

# Android 00

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[Installing the Android Development Environment](#)

00000000 JDK <http://www.oracle.com/technetwork/java/javase/downloads/index.html>

00000000 Eclipse Classic <http://www.eclipse.org/downloads/>

0 Eclipse 000 ADT 000 Help → Install New Software... 000 <https://dl-ssl.google.com/Android/eclipse/>

000

000000 **shell**

adb shell

00000000

00000000000000 SD 00

adb push foo.txt /sdcard

00000000000000 init.rc 00000000000000

adb pull /init.rc

00000000

adb install test.apk

adb install -r test.apk

adb uninstall com.foo.bar.test-1

00test.apk 000000000000 /data/app/com.foo.bar.test-1.apk

00000000000000 /data/data/[package\_name]/files 000000 Context.getFilesDir() 0000000000

□□□□

```
adb shell am start -n package_name/package_name.main_activity_name
```

□ **logcat** □□ **log** □□□□□□□□

```
adb logcat -v time > log.txt
```

□□□□□□□□□□ log □□□□□□□□□□

```
01-01 08:01:16.065 W/EntropyService( 2683): unable to load initial entropy
(first boot?)
```

## sendevent

□□□□□□

```
adb shell cat /proc/bus/input/devices
```

□ Samsung Galaxy S II □□□□□□□□

```
I: Bus=0019 Vendor=0001 Product=0001 Version=0001
N: Name="max8997-muic"
P: Phys=deskdock-key/input0
S:
Sysfs=/devices/platform/s3c2410-i2c.5/i2c-5/5-0066/max8997-muic/input/input0
U: Uniq=
H: Handlers=kbd event0
B: EV=100003
B: KEY=c0000 0 0 0

I: Bus=0019 Vendor=0001 Product=0001 Version=0100
N: Name="sec_key"
P: Phys=gpio-keys/input0
S: Sysfs=/devices/platform/sec_key.0/input/input1
U: Uniq=
H: Handlers=kbd event1
B: EV=3
B: KEY=100000 0 0 1c0000 0 0 0

I: Bus=0000 Vendor=0000 Product=0000 Version=0000
N: Name="sec_touchscreen" # □□□
P: Phys=
S: Sysfs=/devices/virtual/input/input2
U: Uniq=
H: Handlers=event2
```

```
B: EV=9
B: ABS=2650000 0

I: Bus=0000 Vendor=0000 Product=0000 Version=0000
N: Name="gyro_sensor" # 000
P: Phys=
S: Sysfs=/devices/virtual/input/input3
U: Uniq=
H: Handlers=event3
B: EV=5
B: REL=38

I: Bus=0000 Vendor=0000 Product=0000 Version=0000
N: Name="proximity_sensor" # 00000
P: Phys=
S: Sysfs=/devices/virtual/input/input4
U: Uniq=
H: Handlers=event4
B: EV=9
B: ABS=2000000

I: Bus=0000 Vendor=0000 Product=0000 Version=0000
N: Name="light_sensor" # 00000
P: Phys=
S: Sysfs=/devices/virtual/input/input5
U: Uniq=
H: Handlers=event5
B: EV=9
B: ABS=100 0

I: Bus=0019 Vendor=0000 Product=0000 Version=0000
N: Name="sec_touchkey" # 0000000000menu, home, back, search
P: Phys=melfas-touchkey/input0
S: Sysfs=/devices/virtual/input/input6
U: Uniq=
H: Handlers=kbd event6
B: EV=3
B: KEY=40000800 800 0 0 10000000

I: Bus=0018 Vendor=0000 Product=0000 Version=0000
N: Name="compass_sensor" # 000/0000
P: Phys=
S: Sysfs=/devices/virtual/input/input7
U: Uniq=
H: Handlers=event7
B: EV=5
B: REL=3ff
```

```
adb shell ls /dev/input 000
```

```
event0
...
event7
```

mice

□□

□□ adb shell getevent

□□

```
adb shell sendevent /dev/input/eventX 1 Y 1
adb shell sendevent /dev/input/eventX 0 0 0
adb shell sendevent /dev/input/eventX 1 Y 0
adb shell sendevent /dev/input/eventX 0 0 0
```

