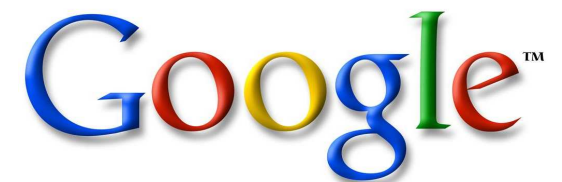


# Android Introduction

Hello World





# Goal

- Create a very simple application
- Run it on a real device
- Run it on the emulator
- Examine its structure





# Google Tutorial

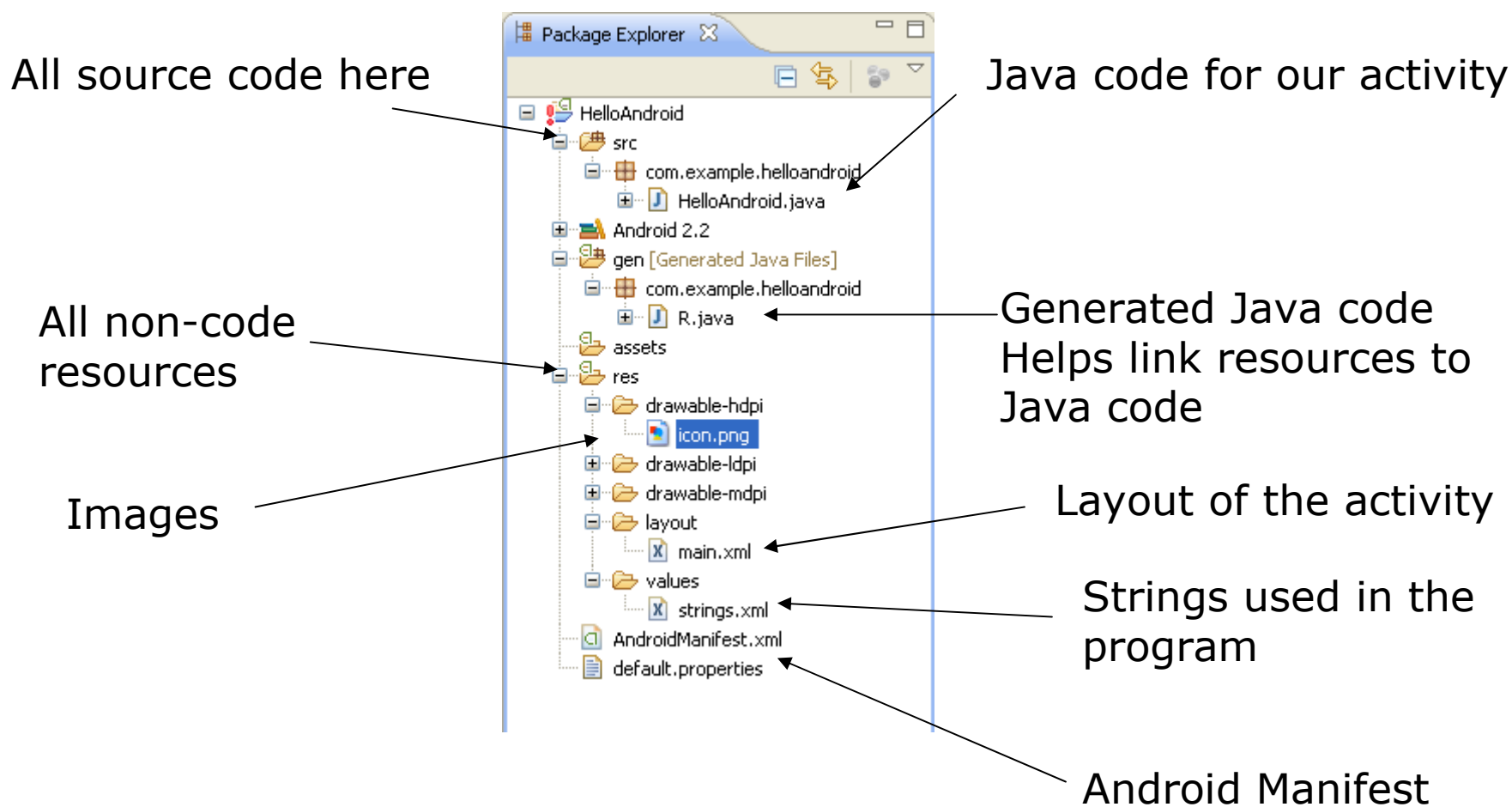
---

- We will follow the tutorial at:  
<http://developer.android.com/resources/tutorials/hello-world.html>
- Start Eclipse (Start -> All Programs -> Eclipse)
- Create an Android Virtual Device (AVD)
- Create a New Android Project





# Package Content





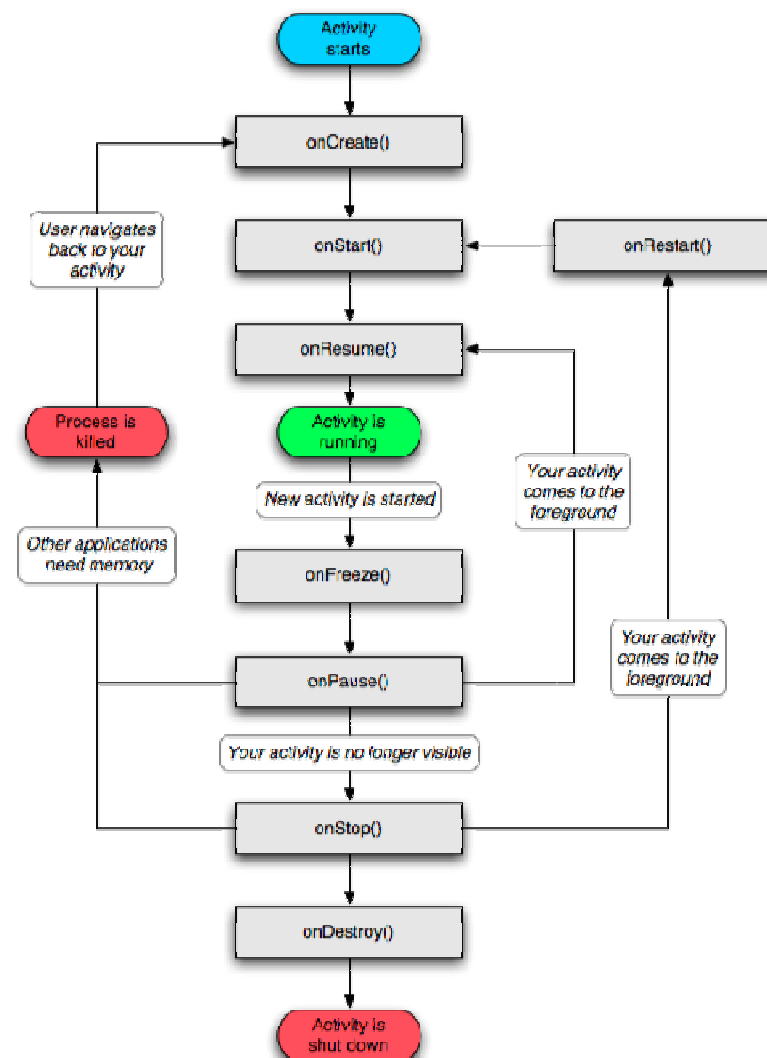
# Android Manifest

- `<?xml version="1.0" encoding="utf-8"?>`
- `<manifest xmlns:android="http://schemas.android.com/apk/res/android"`
- `package="com.example.helloandroid"`
- `android:versionCode="1"`
- `android:versionName="1.0">`
- `<application android:icon="@drawable/icon" android:label="@string/app_name">`
- `<activity android:name=".HelloAndroid"`
- `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>`
- `</manifest>`



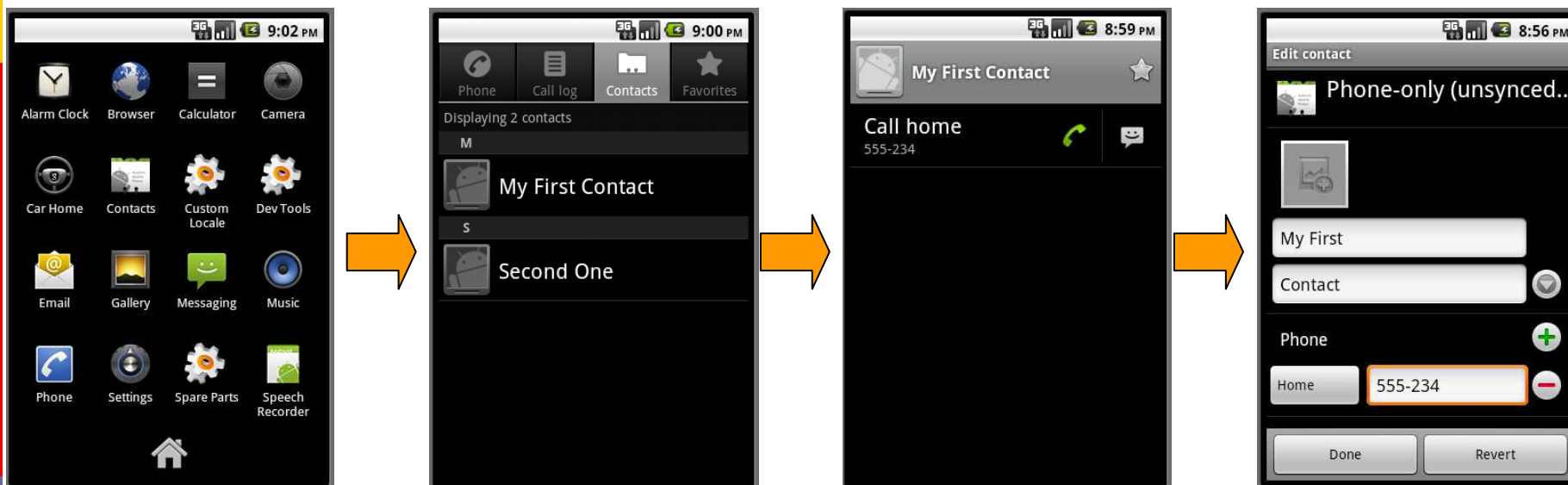
# Activity

- An Android activity is focused on a single thing a user can do.
- Most applications have multiple activities





# Activities start each other





# Revised HelloAndroid.java

```
package com.example.helloandroid;
```

```
import android.app.Activity;  
import android.os.Bundle;
```

```
import android.widget.TextView;
```

```
public class HelloAndroid extends Activity {  
    /** Called when the activity is first created. */  
    @Override  
    public void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        TextView tv = new TextView(this);  
        tv.setText("Hello, Android – by hand");  
        setContentView(tv);  
    }  
}
```

Inherit  
from the  
Activity  
Class

Set the view “by  
hand” – from the  
program







# Run it!

---





# /res/layout/main.xml

---

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
  xmlns:android="http://schemas.android.com/apk/res/android"
  android:orientation="vertical"
  android:layout_width="fill_parent"
  android:layout_height="fill_parent"
  >
  <TextView
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:text="@string/hello"
  />
</LinearLayout>
```

Further redirection to  
[/res/values/strings.xml](#)





# /res/values/strings.xml

---

```
<?xml version="1.0" encoding="utf-8"?>
<resources>
  <string name="hello">Hello World, HelloAndroid – by resources!</string>
  <string name="app_name">Hello, Android</string>
</resources>
```





# HelloAndroid.java

---

```
package com.example.helloandroid;

import android.app.Activity;
import android.os.Bundle;
public class HelloAndroid extends Activity {

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

Set the layout of the view as described in the main.xml layout





# /gen/R.java

---

```
package com.example.helloandroid;

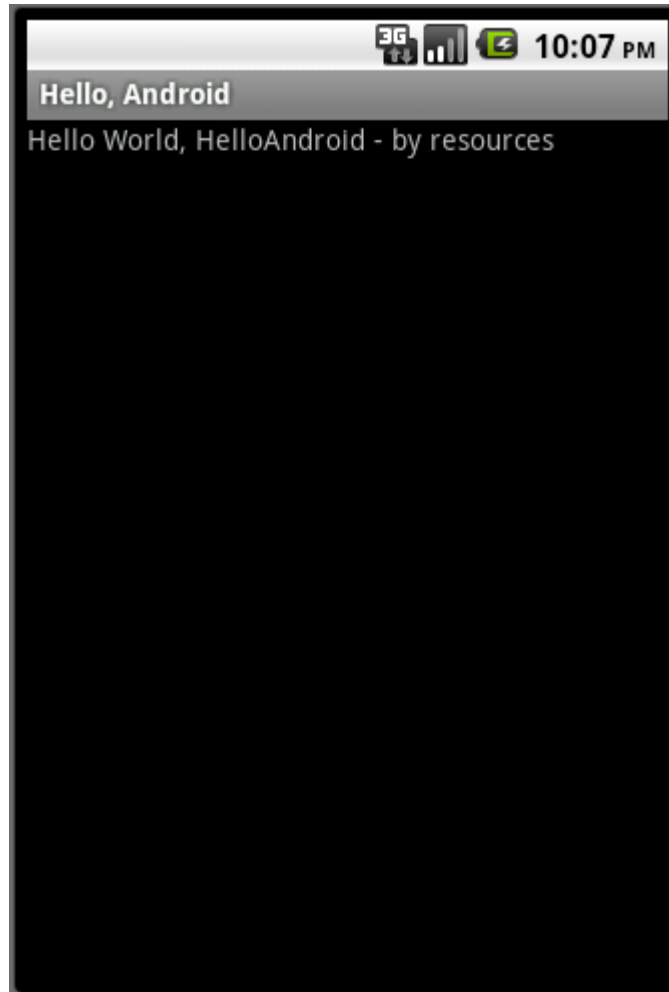
public final class R {
    public static final class attr {
    }
    public static final class drawable {
        public static final int icon=0x7f020000;
    }
    public static final class id {
        public static final int textview=0x7f050000;
    }
    public static final class layout {
        public static final int main=0x7f030000;
    }
    public static final class string {
        public static final int app_name=0x7f040001;
        public static final int hello=0x7f040000;
    }
}
```





# Run it!

---





# Introduce a bug

---

```
package com.example.helloandroid;

import android.app.Activity;
import android.os.Bundle;

public class HelloAndroid extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        Object o = null;
        o.toString();
        setContentView(R.layout.main);
    }
}
```





# Run it!

