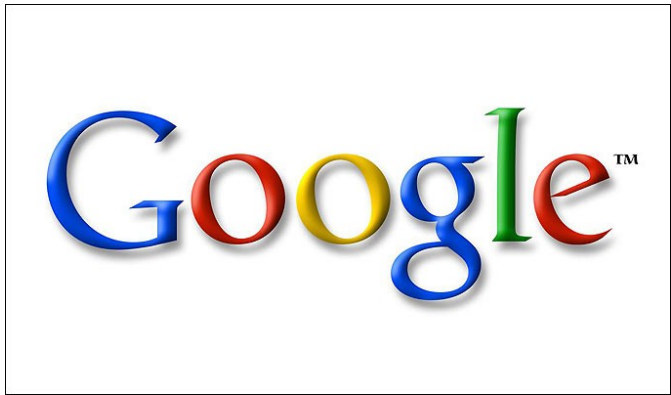
Android Activity

CS 436 Software Development on Mobile

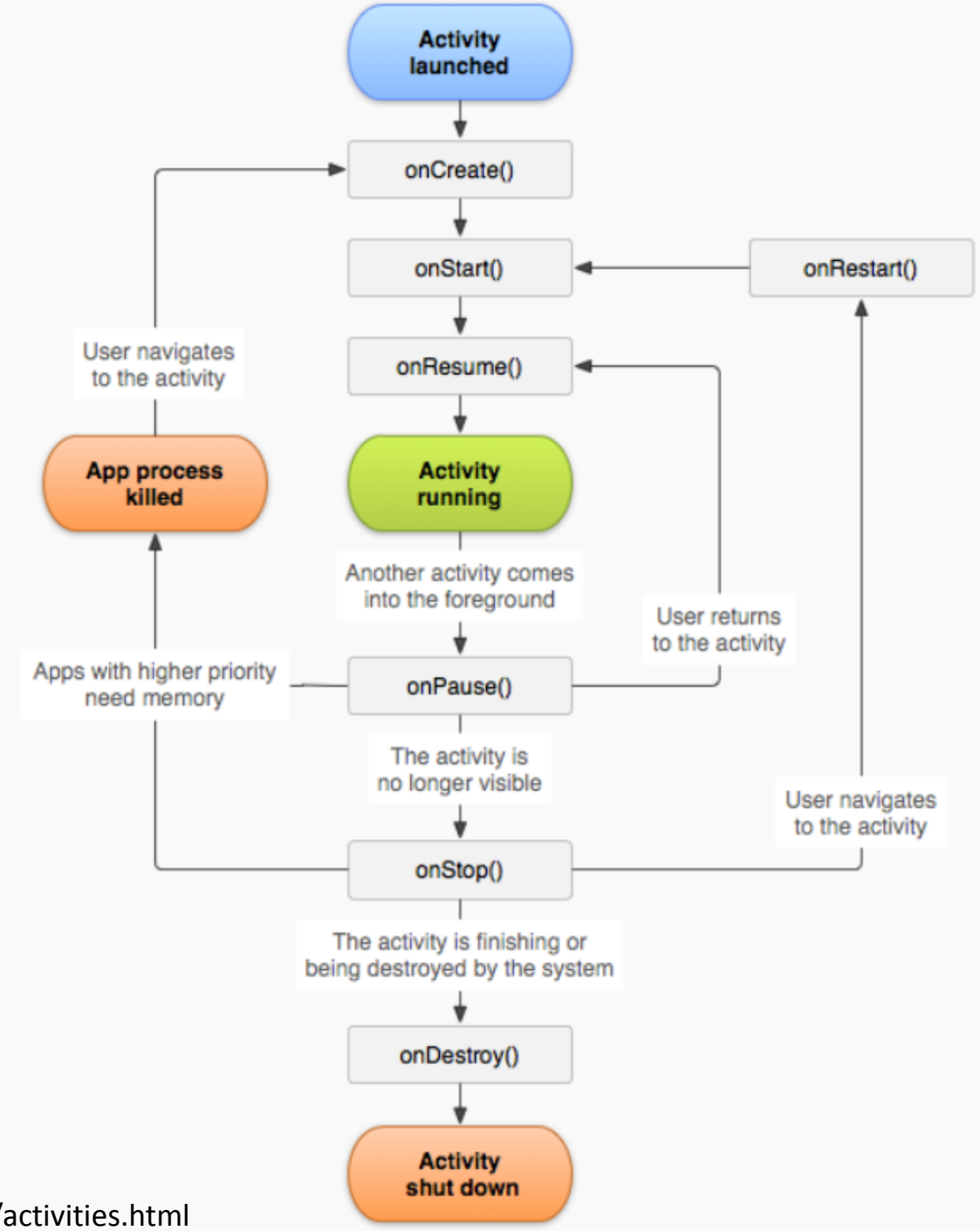
By Dr.Paween Khoenkaw



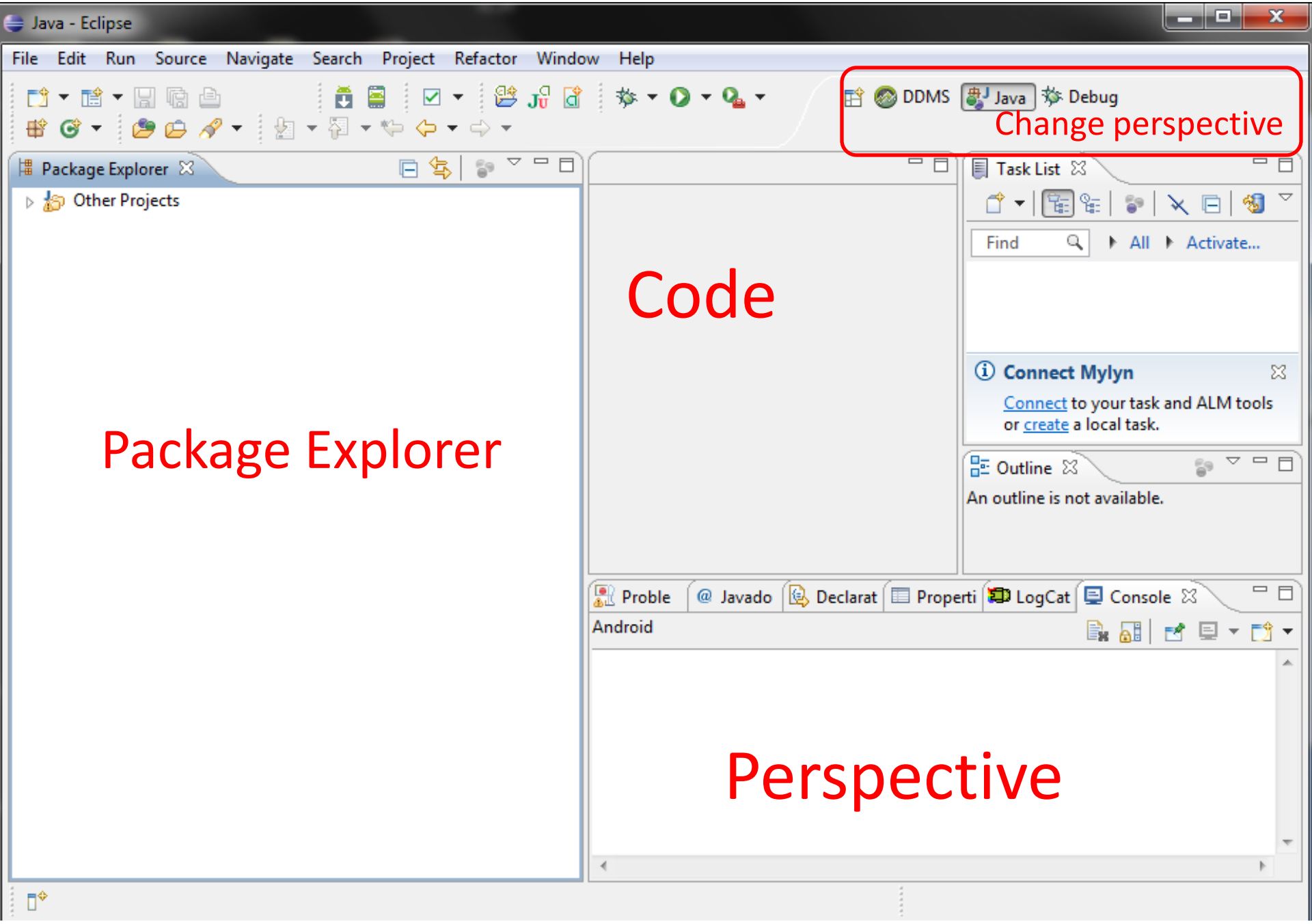
Android Activity

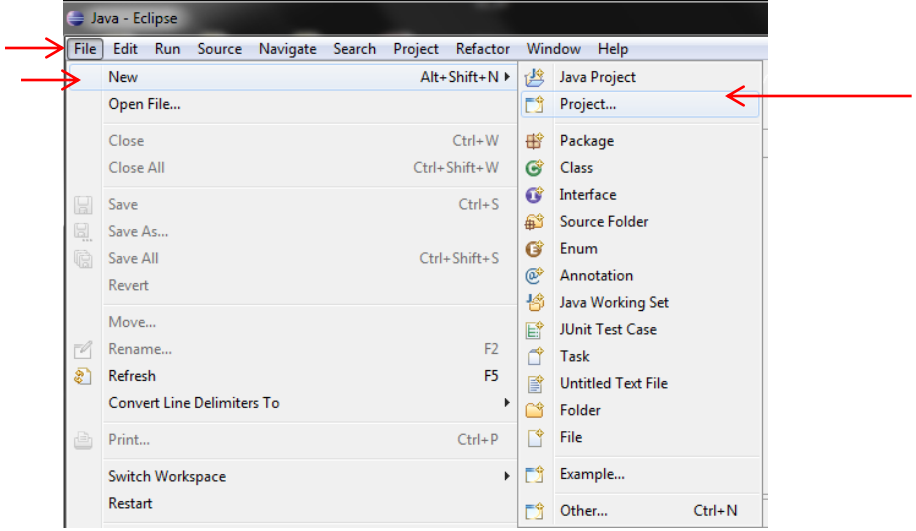
Activity Lifecycle

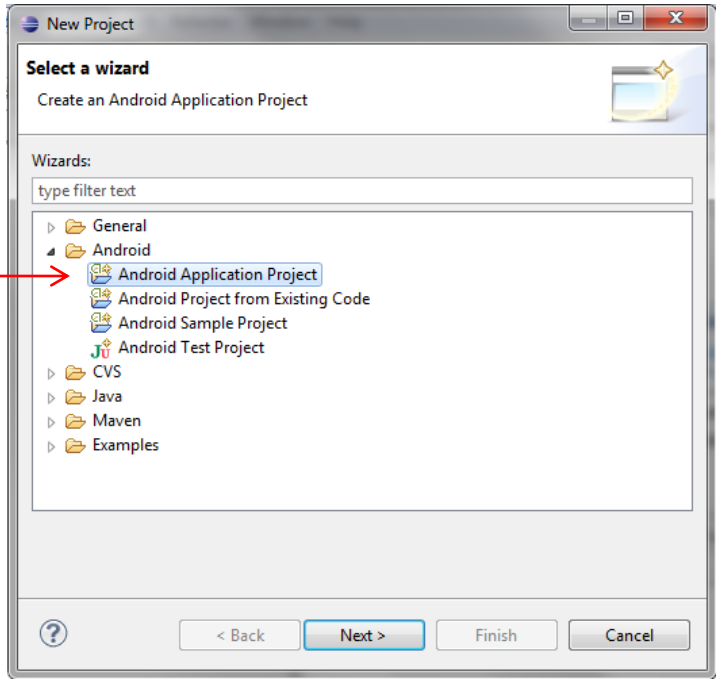
onCreate()
onStart()
onResume()
onPause()
onStop()
onRestart()
onDestroy()

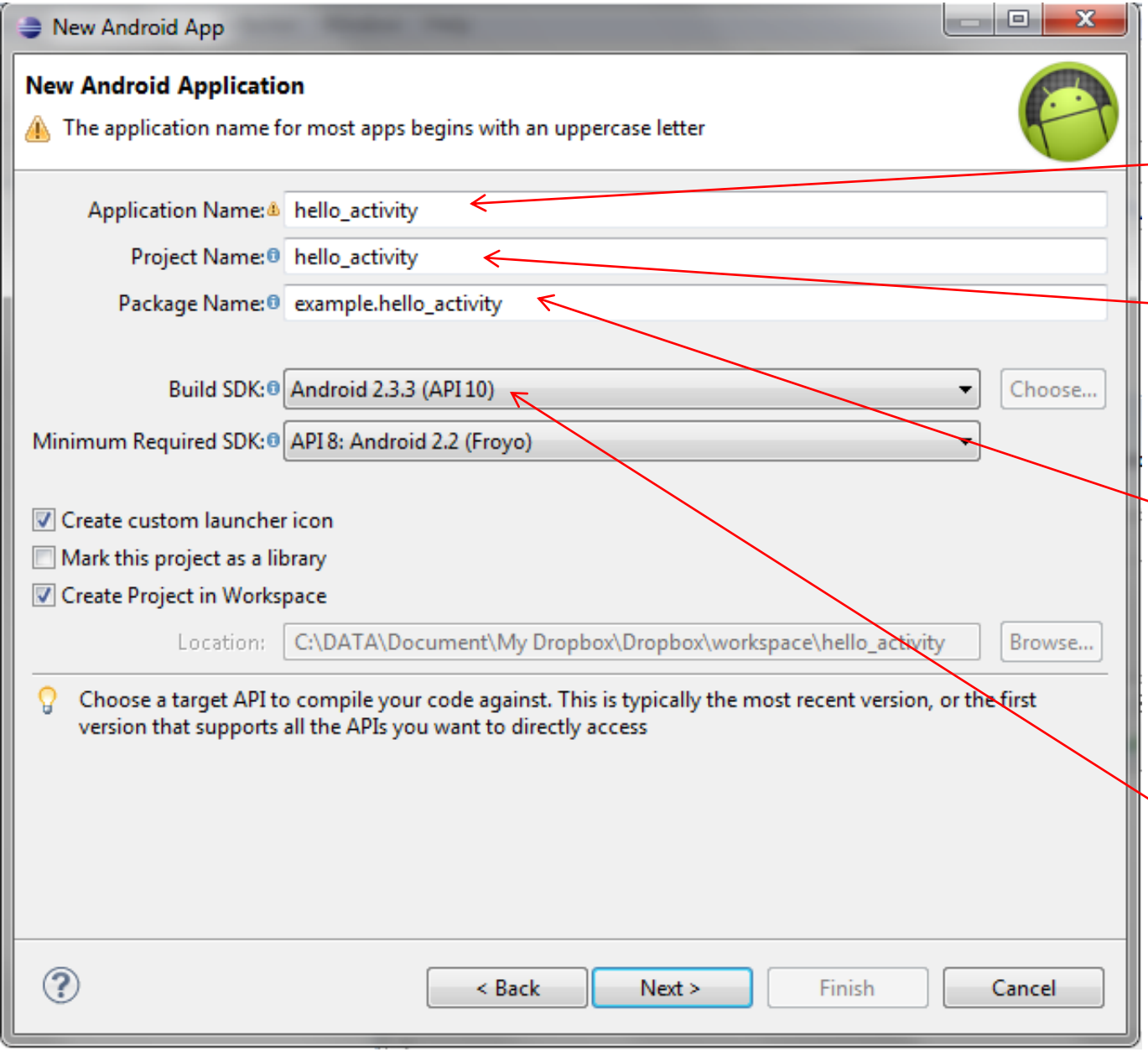


http://developer.android.com/guide/components/activities.html


Java - Eclipse
File Edit Run Source Navigate Search Project Refactor Window Help
DDMS
Java
Debug
Change perspective
Package Explorer
Other Projects
Package Explorer
Code
Task List
Find
All
Activate...
Connect Mylyn
Connect to your task and ALM tools
or create a local task.
Outline
An outline is not available.
Proble
Javado
Declarat
Properti
LogCat
Console
Android
Perspective


Java - Eclipse
File Edit Run Source Navigate Search Project Refactor Window Help
New Alt+Shift+N
Open File...
Close Ctrl+W
Close All Ctrl+Shift+W
Save Ctrl+S
Save As...
Save All Ctrl+Shift+S
Revert
Move...
Rename... F2
Refresh F5
Convert Line Delimiters To
Print... Ctrl+P
Switch Workspace
Restart
Java Project
Project...
Package
Class
Interface
Source Folder
Enum
Annotation
Java Working Set
JUnit Test Case
Task
Untitled Text File
Folder
File
Example...
Other... Ctrl+N


New Project
Select a wizard
Create an Android Application Project
Wizards:
type filter text
General
Android
Android Application Project
Android Project from Existing Code
Android Sample Project
Android Test Project
CVS
Java
Maven
Examples
< Back
Next >
Finish
Cancel



