SuperMap iMobile for Android
Getting Started

SuperMap Software Co., Ltd.

SuperMap

TO BE THE GLOBAL LEADING GIS

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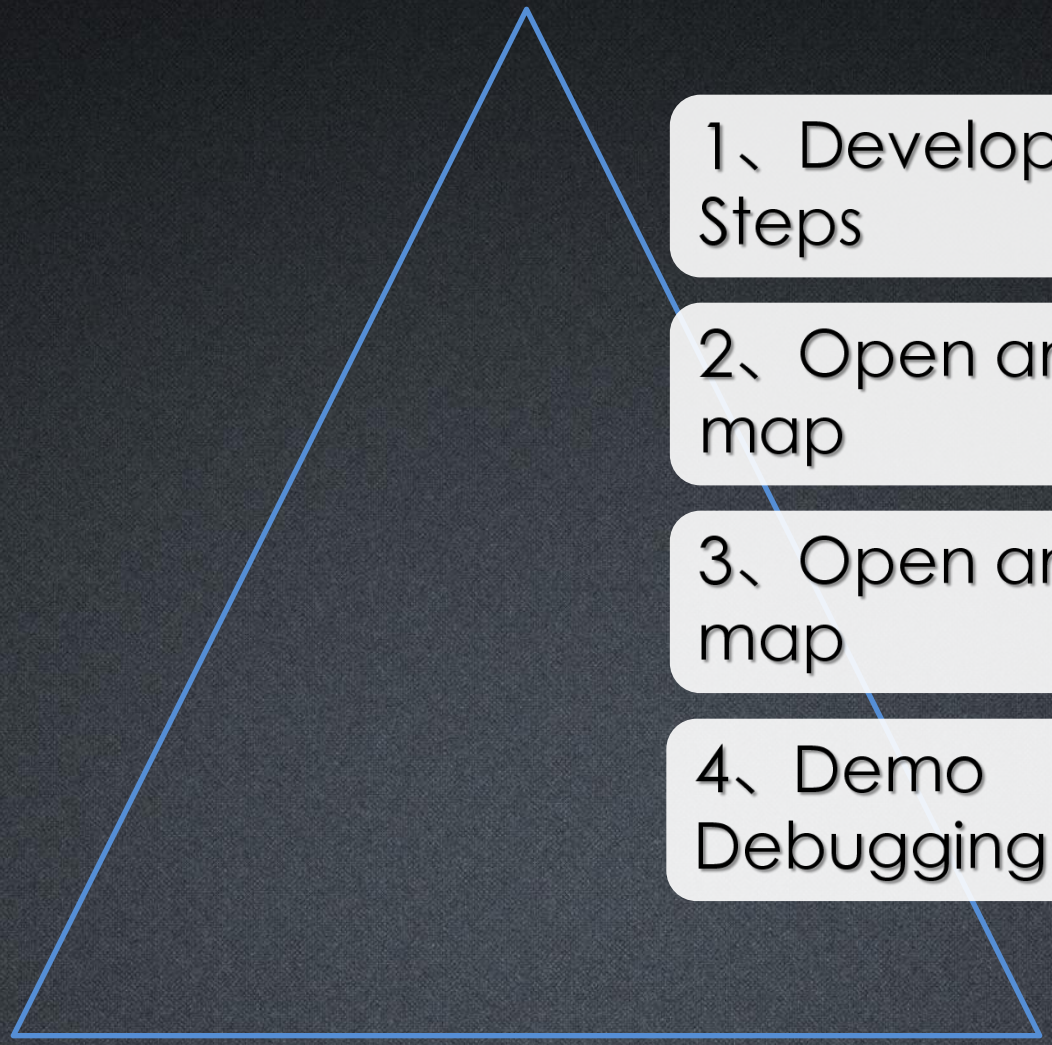

