

Lab 3: Currency Converter App Exercise

The two radio buttons are added within a RadioGroup container. To spread two textfield components across the width of the device weight attributes have been set with a ratio 25/75 (and set widths to 0dp instead of wrap_content)

Identify the id's of the components you will need to use. As with the BMI app the action will be in, or called, from the onClick() method. So a first step is to check that this method is called when the button is pressed. The next step might be to check that you can get input and create output, similar to the BMI app, without doing the conversion calculation.

Finally address doing the calculation. You will need a value for the conversion rate, so include:

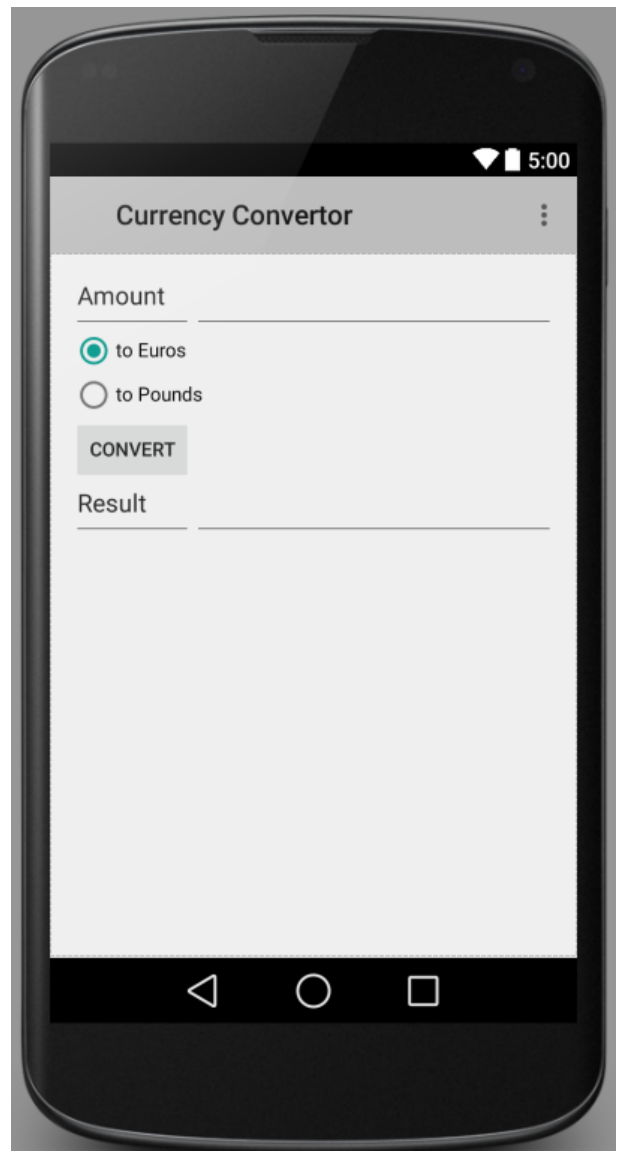
```
private float EUROS_TO_POUND = 0.82f;  
// Our currency exchange rate
```

Two methods to do the conversion either way would be useful

```
private float poundToEuros(float value) {  
    return (value / EUROS_TO_POUND);  
}  
private float eurosToPound(float value){  
    return value * EUROS_TO_POUND;  
}
```

Obviously the tricky bit is to determine which radiobutton is selected and which of these methods to call:

```
RadioButton cbSelected =  
RadioButton)findViewById(R.id.radPounds);  
if (cbSelected.isChecked()) { // Pounds  
    exchange = eurosToPound(myAmount);  
}  
else {  
    exchange = poundToEuros(myAmount);  
}
```



```
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:paddingLeft="@dimen/activity_horizontal_margin"
    android:paddingRight="@dimen/activity_horizontal_margin"
    android:paddingTop="@dimen/activity_vertical_margin"
    android:paddingBottom="@dimen/activity_vertical_margin"
    tools:context=".Converter"
    android:orientation="vertical">
```

```
<LinearLayout
    android:orientation="horizontal"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content">
```

```
<EditText
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:id="@+id/editText"
    android:layout_weight="25"
    android:text="Amount" />
```

```
<EditText
    android:layout_width="0dp"
    android:layout_height="wrap_content"
    android:layout_weight="75"
    android:id="@+id/txtAmount" />
```

```
</LinearLayout>
```

```
<RadioGroup
    android:layout_width="fill_parent"
    android:layout_height="wrap_content">
```

```
<RadioButton
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="to Euros"
    android:id="@+id/radEuros"
    android:checked="true" />
```

```
<RadioButton
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="to Pounds"
    android:id="@+id/radPounds"
    android:checked="false" />
```

```
</RadioGroup>
```

```
<Button
```

```
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:text="Convert"
    android:id="@+id/btnConvert"
    android:onClick="convertClickHandler" />
```

```
<LinearLayout
    android:orientation="horizontal"
    android:layout_width="fill_parent"
    android:layout_height="wrap_content">
```

```
    <EditText
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="25"
        android:text="Result"
        android:id="@+id/textView" />
```

```
    <EditText
        android:layout_width="0dp"
        android:layout_height="wrap_content"
        android:layout_weight="75"
        android:id="@+id/txtResult" />
```

```
</LinearLayout>
</LinearLayout>
```

```
import android.support.v7.app.ActionBarActivity;
import android.os.Bundle;
import android.view.Menu;
import android.view.MenuItem;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.RadioButton;
import android.widget.Toast;
```

```
public class MainActivity extends ActionBarActivity implements View.OnClickListener{
    Button myButton;
    private float EUROS_TO_POUND = 1.22f;
```

```
    @Override
```

```
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        myButton = (Button)findViewById(R.id.btnConvert);
        myButton.setOnClickListener(this);
    }
```

```
    public void onClick(View view) {
        //Toast.makeText(this, "Button has been clicked.", Toast.LENGTH_LONG).show();
        float exchange;
        EditText inputValueText = (EditText)findViewById(R.id.txtAmount);
        float myAmount = Float.parseFloat(inputValueText.getText().toString());
        RadioButton cbSelected = (RadioButton)findViewById(R.id.radPounds);

        if(cbSelected.isChecked()){ // Pounds
            exchange = eurosToPound(myAmount);
        } else {
            exchange = poundToEuros(myAmount);
        }
    }
```

```
    EditText outputValueText = (EditText)findViewById(R.id.txtResult);
    outputValueText.setText(String.valueOf(exchange));
```

```
}
```

```
    private float poundToEuros(float value){
        return (value / EUROS_TO_POUND);
    }
```

```
    private float eurosToPound(float value){
        return value * EUROS_TO_POUND;
    }
```