

# SuperMap iMobile for Android

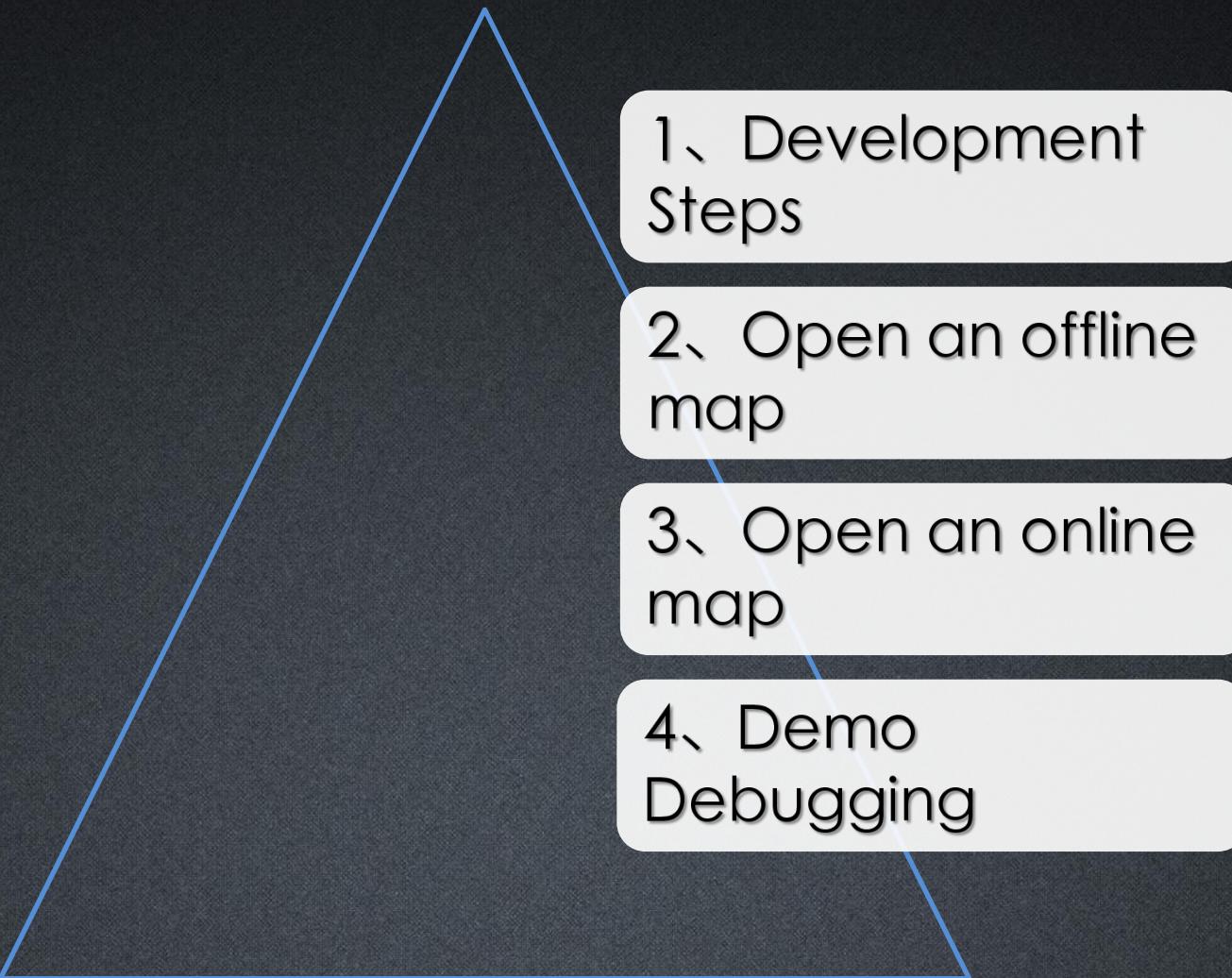
## Getting Started

SuperMap Software Co., Ltd.



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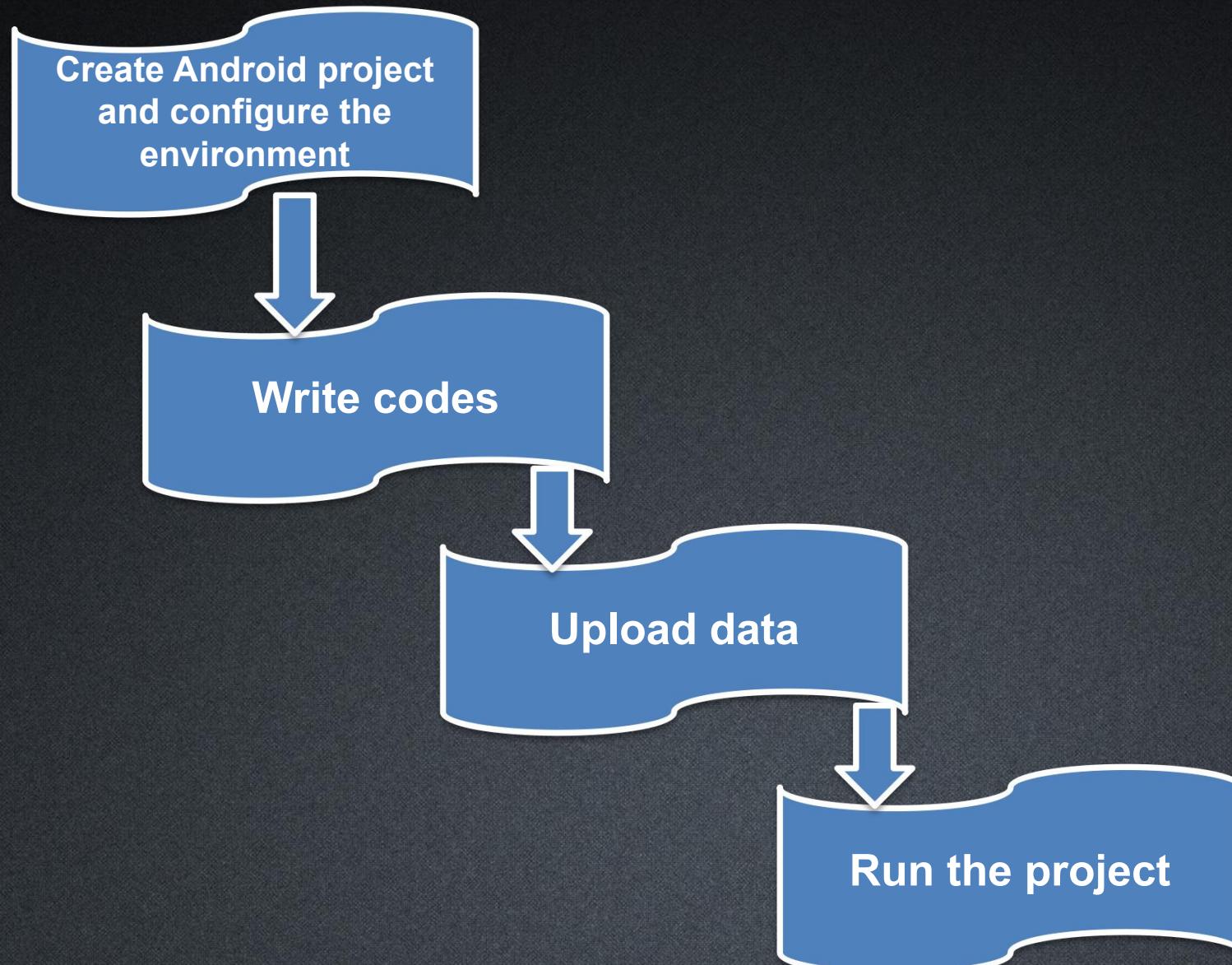
1、Development  
Steps

