**Zaawansowane Programowanie Obiektowe I**

Laboratorium 8: Wstęp do programowania na platformie Android

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P10-78a (wt.11:15)

**Zadanie 1**

* 1. **Rozwiązanie zadania**

@@@activity\_main.xml

<?xml version="1.0" encoding="utf-8"?>  
<LinearLayout 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"  
 android:orientation="vertical"  
 tools:context=".MainActivity">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="622dp"  
 android:layout\_margin="16dp"  
 android:layout\_marginTop="40dp"  
 android:orientation="vertical">  
  
 <TextView  
 android:id="@+id/textView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:gravity="center"  
 android:layout\_gravity="center"  
 android:layout\_margin="16dp"  
 android:layout\_marginTop="40dp"  
 android:text="@string/spinner\_nfo" />  
  
 <Spinner  
 android:id="@+id/currencySpinner"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="16dp" />  
  
 <EditText  
 android:id="@+id/currencyInputValue"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="40dp"  
 android:ems="12"  
 android:gravity="center"  
 android:importantForAutofill="no"  
 android:inputType="numberDecimal" />  
  
 <Button  
 android:id="@+id/calculateBtn"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="40dp"  
 android:layout\_gravity="center"  
 android:onClick="calculateBtnOnClick"  
 android:text="@string/button" />  
  
 <Space  
 android:layout\_width="match\_parent"  
 android:layout\_height="32dp"/>  
  
 <TextView  
 android:id="@+id/outputValue\_nfo"  
 android:gravity="center"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="16dp"  
 android:layout\_marginVertical="4dp"  
 android:paddingVertical="1dp"  
 android:text="@string/outputValue\_nfo" />  
  
 <TextView  
 android:id="@+id/outputValueTV"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="16dp"  
 android:layout\_marginVertical="4dp"  
 android:gravity="center"  
 android:paddingVertical="50dp"  
 android:textSize="28dp" />  
  
 </LinearLayout>  
  
</LinearLayout>

@@@strings.xml

<resources>  
 <string name="app\_name">CurrencyConversion</string>  
 <string name="spinner\_nfo">Choose the input (user given) value currency: </string>  
 <string name="outputValue\_nfo">This is your output (converted) value in PLN: </string>  
 <string name="button">CALCULATE</string>  
 <string-array name="currencySpinner">  
 <item>USD</item>  
 <item>EUR</item>  
 <item>CHF</item>  
 <item>GBP</item>  
 </string-array>  
</resources>

@@@Kantor.java

package edu.ib.CurrencyConversion;  
  
import android.app.Activity;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Spinner;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
public class Kantor extends Activity {  
  
 Button calculateBtn;  
 EditText currencyInputValue;  
 Spinner currencySpinner;  
 String item;  
  
 public Kantor(Button calculateBtn, EditText currencyInputValue, Spinner currencySpinner, String item) {  
 this.calculateBtn = calculateBtn;  
 this.currencyInputValue = currencyInputValue;  
 this.currencySpinner = currencySpinner;  
 this.item = currencySpinner.getSelectedItem().toString();  
 }  
  
 public double returnPLN() {  
  
 double convertedValue = 0;  
  
 double currencyValue;  
 currencyValue = Double.*parseDouble*(String.*valueOf*(currencyInputValue.getText()));  
  
 //SPINNER  
  
 if (item.equals("EUR")){  
 convertedValue = (currencyValue\*4.23)-returnCommission();  
 } else if (item.equals("USD")){  
 convertedValue = (currencyValue\*3.78)-returnCommission();  
 } else if (item.equals("CHF")){  
 convertedValue = (currencyValue\*3.90)-returnCommission();  
 } else if (item.equals("GBP")){  
 convertedValue = (currencyValue\*4.98)-returnCommission();  
 }  
  
 return convertedValue;  
 }  
  
 public double returnCommission() {  
  
 double commission = 0;  
  
 double currencyValue;  
 currencyValue = Double.*parseDouble*(String.*valueOf*(currencyInputValue.getText()));  
  
 if (currencyValue<2e5){  
 commission=currencyValue\*0.2f;  
 } else if (currencyValue>=2e5 && currencyValue<1e6) {  
 commission=currencyValue\*0.15f;  
 } else if (currencyValue>=1e6 && currencyValue<3e6){  
 commission=currencyValue\*0.1f;  
 } else if (currencyValue>=3e6 && currencyValue<10e6){  
 commission=currencyValue\*0.08f;  
 }  
  
 return commission;  
 }  
  
}

@@@MainActivity.java

package edu.ib.CurrencyConversion;  
  
import androidx.appcompat.app.AppCompatActivity;  
  
import android.os.Bundle;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.ArrayAdapter;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Spinner;  
import android.widget.TextView;  
  
import java.util.ArrayList;  
import java.util.List;  
  
public class MainActivity extends AppCompatActivity implements AdapterView.OnItemSelectedListener {  
  
 Button calculateBtn;  
 EditText currencyInputValue;  
 Spinner currencySpinner;  
 String item;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 calculateBtn = (Button) findViewById(R.id.*calculateBtn*);  
 currencyInputValue = (EditText) findViewById(R.id.*currencyInputValue*);  
  
 currencySpinner = (Spinner) findViewById(R.id.*currencySpinner*);  
 // Create an ArrayAdapter using the string array and a default spinner layout  
 ArrayAdapter<CharSequence> adapter = ArrayAdapter.*createFromResource*(this, R.array.*currencySpinner*, android.R.layout.*simple\_spinner\_item*);  
 // Specify the layout to use when the list of choices appears  
 adapter.setDropDownViewResource(android.R.layout.*simple\_spinner\_dropdown\_item*);  
 // Apply the adapter to the spinner  
 currencySpinner.setAdapter(adapter);  
  
  
 }  
  
 public void calculateBtnOnClick(View view) {  
 TextView currencyOutput = (TextView)findViewById(R.id.*outputValueTV*);;  
 Kantor kantor = new Kantor(calculateBtn, currencyInputValue, currencySpinner, item);  
 String ans = String.*valueOf*(kantor.returnPLN());  
 currencyOutput.setText(ans);  
 }  
  
 @Override  
 public void onItemSelected(AdapterView<?> parent, View view, int position, long id) {  
 item = parent.getItemAtPosition(position).toString();  
 }  
  
 @Override  
 public void onNothingSelected(AdapterView<?> parent) {  
  
 }  
}

* 1. **Wyniki**

