

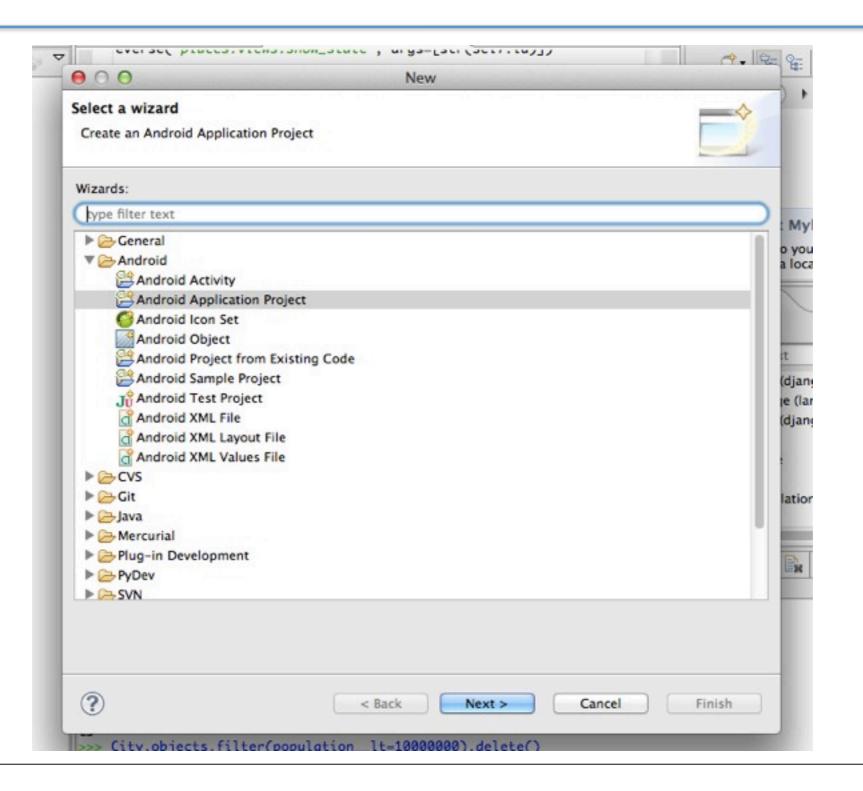
Accelerating Information Technology Innovation

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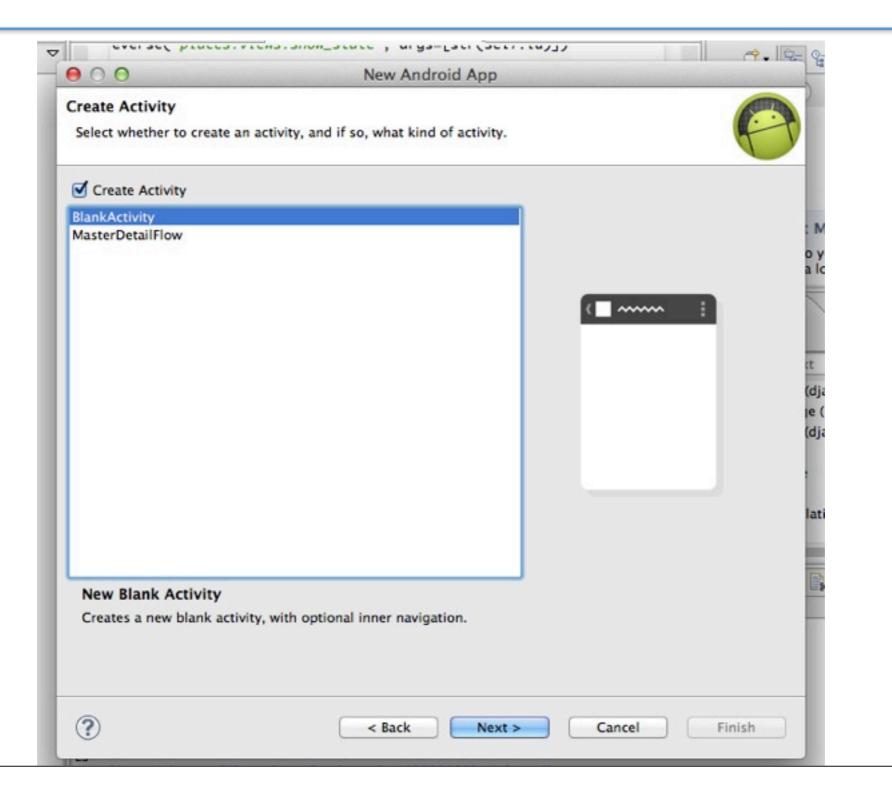
India Summer 2012 Review Session – Android and Web