2、Open an offline  
map

3、Open an online  
map

4、Demo  
Debugging

# Development Steps

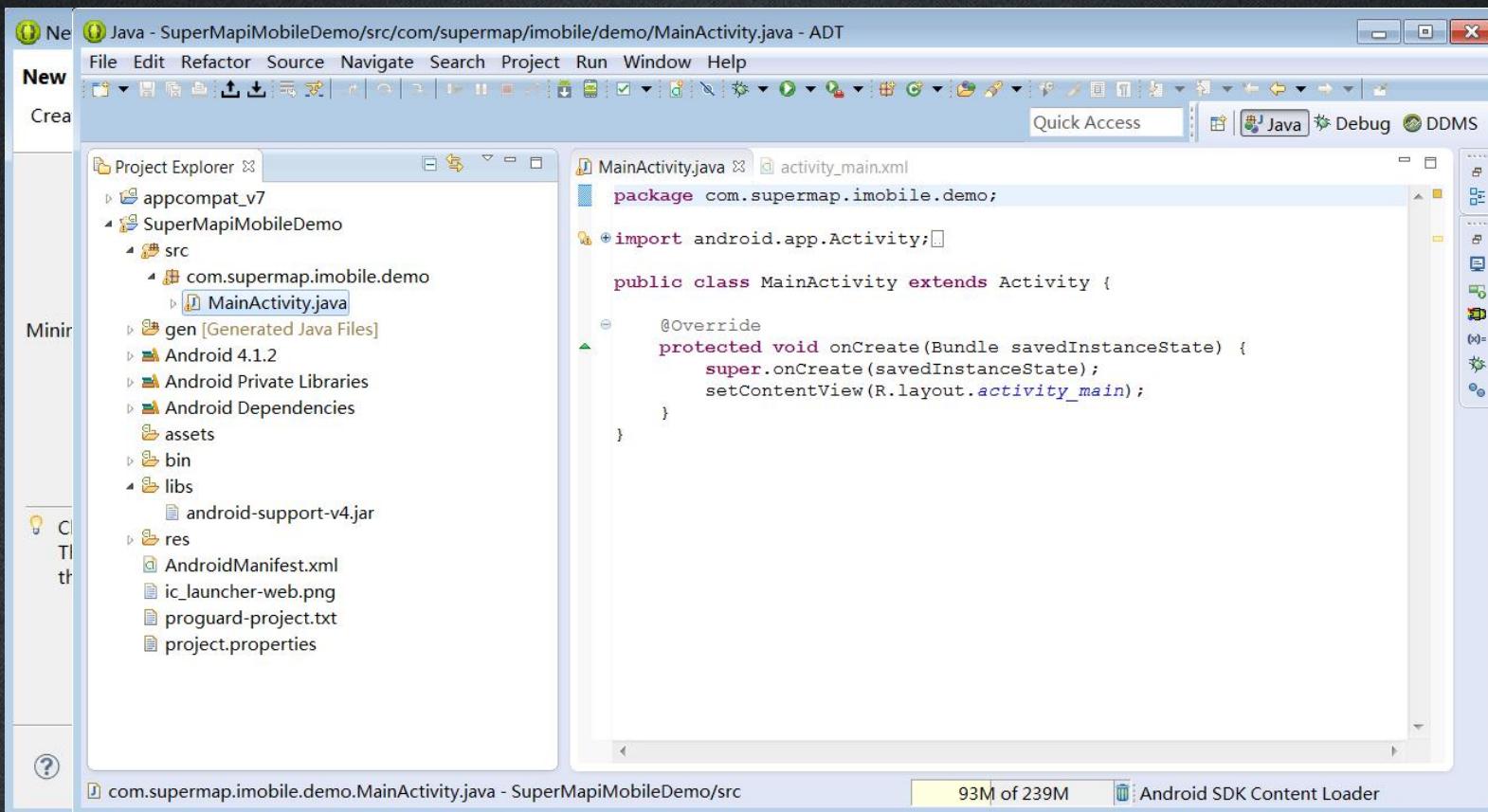


# Create Android project

- Step1: Create an Android project
- Step2: Add iMobile for Android library files
- Step3: Add the minimum permission of SuperMap iMobile for Android
- Step4: Add Activity configuration
- Step5: Configure to support multi formats of screen