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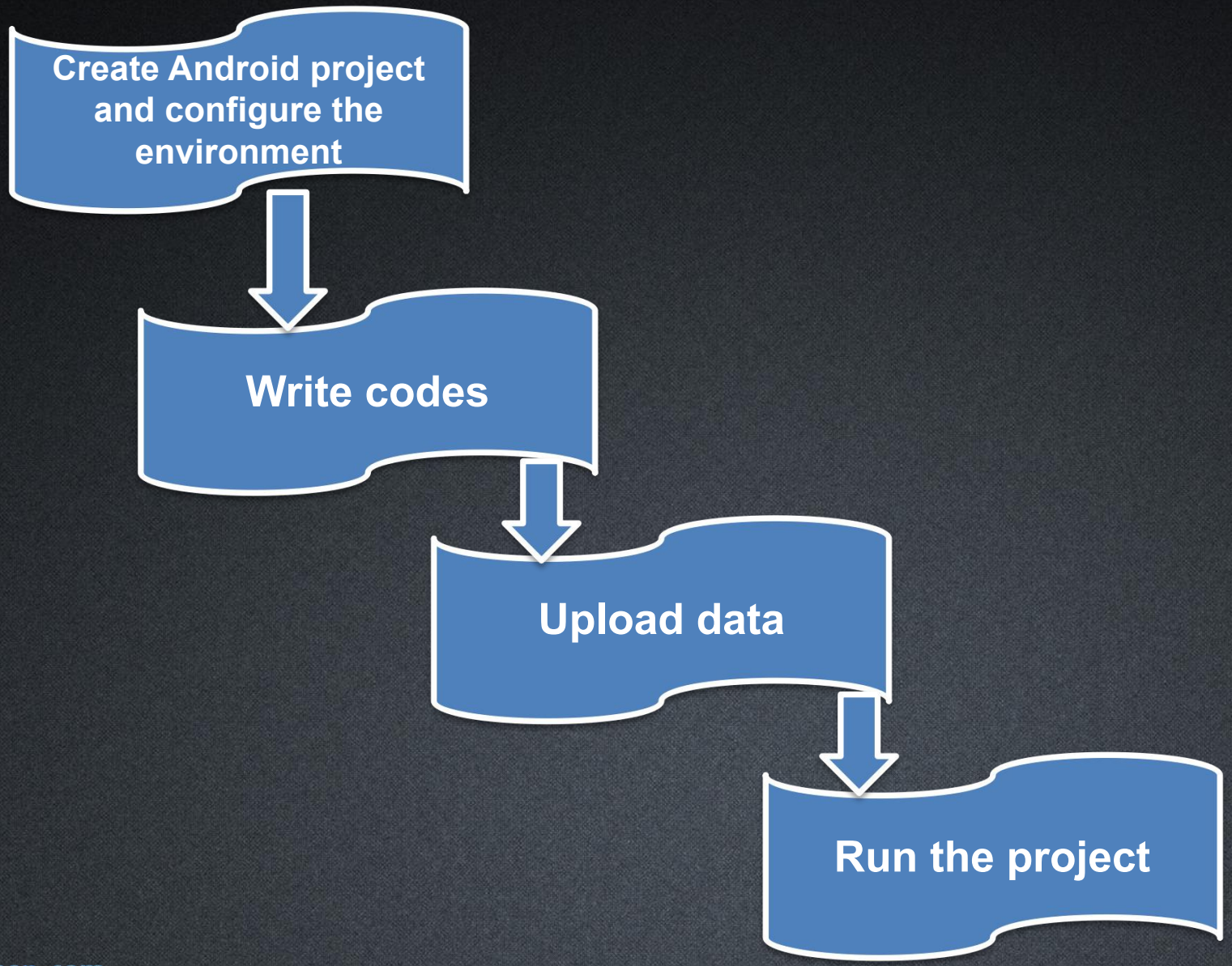
Development Steps

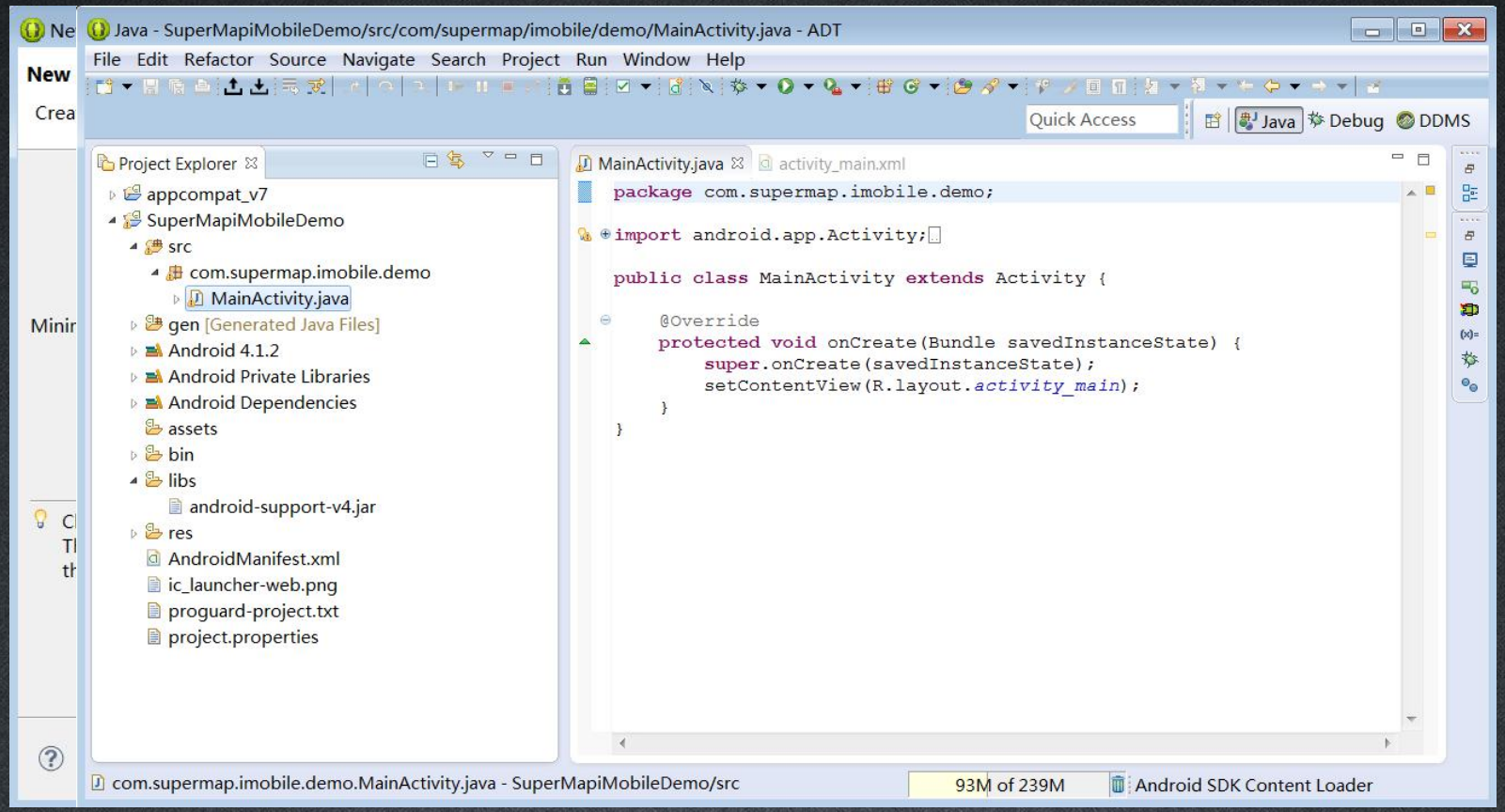


Create Android project

- Step1: Create an Android project
- Step2: Add iMoble 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

