

Setting Up Your Android Development Environment

For Windows XP v1.1

By GoNorthWest

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Setting up the Android development environment can be a bit...well...challenging if you don't have all the pieces in place before you start. The aim of this guide is to visually walk you through the process of downloading what you need, installing it, and making the correct configurations. Once you do that, you're all set to actually work with the source code you download from Buzztouch! Hopefully these instructions will make things just a bit easier for you!

Let's get started!

1. **Download required software.** In order to make this all work, there are several pieces of software you have to download and install:
 - a. **Eclipse:** I chose to download Eclipse Classic 3.7.1, which was the most recent version available at the time of this writing. I downloaded the 32-bit version for Windows XP, but there is also a 64-bit version if you are running 64-bit Windows. Here are the links I used to get this package.

<http://www.eclipse.org/downloads/>

<http://www.eclipse.org/downloads/download.php?file=/eclipse/downloads/drops/R-3.7.1-201109091335/eclipse-SDK-3.7.1-win32.zip>

http://www.eclipse.org/downloads/download.php?file=/eclipse/downloads/drops/R-3.7.1-201109091335/eclipse-SDK-3.7.1-win32-x86_64.zip

- b. **Android Development SDK:** This is the software development kit (SDK), much like the iOS SDK for Macs, that must be used within Eclipse for development. Here are the links I used for this portion.

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

http://dl.google.com/android/installer_r15-windows.exe

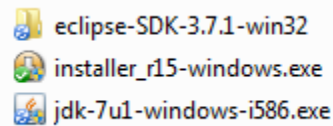
<http://developer.android.com/sdk/eclipse-adt.html#installing>

- c. **Java JDK:** You have to use the Java Developers Kit here...not just the Java Runtime Engine (JRE), which most of you already have installed. This is a very crucial distinction...without it, things will not work.

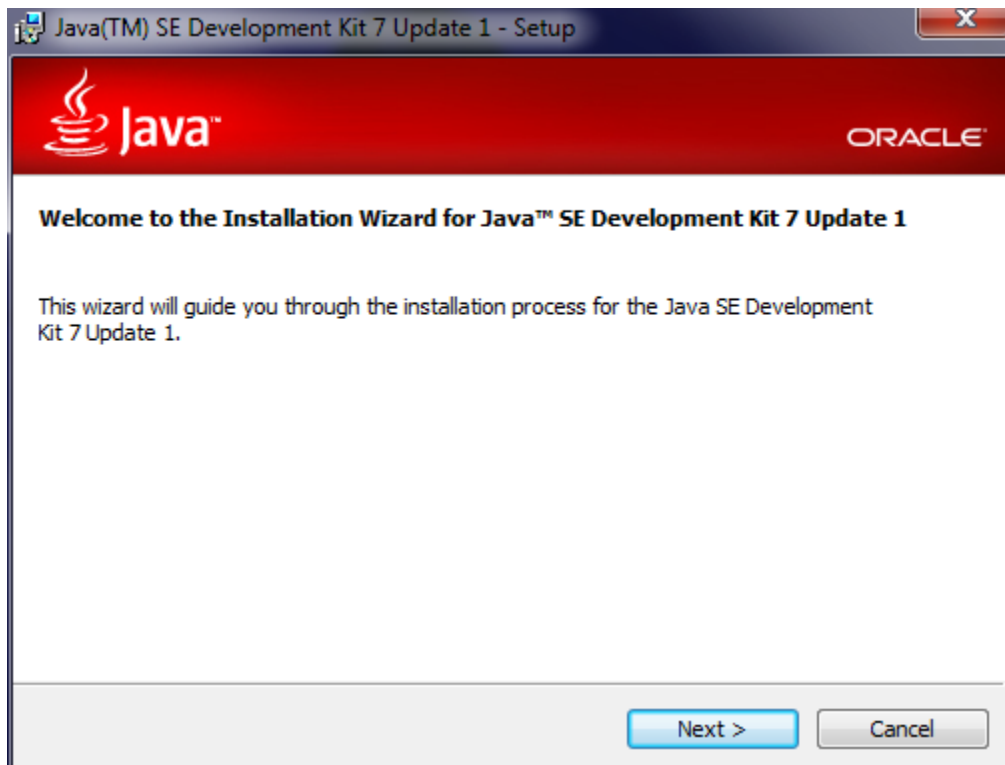
<http://www.oracle.com/technetwork/java/javase/downloads/index.html>

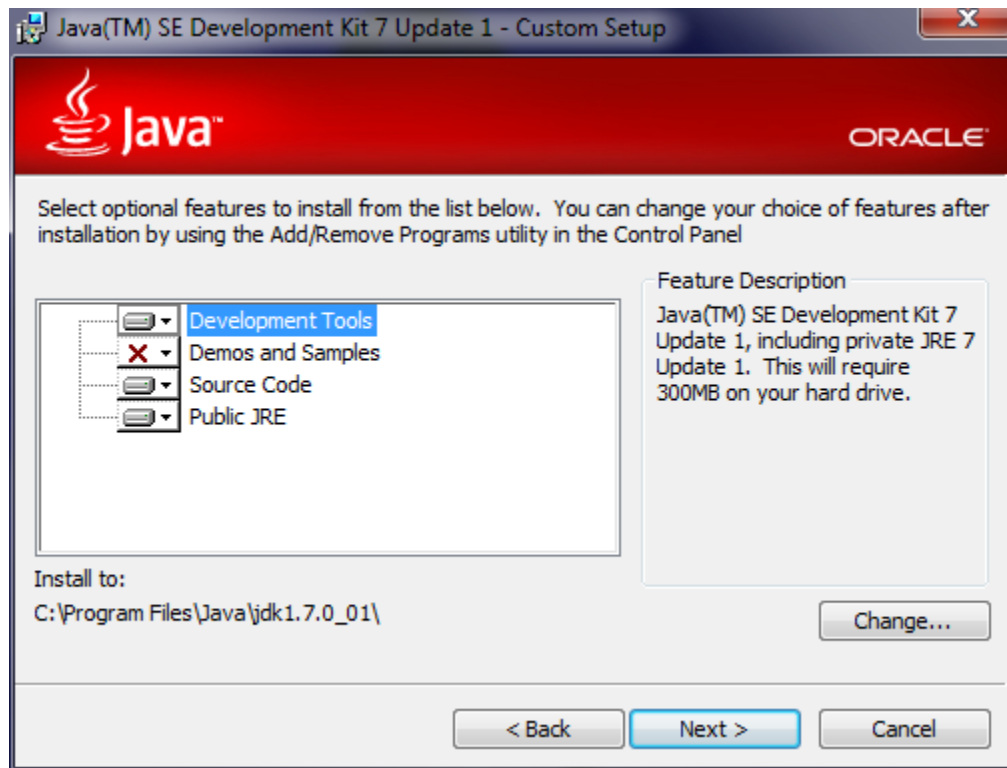
<http://www.oracle.com/technetwork/java/javase/downloads/jdk-7u1-download-513651.html>

- d. Once you get all the software downloaded, you should have a file listing that looks something like this :



