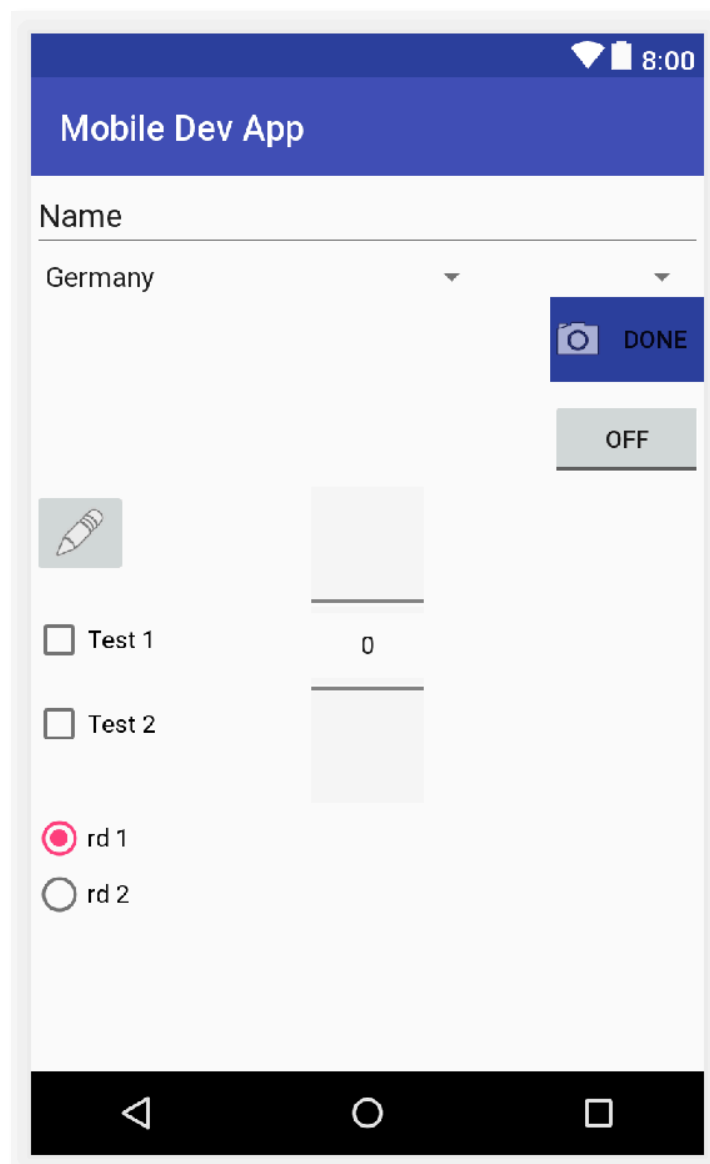


Lab 2: User Interface

Objective

1. To learn how to implement UI elements
2. To create a simple app with multiple UI elements

1. Create UI elements
 - Create a new Activity named as "Week2_UI"



```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:app="http://schemas.android.com/apk/res-auto"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    tools:context=".Week2_UI">

    <EditText
        android:id="@+id/name"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:ems="10"
        android:inputType="textPersonName"
        android:text="Name"
        tools:layout_editor_absoluteX="64dp"
        tools:layout_editor_absoluteY="14dp" />

    <Spinner
        android:id="@+id/team"
        android:layout_width="260dp"
        android:layout_height="wrap_content"
        android:layout_alignParentLeft="true"
        android:layout_below="@+id/name"
        android:layout_toLeftOf="@+id/times"
        android:entries="@array/team"
        />

    <Spinner
        android:id="@+id/times"
        android:layout_width="120dp"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_below="@+id/name" />

    <Button
        android:id="@+id/button6"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentRight="true"
        android:layout_below="@+id/times"
        android:background="@drawable/button_custom"
        android:drawableLeft="@android:drawable/ic_menu_camera"
        android:text="@string/done" />

    <ImageButton
        android:id="@+id/imageButton"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignParentStart="true"
        android:layout_alignParentTop="true"
        android:layout_marginTop="178dp"
        app:srcCompat="@android:drawable/ic_menu_edit" />

    <CheckBox
        android:id="@+id/checkbox2"
        android:layout_width="86dp"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_alignParentStart="true"
        android:layout_marginBottom="182dp"
        android:text="Test 2" />

    <CheckBox
        android:id="@+id/checkbox1"
        android:layout_width="88dp"
        android:layout_height="wrap_content"
        android:layout_alignParentBottom="true"
        android:layout_marginBottom="230dp"
        android:text="Test 1" />