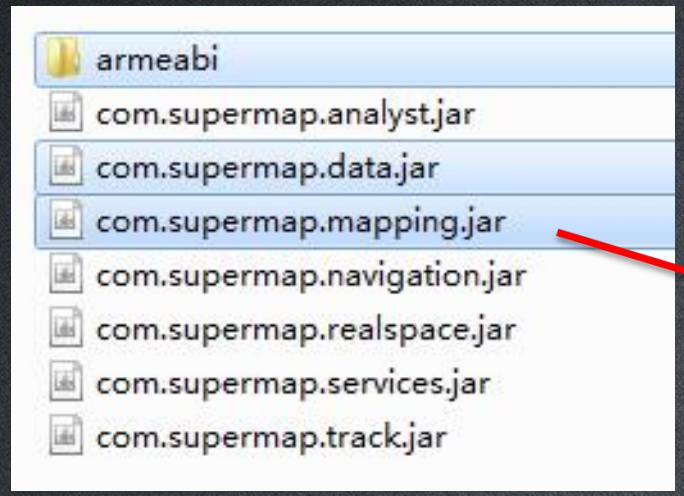
Create Android project

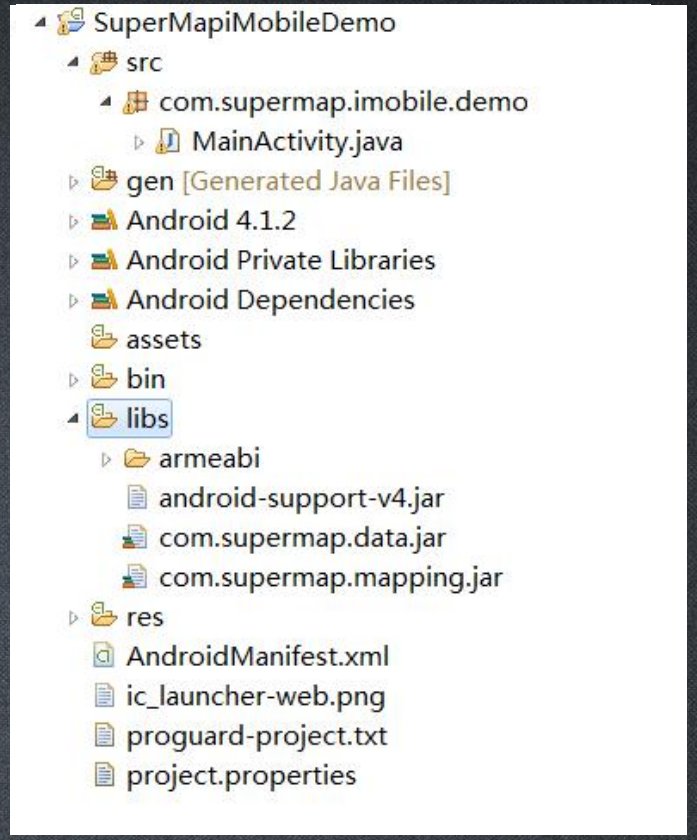
- Step 1:Create Android project
  - Open Eclipse
  - Click “File” >> “new” >> “Android Project”



Create Android project

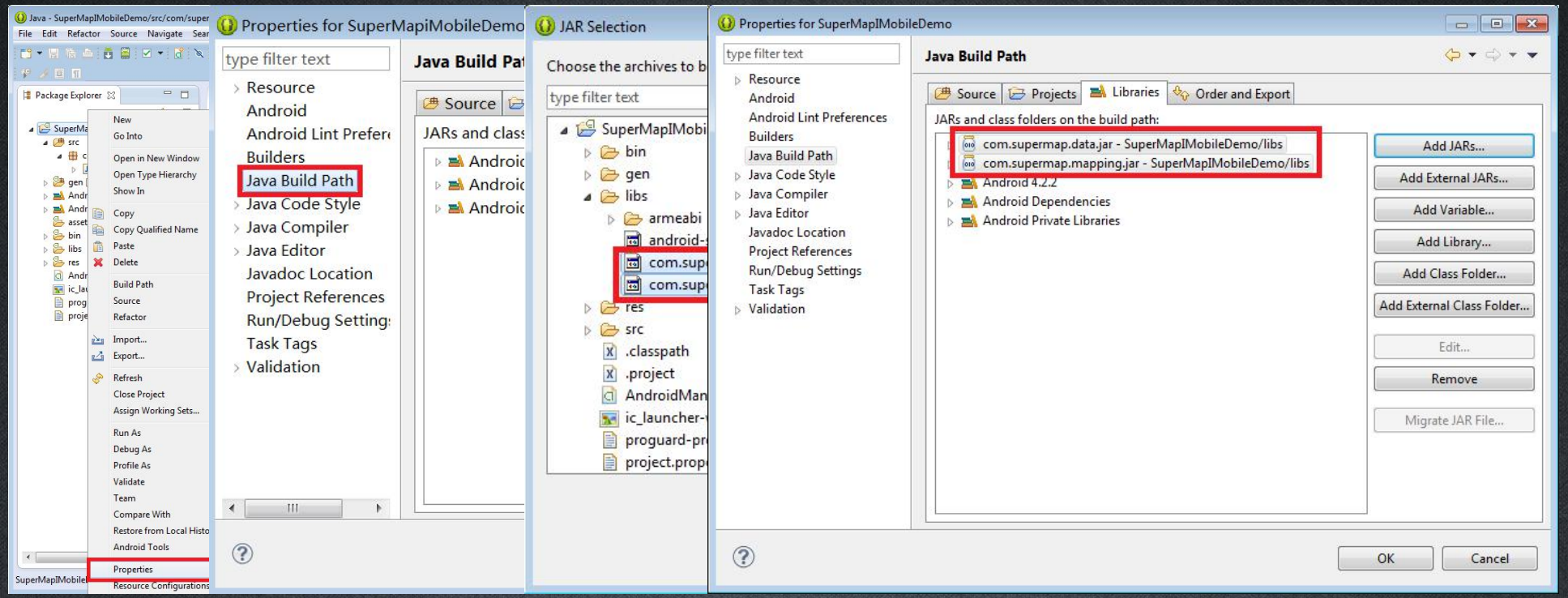
- Step 2： Add iMoble for Android library files
  - Copy the needed jar files under the libs folder in iMobile package to the root path of the project