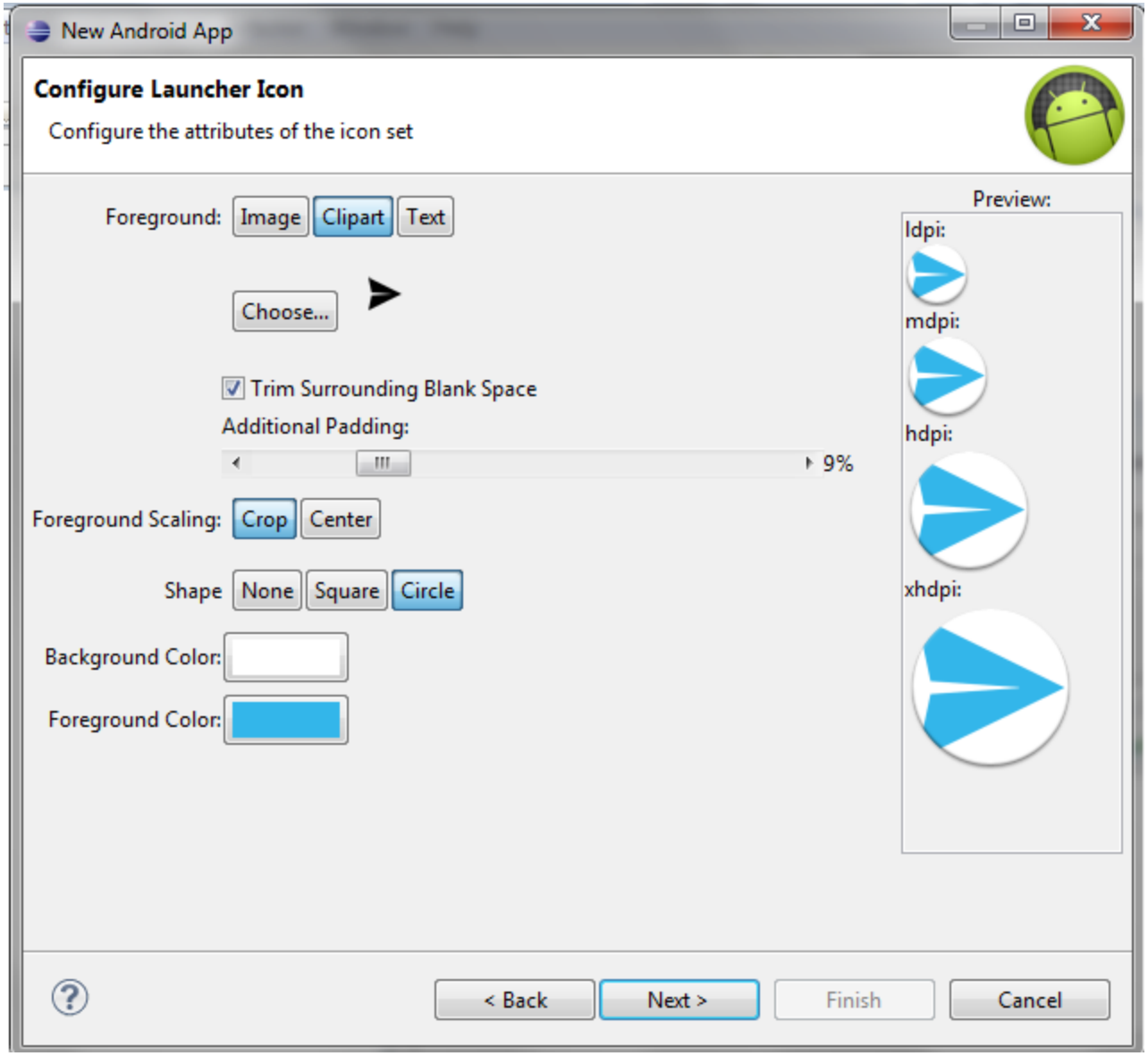
Application name
(Show in launcher)

Project name
(Workspace folder)

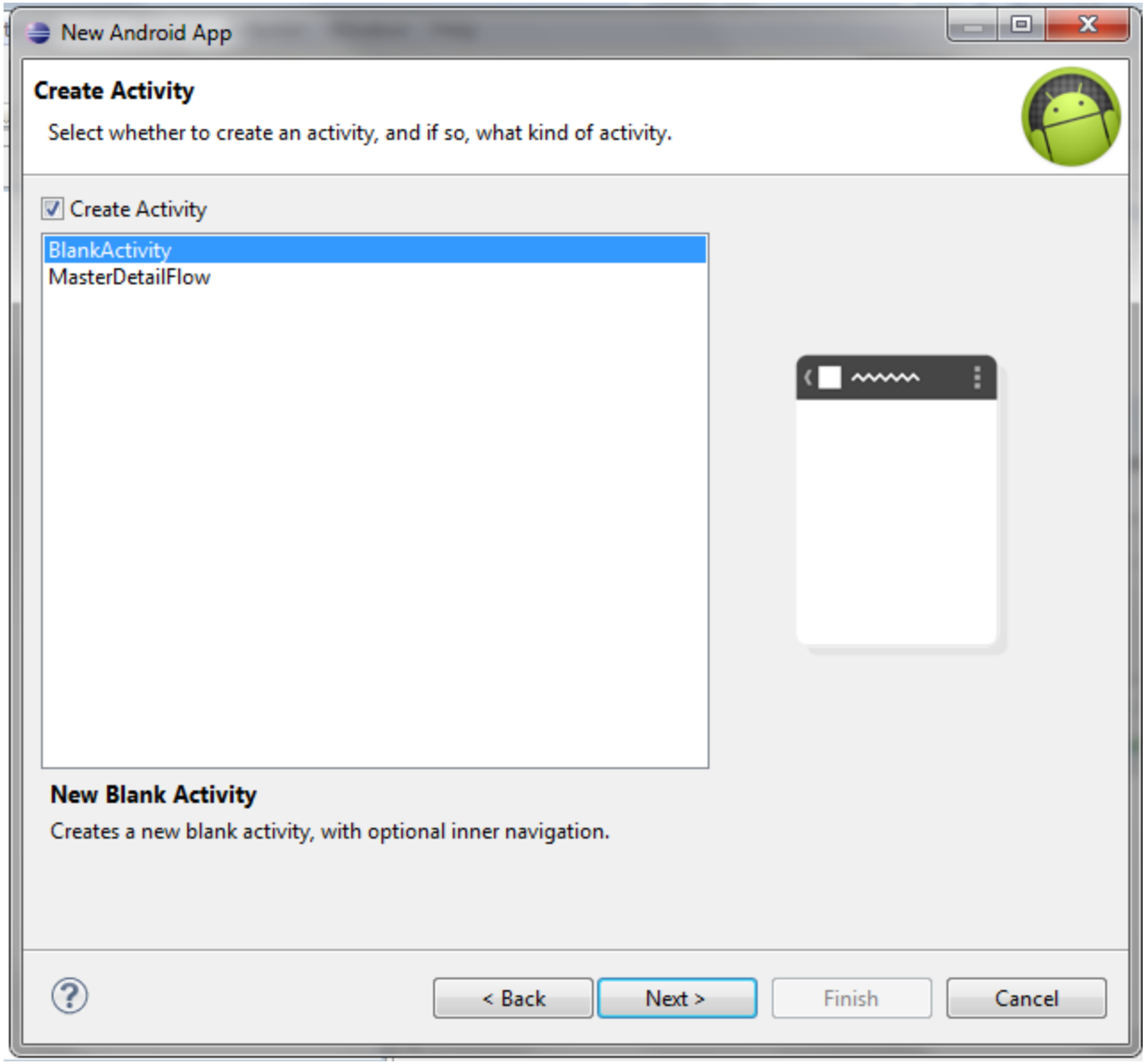
Package name
(unique application identifyer)

Build SDK
(Target phone)

