Location Coordinates

This is a quick example of how to use the location manager in order to get the location (GPS) coordinates.

<?xml version="1.0" encoding="utf-8"?>

<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:orientation="vertical" >

<LinearLayout

android:id="@+id/linearLayout1"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_marginTop="40dip"

android:orientation="horizontal" >

<TextView

android:id="@+id/TextView01"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dip"

android:layout\_marginRight="5dip"

android:text="Latitude: "

android:textSize="20dip" >

</TextView>

<TextView

android:id="@+id/TextView02"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="unknown"

android:textSize="20dip" >

</TextView>

</LinearLayout>

<LinearLayout

android:id="@+id/linearLayout2"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content" >

<TextView

android:id="@+id/TextView03"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginLeft="10dip"

android:layout\_marginRight="5dip"

android:text="Longitute: "

android:textSize="20dip" >

</TextView>

<TextView

android:id="@+id/TextView04"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="unknown"

android:textSize="20dip" >

</TextView>

</LinearLayout>

</LinearLayout>

Add the following permissions to your manifest : INTERNET, ACCESS\_FINE\_LOCATION, and ACCESS\_COARSE\_LOCATION

**package** com.example.cyk.gpstestactivity;  
  
**import** android.Manifest;  
**import** android.content.Context;  
**import** android.content.pm.PackageManager;  
**import** android.hardware.Sensor;  
**import** android.hardware.SensorEvent;  
**import** android.hardware.SensorEventListener;  
**import** android.hardware.SensorManager;  
**import** android.location.Criteria;  
**import** android.location.Location;  
**import** android.location.LocationListener;  
**import** android.location.LocationManager;  
**import** android.support.v4.app.ActivityCompat;  
**import** android.support.v7.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**public class** MainActivity **extends** AppCompatActivity **implements** LocationListener {  
 **private** TextView **latituteField**;  
 **private** TextView **longitudeField**;  
 **private** LocationManager **locationManager**;  
 **private** String **provider**;  
  
  
 */\*\* Called when the activity is first created. \*/* @Override  
 **public void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 **latituteField** = (TextView) findViewById(R.id.***TextView02***);  
 **longitudeField** = (TextView) findViewById(R.id.***TextView04***);  
  
 *// Get the location manager* **locationManager** = (LocationManager) getSystemService(Context.***LOCATION\_SERVICE***);  
 *// Define the criteria how to select the location provider -> use  
 // default* Criteria criteria = **new** Criteria();  
 **provider** = **locationManager**.getBestProvider(criteria, **false**);  
 **if** (ActivityCompat.*checkSelfPermission*(**this**, Manifest.permission.***ACCESS\_FINE\_LOCATION***) != PackageManager.***PERMISSION\_GRANTED*** && ActivityCompat.*checkSelfPermission*(**this**, Manifest.permission.***ACCESS\_COARSE\_LOCATION***) != PackageManager.***PERMISSION\_GRANTED***) {  
 *//* ***TODO: Consider calling*** *// ActivityCompat#requestPermissions  
 // here to request the missing permissions, and then overriding  
 // public void onRequestPermissionsResult(int requestCode, String[] permissions,  
 // int[] grantResults)  
 // to handle the case where the user grants the permission. See the documentation  
 // for ActivityCompat#requestPermissions for more details.* **return**;  
 }  
 Location location = **locationManager**.getLastKnownLocation(**provider**);  
  
 *// Initialize the location fields* **if** (location != **null**) {  
 System.***out***.println(**"Provider "** + **provider** + **" has been selected."**);  
 onLocationChanged(location);  
 } **else** {  
 **latituteField**.setText(**"Location not available"**);  
 **longitudeField**.setText(**"Location not available"**);  
 }  
 }  
  
 */\* Request updates at startup \*/* @Override  
 **protected void** onResume() {  
 **super**.onResume();  
 **if** (ActivityCompat.*checkSelfPermission*(**this**, Manifest.permission.***ACCESS\_FINE\_LOCATION***) != PackageManager.***PERMISSION\_GRANTED*** && ActivityCompat.*checkSelfPermission*(**this**, Manifest.permission.***ACCESS\_COARSE\_LOCATION***) != PackageManager.***PERMISSION\_GRANTED***) {  
 *//* ***TODO: Consider calling*** *// ActivityCompat#requestPermissions  
 // here to request the missing permissions, and then overriding  
 // public void onRequestPermissionsResult(int requestCode, String[] permissions,  
 // int[] grantResults)  
 // to handle the case where the user grants the permission. See the documentation  
 // for ActivityCompat#requestPermissions for more details.* **return**;  
 }  
 **locationManager**.requestLocationUpdates(**provider**, 400, 1, **this**);  
 }  
  
 */\* Remove the locationlistener updates when Activity is paused \*/* @Override  
 **protected void** onPause() {  
 **super**.onPause();  
 **if** (ActivityCompat.*checkSelfPermission*(**this**, Manifest.permission.***ACCESS\_FINE\_LOCATION***) != PackageManager.***PERMISSION\_GRANTED*** && ActivityCompat.*checkSelfPermission*(**this**, Manifest.permission.***ACCESS\_COARSE\_LOCATION***) != PackageManager.***PERMISSION\_GRANTED***) {  
 *//* ***TODO: Consider calling*** *// ActivityCompat#requestPermissions  
 // here to request the missing permissions, and then overriding  
 // public void onRequestPermissionsResult(int requestCode, String[] permissions,  
 // int[] grantResults)  
 // to handle the case where the user grants the permission. See the documentation  
 // for ActivityCompat#requestPermissions for more details.* **return**;  
 }  
 **locationManager**.removeUpdates(**this**);  
 }  
  
 @Override  
 **public void** onLocationChanged(Location location) {  
 **int** lat = (**int**) (location.getLatitude());  
 **int** lng = (**int**) (location.getLongitude());  
 **latituteField**.setText(String.*valueOf*(lat));  
 **longitudeField**.setText(String.*valueOf*(lng));  
 }  
  
 @Override  
 **public void** onStatusChanged(String provider, **int** status, Bundle extras) {  
 *//* ***TODO Auto-generated method stub*** }  
  
 @Override  
 **public void** onProviderEnabled(String provider) {  
 Toast.*makeText*(**this**, **"Enabled new provider "** + provider,  
 Toast.***LENGTH\_SHORT***).show();  
  
 }  
  
 @Override  
 **public void** onProviderDisabled(String provider) {  
 Toast.*makeText*(**this**, **"Disabled provider "** + provider,  
 Toast.***LENGTH\_SHORT***).show();  
 }  
}