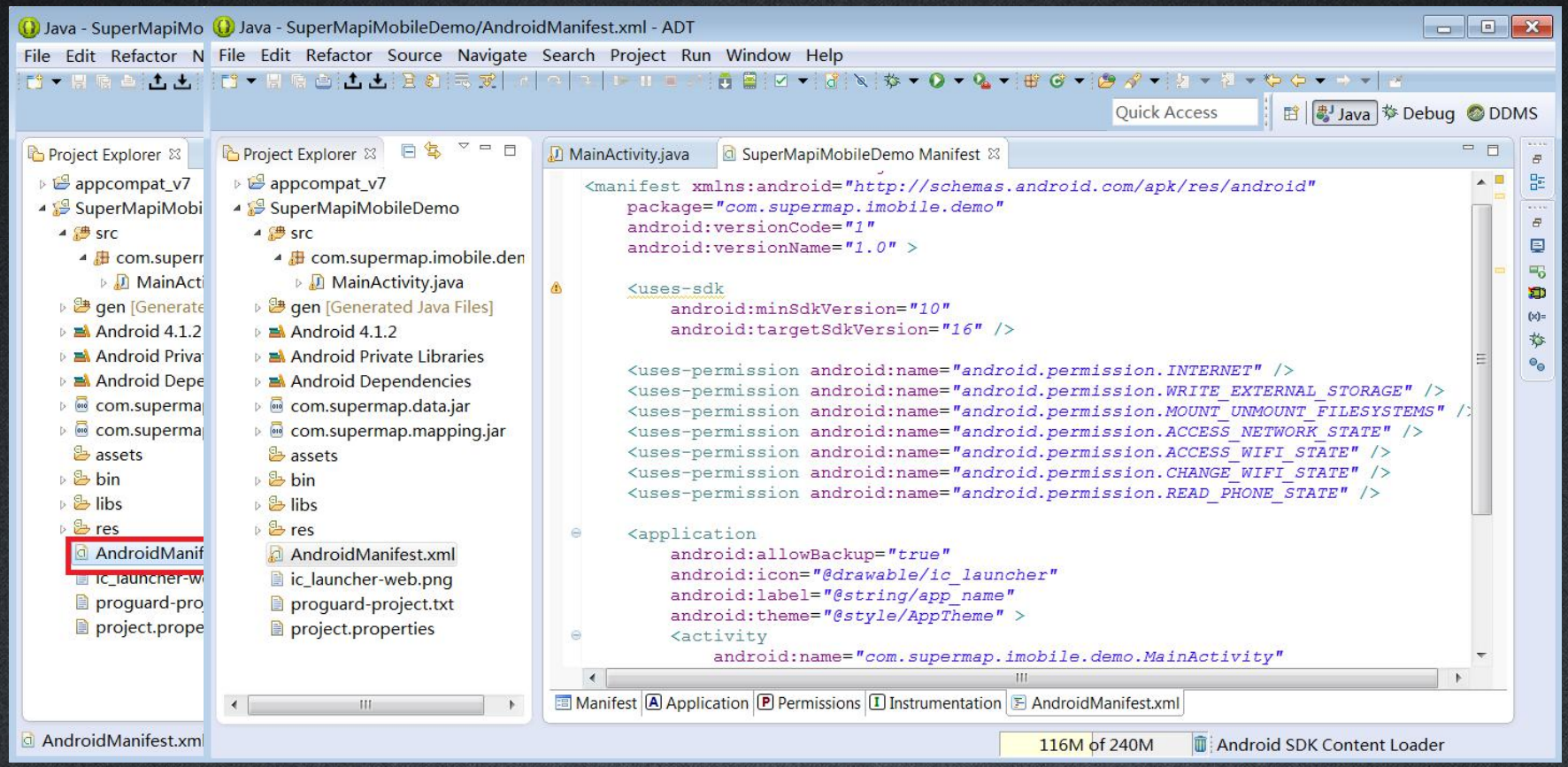
Create Android project

- Step 2： Add iMoble 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

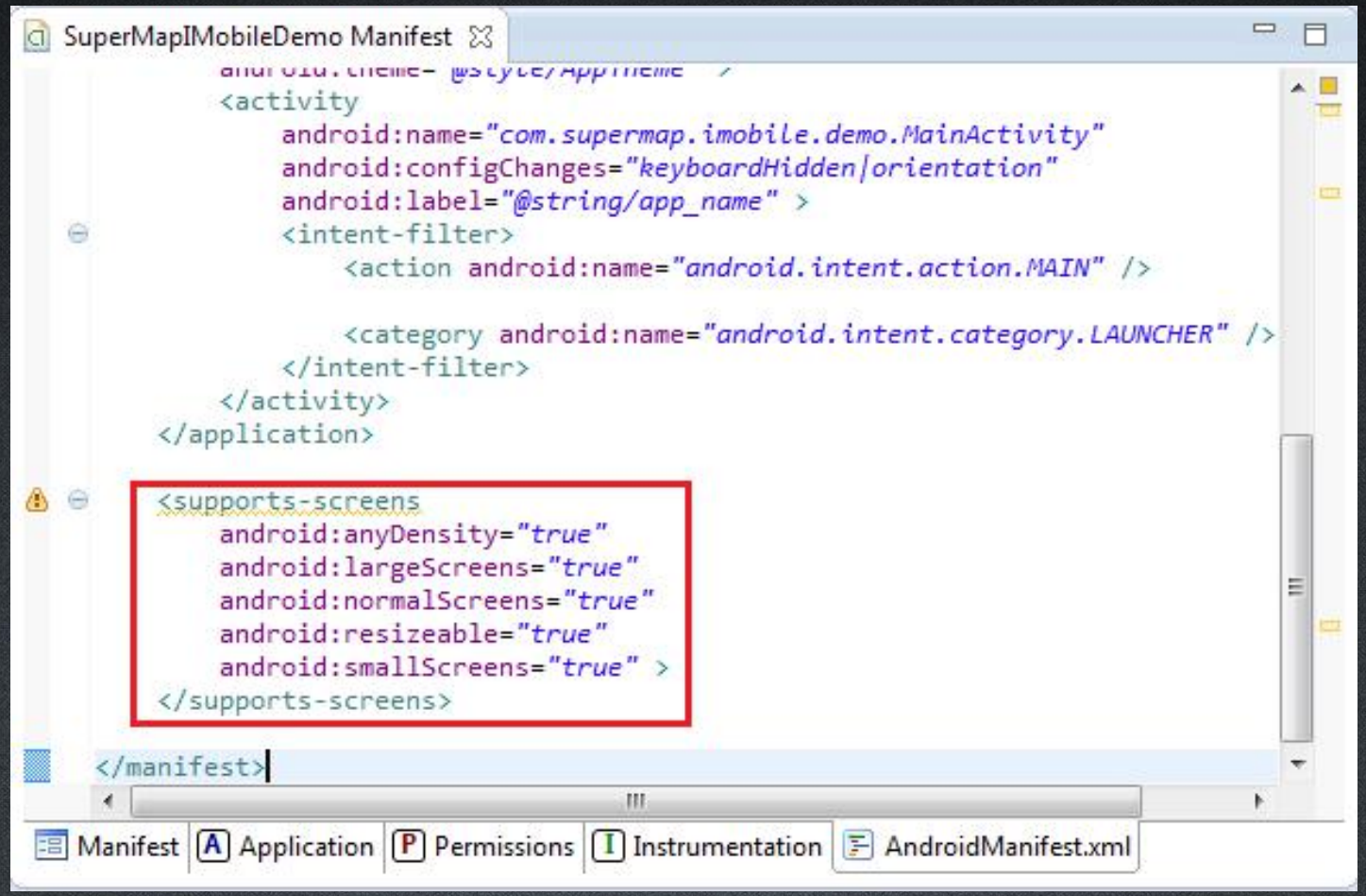


Create Android project

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

Create Android project

- Step 5：configure to support multi formats of screen

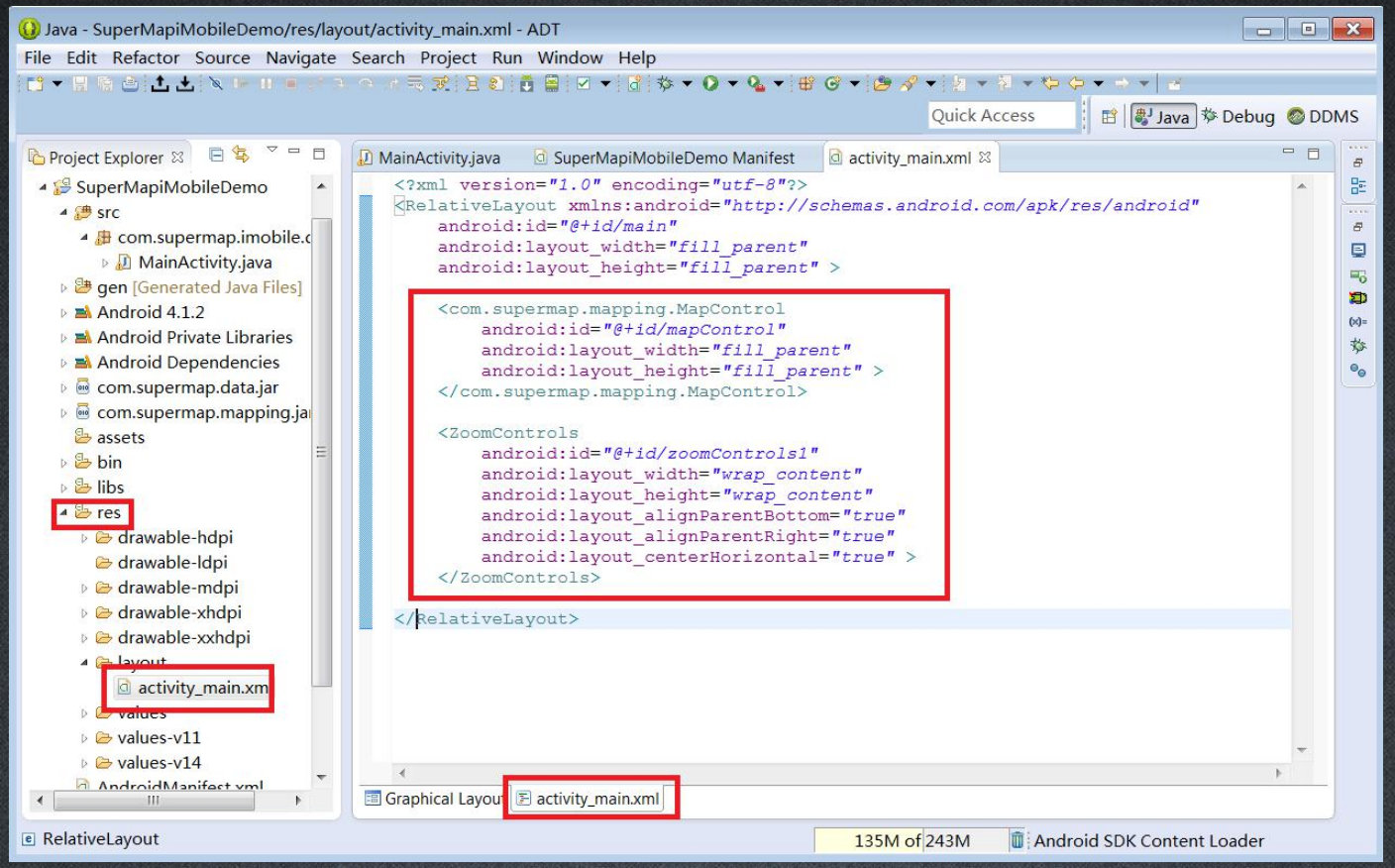


Open an Offline Map