- X = 1
  - Y = 114 - □□□□
  - Y = 115 - □□□□
  - Y = 116 - □□
  - 213 - □□
- X = 6
  - Y = 229 - menu
  - Y = 102 - home
  - Y = 158 - back
  - Y = 231 - call
  - Y = 107 - end call

## Layout

### □□□□□ RelativeLayout

```
RelativeLayout rl = new RelativeLayout( context );
RelativeLayout.LayoutParams rl_lp = new RelativeLayout.LayoutParams(
    ViewGroup.LayoutParams.WRAP_CONTENT,
    ViewGroup.LayoutParams.WRAP_CONTENT );
rl_lp.addRule( RelativeLayout.CENTER_IN_PARENT, RelativeLayout.TRUE );
ProgressBar pb = new ProgressBar( context, null, android.R.attr.
progressBarStyleLarge );
rl.addView( pb, rl_lp );
```

## Shared Preferences

Shared preferences `/data/data/[package_name]/shared_prefs` `[package_name]_preferences.xml`

```
<?xml version='1.0' encoding='utf-8' standalone='yes'?>
<map>
    <string name="key">value</string>
    <boolean name="key" value="true"/>
</map>
```

## shared preferences

code

```
SharedPreferences sp = PreferenceManager.getDefaultSharedPreferences( this );
boolean value = sp.getBoolean( "key", false );
```

code

```
SharedPreferences sp = PreferenceManager.getDefaultSharedPreferences( this );
SharedPreferences.Editor editor = sp.edit();
editor.putString( "key", "value" );
editor.commit();
```

## shared preferences

code "filename.xml" `MODE_PRIVATE`

```
SharedPreferences sp = getSharedPreferences( "filename", MODE_PRIVATE );
```

## SQLite

SQLite `/data/data/[package_name]/databases`

Android `SQLiteOpenHelper` `onOpen()`

```
class MyDBHelper extends SQLiteOpenHelper
{
    MyDBHelper( Context context, String name, CursorFactory cursorFactory,
int version )
    {
        super( context, name, cursorFactory, version );
    }

    @Override
```

```

public void onCreate( SQLiteDatabase db )
{
    db.execSQL( "CREATE TABLE foo(bar VARCHAR(256) PRIMARY KEY)" );
}

@Override
public void onUpgrade( SQLiteDatabase db, int oldVersion, int
newVersion )
{
    ;
}
}

```

SQLiteDatabaseOpenHelper SQLiteDatabaseOpenHelper SQLiteDatabaseOpenHelper
 SQLiteDatabaseOpenHelper

```

class MyDB
{
    private final static int DB_VERSION = 1;

    private MyDBHelper m_dbHelper = null;
    private SQLiteDatabase m_db = null;

    MyDB( Context context, String dbName )
    {
        m_dbHelper = new MyDBHelper( context, dbName, null,
DB_VERSION );
        m_db = m_dbHelper.getWritableDatabase();
    }

    void close()
    {
        if( m_db != null )
            m_db.close();
    }
}

```

**SQLiteDatabase**

## Desktop Management Tools

### SQLite Manager for Firefox

<https://addons.mozilla.org/en-US/firefox/addon/sqlite-manager/>

□□

□□

□□ 11 □□ 20 □□□□□ 10 □□□

```
SELECT * FROM foo LIMIT 9 OFFSET 10
SELECT * FROM foo LIMIT 10,9
```

□□□□□□

```
DELETE FROM foo
```

## Internal Storage

## External Storage

AndroidManifest.xml □□□□□□□□

```
<uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"/>
<uses-permission android:name="android.permission.MOUNT_UNMOUNT_FILESYSTEMS"/>
```

- Environment.getExternalStorageDirectory().toString() == /mnt/sdcard
- Environment.getExternalStoragePublicDirectory( Environment.DIRECTORY\_DOWNLOADS ).toString() == /mnt/sdcard/Download
- getExternalFilesDir( null ).toString() == /mnt/sdcard/Android/data/[package\_name]/files
- getExternalFilesDir( Environment.DIRECTORY\_DOWNLOADS ).toString() == /mnt/sdcard/Android/data/[package\_name]/files/Download
- getExternalCacheDir().toString() == /mnt/sdcard/Android/data/[package\_name]/cache

