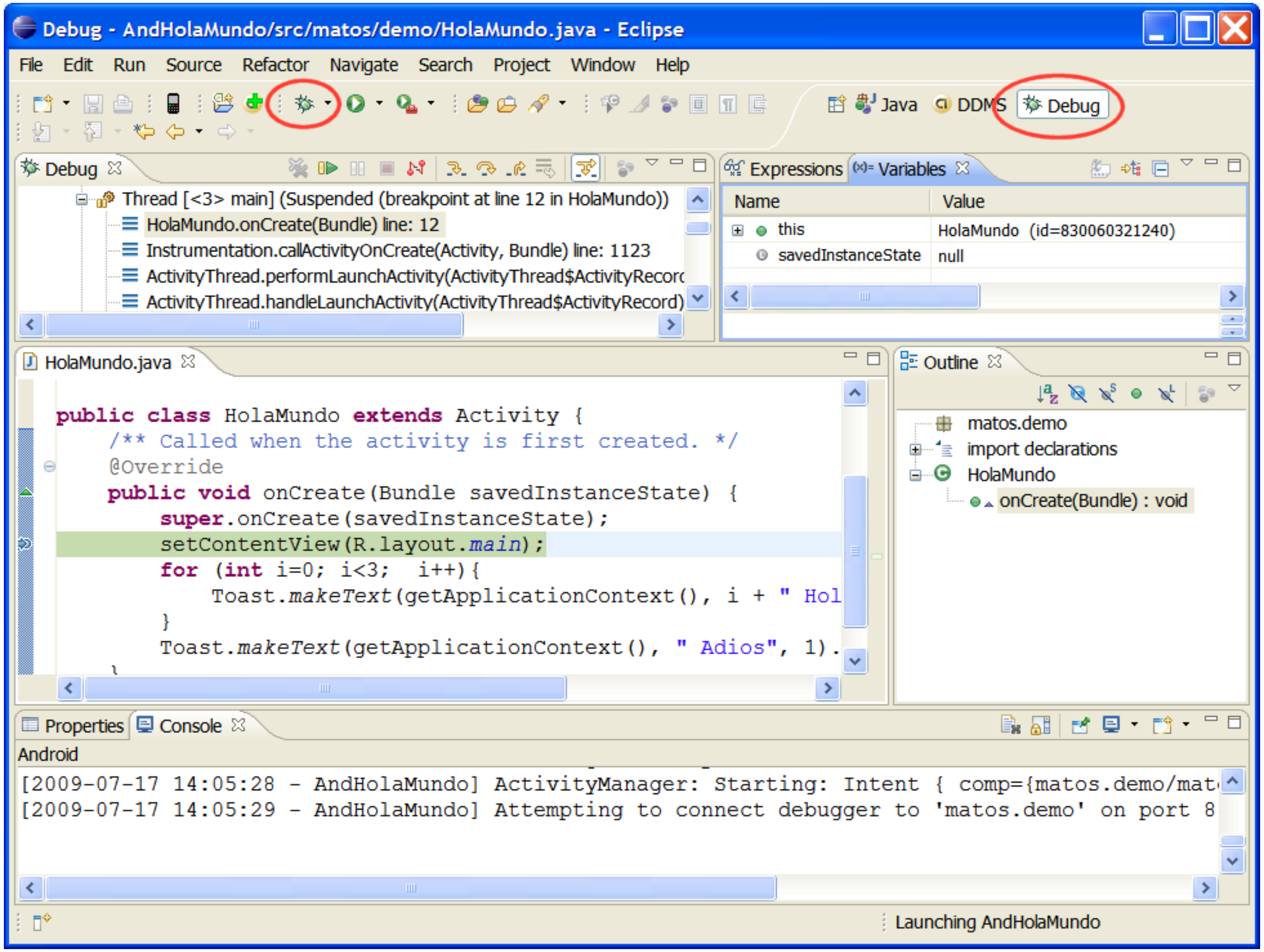
```
package matos.demo;

import android.app.Activity;

public class HolaMundo extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        for (int i=0; i<3;  i++){
            Toast.makeText(getApplicationContext(), i + " HOLA", 1).show();
        }
        Toast.makeText(getApplicationContext(), " Adios", 1).show();
    }
}
```

Android Setup Tutorial

Creating an Android Project - Debugging



Debug - AndHolaMundo/src/matos/demo/HolaMundo.java - Eclipse

Thread [<3> main] (Suspended (breakpoint at line 12 in HolaMundo))
HolaMundo.onCreate(Bundle) line: 12
Instrumentation.callActivityOnCreate(Activity, Bundle) line: 1123
ActivityThread.performLaunchActivity(ActivityThread$ActivityRecorc
ActivityThread.handleLaunchActivity(ActivityThread$ActivityRecord)