- 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 acitvity_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
Environment (configuration information manager in the development environment)	**LicensePath**	The path that stores the license file
	WebCacheDirectory	The path that stores network map caches
	TemporaryPath	The path that stores temporary files
	initialization	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

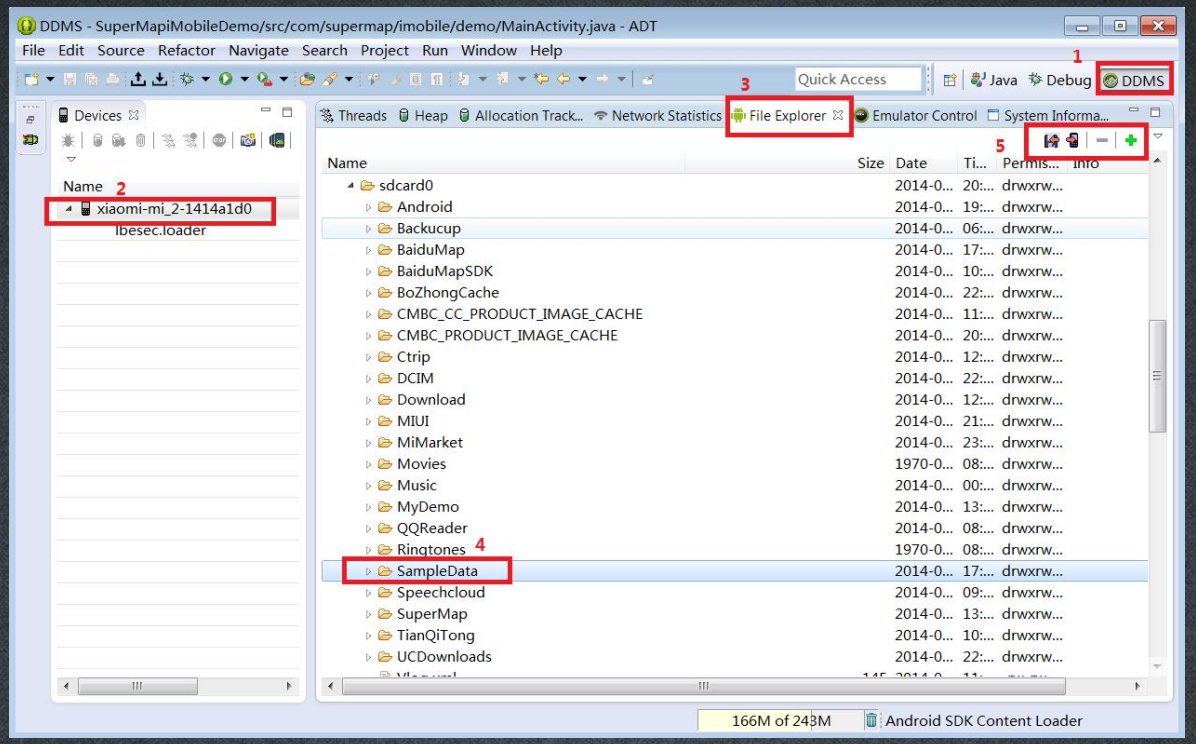
- Step 3： Open workspace