## Date / Time

□□□□□ => □□□

```
// Mon, 19 Mar 2012 17:58:03 GMT
SimpleDateFormat sdf = new SimpleDateFormat( "EEE, dd MMM yyyy HH:mm:ss z",
Locale.US );
Date date = null;
```

```

try
{
    date = sdf.parse( pubDate );
}
catch( ParseException e )
{
    Log.w( "Failed to parse date string", e.getMessage() );
    date = new Date();
}
long timestamp = date.getTime(); // ms

```

SimpleDateFormat locale

=>

```

SimpleDateFormat sdf = new SimpleDateFormat( "MMM dd" );
String str = sdf.format( new Date( timestamp ) );

```

The Android UI toolkit is not thread-safe and must always be manipulated on the UI thread.

Android offers several ways to access the UI thread from other threads. You may already be familiar with some of them but here is a comprehensive list:

- Activity.runOnUiThread(Runnable)
- View.post(Runnable)
- View.postDelayed(Runnable, long)
- Handler

Painless threading: <http://android-developers.blogspot.com/2009/05/painless-threading.html>

Service <http://ysl-paradise.blogspot.com/2009/01/service.html>

AsyncTask <http://ysl-paradise.blogspot.com/2010/09/asynctask.html>

Loaders <http://developer.android.com/guide/topics/fundamentals/loaders.html>

Services <http://developer.android.com/guide/topics/fundamentals/services.html>

IntentService <http://developer.android.com/reference/android/app/IntentService.html>

Multithreading in a UI environment:



## AsyncTask

Params, Progress [] Result Void 4

```
class MyTask extends AsyncTask<Params, Progress, Result>
{
    @Override
    protected Result doInBackground( Params... params )
    {
        return( null );
    }
}
```

- protected void onPreExecute() UI
- protected Result doInBackground( Params... params ) publishProgress( Progress... )
- protected void onProgressUpdate( Progress... progress ) UI publishProgress() UI
- protected void onPostExecute( Result result ) UI UI

```
(new MyTask()).execute( param1, param2, param3 );
```

- UI execute( Params... ) UI
- AsyncTask doInBackground() onPostExecute() UI

## Intent

### Send E-mail

```
Intent email = new Intent( android.content.Intent.ACTION_SEND );
email.setType( "plain/text" );
email.putExtra( android.content.Intent.EXTRA_EMAIL, new String[] {
    "test@gmail.com" } );
email.putExtra( android.content.Intent.EXTRA_SUBJECT, "Subject" );
email.putExtra( android.content.Intent.EXTRA_TEXT, "Content" );
email.putExtra( Intent.EXTRA_STREAM, Uri.fromFile( new File( getFilesDir(),
    "test.txt" ) ) ); // Method 1
//email.putExtra( Intent.EXTRA_STREAM, Uri.parse( "file://" +
    getFilesDir().toString() + "/test.txt" ) ); // Method 2
startActivity( Intent.createChooser( email, "Send email by" ) );
```



