# Installing the Android SDK

To get started with development, we first need to set up and configure our PCs for working with Java, and the Android SDK.   We'll be installing and configuring four packages today - Java JDK (Java Developers Kit), the Eclipse Platform, the Android SDK, and the Android Developer Tools (ADT) Plug-in that is configured within Eclipse.

Downloads

To get started, open a web browser, and visit http://developer.android.com. From the main page, select the download link.
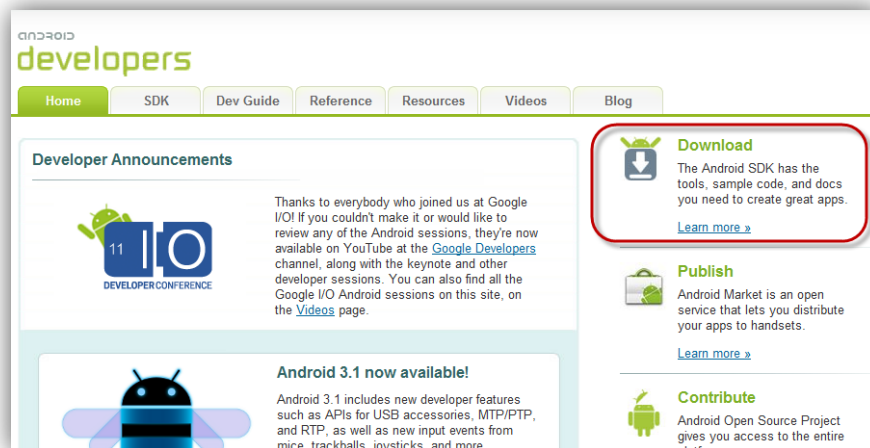
Next, download the SDK for your specific platform. If you're installing the SDK on Windows, choose the recommended windows EXE package, rather than the zip file. For Mac or Linux, choose the appropriate version from the list.

Once the download completes, head on over to www.oracle.com, and select **Downloads** from the menu, then locate **Java SE** under the Java category. Download the latest version of the Java SE (Standard Edition) that is available on the site. We're interested in the JDK (Java Developers Kit) version, not the JRE (Java Runtime Envinronment).

Click on the Download button under JDK, and select the package that is best suited to your system. Note that if you're running Apple's OS X, you do not need to download Java at all. It is already pre-installed on your PC. For Windows / Linux, use the 32-bit versions of Java. 64-bit versions of Java and Eclipse may cause your Android applications to fail with odd errors. Google recommends the use of 32-bit software for development.

Finally, go to http://www.eclipse.org/downloads/, and locate the downloads section for Eclipse Classic. You are looking for the latest version, for your OS. Download the 32-bit version of Eclipse.

The fourth download, the ADT plugin will be downloaded and setup once we have Java, Eclipse, and the SDK setup and functioning.

Setup & Configuration

Now that we have all of the necessary software, we need to install and configure each of these components on the development PC. We will install our applications in the following order:

- Java JDK
- Eclipse
- Android SDK
- Eclipse ADT Plugin

Java JDK

Click on the JDK installer and follow the prompts to install the software. Use all default settings.

Eclipse

To install Eclipse, simply extract the contents of the downloaded zip file into a folder of your choice. I like to keep it under Program Files (x86)\Eclipse in Windows or in the Applications folder on OS X.