  - 1)：Create WorkspaceConnectionInfo class
  - 2)：Set the properties of the WorkspaceConnectionInfo class
  - 3)：Workspace.Open(WorkspaceConnectionInfo)

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

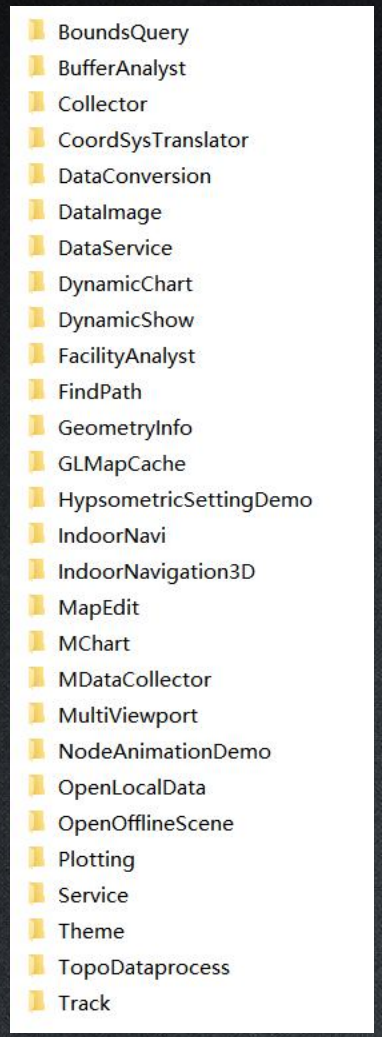
- Step 1 ：Add map control
- Step 2 ：Initialize
- Step 3 ：Open workspace
- Step 4 ：Associate workspace and map
- Step 5 ：Get the online map service
- Step 6 ：Open the online map
- Step 7 ：Refresh the map