## Upload file with POST request

```
public boolean uploadFileByHttp( String target, String filename, HashMap<
String,String> data )
{
    int    responseCode    = 0;
    String responseMessage = null;

    HttpURLConnection connection = null;
    DataOutputStream outputStream = null;
    //DataInputStream inputStream = null;

    String line_end    = "\r\n";
    String two_hyphen = "--";
    String boundary    = "*1*2*3*4*5*6*7*8*9*0*";

    int bufferSize = 1 * 1024 * 1024;

    try
    {
        FileInputStream file = new FileInputStream( new File(
filename ) );

        URL url = new URL( target );
        connection = (HttpURLConnection)url.openConnection();

        // Allow Inputs & Outputs
        connection.setDoInput( true );
        connection.setDoOutput( true );
        connection.setUseCaches( false );

        // Enable POST method
        connection.setRequestMethod( "POST" );

        connection.setRequestProperty( "Connection", "Keep-Alive" );
        connection.setRequestProperty( "Content-Type",
"multipart/form-data;boundary=" + boundary );

        outputStream = new DataOutputStream( connection.
getOutputStream() );
        outputStream.writeBytes( two_hyphen + boundary + line_end );
        outputStream.writeBytes( "Content-Disposition: form-data;
name=\"uploadedfile\";filename=\"" + filename + "\"" + line_end );
        outputStream.writeBytes( line_end );

        int bytesAvailable = file.available();
        int bufferSize = Math.min( bytesAvailable, bufferSize );
        byte[] buffer = new byte[bufferSize];

        // Read file
```

```

int bytesRead = file.read( buffer, 0, bufferSize );
while( bytesRead > 0 )
{
    outputStream.write( buffer, 0, bufferSize );
    bytesAvailable = file.available();
    bufferSize = Math.min( bytesAvailable, maxBufferSize );
    bytesRead = file.read( buffer, 0, bufferSize );
}

outputStream.writeBytes( line_end );
outputStream.writeBytes( two_hyphen + boundary + two_hyphen +
line_end );

// Responses from the server (code and message)
responseCode = connection.getResponseCode();
responseMessage = connection.getResponseMessage();

file.close();
outputStream.flush();
outputStream.close();
}
catch( Exception e )
{
    Log.e( "", e.getMessage() );
    return( false );
}

return( true );
}

```

## XML ☐☐

☐☐☐☐ InputStream ☐ XML☐

```

try
{
    XmlPullParserFactory factory = XmlPullParserFactory.newInstance();
    XmlPullParser xpp = factory.newPullParser();
    xpp.setInput( inputStream, "utf-8" );

    int eventType = parser.getEventType();
    while( eventType != XmlPullParser.END_DOCUMENT )
    {
        switch( eventType )
        {
            case XmlPullParser.START_TAG:
                String tagName = xpp.getName();
                String value = xpp.getAttributeValue( null,

```

```

"attrName" );
                break;
            case XmlPullParser.TEXT:
                String text = xpp.getText();
                break;
            case XmlPullParser.END_TAG:
                String tagName = xpp.getName();
                break;
        }

        eventType = parser.next();
    }
}
catch( XmlPullParserException e )
{
    ;
}
catch( IOException e )
{
    ;
}

```

XXXXXXXXXXXXXXXX XMLXXXXXXXX parser XXXXXXXXXXXXXXXXXXXX

```

XmlResourceParser xrp = getResources().getXml( R.xml.foo );
...
xrp.close();

```

## Regular Expression

```

Pattern p = Pattern.compile( "<span>([^\<]+)</span>" );
Matcher m = p.matcher( str );
if( m.find() )
    String foo = m.group( 1 );

```

## Service

Service XXXXX application XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX service XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

## XX data holder XX

Java X String XX Unicode XXXX

## InputStream to byte[]

```
ByteArrayOutputStream baos = new ByteArrayOutputStream();
try
{
    int    nRead = 0;
    byte[] buffer = new byte[1024];

    while( ( nRead = is.read( buffer, 0, buffer.length ) ) != -1 )
        baos.write( buffer, 0, nRead );

    baos.flush();
}
catch( IOException e )
{
    ;
}

byte[] data = baos.toByteArray();
```

## InputStream to String

```
StringBuilder sb = new StringBuilder();
try
{
    Reader reader = new InputStreamReader( is, "gb2312" ); // ☐
    InputStream  ☐☐☐☐ gb2312
    int read = 0;
    char[] buffer = new char[1024];
    do
    {
        read = reader.read( buffer, 0, buffer.length );
        if( read > 0 )
            sb.append( buffer, 0, read );
    }
    while( read >= 0 );
}
catch( UnsupportedEncodingException e )
{
    ;
}
catch( IOException e )
{
    ;
}
String str = sb.toString();
```