```

```

<RadioGroup
    android:id="@+id/rdg"
    android:layout_width="227dp"
    android:layout_height="wrap_content"
    android:layout_alignParentBottom="true"
    android:layout_marginBottom="85dp" >

    <RadioButton
        android:id="@+id/radioButton1"
        android:layout_width="68dp"
        android:layout_height="wrap_content"
        android:layout_centerVertical="true"
        android:checked="true"
        android:text="rd 1" />

    <RadioButton
        android:id="@+id/radioButton2"
        android:layout_width="71dp"
        android:layout_height="wrap_content"
        android:layout_alignTop="@+id/checkbox2"
        android:text="rd 2" />

```

```
</RadioGroup>
```

```

<NumberPicker
    android:id="@+id/numberPicker"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_alignTop="@+id/imageButton"
    android:layout_centerHorizontal="true"
    android:layout_x="169dp"
    android:layout_y="284dp"
    tools:layout_editor_absoluteX="221dp"
    tools:layout_editor_absoluteY="266dp" />

```

```

<ToggleButton
    android:id="@+id/toggleButton"
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_above="@+id/imageButton"
    android:layout_alignParentEnd="true"
    android:layout_marginBottom="-175dp"
    android:text="ToggleButton" />

```

```
</RelativeLayout>
```

```

package [your package];
import android.support.v7.app.AppCompatActivity;
import android.os.Bundle;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
import android.widget.CheckBox;
import android.widget.NumberPicker;
import android.widget.RadioButton;
import android.widget.Spinner;
import android.widget.Toast;

public class Week2_UI extends AppCompatActivity {

    CheckBox ch1, ch2;

    RadioButton rdb1, rdb2;

    Spinner teamSpinner;

```

```

NumberPicker pickers;

@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_week2__ui);

    ch1 = findViewById(R.id.checkBox1);
    ch2 = findViewById(R.id.checkBox2);

    rdb1 = findViewById(R.id.radioButton1);
    rdb2 = findViewById(R.id.radioButton2);

    teamSpinner = findViewById(R.id.team);

    final String[] teamList = getResources().getStringArray(R.array.team);

    ArrayAdapter<String> adapter = new ArrayAdapter<String>(this,
        android.R.layout.simple_spinner_dropdown_item, teamList);

    teamSpinner.setAdapter(adapter);

    teamSpinner.setOnItemClickListener(new
        AdapterView.OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> parent, View view, int
                position, long id) {
                Toast.makeText(Week2_UI.this, "Select : " + teamList[position],
                    Toast.LENGTH_SHORT).show();
            }

            @Override
            public void onNothingSelected(AdapterView<?> parent) {

            }
        });

    rdb1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            testRadioButtonCheck(view);
        }
    });

    rdb2.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            testRadioButtonCheck(view);
        }
    });

    ch1.setOnClickListener(new View.OnClickListener() {
        @Override
        public void onClick(View view) {
            // Is the view now checked?
            boolean checked = ((CheckBox) view).isChecked();
            Toast.makeText(getApplicationContext(), ((CheckBox)
                view).getText()+" is "+checked, Toast.LENGTH_SHORT).show();
        }
    });
}

```

```

ch2.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        // Is the view now checked?
        boolean checked = ((CheckBox) view).isChecked();
        Toast.makeText(getApplicationContext(),view.getId()+" is
        "+checked,Toast.LENGTH_SHORT).show();
    }
});

pickers = (NumberPicker)findViewById(R.id.numberPicker);

final String[] arrayPicker= new String[]{"Red", "Blue", "Green",
"Yellow", "Gray"};

//set min value zero
pickers.setMinValue(0);

//set max value from length array string reduced 1
pickers.setMaxValue(arrayPicker.length - 1);

//implement array string to number picker
pickers.setDisplayedValues(arrayPicker);

//set wrap true or false, try it you will know the difference
pickers.setWrapSelectorWheel(true);

pickers.setOnValueChangedListener(new
NumberPicker.OnValueChangeListener() {
    @Override
    public void onValueChange(NumberPicker picker, int oldVal, int
    newVal) {

        String color = arrayPicker[picker.getValue()];
        Toast.makeText(getApplicationContext(),color,
        Toast.LENGTH_SHORT).show();

    }
});
}

void testRadioButtonCheck(View view){
    // Is the button now checked?
    boolean checked = ((RadioButton) view).isChecked();
    String result = "";
    // Check which radio button was clicked
    switch(view.getId()) {
        case R.id.radioButton1:
            if (checked)
                result = "rd 1";
            break;
        case R.id.radioButton2:
            if (checked)
                result = "rd 2";
            break;
    }
    Toast.makeText(getApplicationContext(),result,Toast.LENGTH_SHORT).show();
}
}

```

2. Create a simple Mobile Survey App

Survey App

Name SurName

☒ Male ☐ Female Age

Address

Your favorite drink

☐ coffee ☐ water ☐ coke

☐ other _____

Your favorite food

result

Submit

Peter Pan

Male

Age: 25

Address: 30/125 Nongchok Road

My favorite drink: Coffee, Pepsi

My favorite food: Noodle