Name	Value
this	HolaMundo (id=830060321240)
savedInstanceState	null

```
public class HolaMundo extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        for (int i=0; i<3;  i++){
            Toast.makeText(getApplicationContext(), i + " Hol
        }
        Toast.makeText(getApplicationContext(), " Adios", 1).
    }
```

matos.demo
import declarations
HolaMundo
onCreate(Bundle) : void

Android

```
[2009-07-17 14:05:28 - AndHolaMundo] ActivityManager: Starting: Intent { comp={matos.demo/mat
[2009-07-17 14:05:29 - AndHolaMundo] Attempting to connect debugger to 'matos.demo' on port 8
```

Launching AndHolaMundo

Android Setup Tutorial

Creating an Android Project

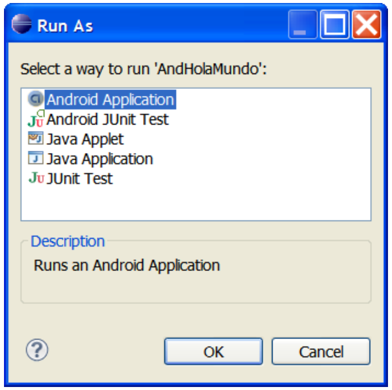
```
package matos.demo;

import android.app.Activity;
import android.os.Bundle;
import android.widget.Toast;

public class HolaMundo extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
        for (int i=0; i<3;  i++){
            Toast.makeText(getApplicationContext(), i + " Hola Mundo", 1).show();
        }
        Toast.makeText(getApplicationContext(), " Adios", 1).show();
    }
}
```

Android Setup Tutorial

Creating an Android Project

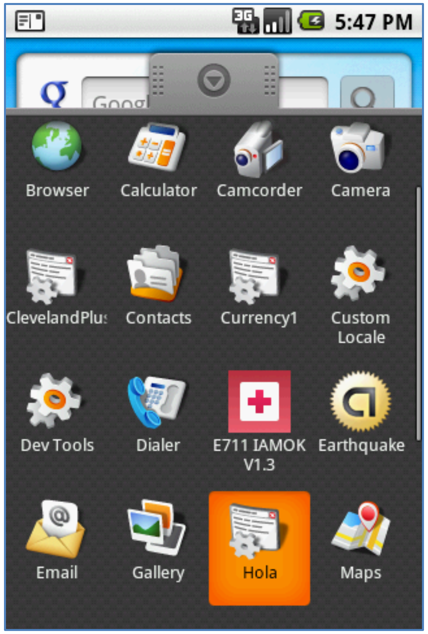

Run As

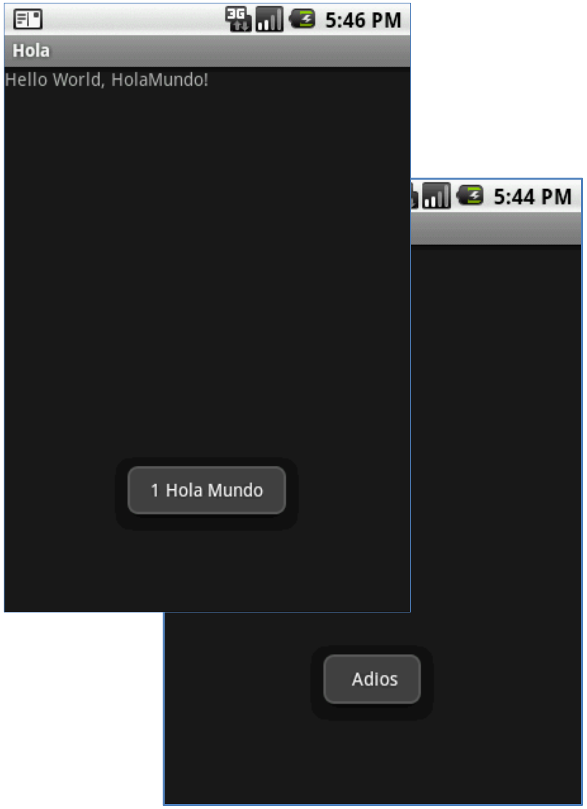
Select a way to run 'AndHolaMundo':

- Android Application
- Android JUnit Test
- Java Applet
- Java Application
- JUnit Test

Description

Runs an Android Application




Hola

Hello World, HolaMundo!

Android Setup Tutorial

Questions ?

Android Setup Tutorial

Summary of Android On-line Installation Resources

0. JAVA
http://www.dailymotion.com/video/x77uqg_google-android-emulator-tutorial-tr_tech

1. ECLIPSE
http://www.dailymotion.com/related/x77v5t_google-android-eclipse-adt-tutorial_tech/video/x77usr_google-android-eclipse-tutorial-tra_tech

2. ANDROID-SDK
Android ADT Eclipse Plug-in link: https://dl-ssl.google.com/android/eclipse/
http://www.dailymotion.com/related/x77v5t_google-android-eclipse-adt-tutorial_tech/video/x77uou_google-android-sdk-emulator-tutoria_tech

3. ECLIPSE-PLUGIN
http://www.dailymotion.com/related/x77usr_google-android-eclipse-tutorial-tra_tech/video/x77v5t_google-android-eclipse-adt-tutorial_tech?from=rss