## byte[] to String

```
String str = EncodingUtils.getString( data, "gb2312"); // 将 gb2312 的 byte[] 转换为 String
```

Or:

```
String str = null;
try
{
    str = new String( data, "gb2312" ); // 将 gb2312 的 byte[] 转换为 String
}
catch( UnsupportedEncodingException e )
{
    ;
}
```

## String to byte[]

```
byte[] data = null;
try
{
    data = str.getBytes( "gb2312" ); // byte[] 转换为 byte[]
}
catch( UnsupportedEncodingException e )
{
    ;
}
```

## Dialog

Activity 中 dialog 的创建方法

```
@Override
protected Dialog onCreateDialog( int id )
{
    AlertDialog.Builder builder = new AlertDialog.Builder( this );
    //...
    AlertDialog dialog = builder.create();
    return( dialog );
}
```

```
@Override
protected void onPrepareDialog( int id, Dialog dialog )
```

```
{  
    ;  
}
```

```
showDialog( id ) Android onCreateDialog() dialog  
dialog Android onPrepareDialog() dialog
```

```
dialog dismissDialog( id )
```

## Custom Dialog

```
AlertDialog.Builder builder = new AlertDialog.Builder( this );  
builder.setTitle( R.string.title );  
builder.setNegativeButton( R.string.ok, this );
```

```
LayoutInflater inflater = (LayoutInflater) getSystemService(  
    LAYOUT_INFLATER_SERVICE );  
View dialogView = inflater.inflate( R.layout.custom_dialog, null );  
builder.setView( dialogView );
```

```
AlertDialog dialog = builder.create();
```

## Touch

```
boolean ViewGroup::onInterceptTouchEvent( MotionEvent ev );
```

```
boolean View::onTouchEvent( MotionEvent event );
```

```
void View::setOnTouchListener( View.OnTouchListener l );
```

```
View.OnTouchListener  
{  
    public abstract boolean onTouch( View v, MotionEvent event );  
}
```

```
onInterceptTouchEvent onTouchEvent
```

```
http://blog.csdn.net/ddna/article/details/5473293
```

## Accessibility

Designing for Accessibility - <http://developer.android.com/guide/practices/design/accessibility.html>



# Eyes-Free

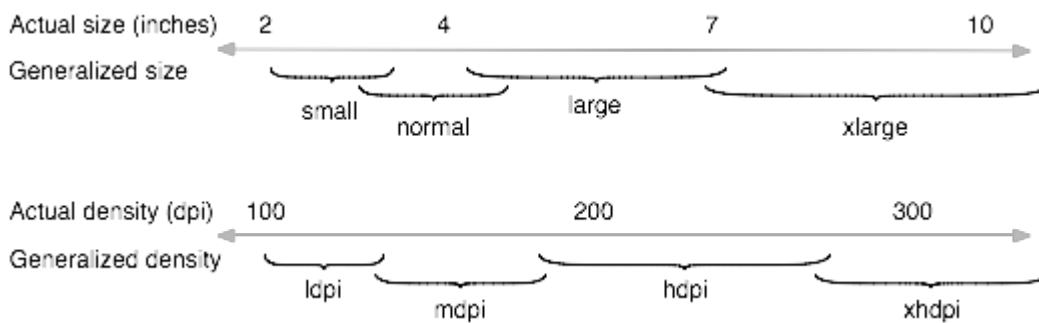
<http://code.google.com/p/eyes-free/>

Google Market/Play TalkBack

## Custom Attributes

Screen size: small, normal, large, extra large (xlarge)

Screen density: dpi(dots per inch)/ppi(pixels per inch) ldpi (low), mdpi (medium), hdpi (high), xhdpi (extra high)



dp (Density-independent Pixel): (dpi/ppi) 160dpi(mdpi) 160dpi 1dp = 1px  
dpi dp px = dp \* ( dpi / 160 )

sp (Scale-independent Pixel): The sp scale factor depends on a user setting and the system scales the size the same as it does for dp.

