Accelerating Information Technology Innovation

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India Summer 2012 Review Session – Android and Web
Working with Views
Working with Views

Create a new Android project. The app name should be “My Review App”.
Working with Views
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Add a button to your starter activity which has the name “Alert Me!” as a string resource.
Working with Views
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Working with Views

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

Create a new element at the top level, in Resources.

- Color
- Dimension
- Drawable
- Integer Array
- Item
- String
- String Array
- Style/Theme
Working with Views
public class MainActivity extends Activity {
    /* ... */

    public void onAlertClicked(View myView) {
        Toast.makeText(this, getString(R.string.hello),
                Toast.LENGTH_SHORT)
                .show();
    }
}

Working with Views
Working with Views

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 “0” (“0” should be a string resource)
The TextView should be to the right of the EditText
Working with Views

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();
        }
    }
}

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Working with Views

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

*Populate it using an Adapter when the activity starts.*
Working with Views
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);
    }
}
Working with Views

*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!
Navigation
Navigation

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.
Navigation
Navigation
Navigation
Navigation

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.
Navigation
Navigation

Select a wizard
Create an Android Activity

Wizards:
- type filter text

- General
- Android
  - Android Activity
    - Android Application Project
    - Android Icon Set
    - Android Object
    - Android Project from Existing Code
    - Android Sample Project
    - Android Test Project
    - Android XML File
    - Android XML Layout File
    - Android XML Values File
- CVS
- Git

1 error, 9 warnings, 0 others
Navigation
Change the “List” menu item so that it starts the ListActivity.
Navigation

```java
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);
        }
    }
}
```
Navigation

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_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);
    }
}
Navigation

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!