MODULE 3

VIEW

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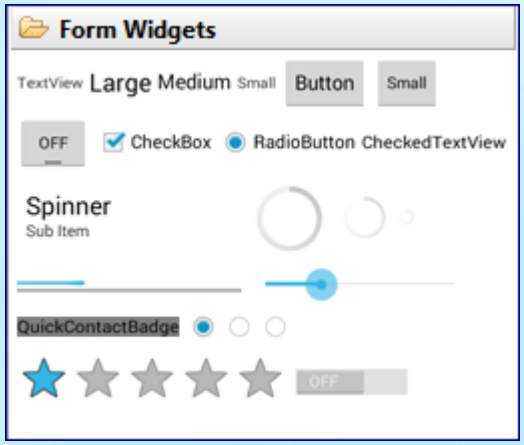
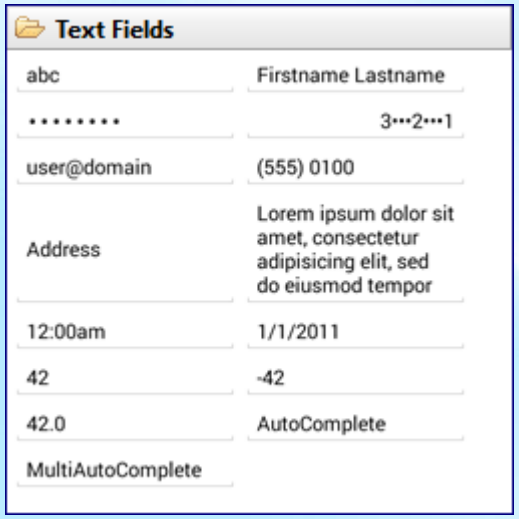
TABLE OF CONTENT

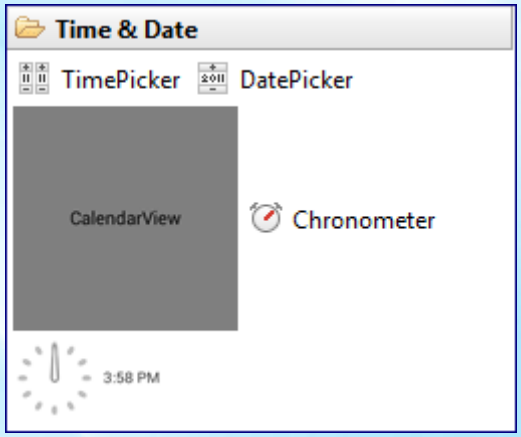
Android Views

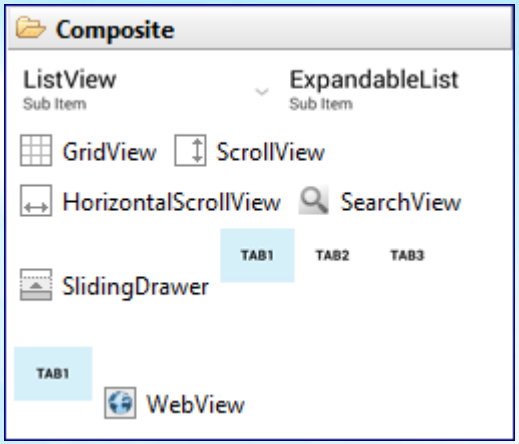
- GUI components
  - Components on the screen
  - To interact with the user
- Widgets
  - Cfr C# control

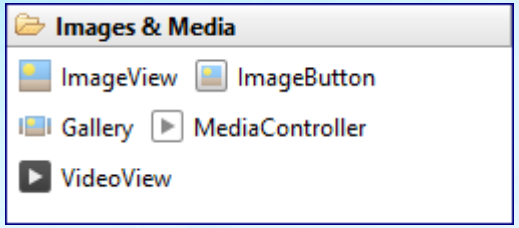
Android Views

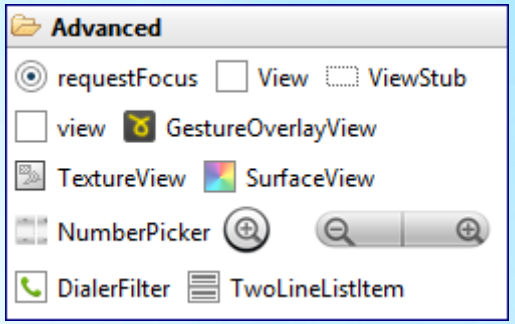












Assigning an ID to a View

- 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,

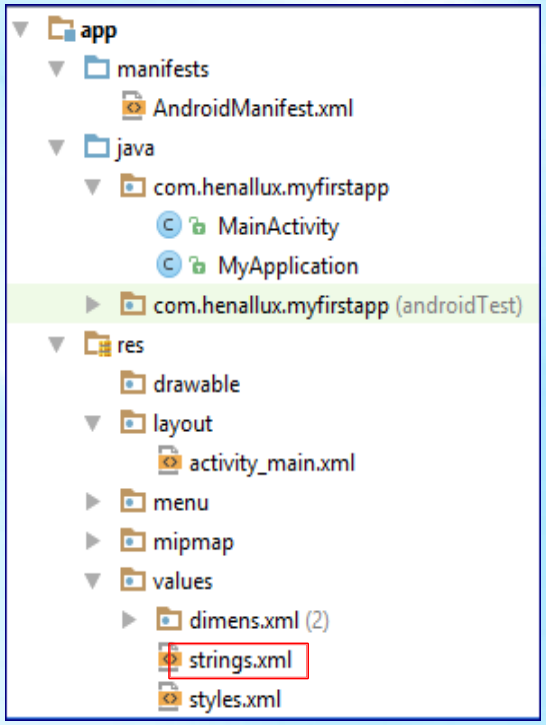
```
public class MainActivity extends Activity {

    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);

      clickMeButton.setOnClickListener(new OnClickListener(){
          @Override
          public void onClick(View arg0) {
              Toast.makeText(MainActivity.this, "Welcome!", Toast.LENGTH_SHORT).show();
          }
      });
  }
```

Find the control

Add listener

Implement reaction to event

Webography

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