pt (Points): 1/72

ldpi, mdpi, hdpi, xhdpi 3:4:6:8 mdpi 48x48 ldpi 36x36 hdpi 72x72 xhdpi 96x96

dp sp

- 120dpi ldpi 3
- 160dpi baseline mdpi 4
- 240dpi hdpi 6
- 320dpi xhdpi 8

sw600dp 7" 96x96

dp (dpi/ppi) 600dp

$$160 \text{ dp} / 1 \text{ inch} = 600 \text{ dp} / x \text{ inch}, 600\text{dp} = 3.75''$$

7" 3.75" 600dp

4:3 7" 4.2" 4.2" - 3.75" = 0.45" 0.45" mdpi 72px 72 system bar 4:3 dpi 160

16:9 7" 3.42" 3.42" mdpi 547px sw600dp 16:9 7" work 16:9 7" tablet

Android 7" tablet 600x1024 1.71 4:3 1.33 16:9 1.78 4:3 16:9 Android 7" dp 600

## Soft Keyboard

EditText OnEditorActionListener

```
myEditText.setOnEditorActionListener( new TextView.OnEditorActionListener()
{
    @Override
    public boolean onEditorAction( TextView v, int actionId, KeyEvent
event )
    {
        if( event != null &&
            event.getKeyCode() == KeyEvent.KEYCODE_ENTER &&
            event.getAction() == KeyEvent.ACTION_DOWN )
        {
            // do any thing you want to do here
            return( true );
        }

        return( false );
    }
});
```

- event null
- onEditorAction() down up down

EditText

```
<EditText
    android:layout_width="wrap_content"
```

```
android:layout_height="wrap_content"
android:imeOptions="actionSearch" />
```

```
onEditorAction() actionId EditorInfo.IME_ACTION_SEARCH
EditorInfo.IME_NULL bug actionId
EditorInfo.IME_NULL
```

## Alert Dialog EditText

dialog

```
dialog.getWindow().setSoftInputMode( WindowManager.LayoutParams.
SOFT_INPUT_STATE_ALWAYS_VISIBLE );
```

```
dialog.setOnShowListener( new OnShowListener()
{
    @Override
    public void onShow( DialogInterface di )
    {
        InputMethodManager imm = (InputMethodManager) getSystemService
( Context.INPUT_METHOD_SERVICE );
        imm.showSoftInput( myEditText, InputMethodManager.
SHOW_IMPLICIT );
    }
});
```

Thread.UncaughtExceptionHandler

```
public void uncaughtException( Thread thread, Throwable ex )
{
    StackTraceElement[] ste = ex.getStackTrace();
    for( int i = 0; i < ste.length; ++i )
    {
        Log.e( "crash", ste[i].toString() );
    }

    android.os.Process.killProcess( android.os.Process.myPid() );
    System.exit( 1 );
}
```

UncaughtExceptionHandler

```
Thread.setDefaultUncaughtExceptionHandler( foo );
```

## 生成 apk 文件

### 生成 RSA 私钥文件

```
keytool -genkey -v -keystore test.keystore -alias test -keyalg RSA -keysize 2048 -validity 10000
```

-validity 指定私钥的有效期

test.keystore 为 keystore 文件名称 key 为 key 名称 test.keystore 为 keystore 文件名称

### 生成 apk 文件

```
jarsigner -verbose -keystore test.keystore unsigned.apk test
```

test.keystore 为 keystore 文件名称 key 为 key 名称 unsigned.apk 为待签名的 apk 文件名称 META-INF 为签名文件名称

- MANIFEST.MF - 包含 apk 文件的 SHA-1 哈希值 Base64 编码
- TEST.SF - 包含 MANIFEST.MF 文件的 SHA-1 哈希值 Base64 编码
- TEST.RSA - 包含私钥的 Base64 编码

### 对齐 apk 文件

```
zipalign -v 4 unaligned.apk ready_to_go.apk
```

-v 指定对齐的字节数 4 为 4 bytes

##

## Samsung Galaxy S II

- Android: 2.3.4
- Screen: 4.27", 480×800, 218.501dpi

## Samsung Galaxy Nexus

- Android: 4.0.2
- Screen: 4.65", 720×1280, 320dpi (316dpi, Device uses PenTile technology. Its pixels consist of only two sub-pixels instead of three and the claimed pixel density is only achieved using subpixel rendering. In any case, the ppi numbers are not directly comparable.)

## Motorola Xoom

- Android: 3.2.1
- Screen: 10.1", 1280×800, 149dpi

## Kindle Fire

- Android: 2.3
- Screen: 7", 1024×600, 169ppi

## NDK

## Tips

### Application

Application AndroidManifest.xml <Application> name code Application  
 java.lang.ClassCastException: android.app.Application

```
<application
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:name="MyApplication">
```

### AndroidManifest.xml

```
String versionName = null;
try
{
    PackageInfo pi = getPackageManager().getPackageInfo( getApplication().
getPackageName(), PackageManager.GET_CONFIGURATIONS );
    versionName = pi.versionName;
}
```

```
catch( PackageManager.NameNotFoundException e )
{
    Log.e( "Failed to get package info", e.getMessage() );
}
```

□□□□□□

```
// method 1
DisplayMetrics dm = new DisplayMetrics();
getWindowManager().getDefaultDisplay().getMetrics( dm );
Log.i( "", "width = " + dm.widthPixels );
Log.i( "", "height = " + dm.heightPixels );

// method 2
Display display = getWindowManager().getDefaultDisplay();
Log.i( "", "width = " + display.getWidth());
Log.i( "", "height = " + display.getHeight());
```

□□ **Activity** □ **title bar** □□□□□□

```
<activity
    android:name=".HelloGoogleMaps"
    android:label="@string/app_name"
    android:theme="@android:style/Theme.NoTitleBar">
```

□□ **EditView** □□ **AutoCompleteTextView** □ **Activity/Fragment** □□□□□□□□

□ EditView/AutoCompleteTextView □□□□□□□□□□□□ focus□

```
<LinearLayout
    android:focusable="true"
    android:focusableInTouchMode="true"
    android:layout_width="0px"
    android:layout_height="0px"/>
```

□□□□□□□□

long System.currentTimeMillis()□□□□ 1970 □ 1 □ 1 □ 00:00:00 UTC □□□□□□□□□□□□

□□□□□

```
InputMethodManager imm = (InputMethodManager)context.getSystemService(
Context.INPUT_METHOD_SERVICE );
imm.hideSoftInputFromWindow( view.getWindowToken(),
InputMethodManager.HIDE_NOT_ALWAYS );
```

view

## URL

```
URLCoder.encode( "http://www.google.com?q=foo%bar", "utf-8" );
```

```
Locale.getDefault().getLanguage() zh
```

```
Locale.getDefault().getCountry() CN
```

## ViewPager View

AdView

```
<LinearLayout
```

```
    xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:ads="http://schemas.android.com/apk/lib/com.google.ads"
    android:id="@+id/root"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical" >
```

```
    <android.support.v4.view.ViewPager
        android:id="@+id/pager"
        android:layout_width="match_parent"
        android:layout_height="wrap_content" />
```

```
    <com.google.ads.AdView
        android:id="@+id/adView"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        ads:adUnitId="MY_AD_UNIT_ID"
        ads:adSize="BANNER"
        ads:testDevices="TEST_EMULATOR, TEST_DEVICE_ID"
        ads:loadAdOnCreate="true" />
```

```
</LinearLayout>
```

ViewPager View ADT 0dip

```

<android.support.v4.view.ViewPager
    android:id="@+id/pager"
    android:layout_width="match_parent"
    android:layout_height="0dip"
    android:layout_weight="1" />

```

## WebView AdView Activity

```

<RelativeLayout
    android:layout_width="match_parent"
    android:layout_height="match_parent">

    <!-- layout_above WebView AdView
    layout_height="match_parent" web page WebView -->
    <WebView
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:layout_above="@id/adView" />

    <!-- layout_alignParentBottom AdView
    AdView WebView -->
    <AdView
        android:layout_above="@+id/adView"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true" />

</RelativeLayout>

```

## WebView Activity

AndroidManifest.xml WebView Activity

```

android:configChanges="orientation"

```

```


```

```

NetworkInfo: type: mobile[UNKNOWN], state: UNKNOWN/IDLE, reason:
(unspecified), extra: (none), roaming: false, failover: false, isAvailable:
false