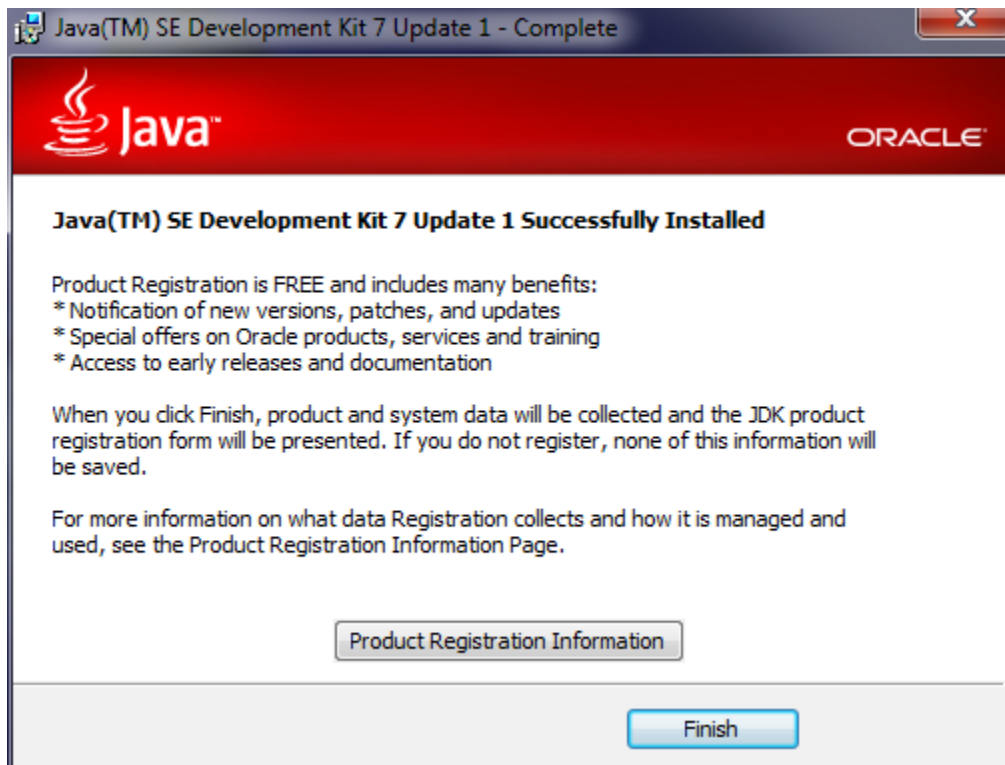
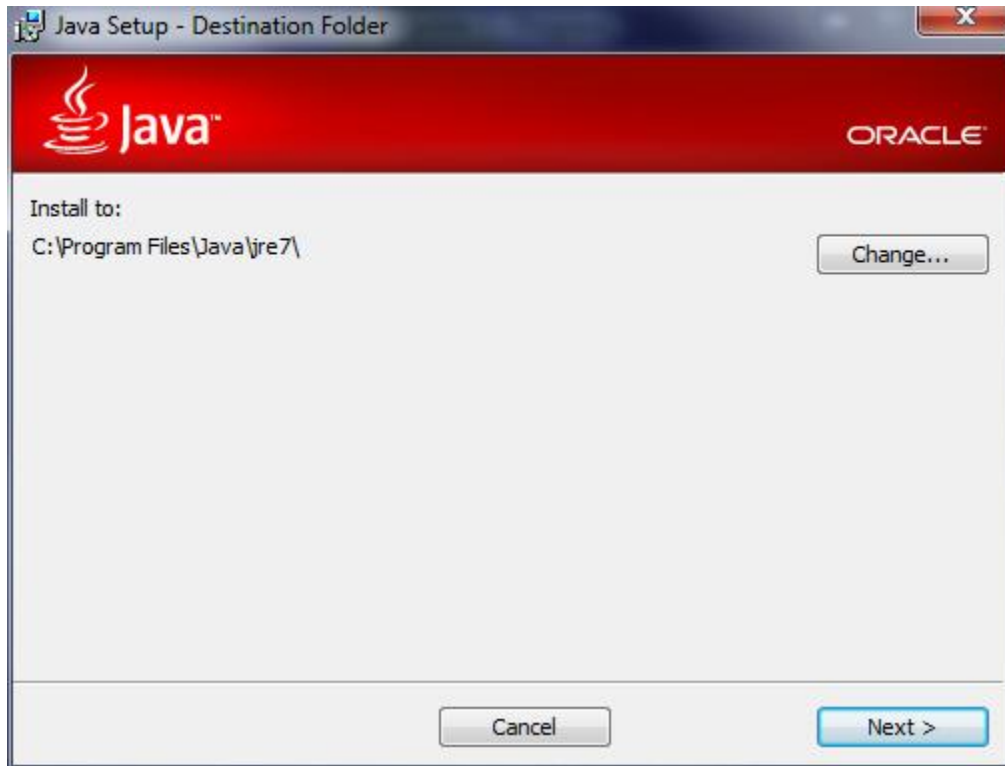
2. **Install the Java JDK (jdk-7u1-windows-i586.exe).** Double-click on the JDK install package you downloaded from above, and follow the prompts. This **MUST** be installed before you can install the Android SDK...without it, SDK installation will fail. Your install screens should look something like the following:





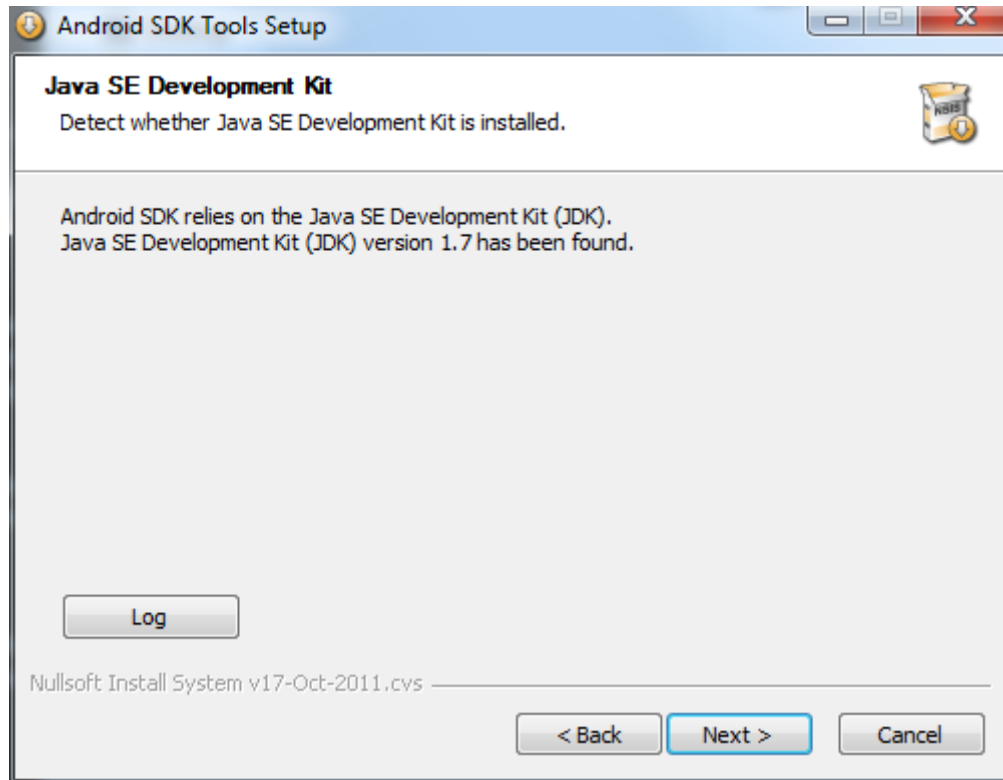
Use the screen above to decide which components you want and don't want. When in doubt, just go with the defaults...it'll be what you need for your environment.





