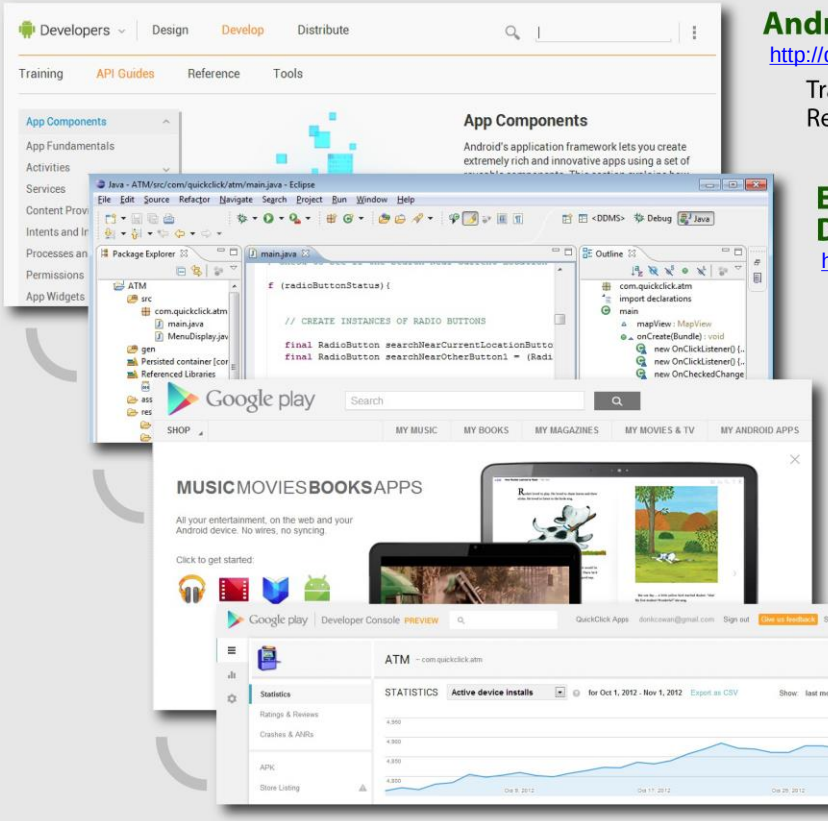
Development System Overview



Android Developers Website

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

Training
API Guides
Tools
Reference
Code Samples
Blog

Eclipse Integrated Development Environment

http://eclipse.org/ (for download)

Code Development
Code Testing
App Packaging

Google Play

https://play.google.com/store

App Marketing
App Sales
App Downloads

Developer Console

https://play.google.com/apps/publish/Home

App Publishing
App Tracking
App Sales

Infinite Skills

Development Tools Overview

Step 1

Java SE Development Kit (JDK)

Packages
Class Libraries
Compiler
.
.
.

Download/Install from Website:
http://www.oracle.com/technetwork/java/javase/downloads/index.html

Step 2

Eclipse Integrated Development Environment (IDE)

Development UI
Coding Support
Screen Capture
App Packaging
.
.
.

Download/Install from Website:
http://www.eclipse.org/

Step 3

Android Software Development Kit (SDK)

Code Libraries
Release Support
Debug Interface
API Documentation
.
.
.

Download/Install from Website:
http://developer.android.com/sdk/index.html

Step 4

Android Development Tools (ADT)

Eclipse Plugin
Custom XML Editors
Integrated Docs
Layout Editor
Includes ADB ------->
.
.
.

Download/Install from Website:
http://developer.android.com/tools/sdk/eclipse-adt.html

Android Debug Bridge (ADB)

Device Comm.
Emulator Interface
.
.
.

Included in ADT

Can also be accessed via command line:
adb . . .

Step 5

Android Virtual Devices (AVD)

Device Emulation
Device Connection
Debugging Support
.
.
.

Download/Install from Program:
C:\Program Files (x86)\Android\android-sdk\AVD Manager

Step 6

Android Sample Apps

Per Android Release
Code
Resources
.
.
.

Download/Install from Program:
C:\Program Files (x86)\Android\android-sdk\SDK Manager

(Optional)

Android Native Development Kit (NDK)

C/C++ Code Reuse
CPU Intensive Apps
.
.
.

Download/Install from Website:
http://developer.android.com/tools/sdk/ndk/index.html

Register prior to uploading apps

Google Play

App Listings
App Uploading
App Downloading
App Statistics
Developer Console
.
.
.

