

Computer Science S-76

Building Mobile Applications

Lecture 2: [Android] Java Primer
July 6, 2011

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API:

<http://java.sun.com/javase/6/docs/api/>

Tutorial:

<http://java.sun.com/docs/books/tutorial/java/TOC.html>

- Begin with letters, \$, or _
- Subsequent characters also can be numbers
- Case sensitive
- No spaces

name

firstName

phoneNumber

Variables

Naming

abstract	continue	for	new	switch
assert	default	goto	package	synchronized
boolean	do	if	private	this
break	double	implements	protected	throw
byte	else	import	public	throws
case	enum	instanceof	return	transient
catch	extends	int	short	try
char	final	interface	static	void
class	finally	long	strictfp	volatile
const	float	native	super	while

http://java.sun.com/docs/books/tutorial/java/nutsandbolts/_keywords.html

Variables

Reserved Words

byte
short
int
long
float
double
boolean
char

Variables

Primitive Types

String
BigDecimal

Variables

Objects

```
int[] grades;  
grades = new int[15];
```

Variables

Arrays

```
if (boolean) {  
    // perform this code  
} else {  
    // otherwise, run this  
}
```

Control Flow

If-else statements


```
switch (variable) {  
    case 1: //code  
        break;  
    case 2: //code  
        break;  
    default: //code  
}
```

Control Flow

Switch

```
while (boolean) {  
    // code  
}
```

Control Flow

While Loops

```
for (init.; term.; update) {  
    // code  
}
```

Control Flow

For Loops

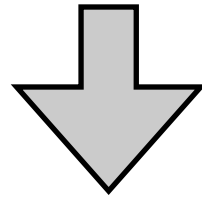


<http://developer.android.com>

Android

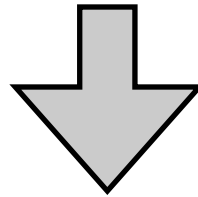
SDK and NDK

.java (code)



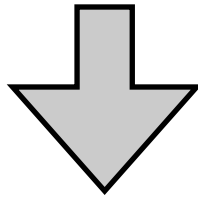
javac (compiler)

.class (bytecode)



dx (converter)

.dex (Dalvik executable)



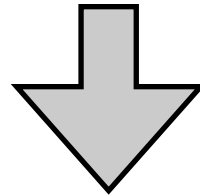
zip, aapt, etc. (archiver)

.apk (Android Package)



Building an App

.java (code)



Eclipse (IDE)

.apk (Android Package)



Building an App

android-sdk-mac_86				
1 of 24 selected, 103.5 GB available				
Name ▲	Date Modified	Size	Kind	
▶ add-ons	Nov 20, 2009 11:26 AM	--	Folder	
▶ docs	Today, 9:32 AM	--	Folder	
▶ platforms	Feb 12, 2010 1:59 PM	--	Folder	
SDK Readme.txt	Nov 20, 2009 11:26 AM	4 KB	Plain Text	
▶ temp	Feb 12, 2010 2:01 PM	--	Folder	
▼ tools	Nov 19, 2009 11:35 AM	--	Folder	
adb	Nov 19, 2009 11:34 AM	352 KB	Unix Executable File	
android	Nov 19, 2009 11:35 AM	4 KB	Unix Executable File	
apkbuilder	Nov 19, 2009 11:35 AM	4 KB	Unix Executable File	
ddms	Nov 19, 2009 11:35 AM	4 KB	Unix Executable File	
dmtracedump	Nov 19, 2009 11:34 AM	106 KB	Unix Executable File	
draw9patch	Nov 19, 2009 11:35 AM	4 KB	Unix Executable File	
emulator	Nov 19, 2009 11:35 AM	5.9 MB	Unix Executable File	
hierarchyviewer	Nov 19, 2009 11:35 AM	4 KB	Unix Executable File	
hprof-conv	Nov 19, 2009 11:34 AM	33 KB	Unix Executable File	
▶ Jet	Nov 19, 2009 11:34 AM	--	Folder	
layoutopt	Nov 19, 2009 11:35 AM	4 KB	Unix Executable File	
▶ lib	Nov 19, 2009 11:35 AM	--	Folder	
mkshcard	Nov 19, 2009 11:34 AM	29 KB	Unix Executable File	
NOTICE.txt	Nov 19, 2009 11:35 AM	193 KB	Plain Text	
source.properties	Nov 19, 2009 11:34 AM	4 KB	Document	
sqlite3	Nov 19, 2009 11:34 AM	1.3 MB	Unix Executable File	
traceview	Nov 19, 2009 11:35 AM	4 KB	Unix Executable File	
zipalign	Nov 19, 2009 11:34 AM	229 KB	Unix Executable File	



SDK

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