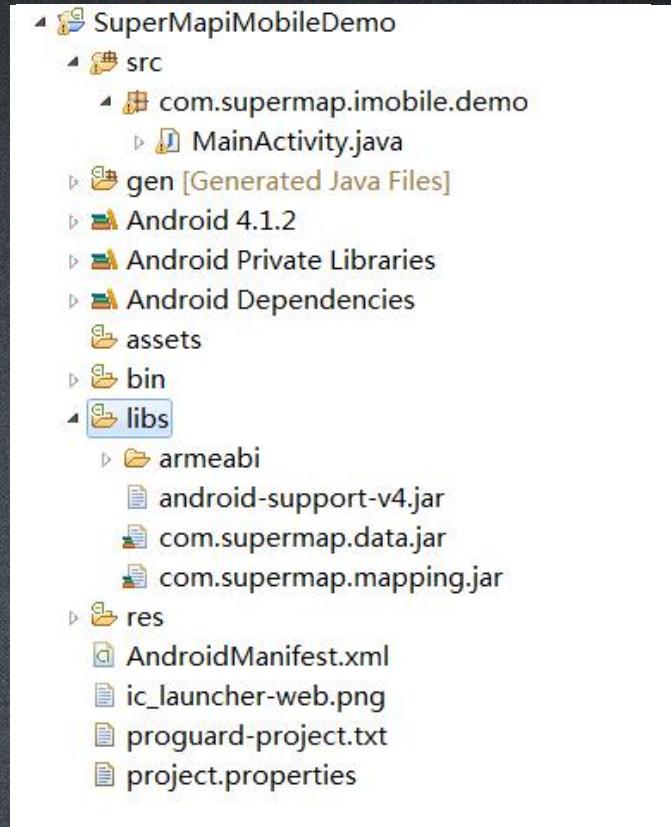
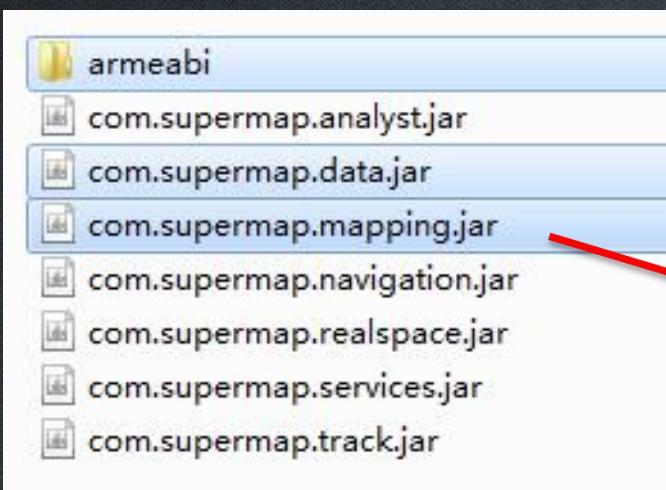
# Create Android project

- Step 1: Create Android project
  - Open Eclipse
  - Click “File” >> “new” >> “Android Project”



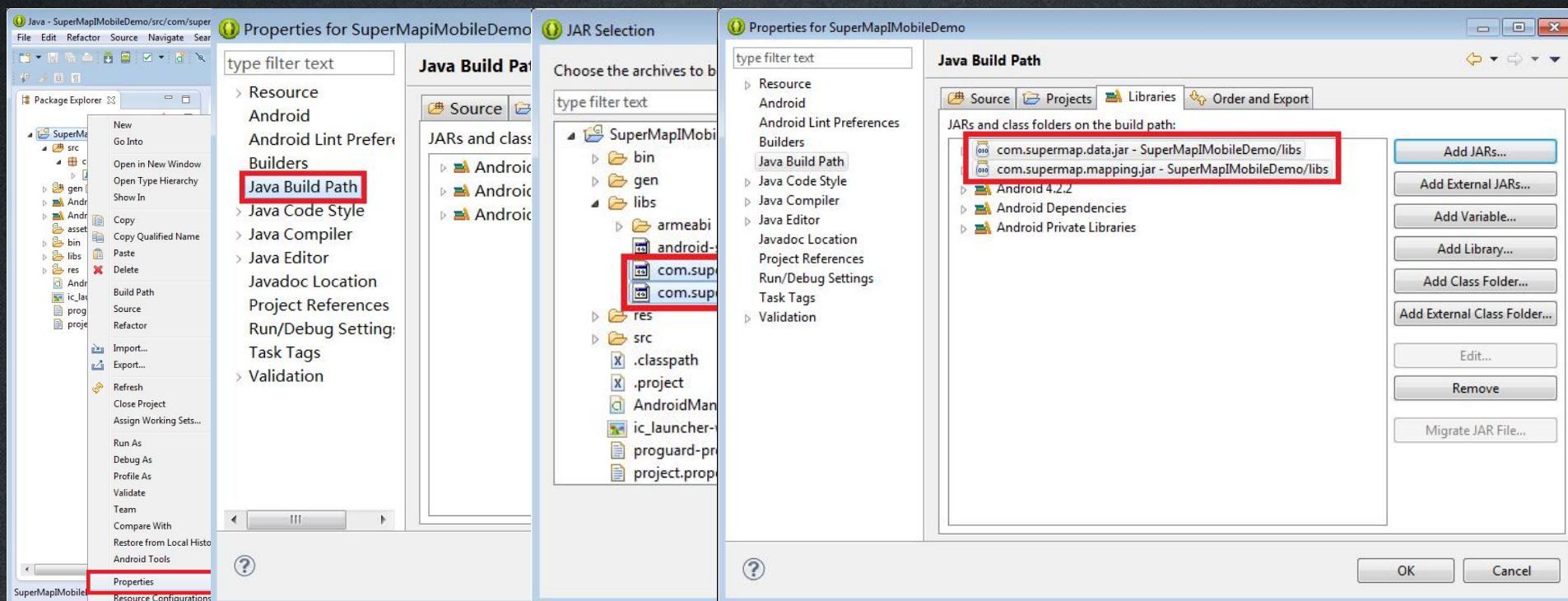
# Create Android project

- Step 2 : Add iMobile for Android library files
  - Copy the needed jar files under the libs folder in iMobile package to the root path of the project