Create a new Android project. The app name should be "My Review App".

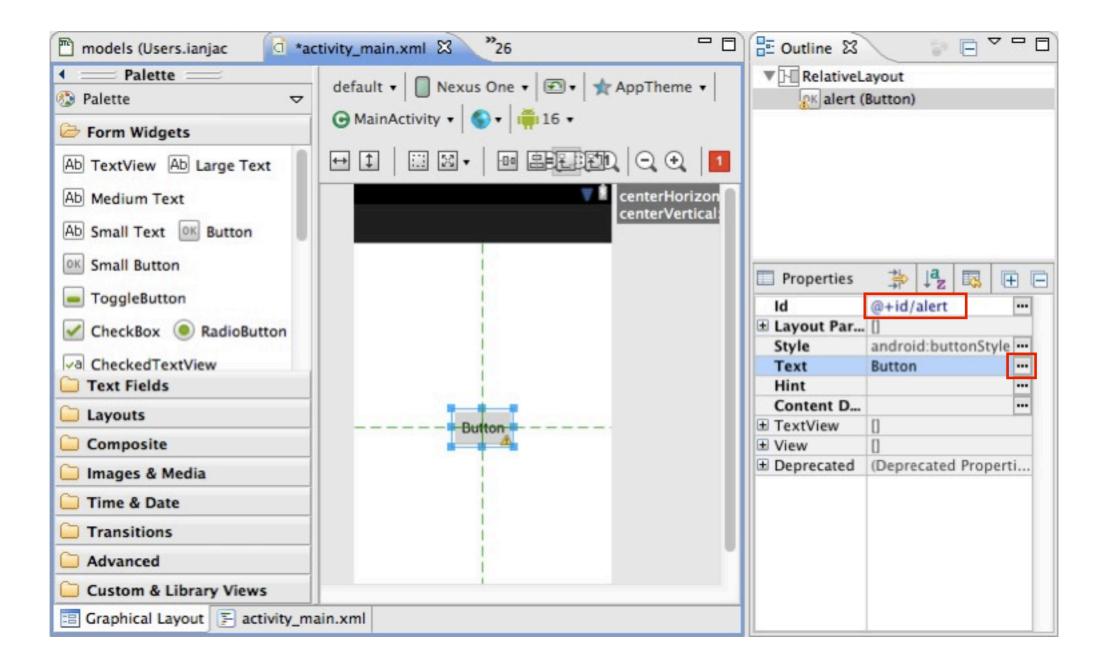


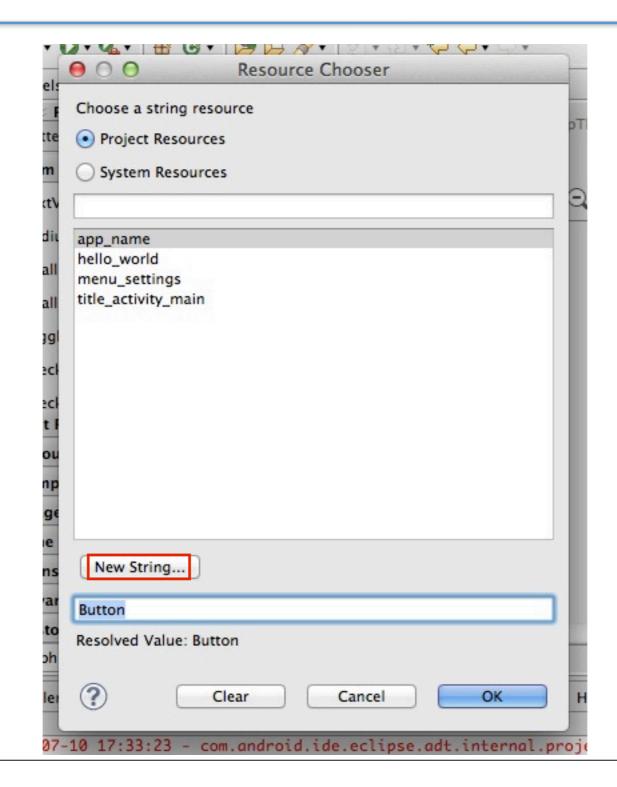
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ew Android Application		0
Application Name: 0	My Review App	
Project Name: 0	My Review App	
Package Name: 6	edu.mit.aiti.india2012.myreviewapp	
Build SDK: 0	Android 4.1 (API 16) ÷	Choose
linimum Required SDK: 0	API 8: Android 2.2 (Froyo) +	
Mark this project as a Create Project in Work		
Location:	/Users/ianjacobi/Documents/AITI Eclipse Workspace/My Review A	Browse
The application name	e is shown in the Play Store, as well as in the Manage Application list in	n Settings.



	New Android App		
lew Blank Activity Creates a new blank	activity, with optional inner navigation.		0
Activity Name 0	MainActivity	····· i	
Layout Name 0	activity_main		
Navigation Type 0	None \$		
Hierarchical Parent 0			
Title 0	MainActivity		
The name of the ac	tivity class to create		
The name of the ac	invity class to create		

Add a button to your starter activity which has the name "Alert Me!" as a string resource





String	Alert Me!			
New R.string.	alert_me			v
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Resource file:	/res/values/string	gs.xml		
Options				
Replace in	all Java files			
		and confi	ouration	
_ Replace in	all XML files for diffe	erent config	guration	

Make the button you created show a Toast notification. When it is clicked it should say "Hello!" ("Hello!" should come from a string resource)

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🗐 Graphical Layout 🔄 activity_ma	ain.xml		

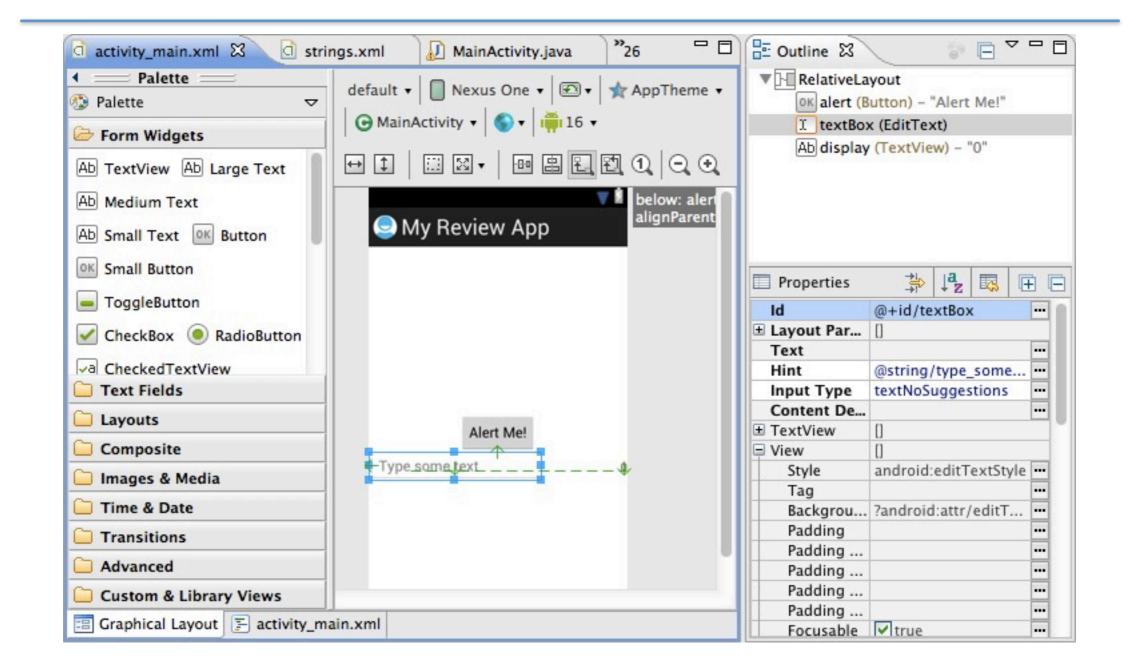
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esources 🗐 strings.xml				