```

```

NetworkInfo: type: WIFI[HSDPA], state: DISCONNECTED/SCANNING, reason:
(unspecified), extra: (none), roaming: false, failover: false, isAvailable:
true

```

```

NetworkInfo: type: mobile_mms[UNKNOWN], state: UNKNOWN/IDLE, reason:
(unspecified), extra: (none), roaming: false, failover: false, isAvailable:

```



```

false
NetworkInfo: type: mobile_supl[UNKNOWN], state: UNKNOWN/IDLE, reason:
(unspecified), extra: (none), roaming: false, failover: false, isAvailable:
false
NetworkInfo: type: mobile_dun[UNKNOWN], state: UNKNOWN/IDLE, reason:
(unspecified), extra: (none), roaming: false, failover: false, isAvailable:
false
NetworkInfo: type: mobile_hipri[UNKNOWN], state: UNKNOWN/IDLE, reason:
(unspecified), extra: (none), roaming: false, failover: false, isAvailable:
false
NetworkInfo: type: mobile_bip[UNKNOWN], state: UNKNOWN/IDLE, reason:
(unspecified), extra: (none), roaming: false, failover: false, isAvailable:
false

```

```

static boolean isNetworkAvailable( Context context )
{
    ConnectivityManager cm = (ConnectivityManager)context.
getSystemService( Context.CONNECTIVITY_SERVICE );
    NetworkInfo[] nis = cm.getAllNetworkInfo();
    for( int i = 0; i < nis.length; ++i )
    {
        if( nis[i].getType() == ConnectivityManager.TYPE_MOBILE ||
            nis[i].getType() == ConnectivityManager.TYPE_WIFI )
        {
            if( nis[i].isConnectedOrConnecting() && nis[i].
isAvailable() )
                return( true );
        }
    }
    return( false );
}

```

□□□□□□

□□□□ layout □□□□:

android:keepScreenOn="true"

□□□□□□□□:

```

getWindow().setFlags( WindowManager.LayoutParams.FLAG_KEEP_SCREEN_ON,
WindowManager.LayoutParams.FLAG_KEEP_SCREEN_ON );

```

□□□□

## ActionBarSherlock

- <http://actionbarsherlock.com/>
- 一个 Android 的 ActionBar 支持 Package 的 app 支持 Library
- 一个 Preference 的 ActionBar 的 plugin  
<https://github.com/JakeWharton/ActionBarSherlock/tree/master/plugins/preference>

## ViewPagerTabs

- <https://github.com/astuetz/android-viewpagetabs>
- 一个 Android Market 的 ViewPager tab 支持 ViewPagerIndicator 支持 Support Package 支持 ActionBarSherlock 支持 ActionBarSherlock 支持 Support Package 支持

## TouchList

- <https://github.com/commonsguy/cwac-touchlist>
- 一个 Android 的 list 支持

## PullToRefresh - Johan

- <https://github.com/johannilsson/android-pulltorefresh>
- 一个 ListView 的 header 支持
- 一个 Android 的 list 支持

## PullToRefresh - Erik

- <https://github.com/erikwt/PullToRefresh-ListView>
- <http://erikw.eu/open-source-android-pull-to-refresh-library/>

## PullToRefresh - Tim Mahoney

- <https://github.com/timahoney/Android-Pull-To-Refresh/>
- 一个 ListView 的 ScrollView 支持

## PullToRefresh - guillep

- <https://github.com/guillep/PullToRefresh>

## PullToRefresh - Chris Banes

- <https://github.com/chrisbanes/Android-PullToRefresh>
- ListView GridView Android
- <http://www.senab.co.uk/2011/11/29/new-pull-to-refresh-library/>

## PullToRefresh

- <http://developer.appcelerator.com/blog/2010/05/how-to-create-a-tweetie-like-pull-to-refresh-table.html>

## PullToRefresh - woozzu

- <https://github.com/woozzu/RefreshableListView>

## android-drag-and-drop-listview

- <http://code.google.com/p/android-drag-and-drop-listview/source/checkout>

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