

Slide 8.17: Java source code: MainActivity.java (cont.)

Slide 8.19: Java source code: MainActivity.java (cont.)

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Java Source Code (Cont.)

Line 18: [final](#) [EditText](#) name = ([EditText](#)) [findViewById](#)([R.id.name](#));

A final class cannot be extended for reasons of security and efficiency. [EditText](#) is a subclass of [TextView](#) supplied with text editing operations. It is often used in the applications in order to provide an input or text field, especially in forms.

Line 19: [final](#) [Button](#) button = ([Button](#)) [findViewById](#)([R.id.next](#));

The method [findViewById](#) of the class [View](#) looks for a child view with the given id such as [R.id.next](#). If this view has the given id, return this view. The id [next](#) is defined in the file [activity_main](#) as

```
<Button android:id      = "@+id/next"
      android:layout_width = "wrap_content"
      android:layout_height = "wrap_content"
      android:text        = "@string/next_page" />
```

where the text of [next_page](#) is “Next Page” defined in [strings](#).

Line 20: [button.setOnClickListener](#)([View.OnClickListener](#) |)

It is a method of the class [View](#) and registers a callback to be invoked when this view, a button in this case, is clicked. If it is not clickable, it becomes clickable.

Line 21: [new](#) [View.OnClickListener](#)()

It is an interface definition for a callback to be invoked when a view is clicked

Line 22: [public void](#) [onClick](#)([View v](#)) {

It is a method of the class [View.OnClickListener](#) and is called when a view has been clicked

HelloWorld/app/src/main/java/com/example/wenchen/helloworld/MainActivity.java

```
01 package com.example.wenchen.helloworld;
02
03 import android.app.Activity;
04 import android.content.Intent;
05 import android.os.Bundle;
06 import android.view.View;
07 import android.widget.Button;
08 import android.widget.EditText;
09 import android.support.v7.app.AppCompatActivity;
10 import android.view.Menu;
11 import android.view.MenuItem;
12
13 public class MainActivity extends AppCompatActivity {
14     @Override
15     protected void onCreate( Bundle savedInstanceState ) {
16         super.onCreate( savedInstanceState );
17         setContentView( R.layout.activity_main );
18         final EditText name = (EditText) findViewById( R.id.name );
19         final Button button = (Button) findViewById( R.id.next );
20         button.setOnClickListener(
21             new View.OnClickListener( ) {
22                 public void onClick( View v ) {
23                     /** Here i calls a new screen. */
24                     Intent i = new Intent( MainActivity.this, NextActivity.class );
25                     i.putExtra( "name", name.getText( ).toString( ) );
26                     startActivity( i );
27                 }
28             }
29         );
30     }
31
32     @Override
33     public boolean onCreateOptionsMenu( Menu menu ) {
34         // Inflate the menu; this adds items to the action bar if it is present.
35         getMenuInflater( ).inflate( R.menu.menu_main, menu );
36         return true;
37     }
38
39     @Override
40     public boolean onOptionsItemSelected( MenuItem item ) {
41         // Handle action bar item clicks here. The action bar will
42         // automatically handle clicks on the Home/Up button, so long
43         // as you specify a parent activity in AndroidManifest.xml.
44         int id = item.getItemId( );
45
46         // noinspection SimplifiableIfStatement
47         if ( id == R.id.action_settings ) {
48             return true;
49         }
50         else if ( id == R.id.next ) {
51             Intent i = new Intent( MainActivity.this, NextActivity.class );
52             startActivity( i );
53         }
54         return super.onOptionsItemSelected( item );
55     }
56 }
```

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