Add an EditText widget below the button with the placeholder text "Type some text" (from a string resource)

Add a TextView with the default text "O" ("O" should be a string resource) The TextView should be to the right of the EditText



Remember to set android: inputType="textNoSuggestions" in the EditText XML!

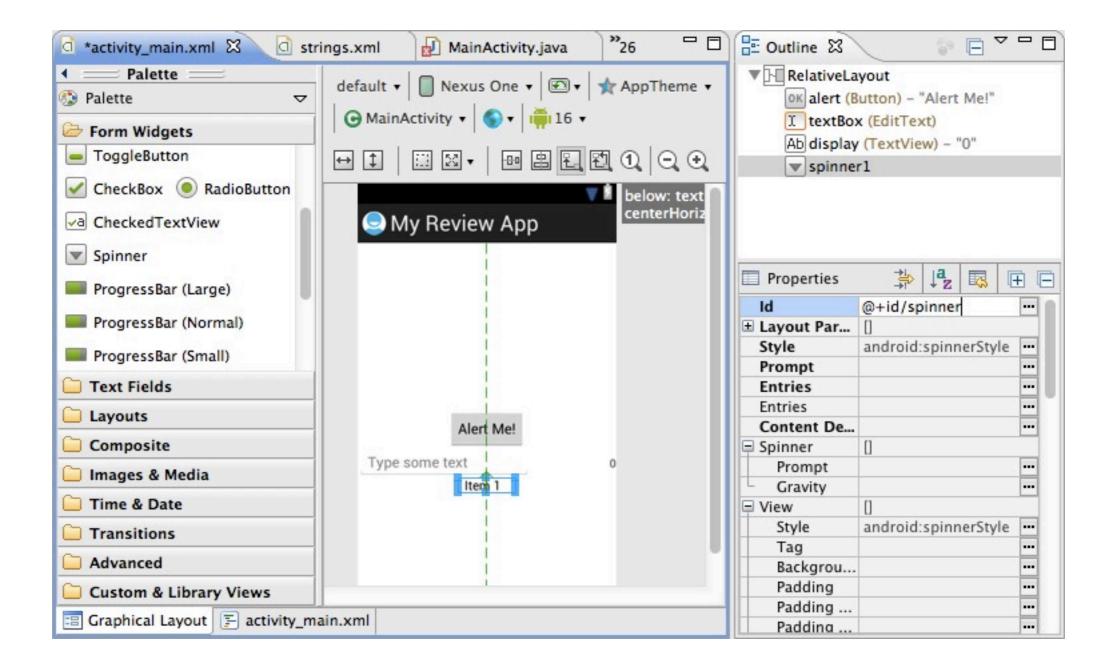
Change the button so that it divides 5 by the number in the EditText and saves the value in the TextView.

