

Developing Google Maps Application in Android

Following are the steps for integrating google maps in your application:

Step 1: Add following permission in your **manifest** file.

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

Step 2: Add your generated API Key in your **manifest** file inside application tag as follows.

```
<meta-data
    android:name="com.google.android.geo.API_KEY"
    android:value="AIzaSyCWIdlyqlFhC7lOthG164H42heV1F7N3v0" />
```

Step 3: Add following dependency in **build.gradle** file .

```
dependencies {
    . . .
    . . .
    implementation 'com.google.android.gms:play-services-maps:15.0.1'
}
```

Step 4: Now create layout resource file to display google map.

map_activity.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    xmlns:tools="http://schemas.android.com/tools">

    <fragment xmlns:android="http://schemas.android.com/apk/res/android"
        android:id="@+id/map"
        android:name="com.google.android.gms.maps.SupportMapFragment"
        tools:context=".MapsActivity"
        android:layout_width="match_parent"
```

```
        android:layout_height="match_parent" />
</RelativeLayout>
```

Step 5: Now finally create an Activity by implementing **OnMapReadyCallback** interface.

MapsActivity.java

```
public class MapsActivity extends AppCompatActivity implements
    OnMapReadyCallback {

    GoogleMap mMap;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.map_activity);

        // Obtain the SupportMapFragment and get notified when the map is
        // ready to be used.
        SupportMapFragment mapFragment = (SupportMapFragment)
            getSupportFragmentManager().findFragmentById(R.id.map);
        mapFragment.getMapAsync(this);
    }

    @Override
    public void onMapReady(GoogleMap googleMap) {
        mMap = googleMap;
        // Adding latitude and longitude
        LatLng location = new LatLng(26.644096, 87.989391);
        //Adding red marker to point location
        mMap.addMarker(new MarkerOptions().position(location).
            title("Marker in Birtamode"));
        //Moving camera to desired location
        mMap.moveCamera(CameraUpdateFactory.newLatLng(location));
        //Adding zoom effect
        mMap.animateCamera(CameraUpdateFactory.zoomTo(12.0f));
    }
}
```

Output:

