

MODULE 3

VIEW

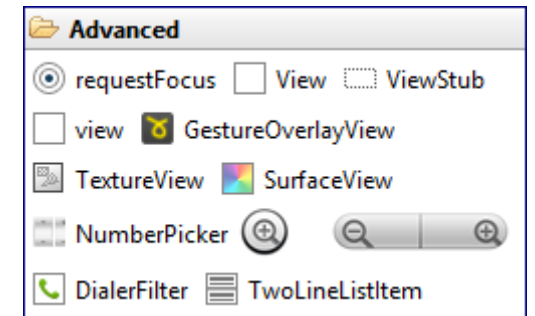
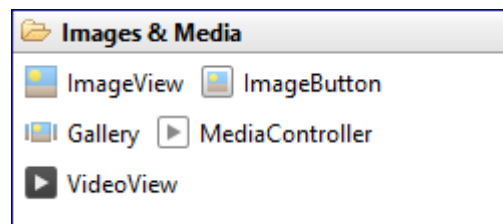
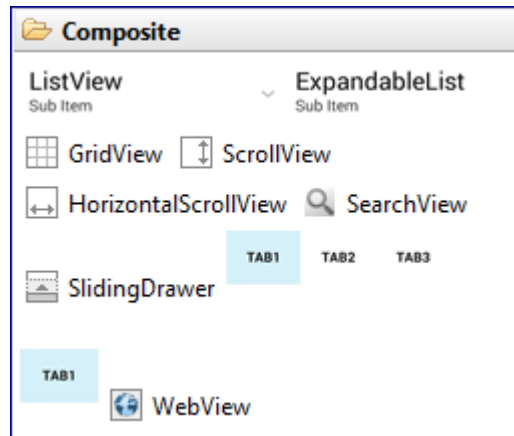
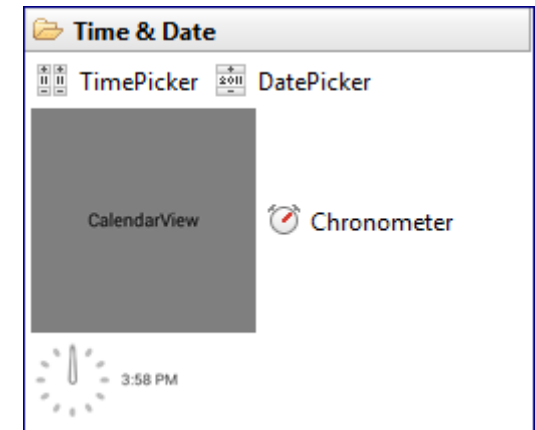
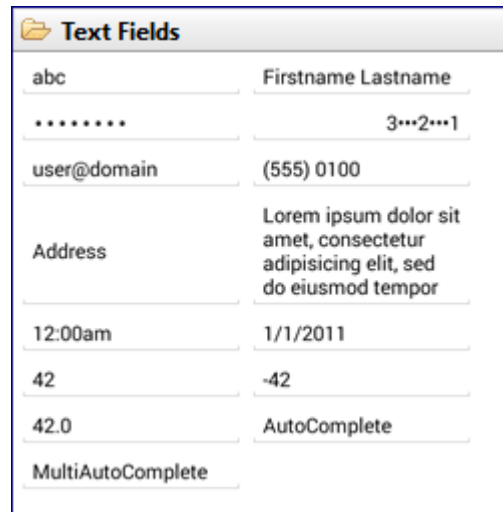
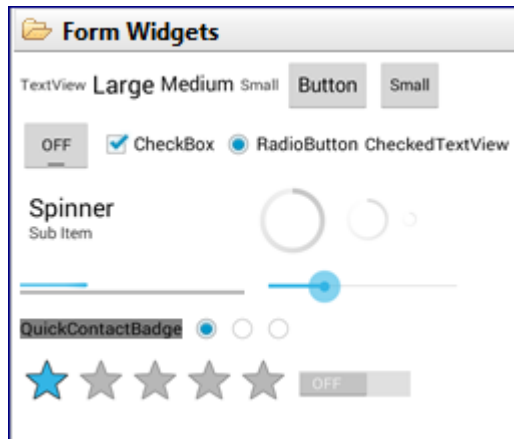
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Android Views

- ▶ GUI components
 - Components on the screen
 - To interact with the user
- ▶ Widgets
 - Cfr C# control

Android Views



Assigning an ID to a View

- ▶ To access views from XML files into Java code
- ▶ Add an ID to a view
 - Will be stored in **R.id**
 - Through `android:id="@+id/identifierName"`
 - Where the (+) sign means that this is a new resource name that must be created and added to resources (in the R.java file)
 - E.g,

```
<TextView  
    android:id="@+id/helloText"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:text="@string/hello_world" />
```

Assigning an ID to a View

- ▶ To use views into Java code
 - Through **findViewById** method
 - Argument: **R.id.identifierName**
 - Casting to do !
 - E.g,

```
public class MainActivity extends Activity {  
  
    private TextView mess;  
  
    @Override  
    protected void onCreate(Bundle savedInstanceState) {  
        super.onCreate(savedInstanceState);  
        setContentView(R.layout.activity_main);  
        mess = (TextView) findViewById(R.id.helloText);  
        mess.setText("Welcome");  
    }  
}
```

Using String Resource

- ▶ Do not hardcode String values!
- ▶ Better to define String resources in external XML file
 - Easier to maintain
 - E.g, for internationalization

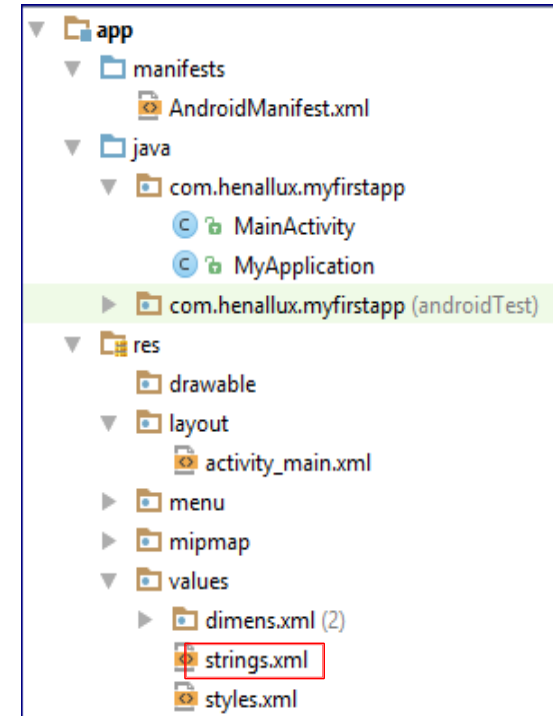
Using String Resource

- ▶ Add new resource entry in strings.xml file
 - Through **<string>** tag
 - Attribute **name** : identifies resource
- ▶ E.g,

```
<resources>  
    <string name="app_name">MyFirstApp</string>  
    <string name="action_settings">Settings</string>  
    <string name="hello_world">Hello world</string>  
</resources>
```

Resource identifier

String value



String Resource

► Use String resource

◦ In XML files

- Through `@string/resourceIdentifier`

- E.g,

```
<TextView
    android:id="@+id/helloText"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="@string/hello_world" />
```

◦ In Java

- Through **R.string**

- E.g,

```
String message = getString(R.string.hello_world);
```

```
Toast.makeText(MainActivity.this, R.string.hello_world, Toast.LENGTH_LONG).show();
```

Event Handling

- ▶ In the Activity Java file
- ▶ First, find the view through its Id
- ▶ Then, add listener to the view
 - And implement methods from the interface with the reaction to event

Event Handling

► E.g,

```
import android.app.Activity;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
```

Event Handling

► E.g,

```
public class MainActivity extends Activity {
```

```
    private Button clickMeButton;
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
```

```
        super.onCreate(savedInstanceState);
```

```
        setContentView(R.layout.activity_main);
```

```
        clickMeButton = (Button) findViewById(R.id.clickMeButton);
```

→ Find the control

```
        clickMeButton.setOnClickListener(new OnClickListener() {
```

→ Add listener

```
            @Override
```

```
            public void onClick(View arg0) {
```

```
                Toast.makeText(MainActivity.this, "Welcome!", Toast.LENGTH_SHORT).show();
```

```
            }
```

```
        });
```

```
    }
```

↓
Implement reaction to event

Webography

- ▶ <http://developer.android.com/guide/topics/ui/controls.html>
- ▶ <http://developer.android.com/guide/topics/ui/ui-events.html>