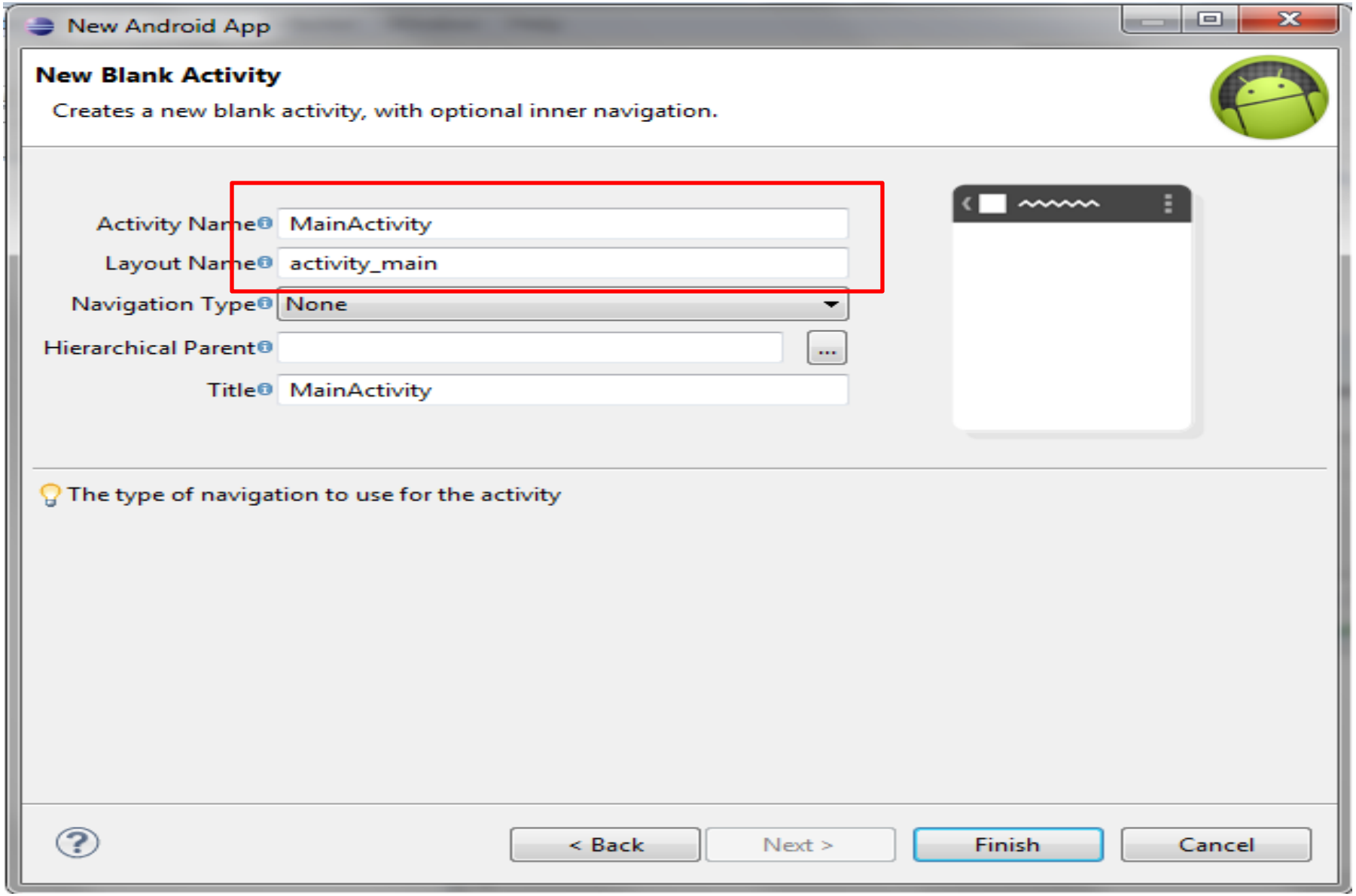
Theme and icons

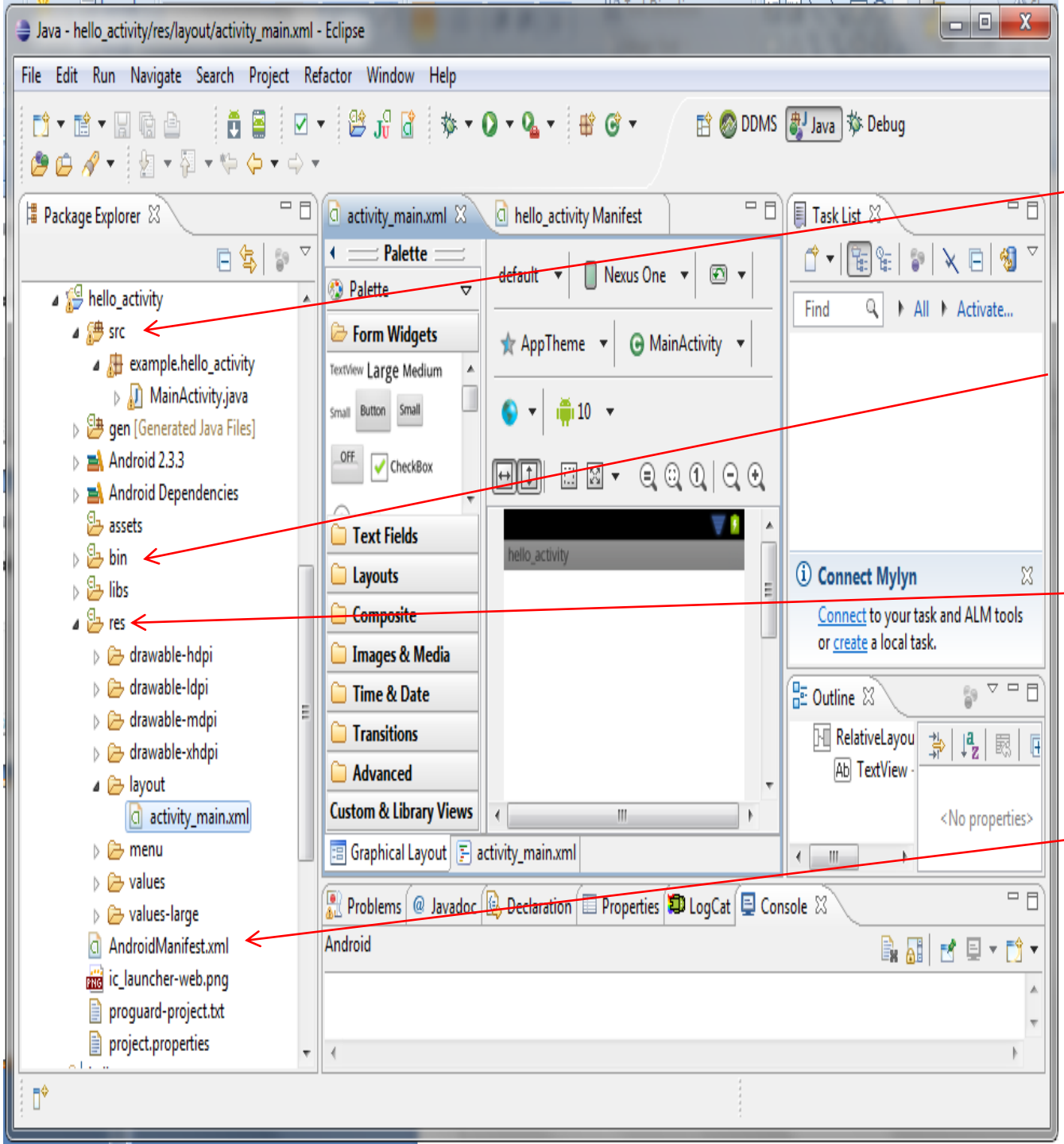


Activity type (Honeycomb only)



Activity name and Layout name





SRC: java code

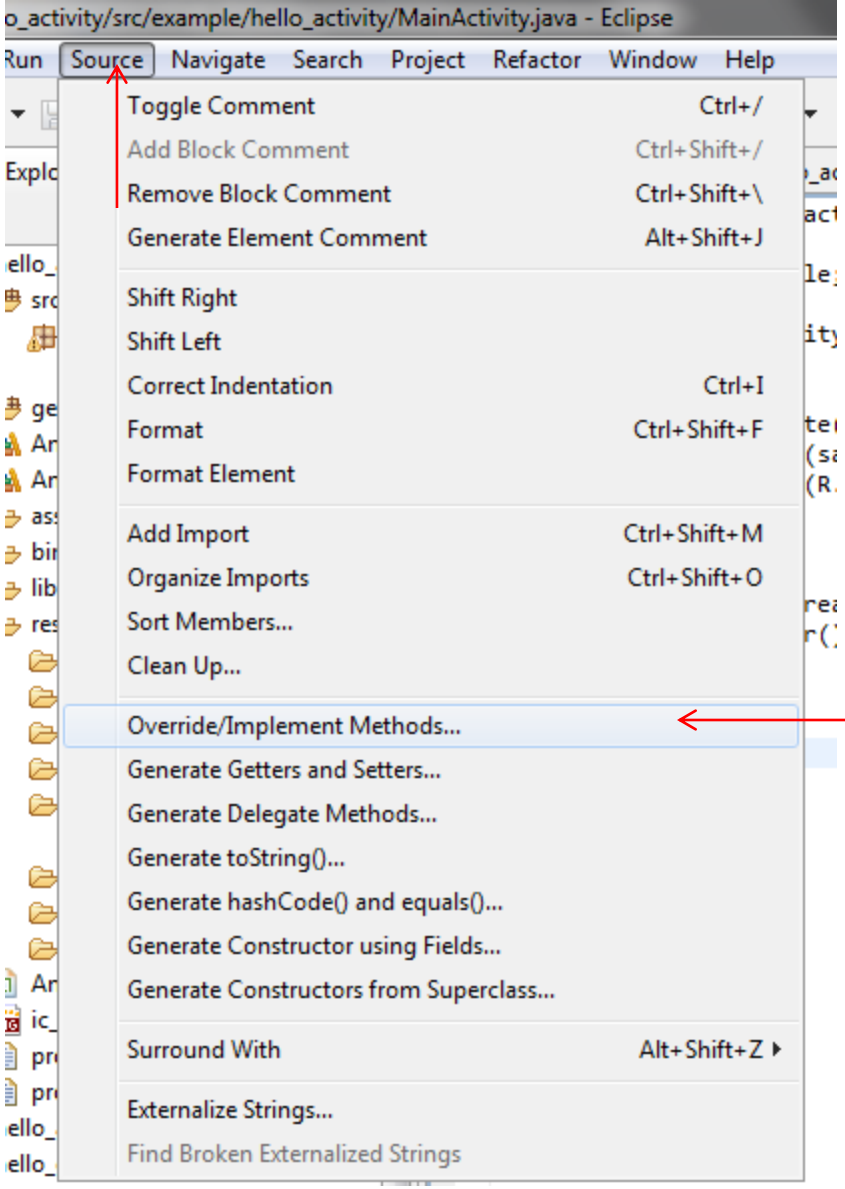
BIN: Binary resource
(video , audio ...)

RES: Text resource
(layout,menu,string ..)