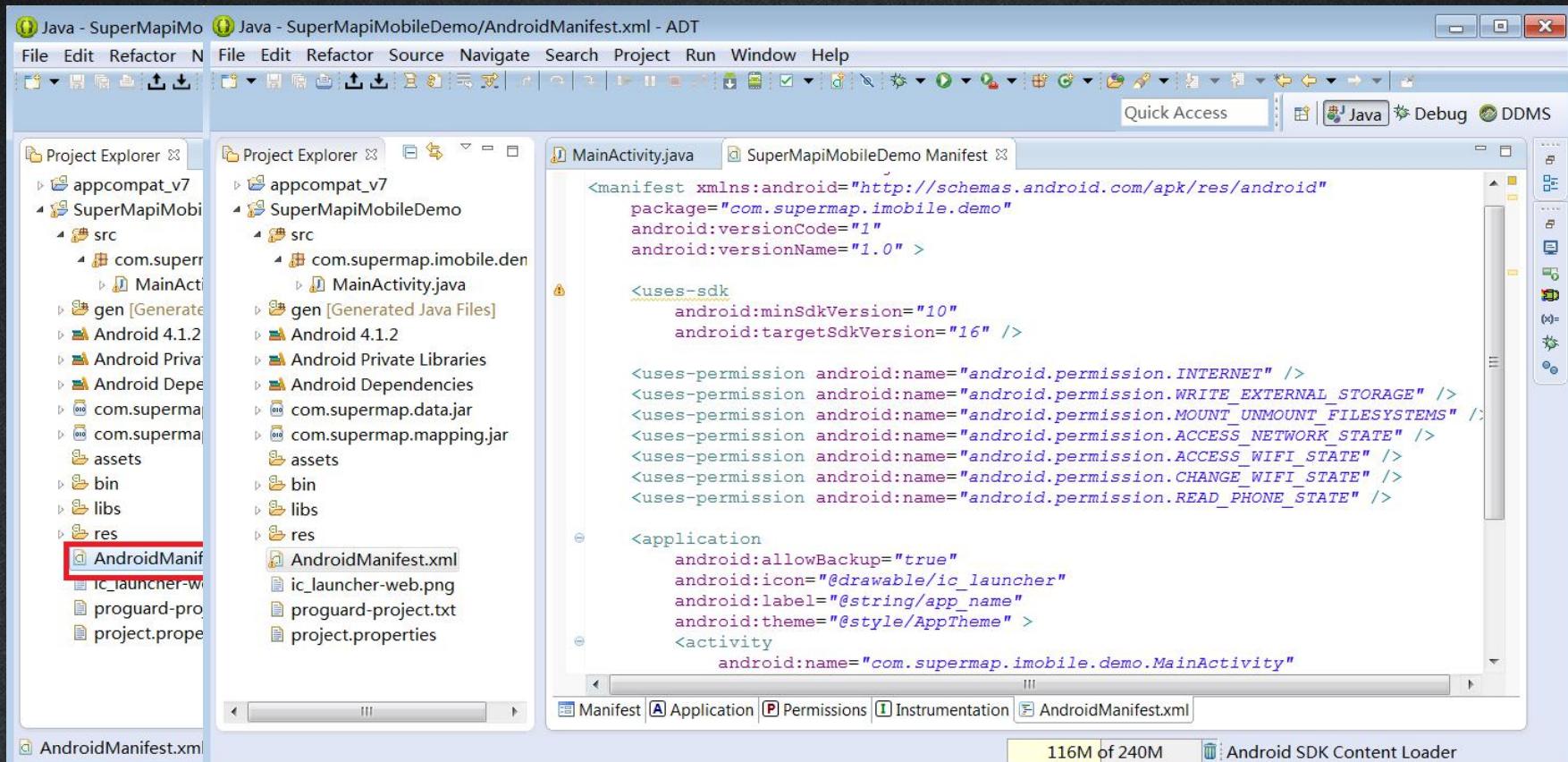
# Create Android project

- Step 2 : Add iMobile for Android library files
  - Add Jar to the project
    - Right click the project>>choose “Properties” >>choose “Java Build Path”
    - Choose “Libraries”>>Click “Add JARs...”, choose the needed jar files



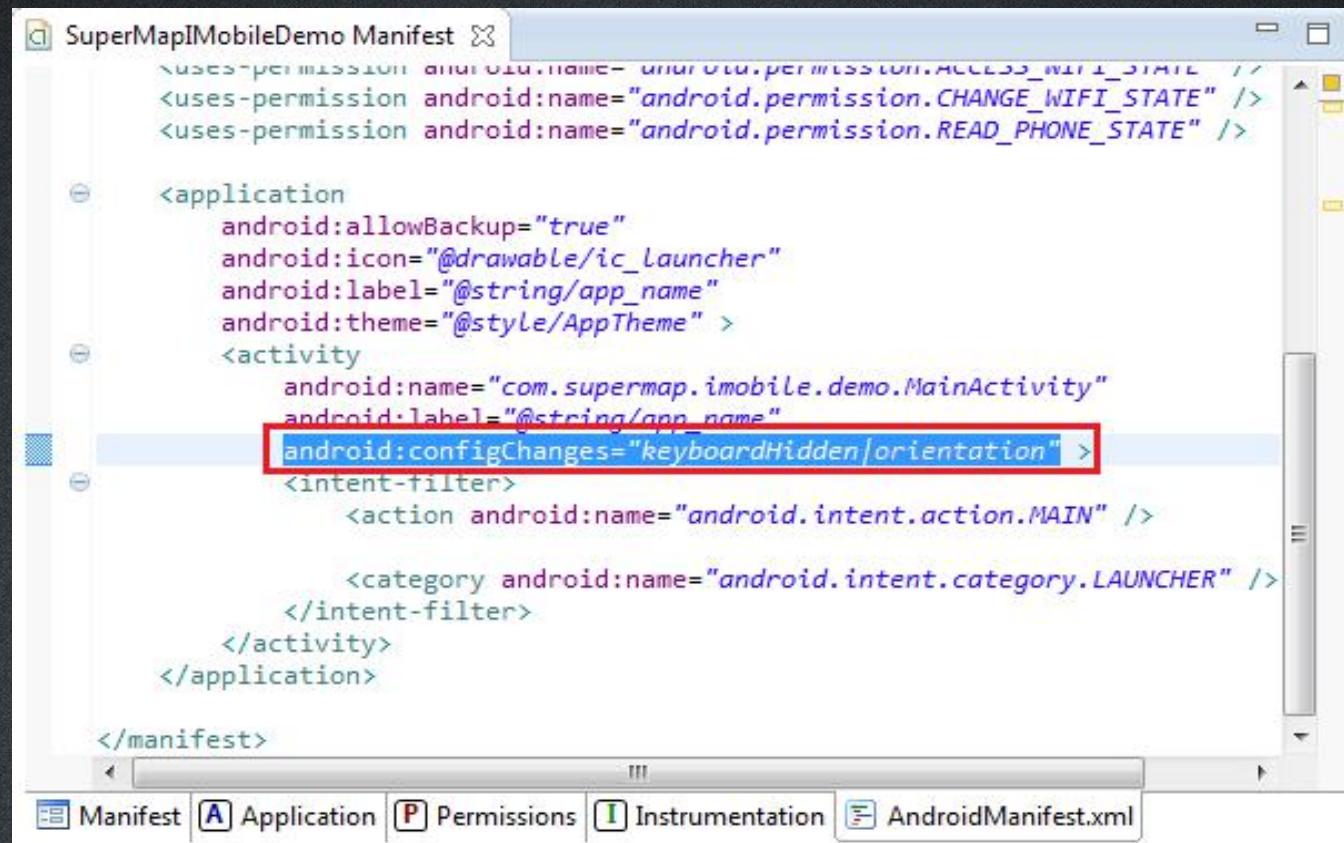
# Create Android project

- Step 3 : Add the minimum permission of SuperMap iMobile for Android
  - Double click “AndroidManifest.xml” to open it



# Create Android project

- Step 4: Add Activity configuration
  - Modify AndroidManifest.xml, set not to repeatedly call the onCreate method when switching the device screen.