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



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

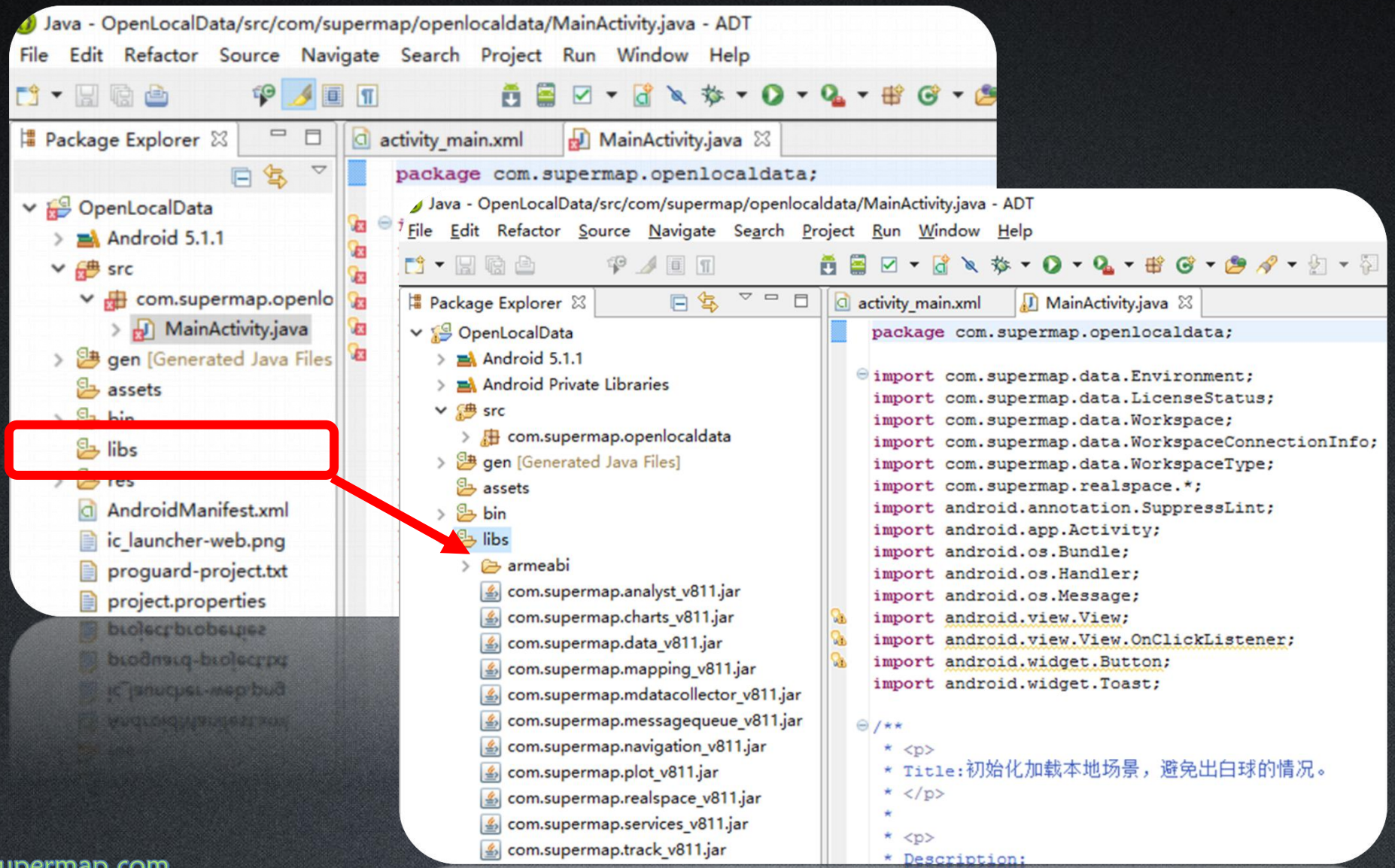
    The adb remount

    The adb install MapEdit.apk

Demo Debugging

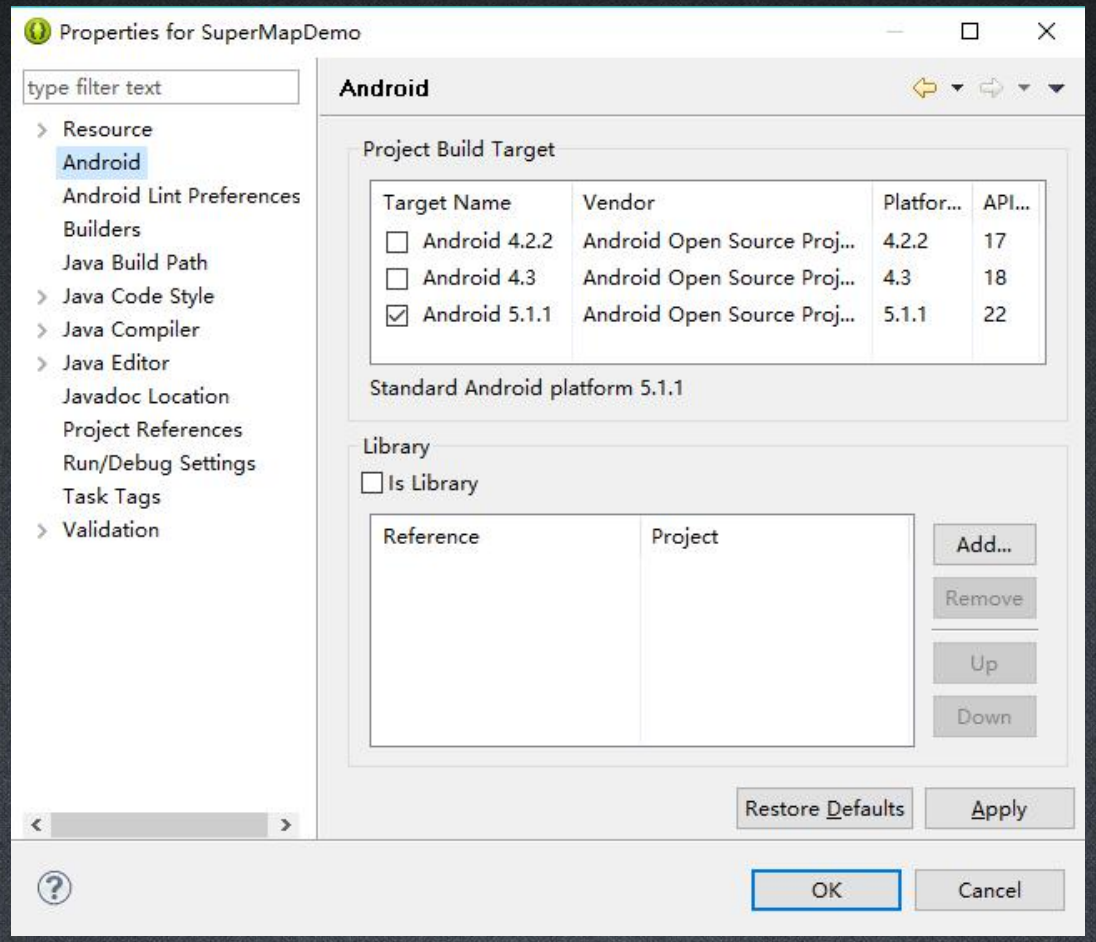
- Several things to note:
  - Step1: To check whether the jar package is complete
  - Step2: To modify the target SDK version
  - Step3: To check the paths of data and license file
  - Step4: To check whether the resource file is complete
  - Step5: To check the Android emulator or the real machine

To check whether the jar package is complete



To modify the target SDK version