AndroidManifest

Experiment 1:Activity lifecycle

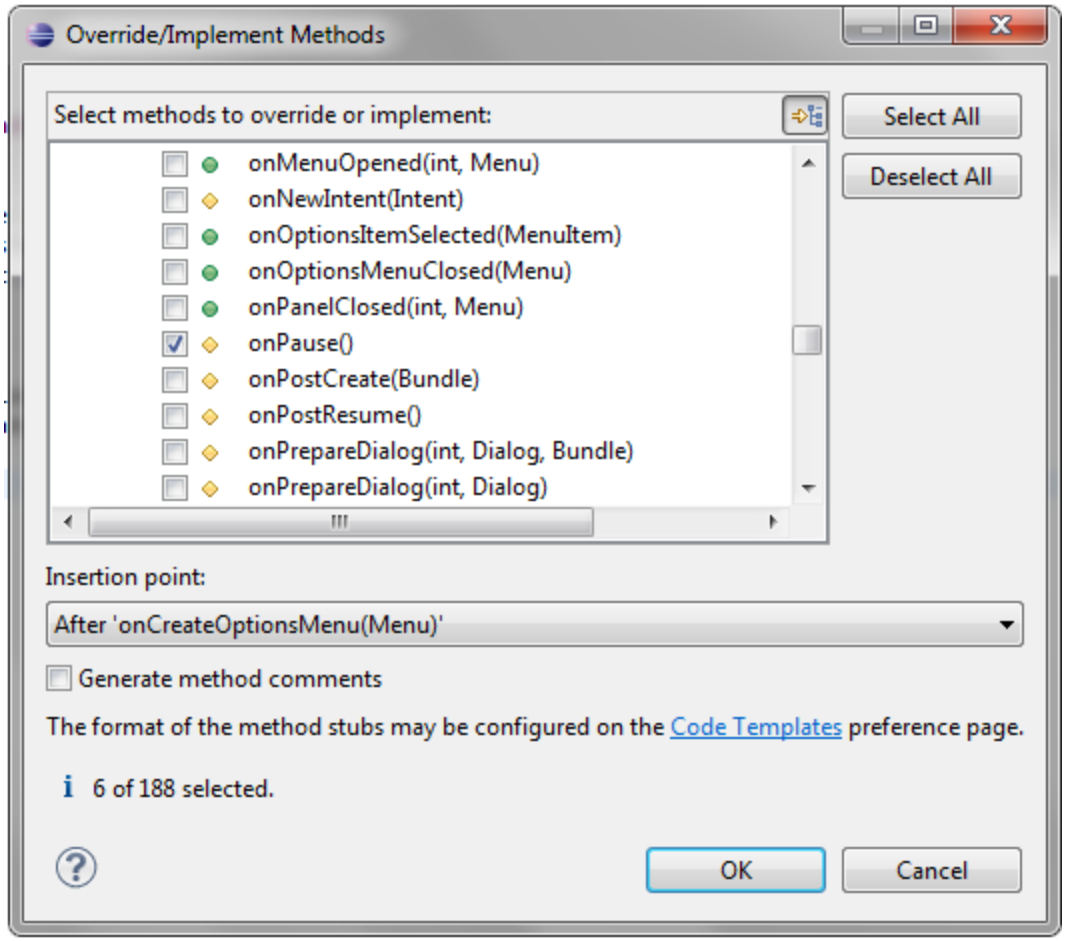
1) Override Activity events method
2) Create Log cat debug
3) Run and observe



Use eclipse auto code completion to create override method

Source → Override/Implement Methods..

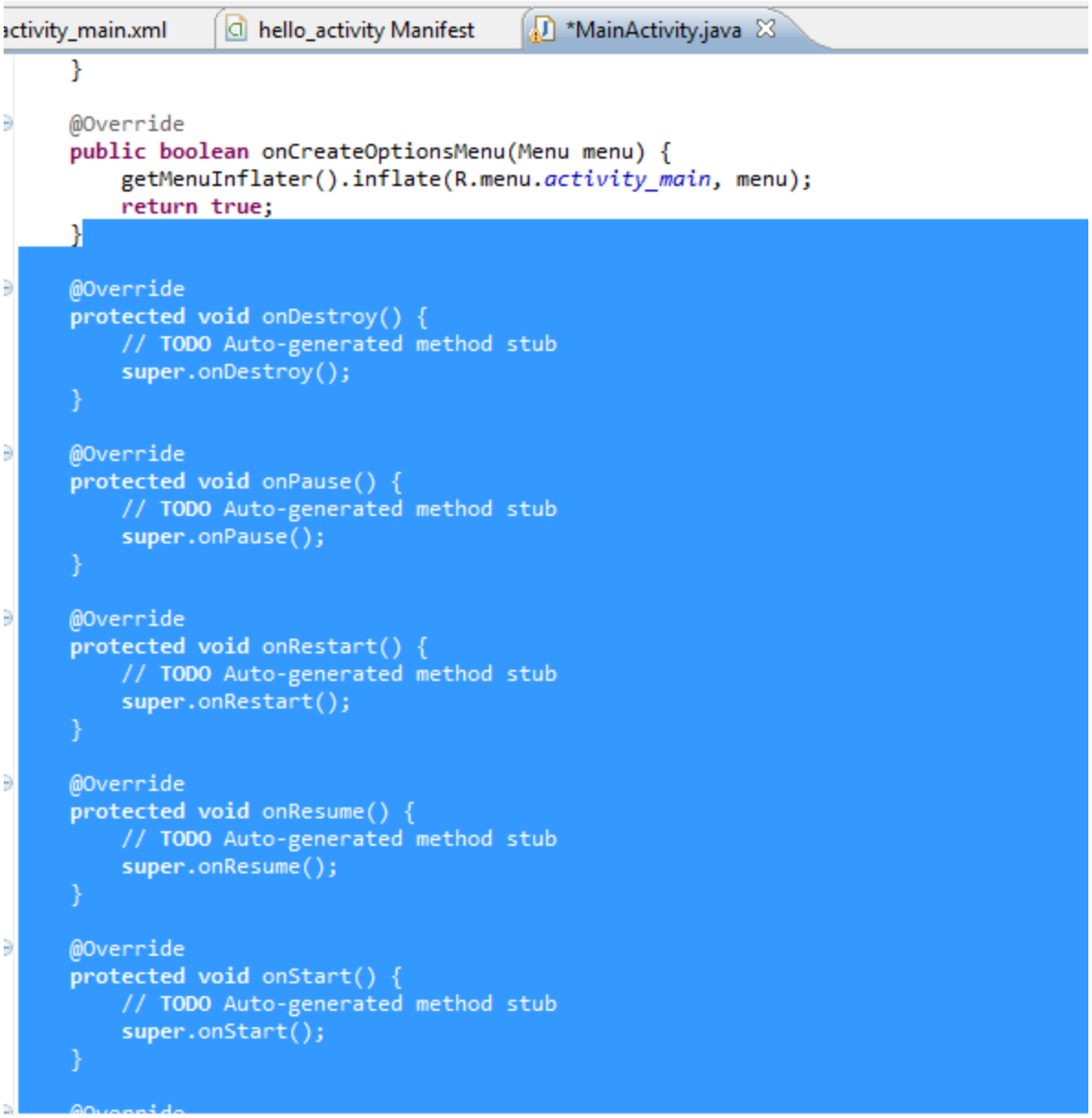
Select method to be override



onCreate()
onStart()
onResume()
onPause()
onStop()
onRestart()
onDestroy()

*note: onCreate() was already override by default

You will get automatically generated override method



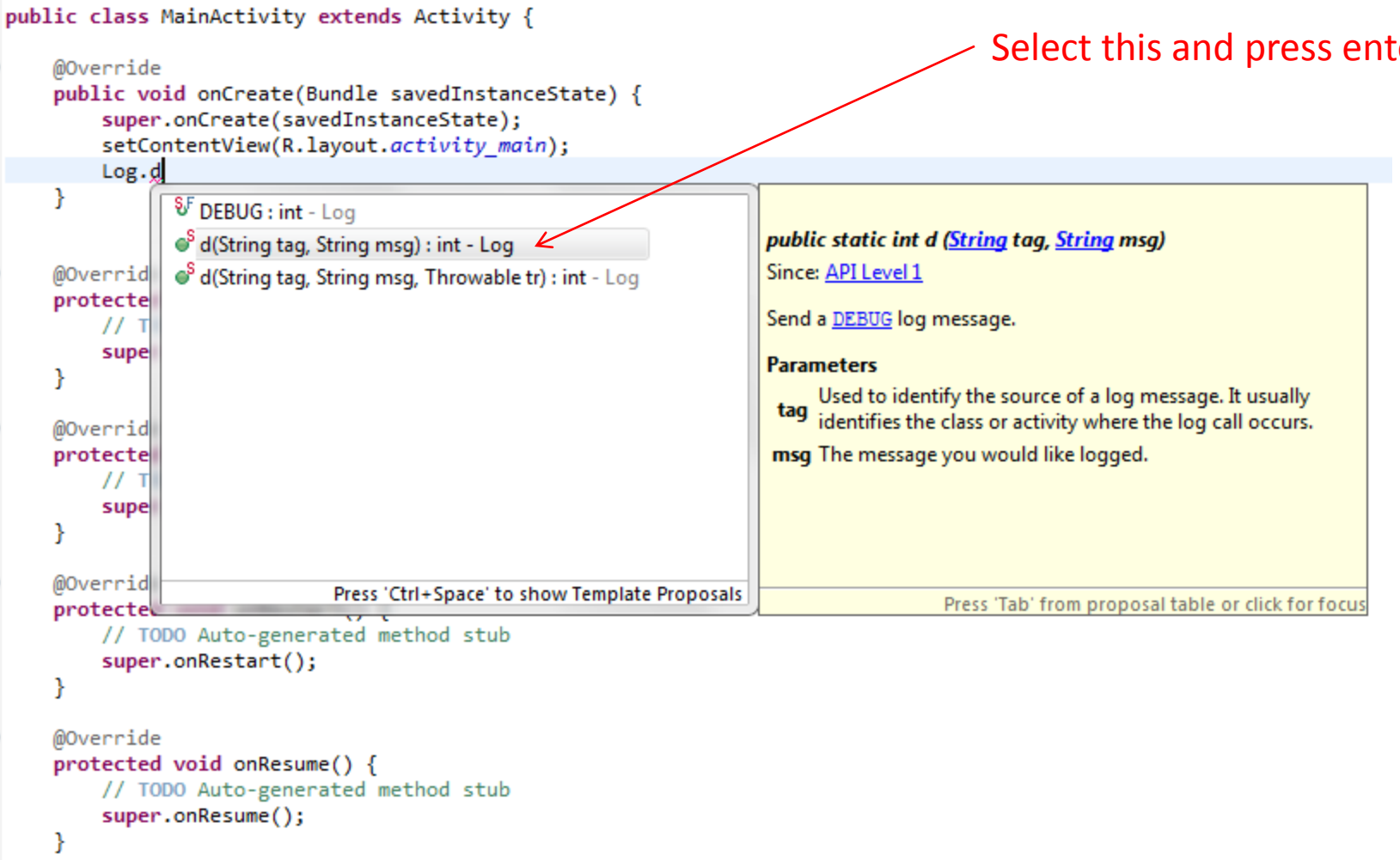
Override section

**note: this technique can also be used for interface and class implementation

Insert this line in onCreate method Log.d(“this was fired from activity”,”on create”);