If the EditText value is not a number, the Toast should appear and say "Not a number"

```
public class MainActivity extends Activity {
    public void onAlertClicked(View myView) {
        EditText t = (EditText) findViewById(R.id.textBox);
        String value = t.getText().toString();
        try {
            double d = Double.parseDouble(value);
            TextView tv = (TextView)
                findViewById(R.id.display);
            tv.setText(String.valueOf(5 / d));
        } catch (NumberFormatException e) {
            Toast.makeText(this, getString(R.string.bad_no),
                           Toast.LENGTH_SHORT)
                 .show();
        }
    }
```

Add a spinner and populate it with the string values from 1 to 10.

Populate it using an Adapter when the activity starts.



```
public class MainActivity extends Activity {
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
```

```
String[] values = {"1", "2", "3", "4", "5",
                               "6", "7", "8", "9", "10"};
ArrayAdapter<String> adapter =
    new ArrayAdapter<String>(
        this, android.R.layout.simple_spinner_item,
        values);
Spinner spinner =
        (Spinner) findViewById(R.id.spinner);
spinner.setAdapter(adapter);
```

}

Change the button so that it divides the number in the spinner rather than 5.

```
public class MainActivity extends Activity {
    public void onAlertClicked(View myView) {
        EditText t = (EditText) findViewById(R.id.textBox);
        String value1 = t.getText().toString();
        Spinner s = (Spinner) findViewById(R.id.spinner);
        String value2 = s.getSelectedItem().toString();
        try {
            double d1 = Double.parseDouble(value1);
            double d2 = Double.parseDouble(value2);
            TextView tv = (TextView)
                findViewById(R.id.display);
            tv.setText(String.valueOf(d2 / d1));
        } catch (NumberFormatException e) {
            Toast.makeText(this, getString(R.string.bad_no),
                           Toast.LENGTH_SHORT)
                 .show();
        }
    }
}
```

Break!

Add an item to the main activity's menu that says "List" ("List" should come from a string resource)

Make it work in an Action Bar.

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		Alphabetic shortcut		Browse
		Numeric shortcut		Browse
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		Visible		•
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		On click		Browse
		Show as action	always	Select

Make the "List" menu item give a Toast notification that says "List" when it is clicked. (This can use the same string resource)

```
public class MainActivity extends Activity {
    public boolean onOptionsItemSelected(MenuItem item) {
        switch (item.getItemId()) {
        case R.id.menu_list:
            Toast.makeText(this, getString(R.string.list),
                            Toast.LENGTH_SHORT)
                 .show();
            return true;
        default:
            return super.onOptionsItemSelected(item);
        }
    }
```

Create a new activity named "ListActivity".

Add a ListView to it.

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Change the "List" menu item so that it starts the ListActivity.

```
public class MainActivity extends Activity {
    public boolean onOptionsItemSelected(MenuItem item) {
        switch (item.getItemId()) {
        case R.id.menu_list:
            Intent startListActivity =
              new Intent(this, ListActivity.class);
            startActivity(startListActivity);
            return true;
        default:
            return super.onOptionsItemSelected(item);
        }
    }
```

Populate the ListView with the same numbers 1 through 10 that we used with the spinner.

```
public class ListActivity extends Activity {
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_list);
```

```
String[] values = {"1", "2", "3", "4", "5",
                               "6", "7", "8", "9", "10"};
ArrayAdapter<String> adapter =
    new ArrayAdapter<String>(
        this, android.R.layout.simple_list_item_1,
        values);
ListView list =
        (ListView) findViewById(R.id.list);
list.setAdapter(adapter);
```

}

Make the ListView give a Toast notification containing the number clicked when a row in the ListView is clicked.

```
public class ListActivity extends Activity {
    public void onCreate(Bundle savedInstanceState) {
        /* ... */
        ListView list =
            (ListView) findViewById(R.id.list);
        list.setOnItemClickListener(
          new OnItemClickListener() {
            public void onItemClick(AdapterView<?> parent,
              View view, int pos, long id) {
              Toast.makeText(getApplicationContext(),
                             parent.getItemAtPosition(pos),
                             Toast.LENGTH_SHORT).show();
        });
```

Break!