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

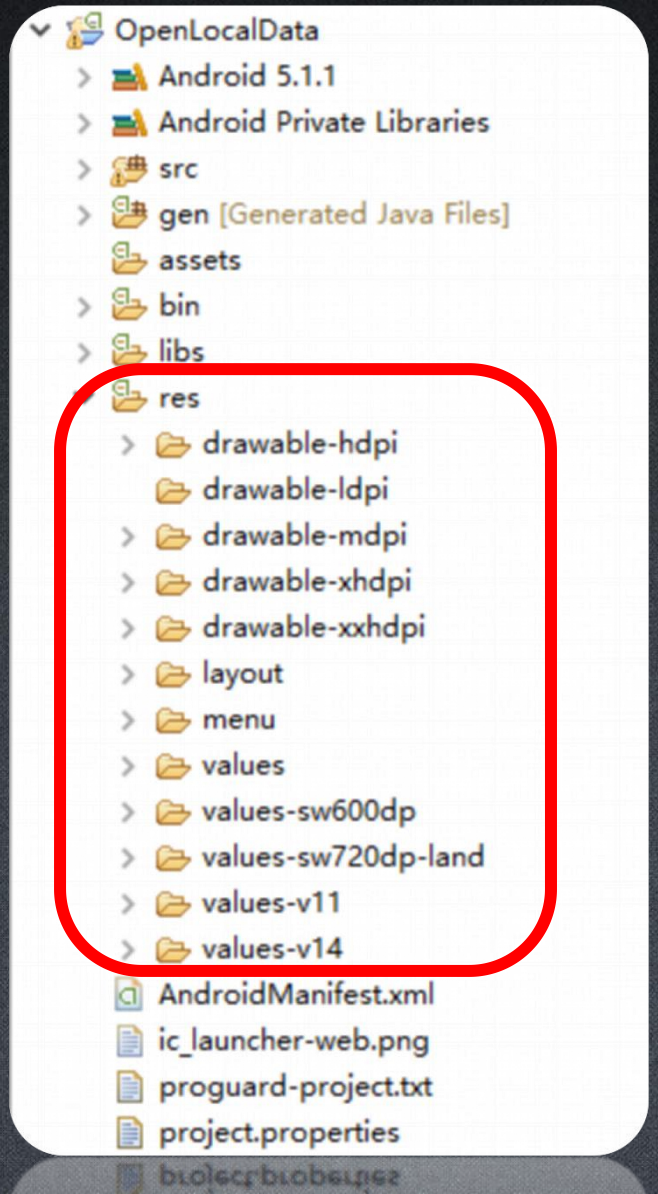


To check the paths of data and license file

```
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/");
```

```
public class MainActivity extends Activity {
    private Workspace m_workspace;
    private Scene m_scene;
    private SceneControl mSceneControl;
    String workspacePath = "/sdcard/SuperMap/data/珠峰/珠峰.sxwu";
    String sceneName = "珠峰";
    WorkspaceConnectionInfo info;
    WorkspaceType workspaceTypetemp = null;
```

To check whether the resource file is complete



Thank You!

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