4. HELLO WORLD TUTORIAL
http://www.dailymotion.com/video/x77v6w_google-android-apps-tutorial-traini_tech

5. DROID_DRAW
http://www.droiddraw.org

6. MAKING SDCARD (Video, blogs)
http://www.anddev.org/emulating_a_sd-card-t263.html
http://groups.google.com/group/android-developers/browse_thread/thread/9d068936b43c5f27
http://www.anddev.org/problem_pushing_files_onto_sdcard-t2467.html

7. Three GOOD videos from Google (Architecture, Interprocess Comm, APIs)

1. http://www.youtube.com/watch?v=QBGfUs9mQYY&eurl=http://developerlife.com/theblog/?p=454
2. http://www.youtube.com/watch?v=fL6gSd4ugSI&feature=related
3. http://www.youtube.com/watch?v=MPukbH6D-lY&feature=related

8. More APPs (Google President, HelloWorld, PhoneLocator)
http://www.youtube.com/watch?v=1FJHYqE0RDg&feature=channel
http://www.youtube.com/watch?v=I6ObTqIiYfE&feature=channel
http://www.helloandroid.com/taxonomy/term/29

Android Setup Tutorial

Appendix A.

Android Virtual Devices

An AVD tells the emulator what kind of device it is suppose to impersonate. Currently there are a few of these targets, such as:

Target Level	Description
4	Identifies an **Android 1.6 device that has Google Maps support** [mostly all new Android devices after 2008]
9	Identifies an **Android 2.3 device that has Google Maps support** [mostly all new Android devices after 2010+]

Android Setup Tutorial

Appendix A. Cont

Android SDK Targets (2.x and newer versions)

You may use the UI app to inspect available components and download target platforms.

Downloading

This is a three-steps operation. First install the (empty) SDK shell as indicated above (download and unzip). Second update the path system variable to include the path to: **android-sdk-windows\tools**. Third: access the repository, select and download the specific targets.

How?

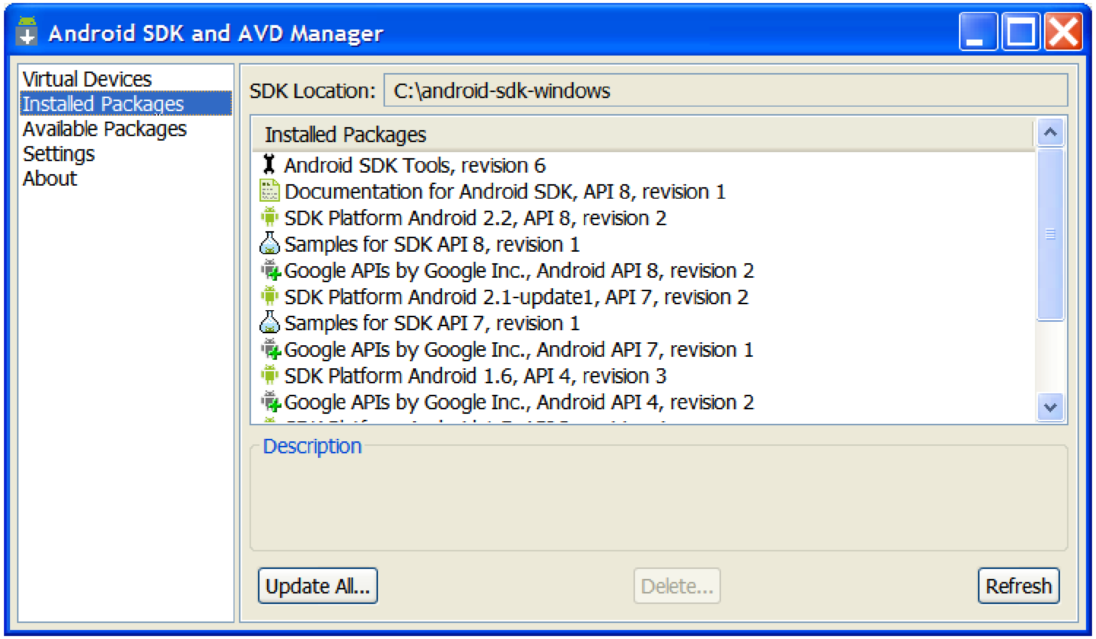
At the console prompt type in the command

```
C:> android
```

To add SDKs click on
Available Packages

Use the https://..... URL
(or equivalent but less secure
http://.... Locator)

Follow instructions to accept Licensing. Wait (slow …)



SDK Location: C:\android-sdk-windows

Installed Packages

- Android SDK Tools, revision 6
- Documentation for Android SDK, API 8, revision 1
- SDK Platform Android 2.2, API 8, revision 2
- Samples for SDK API 8, revision 1
- Google APIs by Google Inc., Android API 8, revision 2
- SDK Platform Android 2.1-update1, API 7, revision 2
- Samples for SDK API 7, revision 1
- Google APIs by Google Inc., Android API 7, revision 1
- SDK Platform Android 1.6, API 4, revision 3
- Google APIs by Google Inc., Android API 4, revision 2