The screenshot shows the AndroidManifest.xml file in the Eclipse IDE. The XML code is displayed in a code editor window titled "SuperMapIMobileDemo Manifest". A red box highlights the line `android:configChanges="keyboardHidden|orientation"`. The code editor has tabs at the bottom: Manifest, Application, Permissions, Instrumentation, and AndroidManifest.xml. The "Manifest" tab is selected.

```
<uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />
<uses-permission android:name="android.permission.CHANGE_WIFI_STATE" />
<uses-permission android:name="android.permission.READ_PHONE_STATE" />

<application
    android:allowBackup="true"
    android:icon="@drawable/ic_launcher"
    android:label="@string/app_name"
    android:theme="@style/AppTheme" >
    <activity
        android:name="com.supermap.imobile.demo.MainActivity"
        android:label="@string/app_name"
        android:configChanges="keyboardHidden|orientation" >
        <intent-filter>
            <action android:name="android.intent.action.MAIN" />
            <category android:name="android.intent.category.LAUNCHER" />
        </intent-filter>
    </activity>
</application>

</manifest>
```

# Create Android project

- Step 5 : configure to support multi formats of screen

```
<activity
    android:name="com.supermap.imobile.demo.MainActivity"
    android:configChanges="keyboardHidden/orientation"
    android:label="@string/app_name" >
    <intent-filter>
        <action android:name="android.intent.action.MAIN" />
        <category android:name="android.intent.category.LAUNCHER" />
    </intent-filter>
</activity>
</application>

<supports-screens
    android:anyDensity="true"
    android:largeScreens="true"
    android:normalScreens="true"
    android:resizeable="true"
    android:smallScreens="true" >
</supports-screens>

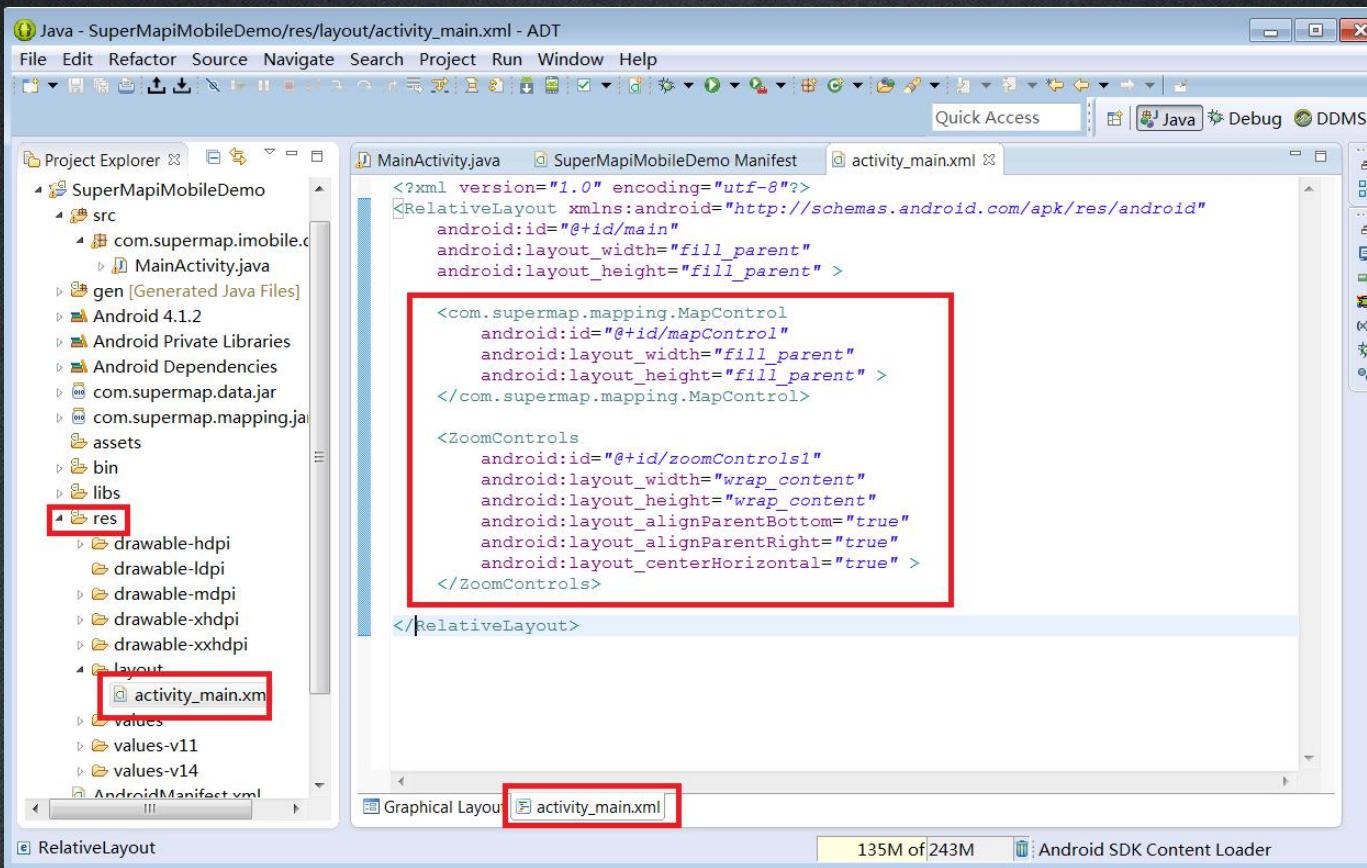
</manifest>
```

# Open an Offline Map

- Step 1 : Add map control
- Step 2 : Initialize
- Step 3 : Open workspace
- Step 4 : Associate workspace and map
- Step 5 : Open the map
- Step 6 : Refresh the map

# Open an Offline Map

- Step 1 : Add map control
  - Open the activity\_main.xml in “res” >>layout
  - Add the codes in the xml file



# Open an Offline Map

- Step 2 : Initialize
  - Main interfaces
    - Environment object

Name	Property	Description
<b>Environment (configuration information manager in the development environment)</b>	<b>LicensePath</b>	The path that stores the license file
	<b>WebCacheDirectory</b>	The path that stores network map caches
	<b>TemporaryPath</b>	The path that stores temporary files
	<b>initialization</b>	Method to initialize environment.