Open Eclipse, and set your default workspace. The workspace will be the location where we store all of the projects that we are working on or have worked on. Towards the bottom of the dialog box, select "**Use this as the default and do not ask again**" checkbox. When Eclipse comes up, exit the application.
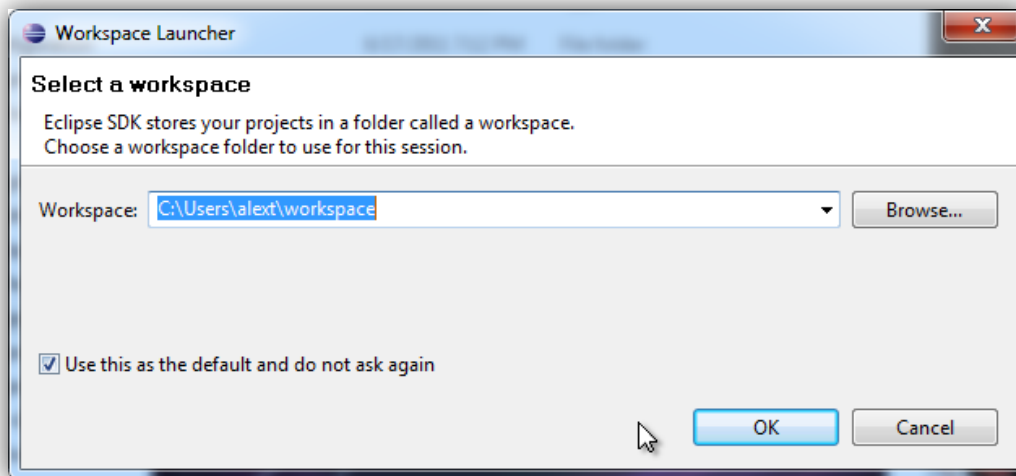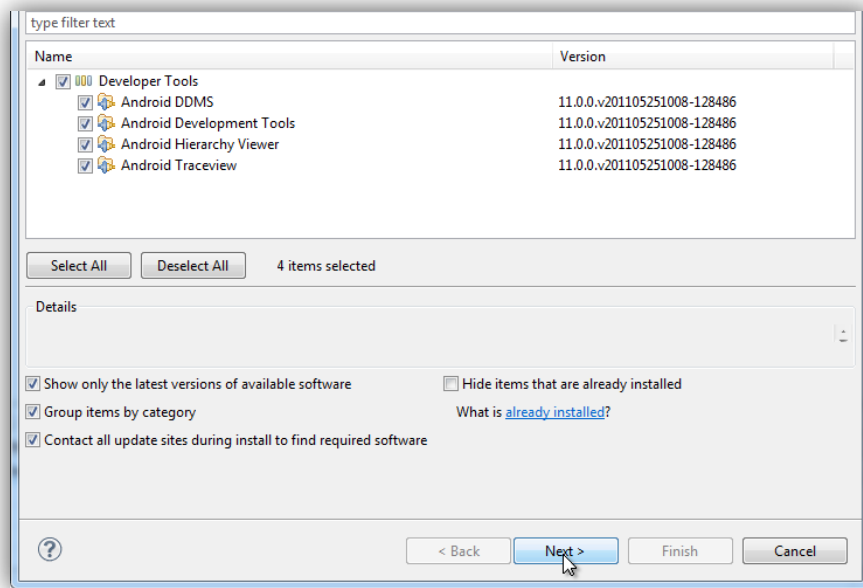
Android SDK

Run the setup for the Android SDK, using all default options. At the end of the installation, the SDK will ask to "Start SDK Manager (to download system images, etc.)". **Uncheck** that checkbox and click the **Finish** button.

Android Developer Tools Eclipse Plugin

Re-launch Eclipse, and select the **Help** menu option (upper right hand corner), then **Install New Software**. Click on the Add button in the Install dialog box that appears and type in **Google** for the **Name**, and **https://dl-ssl.google.com/android/eclipse/** as the **Location**, then click **OK**. Be sure to check the URL against the instructions found on the Android Developer web site to make sure the URL hasn't changed.
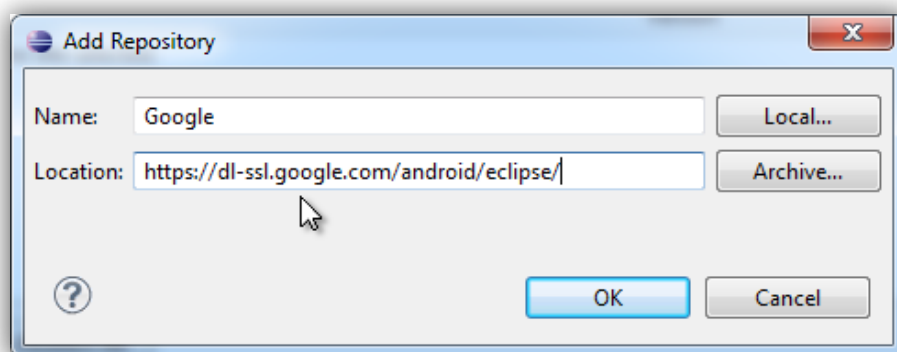

Select all of the components that appear, and click **Next**. Accept all of the license agreements, and click on **Finish**. The download will take several minutes, and will ask you to re-start Eclipse.

After Eclipse is restarted, go to the **Window** menu, then select **Preferences**. Select the **Android** tab, and type in or **Browse** to the location where you installed the Android SDK. Navigate to the Jave section, and expand it. Select Compiler, and make sure that Compiler compliance level is set to 1.6.

Now open the Android SDK and AVD Manager from the main toolbar in Eclipse or from the Window menu.
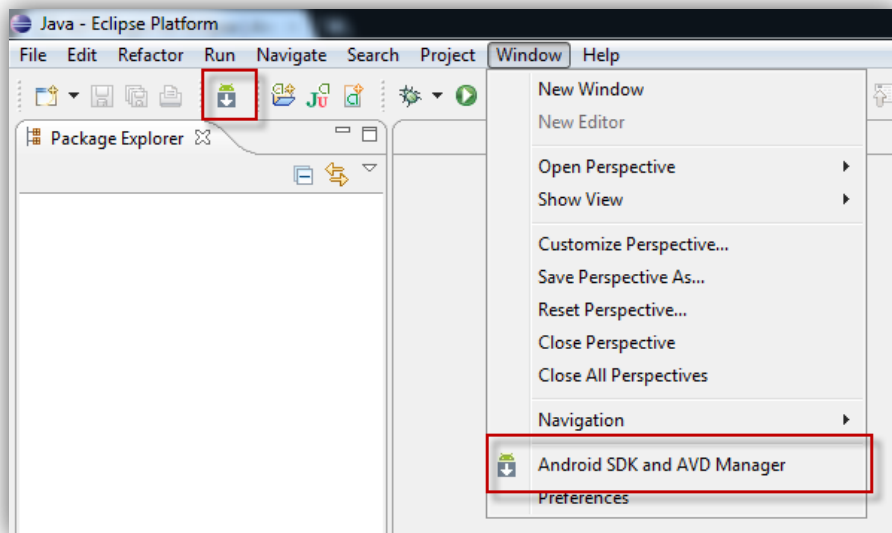

Select Available Packages and expand all options. Choose options that you would like install, and click on the **Install Selected** button. Installing everything here is OK, but you are not likely to work with, or create applications for Android 1.5 or 1.6. Typically, you'll want to support Android 2.1 and higher. The

Third party Add-ons includes support for Samsung, Sony, and other companies that have produced Android devices. It is up to you to decide if you want to use any of their software within your development practice.

OS Specific Instructions

Windows 7

Right-click on the **Computer** icon in your start menu. Select **Properties**. Select **Advanced System Settings** from the sidebar on your left, then choose **Environment Variables** from the dialog box that appears. Locate **Path**, and select the **Edit** button.
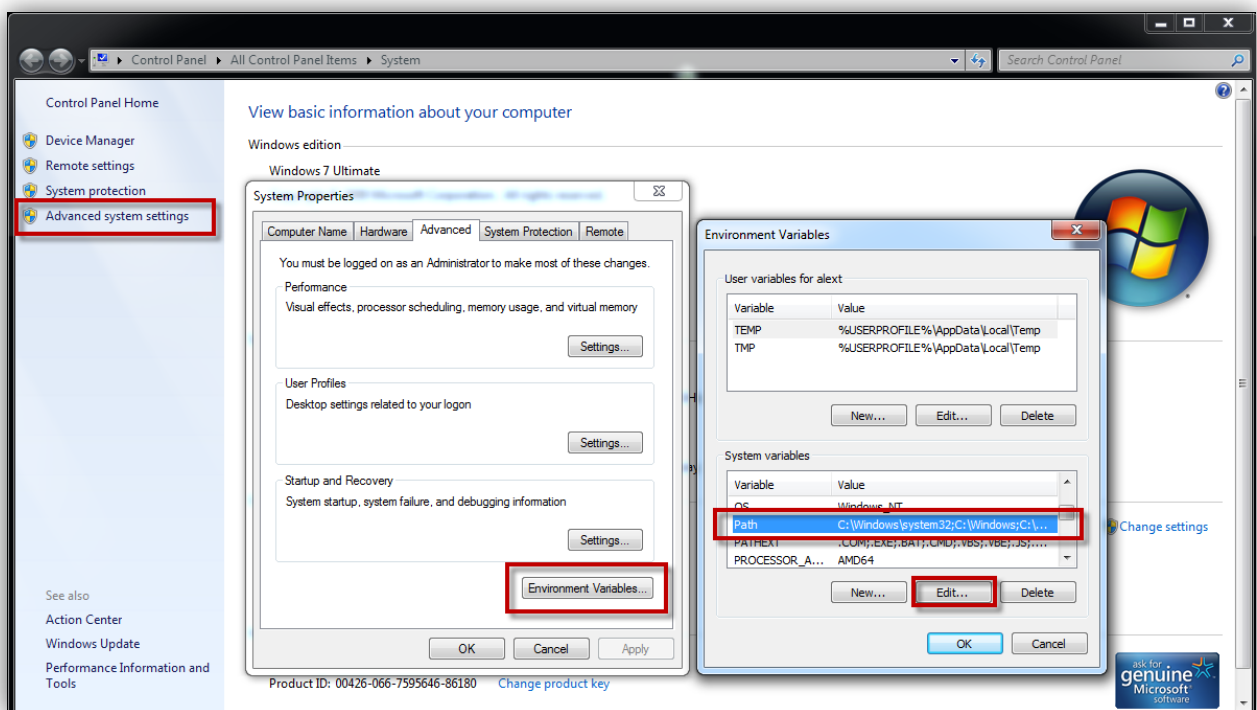
Add the full path to tools and platform-tools directories to the end of the path string. Be sure to separate each one by a semi-colon. An example string is listed below:

%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;%SYSTEMROOT%\System32\WindowsPowerShell\v1.0**;C:\Program Files (x86)\Android\android-sdk-windows\tools\;C:\Program Files (x86)\Android\android-sdk-windows\platform-tools**

The items in gray were previously part of the string, and to that I added the items highlighted in yellow.

OS X

On a Mac OS X, look in your home directory for a file called .bash_profile. You can create the .bash_profile file if you don't already have one. Look for a line that sets the PATH environment variable and add the full path to the tools/ and platform-tools/ directories to it.

Upon completion of these steps, the Android SDK is installed and configured. You're now ready to create a virtual device for testing your applications, and to start developing your first application!