Access Website at:
https://play.google.com/store

Register as Developer at:
http://developer.android.com/distribute/googleplay/publish/register.html

Developer Console at:
https://play.google.com/apps/publish/Home

Sample Apps from Android SDKs

SDK for API 4.1
Jelly Bean

Sample App
Sample App
Sample App

SDK for API 2.2
Froyo

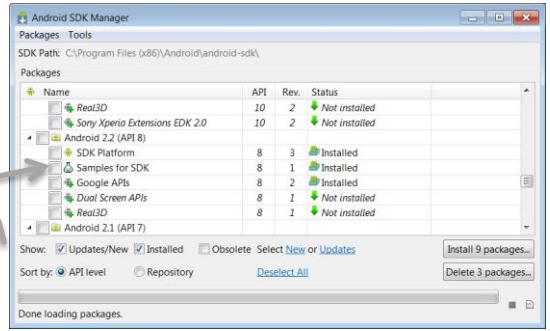
Sample App
Sample App
Sample App

SDK for API 2.1
Eclair

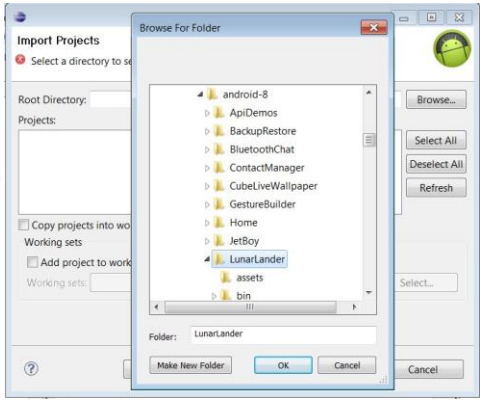
Sample App
Sample App
Sample App

Samples Instructions
http://developer.android.com
/tools/samples/index.html

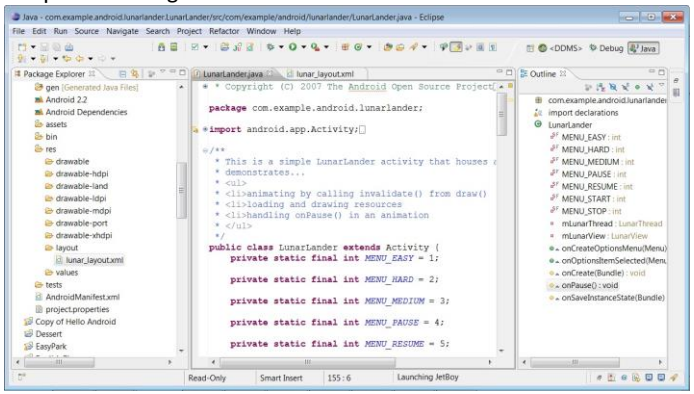
Eclipse → Window → Android SDK Manager



Eclipse → File → Import → Android →
Existing Android Code Into Workspace



Eclipse → Debug → Lunar Lander



Emulator

API Levels
http://developer.android.com
/guide/topics/manifest
/uses-sdk-element.html#ApiLevels

Platform Version Usage
http://developer.android.com
/about/dashboards/index.html

Using the Emulator
http://developer.android.com
/tools/devices/emulator.html

Android Developer Tools Bundle

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Register as Developer at:
http://developer.android.com/distribute/googleplay/publish/register.html

Developer Console at:
https://play.google.com/apps/publish/Home

Java Programming Language Resources

Overviews

Java:	http://en.wikipedia.org/wiki/Java_(programming_language)
Android Java:	http://en.wikipedia.org/wiki/Comparison_of_Java_and_Android_API
Object Oriented Programming:	http://en.wikipedia.org/wiki/Object-oriented_programming

References

Oracle Tutorials:	http://docs.oracle.com/javase/tutorial/index.html
Android APIs:	http://developer.android.com/reference/packages.html
Books:	http://www.amazon.com/s/ref=nb_sb_noss_1?url=search-alias%3Dstripbooks&field-keywords=java+programming&sprefix=java+programming%2Cstripbooks%2C239&rh=n%3A283155%2Ck%3Ajava+programming

Courses

Basics:	http://www.infiniteskills.com/training/learning-to-program-with-java-the-basics.html
Advanced:	http://www.infiniteskills.com/training/advanced-java-programming.html
Bundle:	http://www.infiniteskills.com/training/java-programming-bundle.html

Eclipse IDE Resources

Overviews

Eclipse:	http://en.wikipedia.org/wiki/Eclipse_ide
IDE:	http://en.wikipedia.org/wiki/Integrated_development_environment