# Open an Offline Map

- Write codes

```
@Override  
public void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
  
    //Set some paths that the system needs to use.  
    Environment.setLicensePath("/sdcard/SuperMap/license/");  
    Environment.setWebCacheDirectory("/sdcard/SuperMap/WebCache/");  
    Environment.setTemporaryPath("/sdcard/SuperMap/temp/");  
  
    //The functions must be invoked after Environment initialization.  
    Environment.initialization(this);  
    setContentView(R.layout.activity_main);
```

# Open an Offline Map

- Step 3 : Open workspace
  - 1) : Create WorkspaceConnectionInfo class
  - 2) : Set the properties of the WorkspaceConnectionInfo class
  - 3) : Workspace.Open( WorkspaceConnectionInfo )

# Open an Offline Map

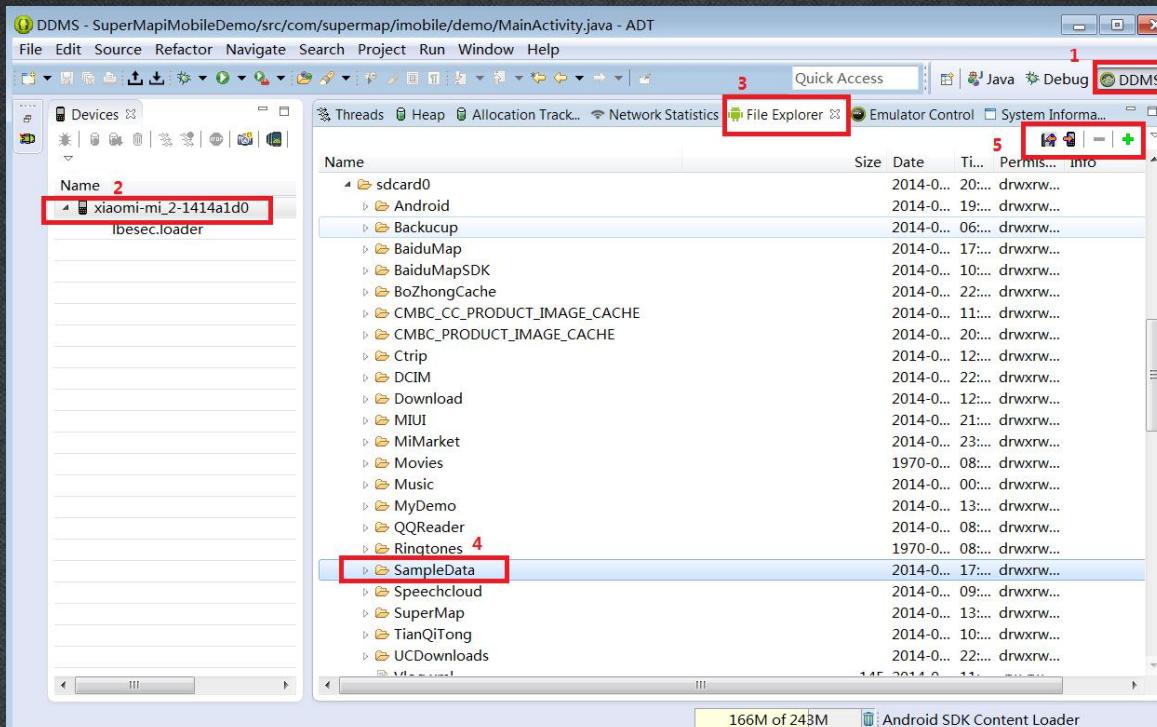
```
//Open workspace
Workspace workspace = new Workspace();
WorkspaceConnectionInfo info = new WorkspaceConnectionInfo();
info.setServer("/sdcard/SampleData/World.smwu");
info.setType(WorkspaceType.SMwu);
workspace.open(info);

//Associate map control and workspace
MapControl mapControl =
(MapControl) findViewById(R.id.mapControl);
mapControl.getMap().setWorkspace(workspace);

//Open the first map in the workspace
String mapName = workspace.getMaps().get(0);
mapControl.getMap().open(mapName);
mapControl.getMap().refresh();
}
```

# Open an Offline Map

- Push the sample data to the device
  - Sent it to the device
  - Through DDMS view, push the data to device
  - Through other software



# Open an Offline Map

- Run the project



# Open an Online Map

- Step 1 : Add map control
- Step 2 : Initialize
- Step 3 : Open workspace
- Step 4 : Associate workspace and map
- Step 5 : Get the online map service
- Step 6 : Open the online map
- Step 7 : Refresh the map

# Open an Online Map

```
•    //Open the Baidu map service as a web datasource in the workspace.  
•    DatasourceConnectionInfo ds_info=new DatasourceConnectionInfo();  
•    ds_info.setAlias("BaiduMap");  
•    ds_info.setServer("http://map.baidu.com/");  
•    ds_info.setEngineType(EngineType.BaiDu);  
  
•    Datasource m_datasource=m_workspace.getDatasources().open(ds_info);  
•  
•    //Get the first dataset, namely the dataset of baidu map.  
•    Dataset m_dataset = m_datasource.getDatasets().get(0);  
  
•    //Add the dataset to the map layer.  
•    m_mapControl.getMap().getLayers().add(m_dataset, true);  
•    m_mapControl.getMap().refresh();
```

# Open an Online Map



# Demo Debugging

BoundsQuery
BufferAnalyst
Collector
CoordSysTranslator
DataConversion
Datalmage
DataService
DynamicChart
DynamicShow
FacilityAnalyst
FindPath
GeometryInfo
GLMapCache
HypsometricSettingDemo
IndoorNavi
IndoorNavigation3D
MapEdit
MChart
MDataCollector
MultiViewport
NodeAnimationDemo
OpenLocalData
OpenOfflineScene
Plotting
Service
Theme
TopoDataprocess
Track

Module	Content	Description
Data	<a href="#">Vector map package data (GLMapCache)</a>	Demonstrates how to use the vector map package data.
	<a href="#">BoundsQuery (BoundsQuery)</a>	Demonstrates how to query by the specified map bound.
	<a href="#">Buffer Analysis (BufferQuery)</a>	Demonstrates how to query by the specified buffer bound.
	<a href="#">Object Information Query (GeometryInfo)</a>	Demonstrates how to query the information of any object.
	<a href="#">Projection Transformation (CoordSysTranslator)</a>	Demonstrates how to transform projection and check the different effects before and after transformation.
	<a href="#">Data conversion (DataConversion)</a>	Demonstrates how to import or export the data in the format shp, mif, dwg, dxf, tif, kmz.
Mapping	<a href="#">Thematic Mapping (Theme)</a>	Demonstrates how to make the ThemeLabel, ThemeRange and ThemeUnique.
	<a href="#">Draw &amp; Edit (MapEdit)</a>	Demonstrates how to draw and edit objects.
	<a href="#">Draw &amp; Edit (DynamicShow)</a>	Demonstrates how to use dynamic layer.
	<a href="#">Processing image data (Datalmage)</a>	Demonstrates how to stretch, clip and display the image data.
	<a href="#">Processing topological data (TopoDataprocess)</a>	Demonstrates how to perform topology capture and topology editing.
	<a href="#">Situation Plotting (Plotting)</a>	Demonstrates the plotting function.
	<a href="#">GPS geometric object collection (Collector)</a>	Demonstrates how to perform the function on GPS geometric object acquisition
	<a href="#">Data visualization (Mchart)</a>	Demonstrates how data is visualization.
	<a href="#">Service Assessing</a>	Demonstrates how to use the service module.
	<a href="#">Accessing data service(DataService)</a>	Demonstrates how to use the data service function.
Services	<a href="#">Docking online service (OnlineService)</a>	Demonstrates how to dock online services to achieve geocoding, online navigation, bus transfer, coordinate conversion, local search function.
	<a href="#">Indoor navigation (IndoorNavi)</a>	Demonstrates how to navigate indoor.
	<a href="#">3D indoor navigation (3DIndoorNavi)</a>	Demonstrates how to achieve 3D path analysis and navigation indoor through the navigation module.
	<a href="#">Facility Network Analyst (FacilityAnalyst)</a>	Demonstrates how to conduct the facility network analyst and display it in the map.
Navigation	<a href="#">Shortest Path Analysis (FindPath)</a>	Demonstrates how to conduct the shortest path analysis, and display it in the map.
	<a href="#">Opening offline scene (OpenOfflineScene)</a>	Demonstrates how to open offline scene
	<a href="#">Opening local data (OpenLocalData)</a>	Demonstrates how to open a local scene data in the case of initialization.
	<a href="#">Split-screen display (MultiViewport)</a>	Demonstrates how to use the split-screen display function.
	<a href="#">Node Animation (NodeAnimation)</a>	Demonstrates how to use the node animation function.
Realspace	<a href="#">Hypsometric tint (HypsometricSetting)</a>	Demonstrates how to do the hypsometric tint expression to 3D slice cache (OSGB).
	<a href="#">Recording track (Track)</a>	Demonstrates how to record the track automatically.
	<a href="#">Dynamic chart(DynamicChart)</a>	Demonstrates how to make a dynamic chart, such as histogram, pie chart, line chart.
	<a href="#">MDatacollector</a>	Demonstrates how to make a photo-, video-, audio collector.