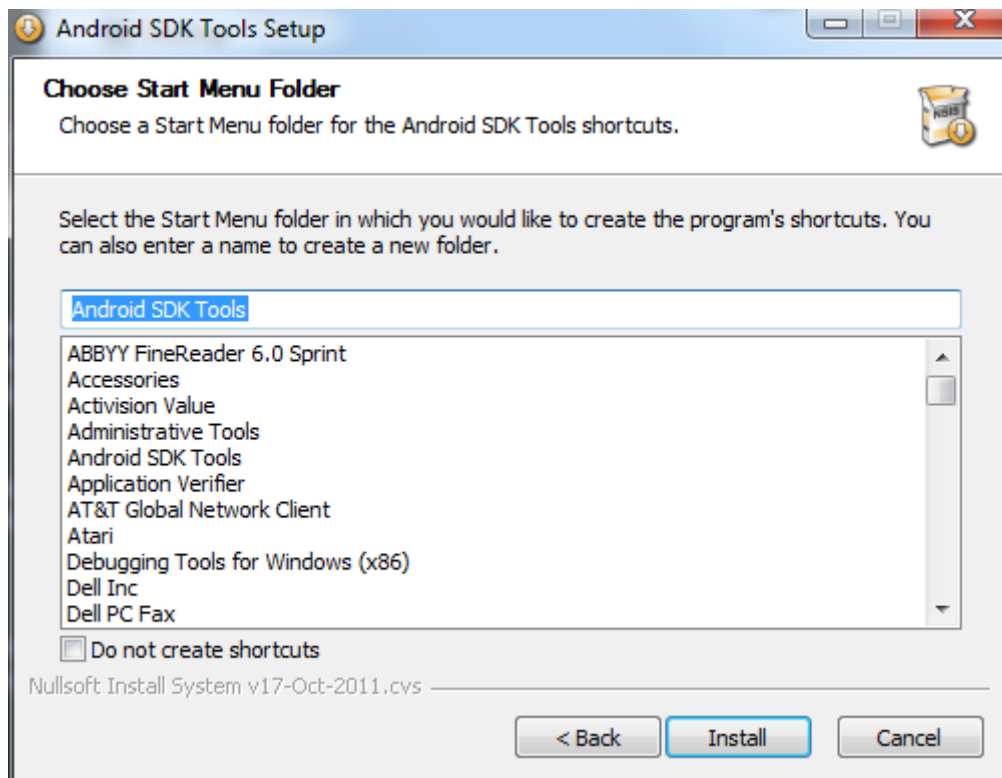
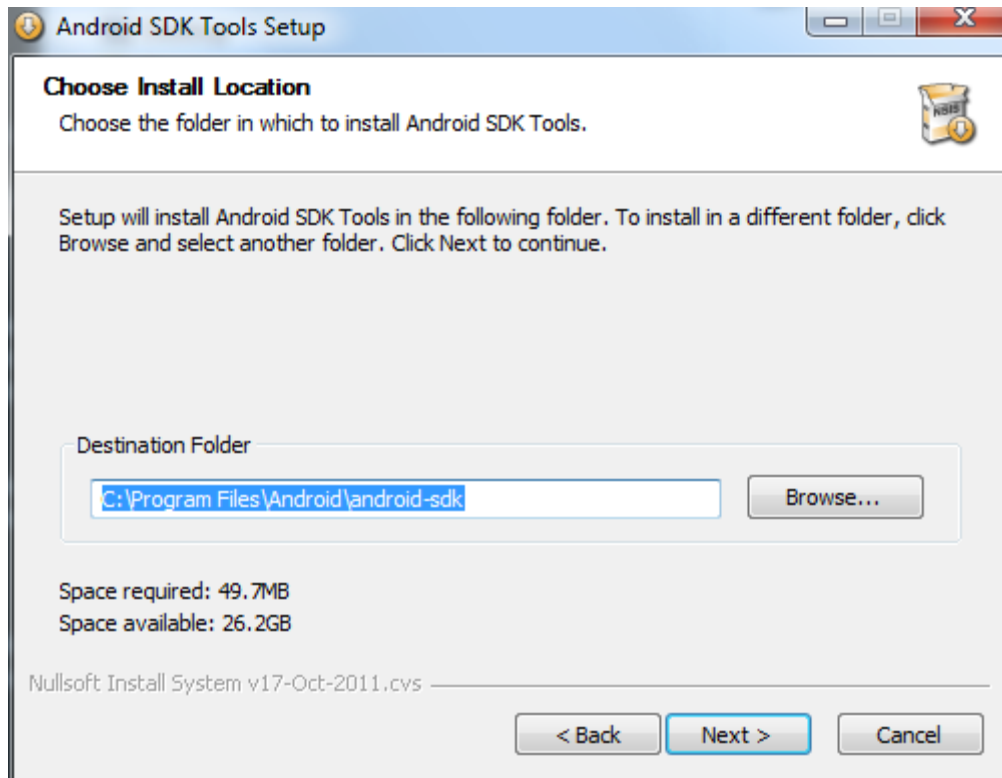
Once you have hit the Finish button, you are done with the JDK install, and can move on to the Android SDK Installer.

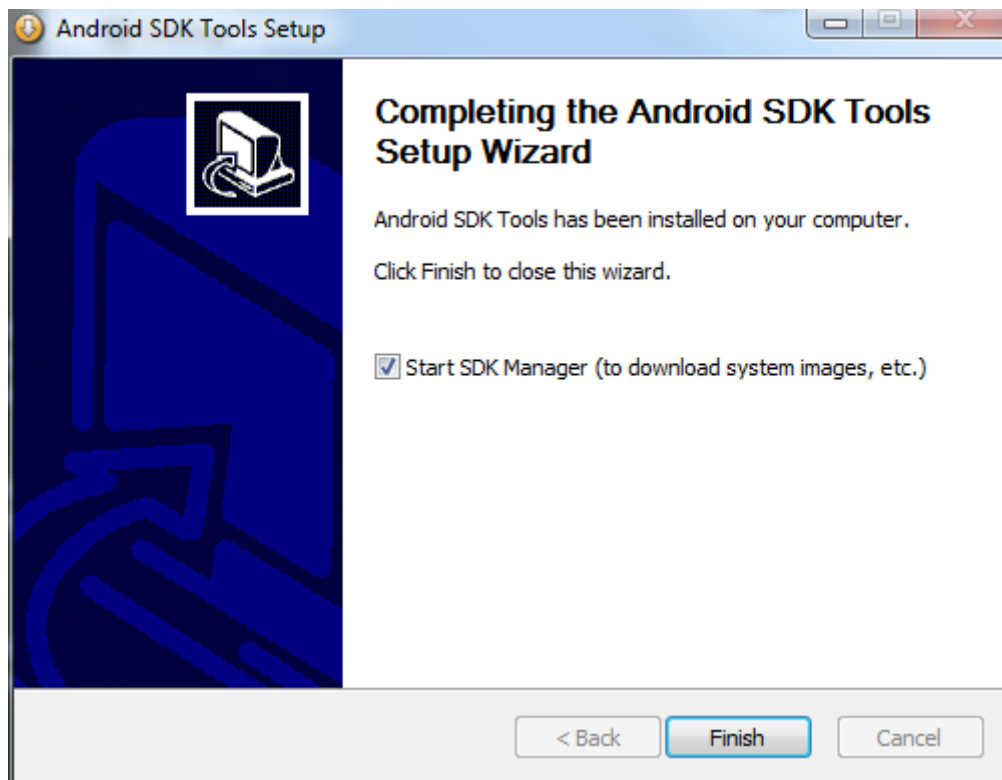
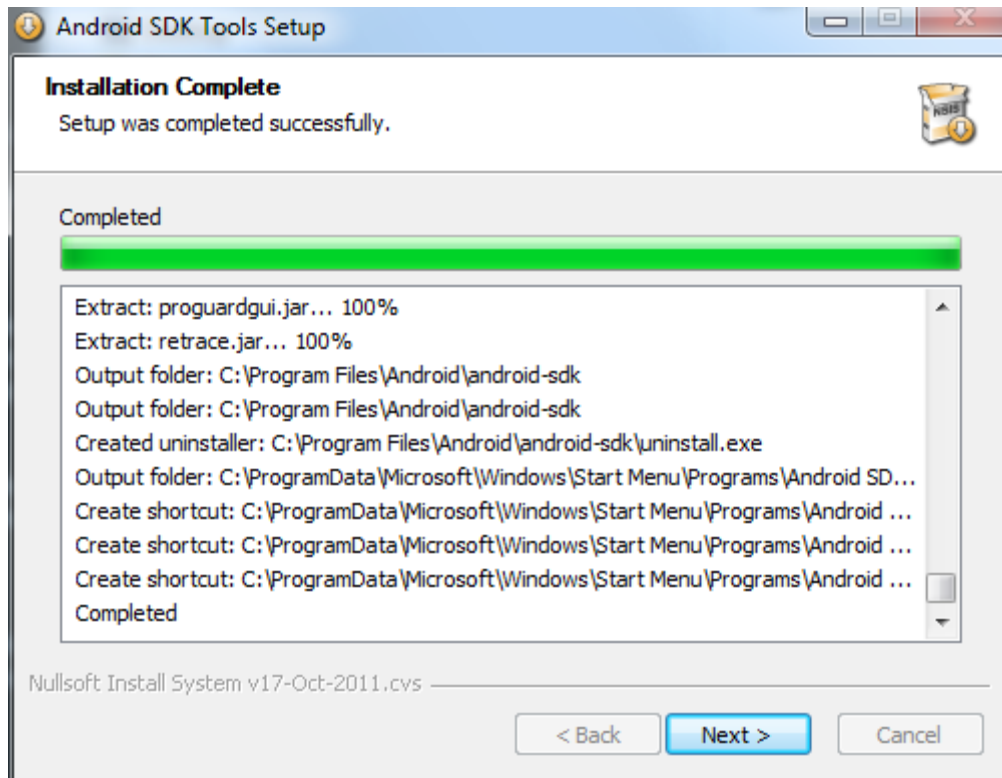
3. **Install the Android SDK (installer_r15-windows.exe).** Double-click on the Android SDK install package you downloaded from above, and follow the prompts. Your install screens should look something like the following:



If you don't see the above screen initially, and it complains that it cannot find the JDK, then hit the "Back" button, then "Next" again. This should resolve the problem. If not, check out this article on Stack Overflow :

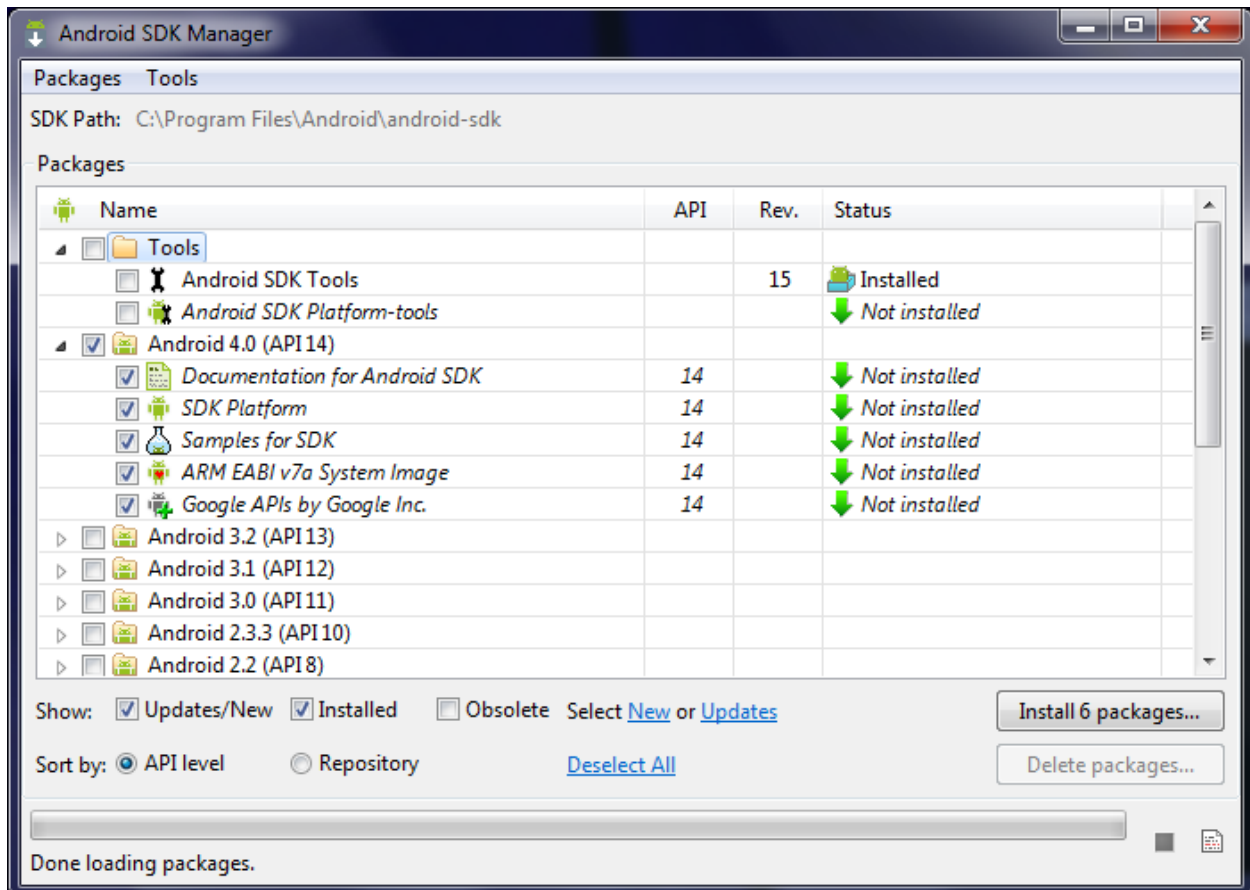
<http://stackoverflow.com/questions/4382178/android-sdk-installation-doesnt-find-jdk>



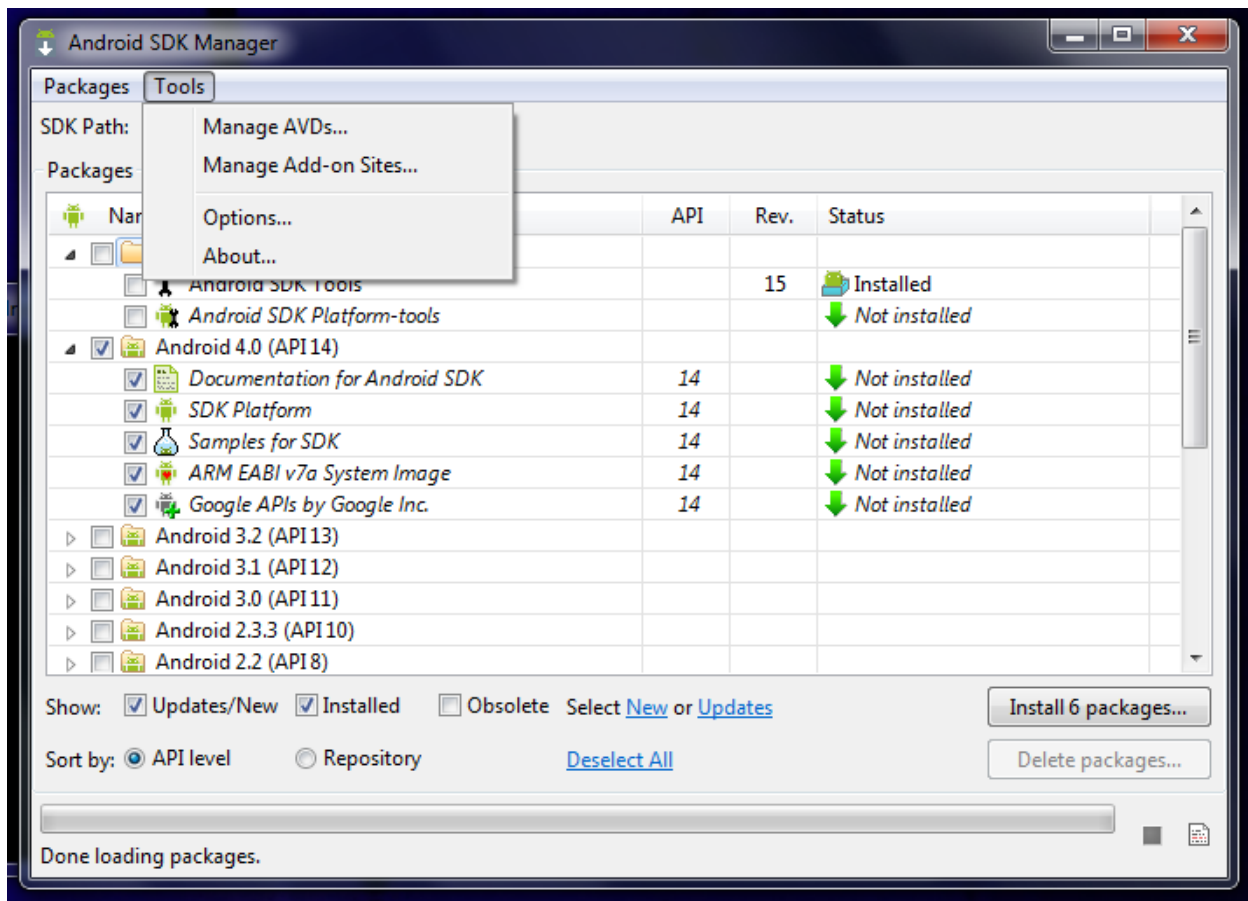


You can choose to start the SDK Manager at this point, or move on to Eclipse installation. For the sake of this tutorial, keep "Start SDK Manager" selected, and hit Finish.

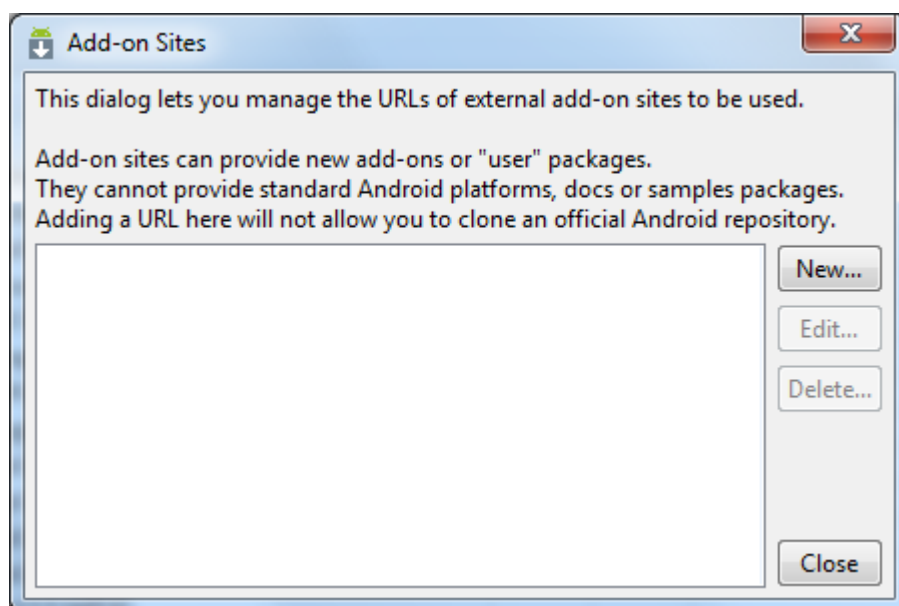
4. **Configure the Android SDK for Development Tools and Google API.** This is where you configure the Android SDK Manager to download the tools you will need to create Buzztouch apps. This is essentially downloading the Google API's Platform 2.2 and API level 8. Keep in mind a common mistake, as pointed out in the Readme file provided by Buzztouch with your Android source code : "A common mistake is to assume Android 2.2 API's and Google 2.2 API's are the same, they are not." This is important to keep in mind...if you grab the wrong ones, you won't be able to get your program to work.



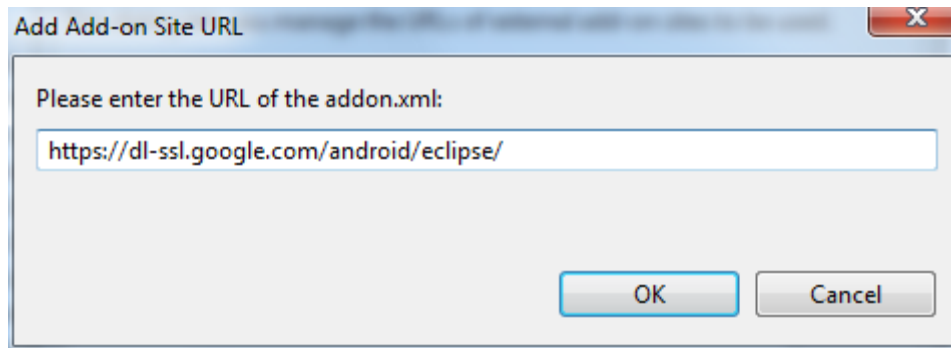
This should be the first screen you see. If you select what I selected above, you'll get what you need for developing with Buzztouch. In fact, you'll get more than what you need, but sometimes it's difficult to narrow down exactly where all the necessary packages are, so just grab everything!



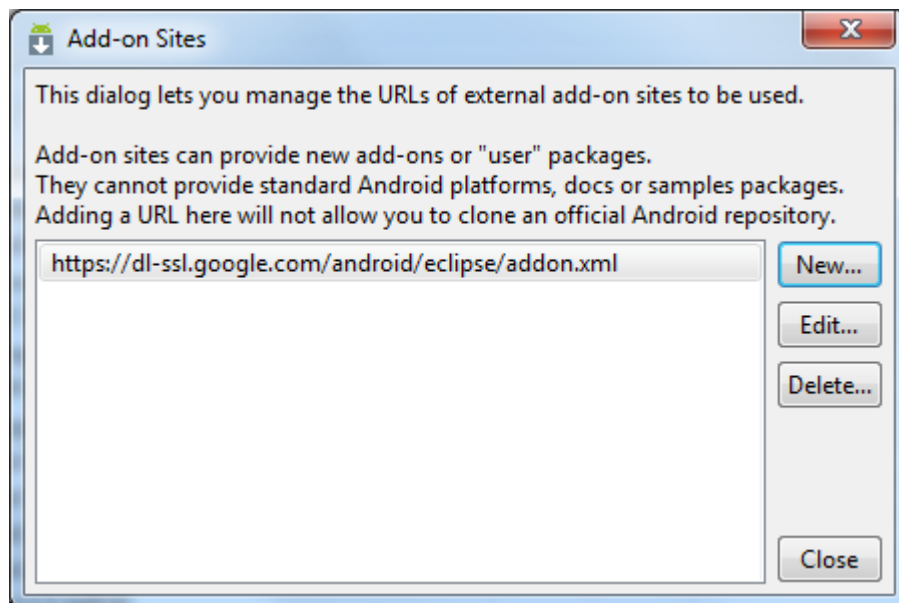
In order to download the packages, you need to define Add-on Sites. Go to Tools...Manage Add-on Sites, and you'll get the following:



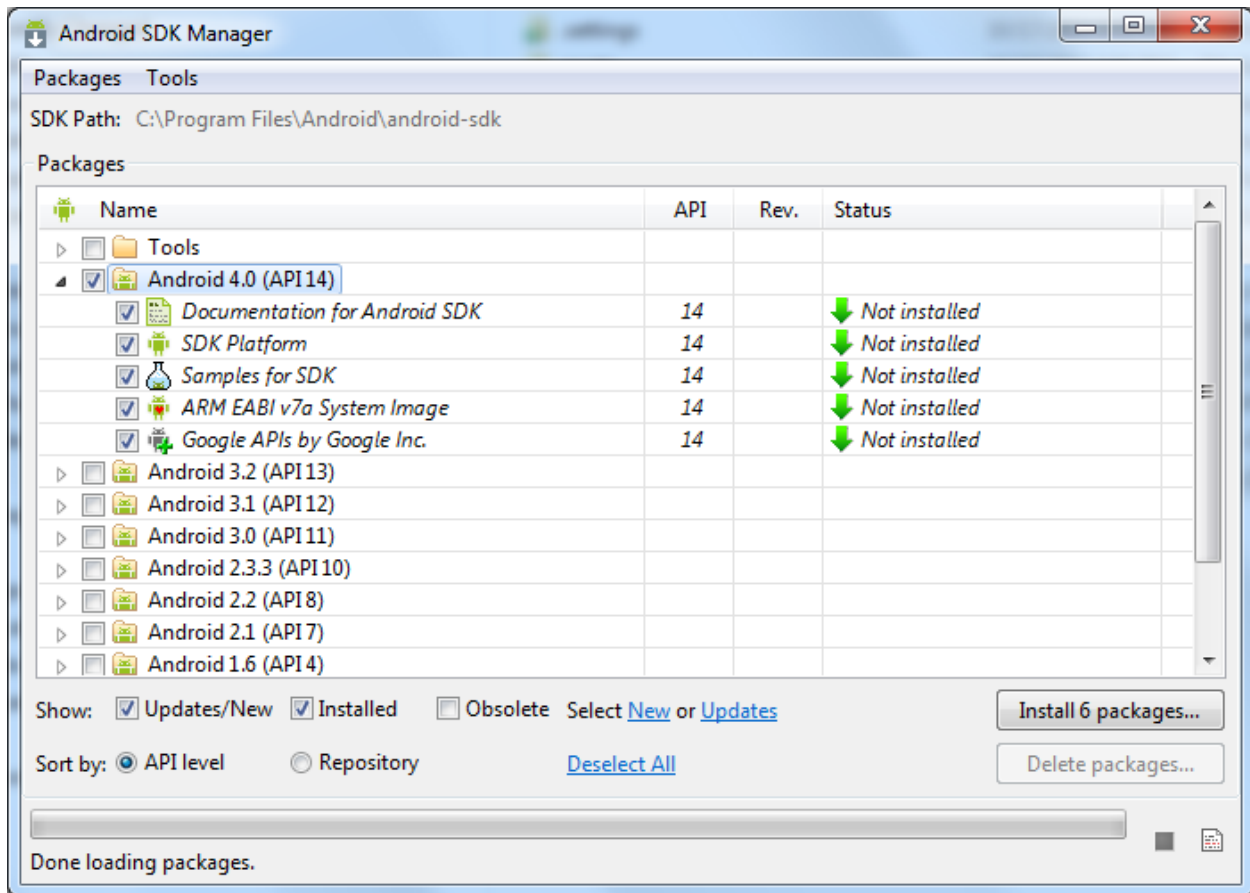
Select the "New" button and you'll be asked for a URL. Use the following:



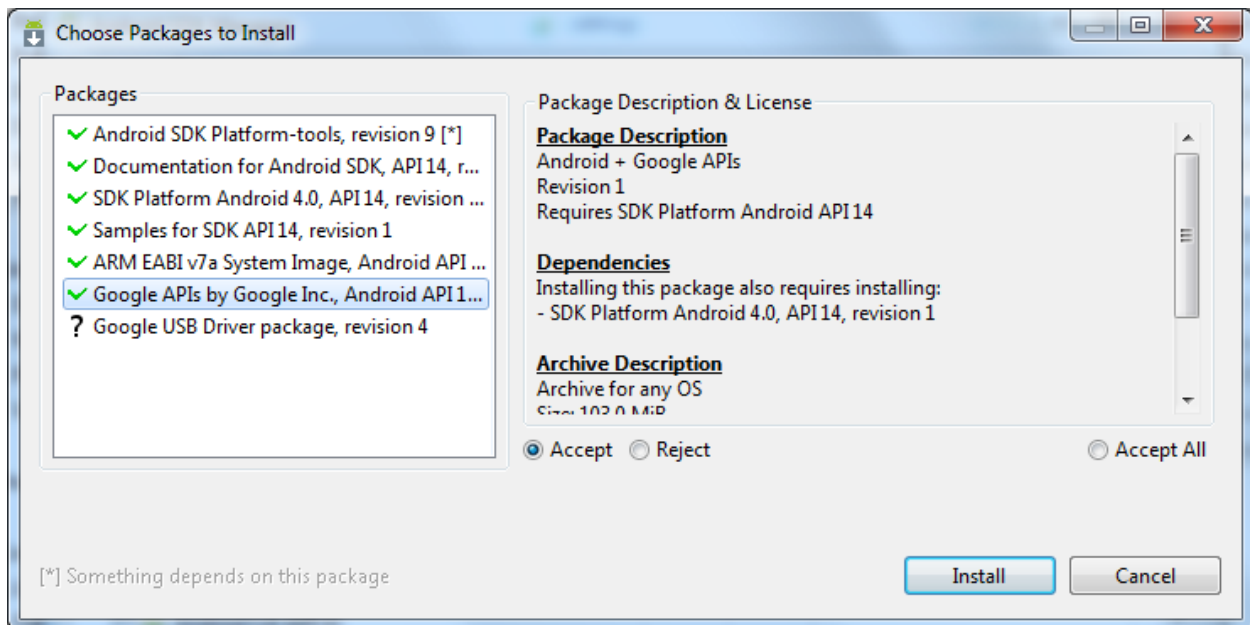
Hit OK, and you'll see the following screen:



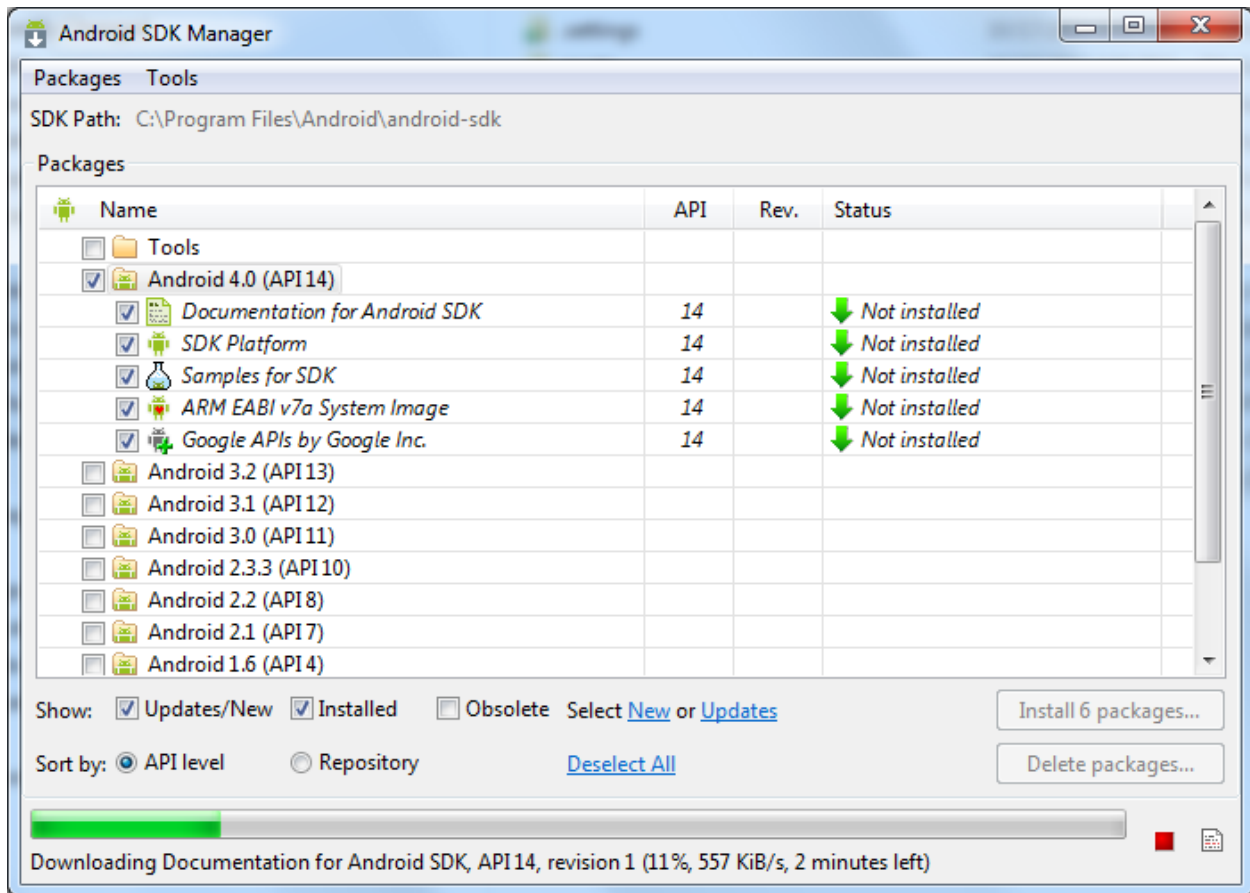
Now you can hit Close, and get this screen:



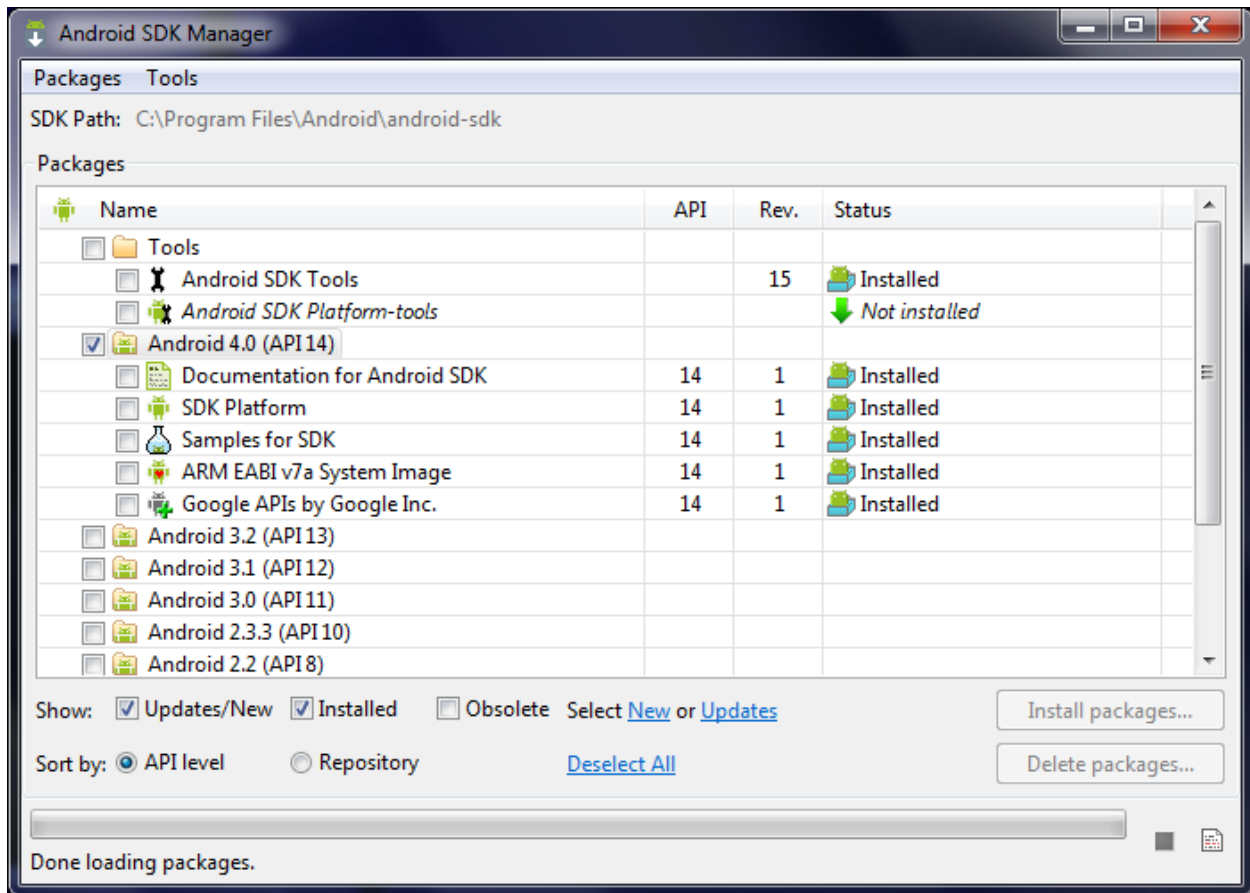
Now you can hit the **Install 6 Packages** button, and the following screen should appear:



This is one of those better to grab everything moments. Make sure there is a green checkmark next to everything you see above, and then hit Install. Now grab a cup of coffee or SoBe...this is gonna take a bit.

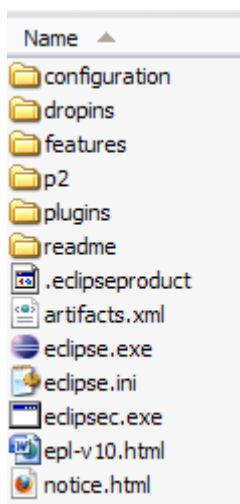


It's now downloading and installing the stuff you need. Depending on your connection speed and system speed, this could literally take 30 minutes or more. I left mine and came back later. When it's done, you'll get this screen:



Success! Now time to install Eclipse!

- 5. Install Eclipse.** This is the easiest thing you'll do today. Simply unzip the package you downloaded into the folder of your choice. I recommend `c:\eclipse`. Your folder structure should now basically look like what you see below. The `eclipse.exe` file is what you launch to start the program. Feel free to create a shortcut on your desktop, or pin it to your Start Menu (which I did). You'll want to run this program as Administrator.



6. **Set up your Android keystores (Debug and Release).** In order to get your application installed on a device, it must be digitally signed with a certificate who's private key is held with the developer. If you are testing your app on a device, you can use a Debug Key. If you want to sell your app, or put it on a marketplace somewhere, you'll need to use a Release Key.

- a. Debug Key : When you install the Android SDK, a default debug keystore/key is created with predetermined names/passwords:
 - i. Keystore name : "debug.keystore"
 - ii. Keystore password : "android"
 - iii. Key alias : "androiddebugkey"
 - iv. Key password : "android"
 - v. CN : "CN=Android Debug, O=Android, C=US"

On my Windows system, the keystore is located at C:\Documents and Settings\mf\android. You'll need this path to configure Eclipse when you're ready to create an APK package of your app.

To set up a Release Key, it's best to follow the instructions that can be found here :

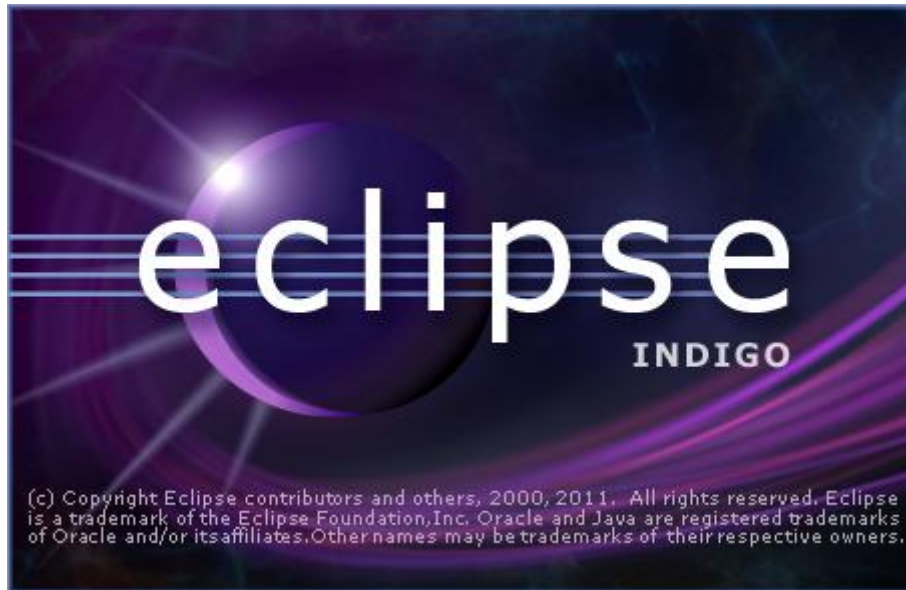
<http://developer.android.com/guide/publishing/app-signing.html#setup>

Once you have done this, you should see two keystores in your folder :

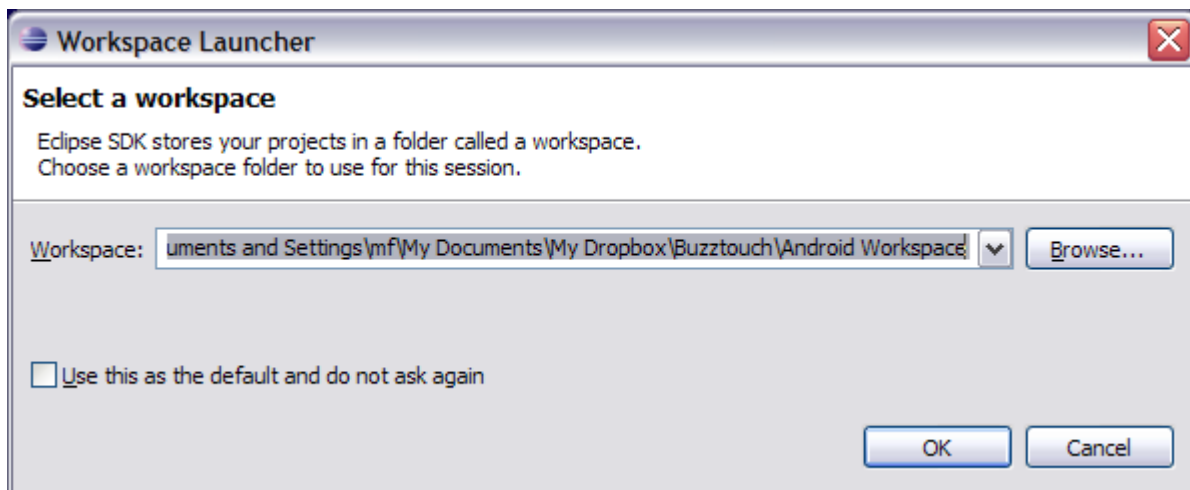
```
10/12/2011 09:59 PM <DIR> .
10/12/2011 09:59 PM <DIR> ..
09/14/2011 04:49 PM      123 adb_usb.ini
09/16/2011 12:29 AM      149 androidtool.cfg
09/15/2011 11:51 PM <DIR> avd
11/03/2011 04:36 PM      137 ddms.cfg
09/15/2011 02:51 PM      2,148 debug.keystore
09/16/2010 08:37 PM      784 default.keySet
10/12/2011 10:19 PM      171 modem-nv-ram-5554
10/12/2011 09:59 PM      171 modem-nv-ram-5556
09/15/2011 12:09 PM      3,458 release.keystore
11/03/2011 04:38 PM      75 repositories.cfg
```

You'll reference these later when you package up your application. But it's best to get it taken care of now, so you don't get surprised later!

7. **Configure Eclipse.** We're just about done setting things up! Crazy how long this takes! Start by clicking on the Eclipse icon you created earlier, or by double-clicking the eclipse.exe file in your c:\eclipse folder. You should see a splash screen similar to the following :

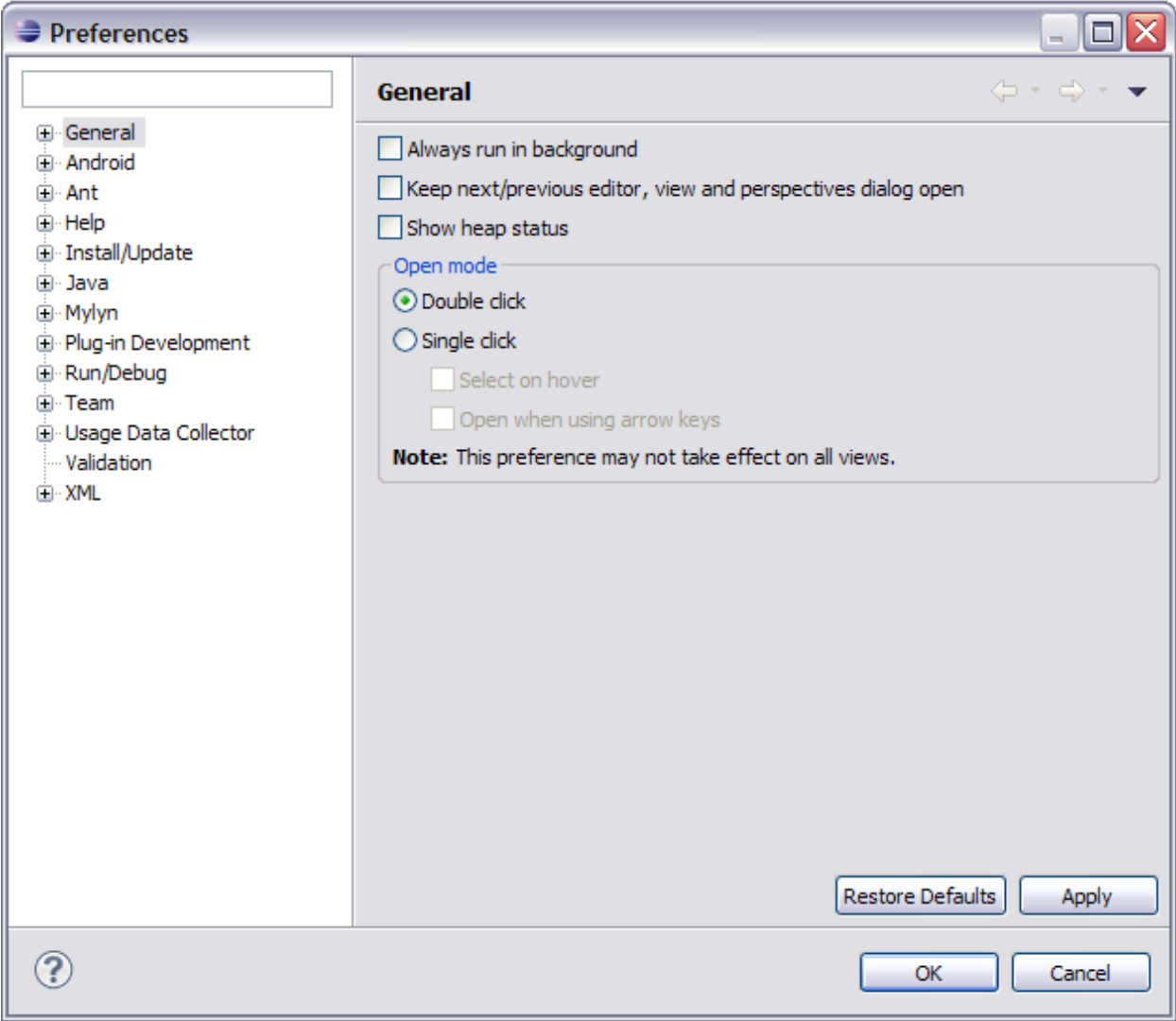


This means the program is loading, but it does so very slowly. Must be related to all that Java! In a few minutes, you'll see the following dialogue :

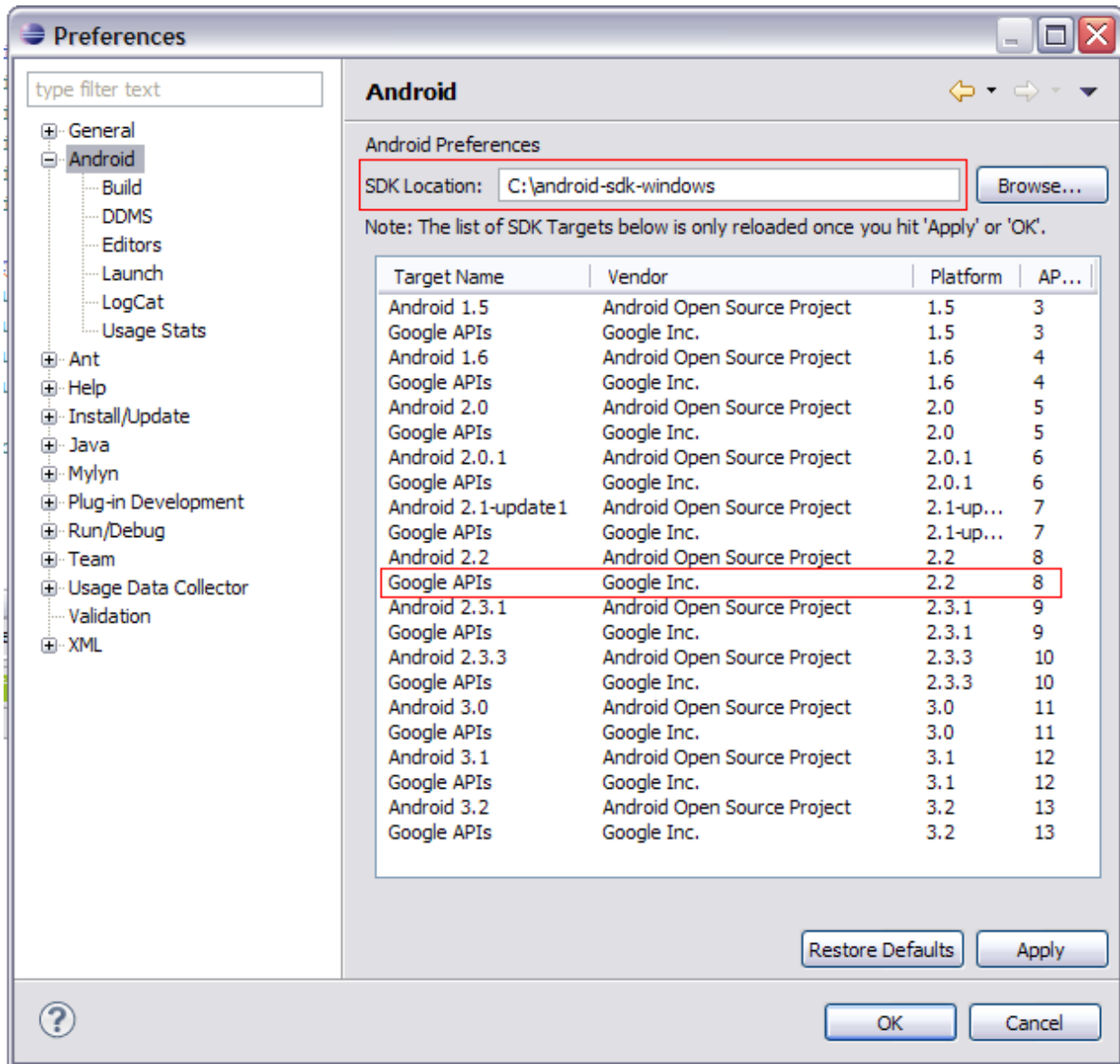


You can choose whatever you want here. I use DropBox for my Workspace, so that way everything is synced between computers. I'm not entirely sure how to explain the Workspace, but you need it, and it can be anywhere.

Once the workspace has been configured, the main program will come up. You now want to go to **Windows > Preferences**, and the following screen will display:



Now, expand the Android section, and you should see the following screen :



There are two things of importance here. First, you need to **specify your SDK location**, which is indicated in the top red box. Browse to the root folder for your SDK installation, and then hit OK to select. Then hit Apply, and it will populate all the SDKs you have installed. This brings us to the second important item, which is making sure you have the **Google APIs 2.2/8** installed, as shown above in the second red box. If you don't, you need to install them, as your BT v1.5 app won't work without them!

If everything looks good here, then hit OK to close out of this dialog, and you'll be back to the main interface for Eclipse! Congratulations...everything is now set up correctly for you to be able to develop Buzztouch apps on Windows!

Comments? Post them in the forum or email me at MrkFleming@gmail.com.

Revision Log			
v1.0	11/26/11	Initial release of document.	GoNorthWest
v1.1	11/28/11	Added Revision Log.	GoNorthWest