Use automatic code completion

Select this and press enter

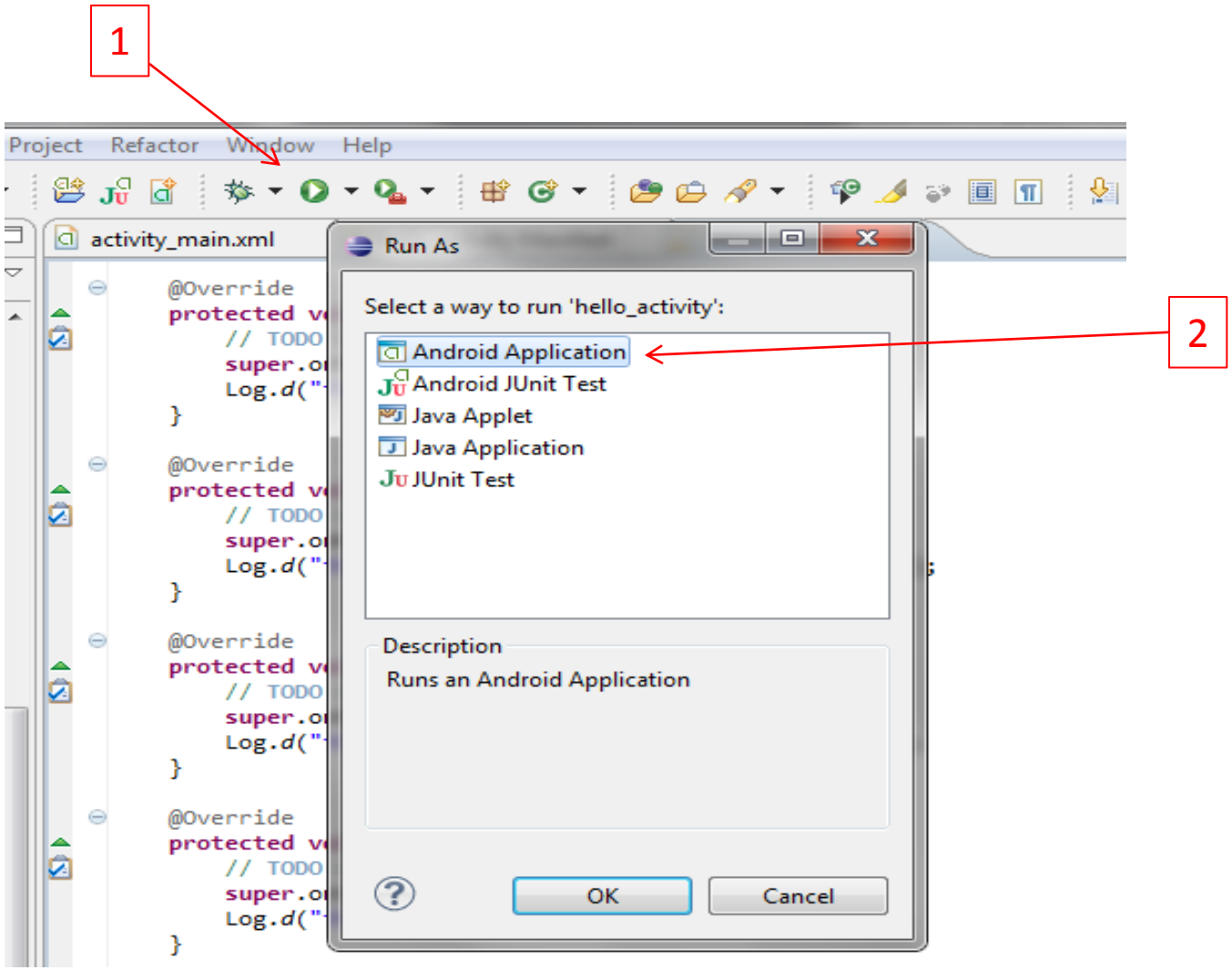


```
import android.os.Bundle;
import android.app.Activity;
import android.util.Log;
import android.view.Menu;
import android.view.MenuItem;
import android.support.v4.app.NavUtils;

public class MainActivity extends Activity {

    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Log.d("this was fired from activity","On Create");
    }


    @Override
    protected void onDestroy() {
        // TODO Auto-generated method stub
        super.onDestroy();
    }
```

Log class was imported automatically

Assignment: you add log cat to all the remaining method

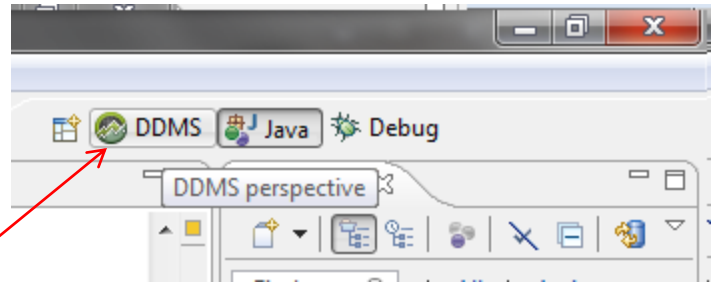
Run your application



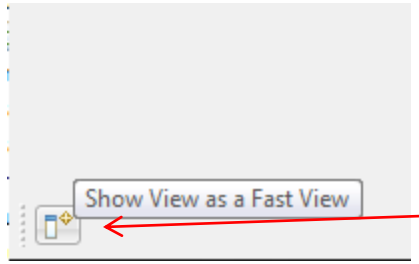
It will compile , install and run this application on default ADB device