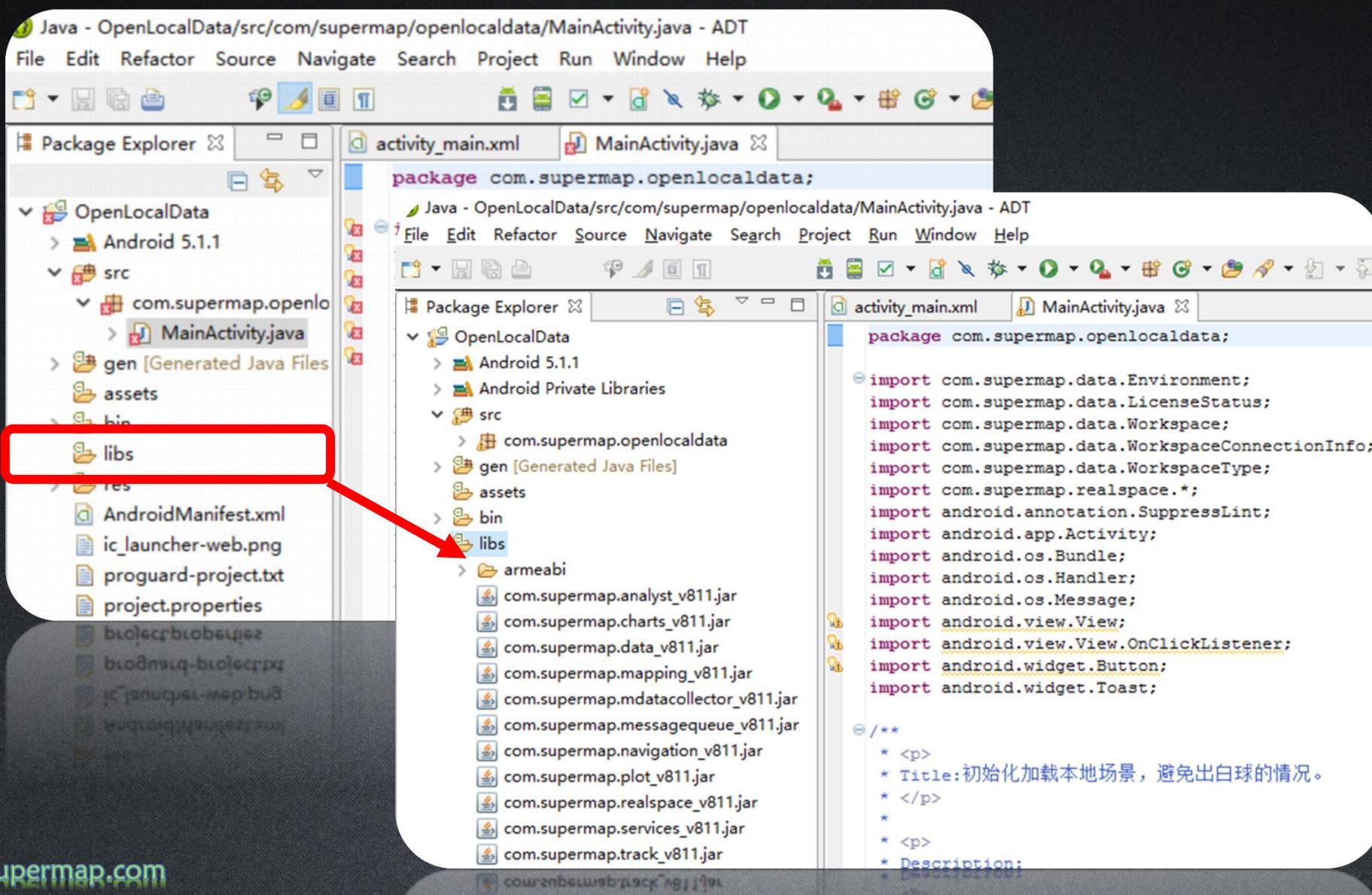
# Demo Debugging

- Three methods to setup the demo application
  - (1) (Recommended) Use Android Studio/Eclipse to import a project in SampleCode, click run, and use a real machine or an emulator to run the program.
  - (2) Copy the .apk file to the device and run the installation, or use the software installation tool to install it.
  - (3) Using the command line, enter the following command to install the .apk file:  
**The adb remount**  
**The adb install MapEdit.apk**