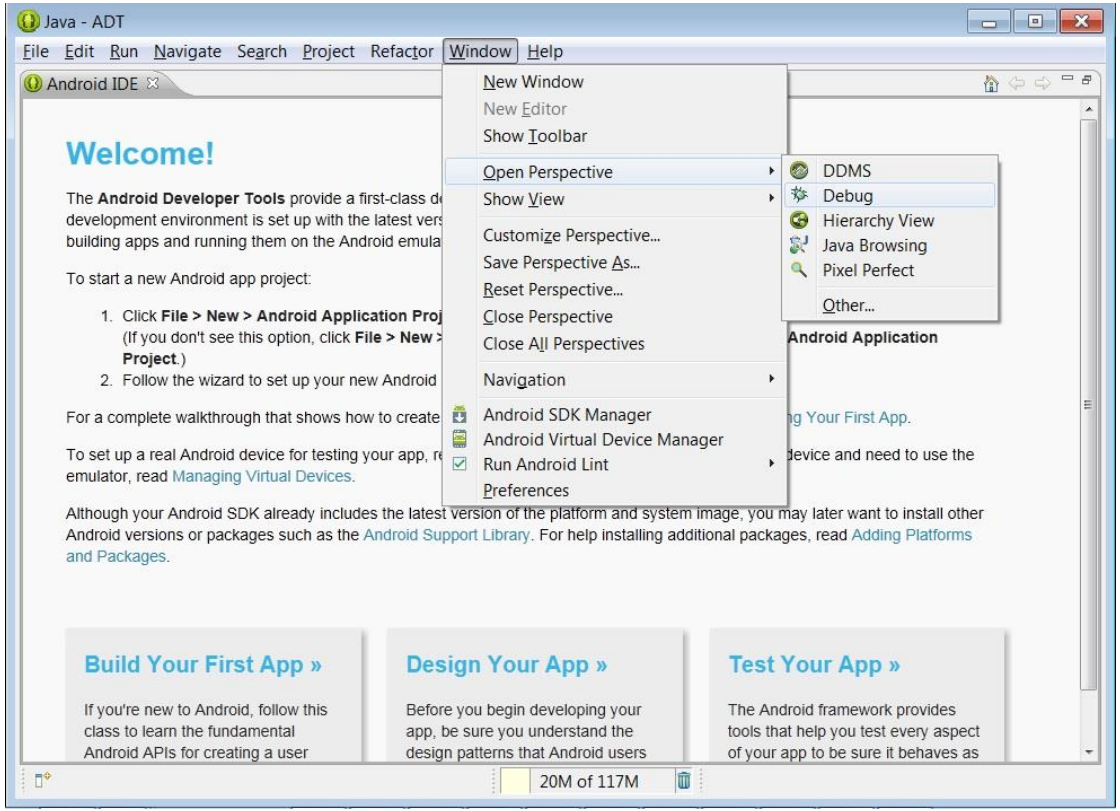
References

Eclipse Website:	http://www.eclipse.org/
Eclipse Resources:	http://www.eclipse.org/resources/
Eclipse Docs:	http://www.eclipse.org/documentation/
Eclipse Books:	http://www.amazon.com/s/ref=nb_sb_noss_1?url=search-alias%3Dstripbooks&field-keywords=eclipse+ide

Courses

Eclipse Training:	http://www.eclipse.org/community/training/classes.php
Eclipse Tutorials:	http://eclipsetutorial.sourceforge.net/totalbeginner.html

Eclipse ADT Open Perspective



Android Virtual Device Resources

Overviews

Managing Virtual Devices:	http://developer.android.com/tools/devices/index.html
Using the AVD Manager:	http://developer.android.com/tools/devices/managing-avds.html

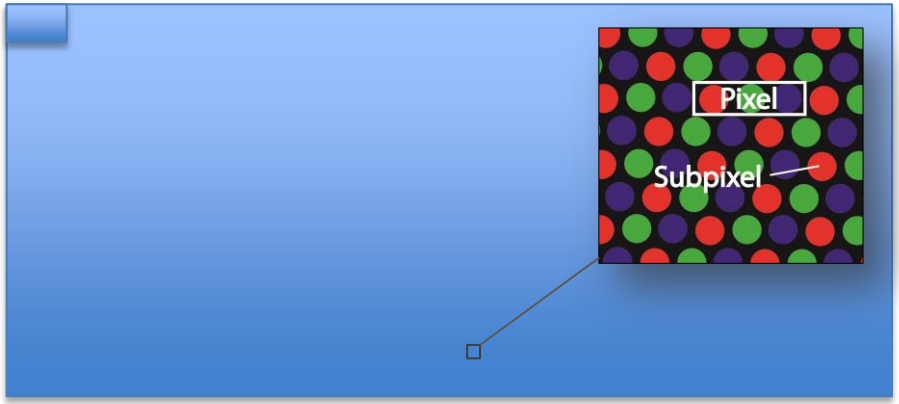
References

Graphics Display Resolution:	http://en.wikipedia.org/wiki/Graphics_display_resolution
AVD Hardware Options:	http://developer.android.com/tools/devices/managing-avds.html#hardwareopts

Device Screen Dimensions and Densities

VGA	Video Graphics Array	160	x 120	-	1024	x 600
XGA	Extended Graphics Array	1024	x 768	-	7680	x 4800
HD	High Definition	640	x 360	-	7680	x 4320

Q	Quarter
Q	Quad
H	Half
W	Wide
F	Full
S	Super
D	Double
H	Hyper
U	Ultra



ldpi	low	≈ 120 dpi
mdpi	medium	≈ 160 dpi
hdpi	high	≈ 240 dpi
xhdpi	extra high	≈ 320 dpi
tvdpi	TV	

Display Resolutions:	http://en.wikipedia.org/wiki/Graphics_display_resolution
Android Displays:	http://developer.android.com/design/style/devices-displays.html
Virtual Devices:	http://developer.android.com/tools/devices/index.html
Hardware Acceleration:	http://developer.android.com/tools/devices/emulator.html#accel-vm
Managing AVDs:	http://developer.android.com/tools/devices/managing-avds.html

Android Emulator

Read about improved emulator and GPU (Graphics Processing Unit) support on the Android Developers Blog at:

http://android-developers.blogspot.com/2012/04/faster-emulator-with-better-hardware.html