How to get log cat output

1) Switch perspective from java to DDMS
2) Add fastview
3) Select LogCat

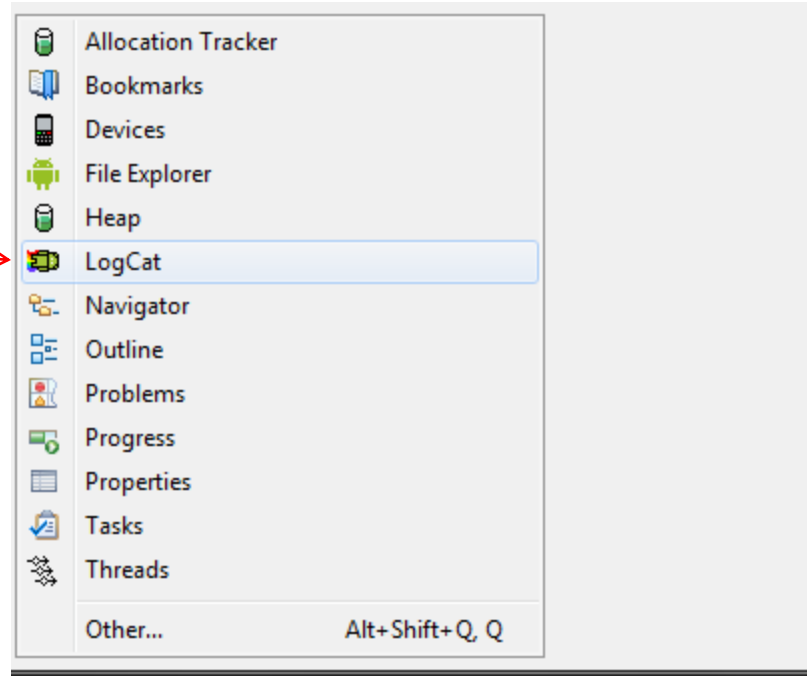


1

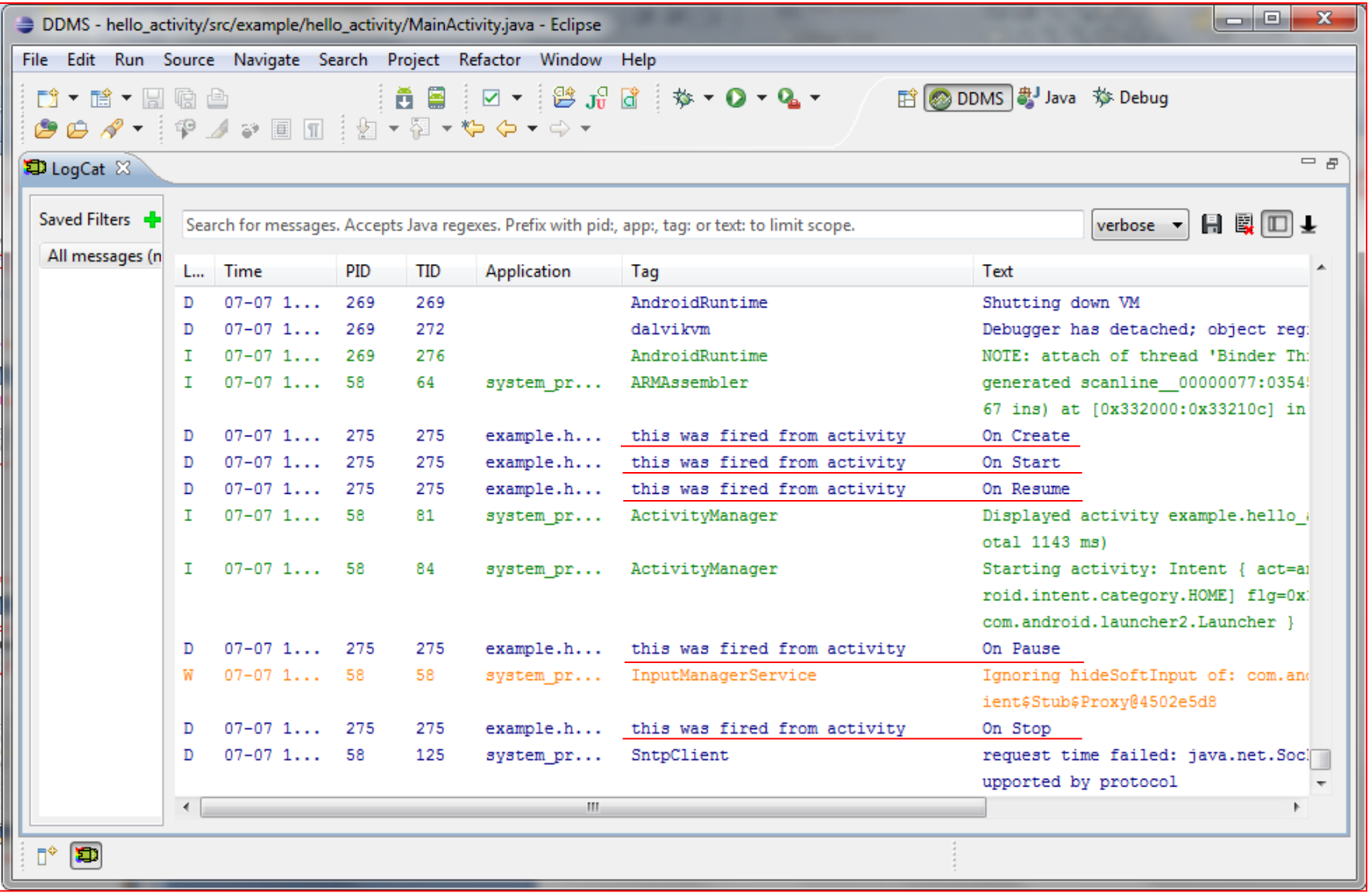


2

3



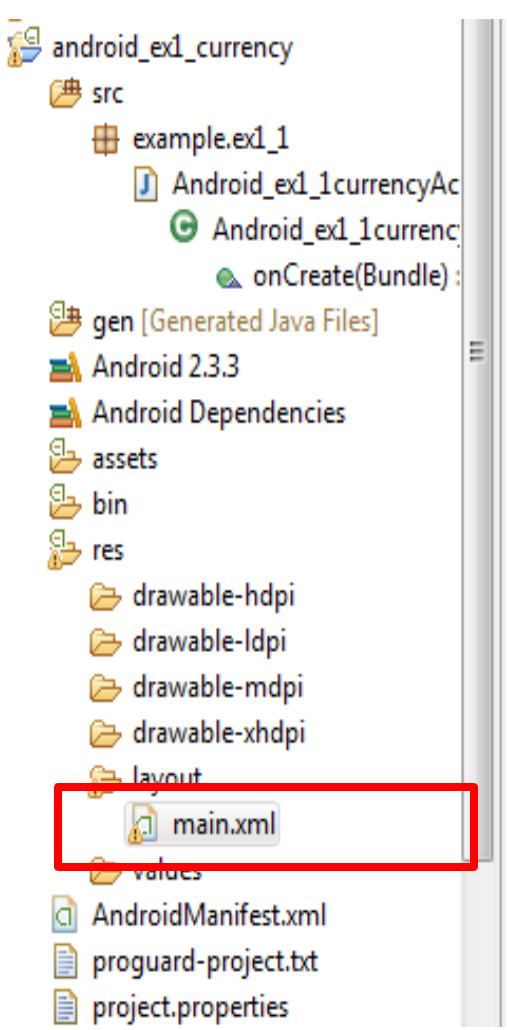
Play with emulator and observe output

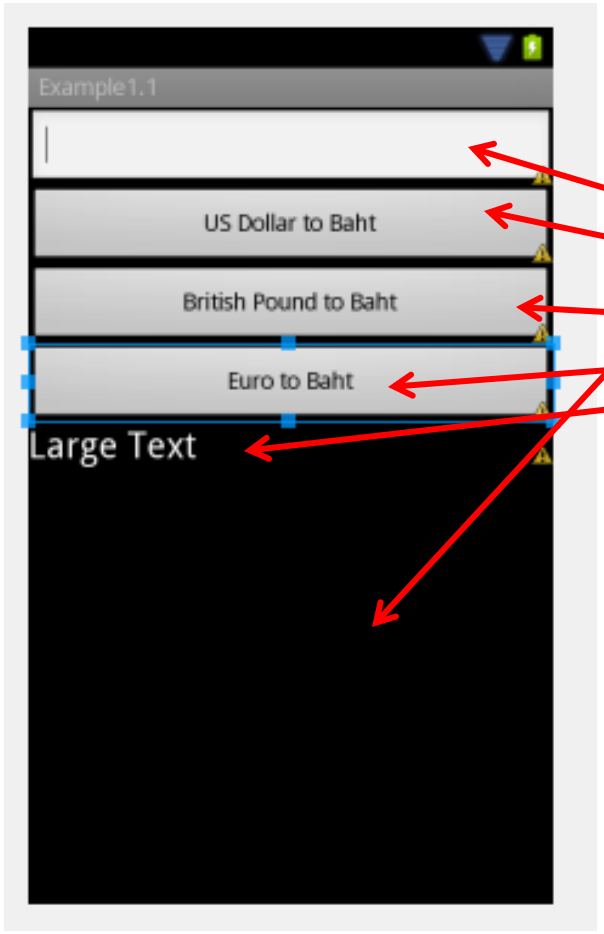


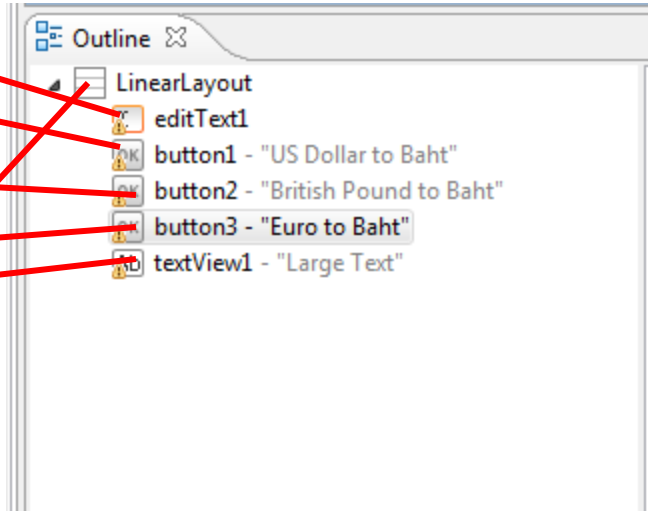
Example 1.1 Currency conversion application

1. Draw layout
2. Instantiations
3. Create and set Onclick listener for Button
4. Get input from edittext and casting to string
5. Write calculation code
6. Casting result to string and set result to textview

Example 1.1 (Layout)







Example 1.1 (Code)