# Demo Debugging

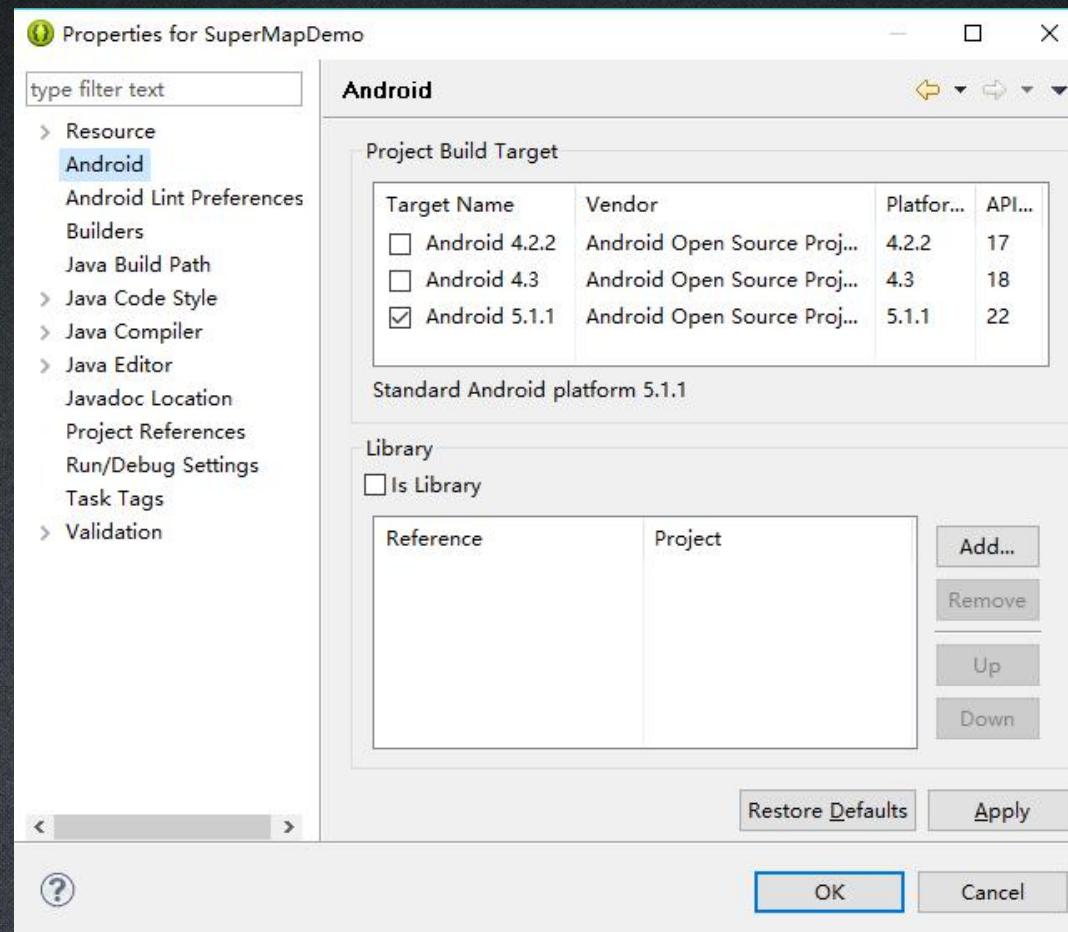
- Several things to note:
  - Step1: To check whether the jar package is complete
  - Step2: To modify the target SDK version
  - Step3: To check the paths of data and license file
  - Step4: To check whether the resource file is complete
  - Step5: To check the Android emulator or the real machine

# To check whether the jar package is complete



# To modify the target SDK version

- Right click >> Properties >> Android >> Project Build Target

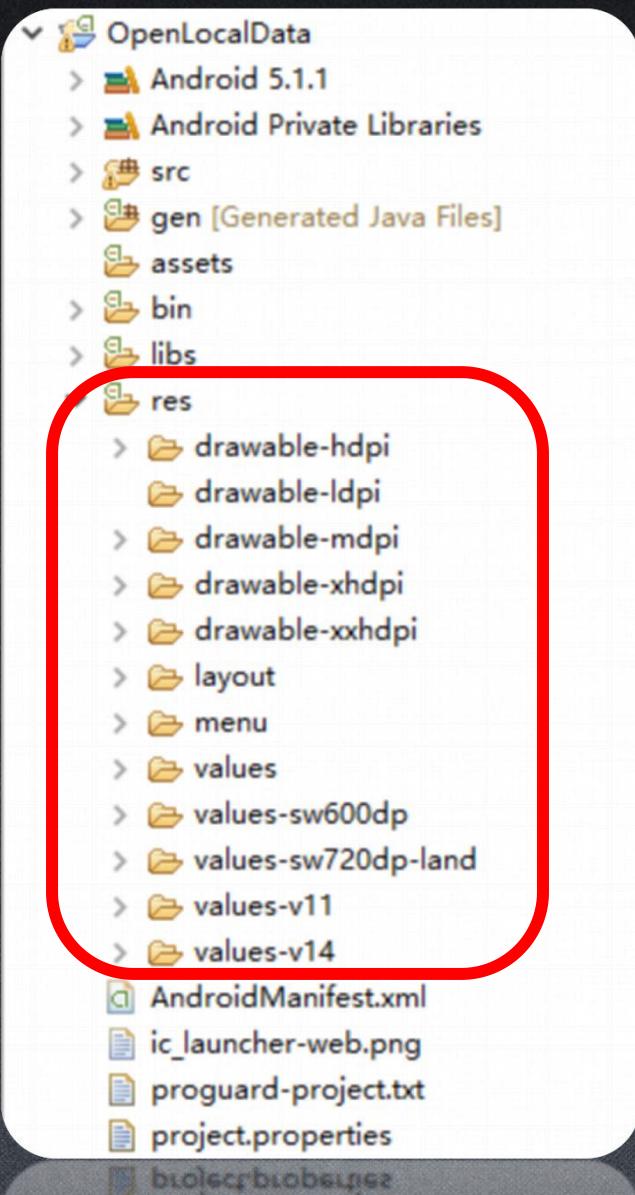


# To check the paths of data and license file

```
public void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    Environment.setLicensePath(sdcard + "/SuperMap/license/");  
    Environment.initialization(this);  
    String datapath = getApplicationContext().getFilesDir().getAbsolutePath();  
    Environment.setFontsPath(datapath + "/config/Resource/Font/");  
    Environment.setDataSourcePath(datapath + "\\\\config\\geomatics\\source\\\\");
```

```
public class MainActivity extends Activity {  
    private Workspace m_workspace;  
    private Scene m_scene;  
    private SceneControl mSceneControl;  
    // 高级三维场景数据名  
    String workspacePath = "/sdcard/SuperMap/data/珠峰/珠峰.sxwu";  
    // 三维场景名称  
    String sceneName = "珠峰";  
    WorkspaceConnectionInfo info;  
    WorkspaceType workspaceTypetemp = null;  
    Workspace workspace = null;  
    WorkspaceConnectionInfo workspaceInfo;
```

# To check whether the resource file is complete



# Thank You!

Website: [www.supermap.com](http://www.supermap.com)

Email: [globalsupport@supermap.com](mailto:globalsupport@supermap.com)

Skype: [supermapsupport](#)

MSN: [globalsupport@supermap.com](mailto:globalsupport@supermap.com)