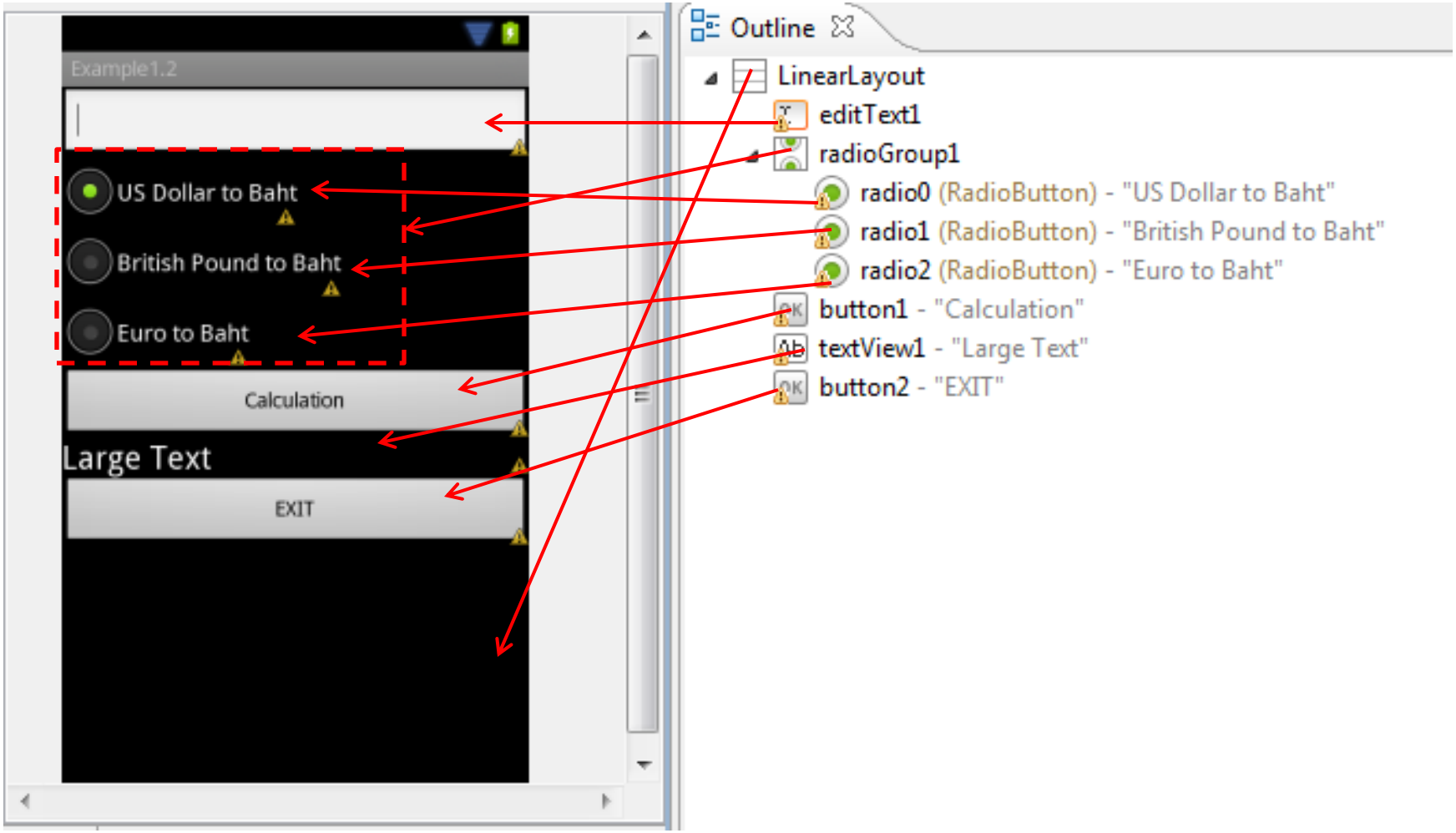
```
public class Android_ex1_1currencyActivity extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);

        Button button1,button2,button3;
        final EditText edittext1;
        final TextView textview1;
        final double dDollar=31.6d;
        final double dPound=49.8d;
        final double dEuro=39.8d;

        // Instantiation
        button1= (Button) this.findViewById(R.id.button1);
        button2=(Button) this.findViewById(R.id.button2);
        button3=(Button) this.findViewById(R.id.button3);
        edittext1=(EditText)this.findViewById(R.id.editText1);
        textview1=(TextView)this.findViewById(R.id.textView1);


        // attach onclicklistener to the Viewclass
        button1.setOnClickListener(new View.OnClickListener() {
                @Override
            public void onClick(View v) {
                // TODO Auto-generated method stub



            }
        });
```

Create variable

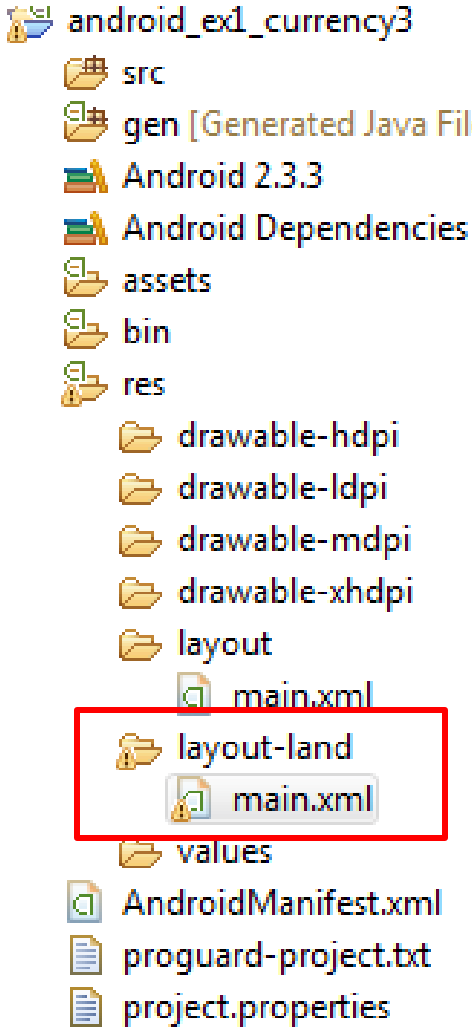
Instantiations

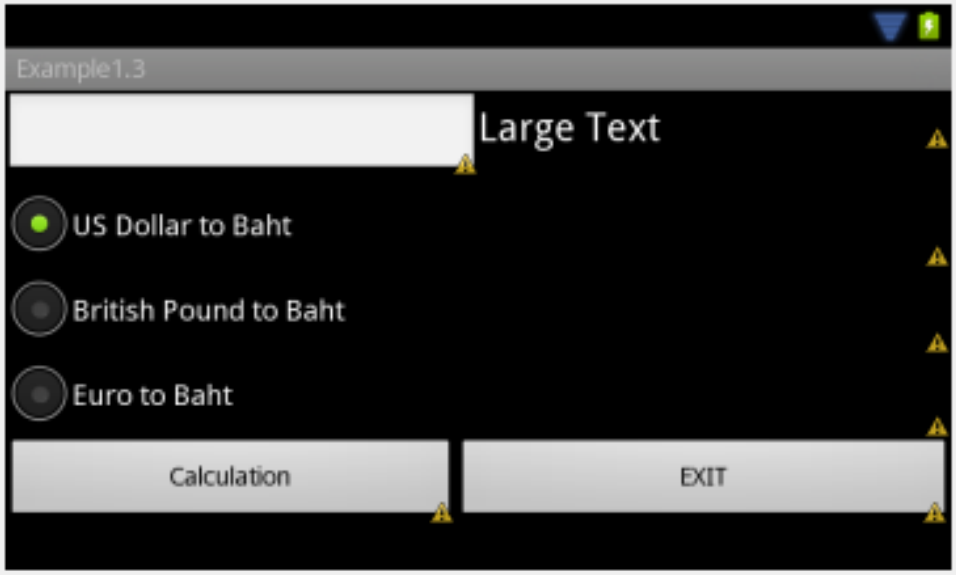
Set onClick listener

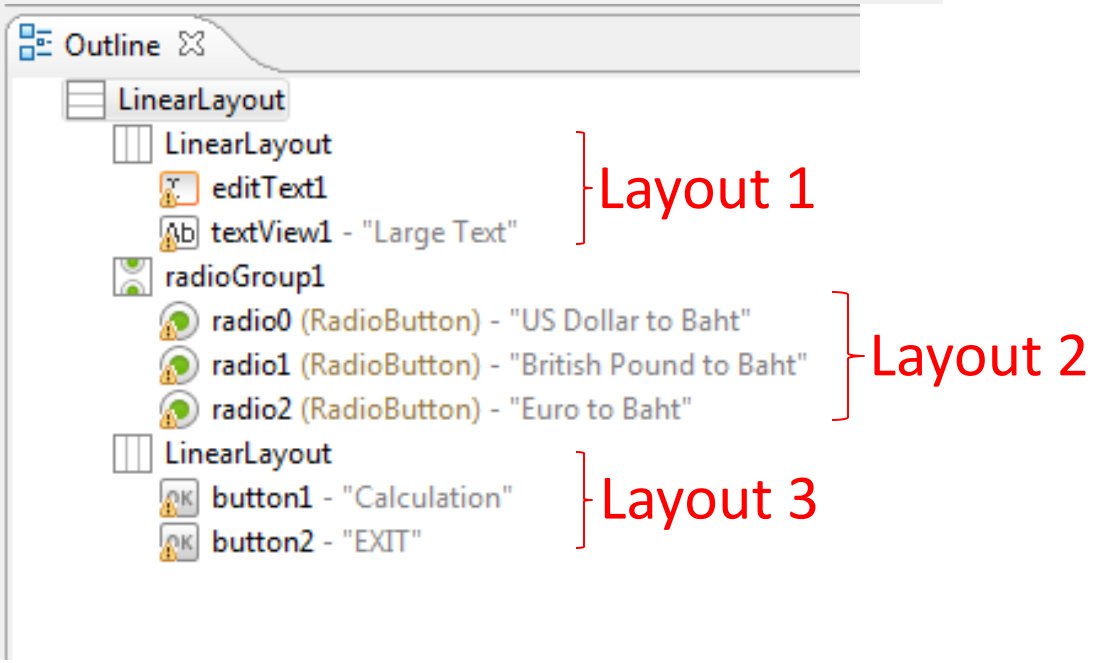
Example 1.2


Example1.2
US Dollar to Baht
British Pound to Baht
Euro to Baht
Calculation
Large Text
EXIT
Outline
LinearLayout
editText1
radioGroup1
radio0 (RadioButton) - "US Dollar to Baht"
radio1 (RadioButton) - "British Pound to Baht"
radio2 (RadioButton) - "Euro to Baht"
button1 - "Calculation"
textView1 - "Large Text"
button2 - "EXIT"

Example 1.3


android_ex1_currency3
src
gen [Generated Java Files]
Android 2.3.3
Android Dependencies
assets
bin
res
drawable-hdpi
drawable-ldpi
drawable-mdpi
drawable-xhdpi
layout
main.xml
layout-land
main.xml
values
AndroidManifest.xml
proguard-project.txt
project.properties


Example1.3
Large Text
US Dollar to Baht
British Pound to Baht
Euro to Baht
Calculation
EXIT


Outline
LinearLayout
LinearLayout
editText1
textView1 - "Large Text"
radioGroup1
radio0 (RadioButton) - "US Dollar to Baht"
radio1 (RadioButton) - "British Pound to Baht"
radio2 (RadioButton) - "Euro to Baht"
LinearLayout
button1 - "Calculation"
button2 - "EXIT"
Layout 1
Layout 2
Layout 3

Thank you ☺