Currency Converter in Android Studio

# Main Activity.java

package com.example.MyApplication;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.util.Log;  
import android.view.View;  
import android.widget.ArrayAdapter;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Spinner;  
import android.widget.TextView;  
import android.widget.Toast;  
import com.example.MyApplication.R;  
import com.squareup.okhttp.Callback;  
import com.squareup.okhttp.OkHttpClient;  
import com.squareup.okhttp.Request;  
import com.squareup.okhttp.Response;  
import org.json.JSONException;  
import org.json.JSONObject;  
import java.io.IOException;  
import java.text.BreakIterator;  
import java.util.ArrayList;  
import java.util.Iterator;  
import java.util.List;  
public class MainActivity extends AppCompatActivity {  
 public static BreakIterator *data*;  
 List<String> keysList;  
 Spinner toCurrency;  
 TextView textView;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.activity\_main);  
 toCurrency = (Spinner)findViewById(R.id.planets\_spinner);  
 final EditText edtEuroValue = (EditText)findViewById(R.id.editText4);  
 final Button btnConvert = (Button)findViewById(R.id.button);  
 textView =(TextView) findViewById(R.id.textView7);  
 try {  
 loadConvTypes();  
 } catch (IOException e) {  
 e.printStackTrace();  
 }  
 btnConvert.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 if(!edtEuroValue.getText().toString().isEmpty())  
 {  
 String toCurr = toCurrency.getSelectedItem().toString();  
 double euroVlaue = Double.*valueOf*(edtEuroValue.getText().toString());  
 Toast.makeText(MainActivity.this, "Please Wait..", Toast.*LENGTH\_SHORT*).show();  
 try {  
 convertCurrency(toCurr, euroVlaue);  
 } catch (IOException e) {  
 e.printStackTrace();  
 Toast.makeText(MainActivity.this, e.getMessage(), Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
 else  
 {  
 Toast.makeText(MainActivity.this, "Please Enter a Value to Convert..", Toast.*LENGTH\_SHORT*).show();  
 }  
  
 }  
 });  
  
 }  
 public void loadConvTypes() throws IOException {  
 String url = "https://api.exchangeratesapi.io/latest";  
 OkHttpClient client = new OkHttpClient();  
 Request request = new Request.Builder()  
 .url(url)  
 .header("Content-Type", "application/json")  
 .build();  
 client.newCall(request).enqueue(new Callback() {  
 @Override  
 public void onFailure(Request request, IOException e) {  
 String mMessage = e.getMessage().toString();  
 Log.*w*("failure Response", mMessage);  
 Toast.makeText(MainActivity.this, mMessage, Toast.*LENGTH\_SHORT*).show();  
 }  
 @Override  
 public void onResponse(Response response) throws IOException {  
 final String mMessage = response.body().string();  
 MainActivity.this.runOnUiThread(new Runnable() {  
 @Override  
 public void run() {  
 *//Toast.makeText(MainActivity.this, mMessage, Toast.LENGTH\_SHORT).show();* try {  
 JSONObject obj = new JSONObject(mMessage);  
 JSONObject b = obj.getJSONObject("rates");  
 Iterator keysToCopyIterator = b.keys();  
 keysList = new ArrayList<String>();  
 while(keysToCopyIterator.hasNext()) {  
 String key = (String) keysToCopyIterator.next();  
 keysList.add(key);  
 }  
 ArrayAdapter<String> spinnerArrayAdapter = new ArrayAdapter<String>(getApplicationContext(), android.R.layout.*simple\_spinner\_item*, keysList );  
 toCurrency.setAdapter(spinnerArrayAdapter);  
  
 } catch (JSONException e) {  
 e.printStackTrace();  
 }  
  
 }  
 });  
 }  
  
 });  
 }  
 public void convertCurrency(final String toCurr, final double euroVlaue) throws IOException {  
 String url = "https://api.exchangeratesapi.io/latest";  
 OkHttpClient client = new OkHttpClient();  
 Request request = new Request.Builder()  
 .url(url)  
 .header("Content-Type", "application/json")  
 .build();  
 client.newCall(request).enqueue(new Callback() {  
 @Override  
 public void onFailure(Request request, IOException e) {  
 String mMessage = e.getMessage().toString();  
 Log.*w*("failure Response", mMessage);  
 Toast.makeText(MainActivity.this, mMessage, Toast.*LENGTH\_SHORT*).show();  
 }  
 @Override  
 public void onResponse(Response response) throws IOException {  
 final String mMessage = response.body().string();  
 MainActivity.this.runOnUiThread(new Runnable() {  
 @Override  
 public void run() {  
 *//Toast.makeText(MainActivity.this, mMessage, Toast.LENGTH\_SHORT).show();* try {  
 JSONObject obj = new JSONObject(mMessage);  
 JSONObject b = obj.getJSONObject("rates");  
 String val = b.getString(toCurr);  
 double output = euroVlaue\*Double.*valueOf*(val)  
 textView.setText(String.*valueOf*(output));  
 } catch (JSONException e) {  
 e.printStackTrace();  
 }  
  
 }  
 });  
 }  
  
 });  
 }  
}

# activity\_main.xml:

*<?*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=".MainActivity">  
  
 <ImageView  
 android:layout\_width="100dp"  
 android:layout\_height="100dp"  
 android:layout\_alignEnd="@+id/button"  
 android:layout\_alignParentTop="true"  
 android:layout\_marginTop="30dp"  
 android:layout\_marginEnd="-14dp"  
 android:src="@drawable/icon"  
 android:layout\_alignRight="@+id/button"  
 android:layout\_marginRight="-14dp" />  
 <TextView  
 android:id="@+id/textView4"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentStart="true"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentTop="true"  
 android:layout\_marginStart="41dp"  
 android:layout\_marginLeft="41dp"  
 android:layout\_marginTop="164dp"  
 android:text="Euro" />  
  
 <EditText  
 android:id="@+id/editText4"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignBottom="@+id/textView4"  
 android:layout\_centerHorizontal="true"  
  
 android:layout\_marginBottom="-16dp"  
 android:ems="10"  
 android:inputType="number" />  
  
 <TextView  
 android:id="@+id/textView5"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignStart="@+id/textView4"  
 android:layout\_alignParentTop="true"  
 android:layout\_marginStart="0dp"  
 android:layout\_marginTop="231dp"  
 android:text="Curency" />  
  
 <Spinner  
 android:id="@+id/planets\_spinner"  
  
 android:layout\_width="220dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignTop="@+id/textView5"  
 android:layout\_marginLeft="70dp"  
 android:layout\_marginTop="1dp" />  
  
  
 <Button  
 android:id="@+id/button"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentStart="true"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentTop="true"  
 android:layout\_marginStart="125dp"  
 android:layout\_marginLeft="125dp"  
 android:layout\_marginTop="297dp"  
 android:text="Converte" />  
  
 <TextView  
 android:id="@+id/textView6"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignParentStart="true"  
 android:layout\_alignParentLeft="true"  
 android:layout\_alignParentBottom="true"  
 android:layout\_marginStart="51dp"  
 android:layout\_marginLeft="51dp"  
 android:layout\_marginBottom="113dp"  
 android:text="Value" />  
  
 <TextView  
 android:id="@+id/textView7"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_alignTop="@+id/textView6"  
 android:layout\_marginStart="44dp"  
 android:layout\_marginTop="0dp"  
 android:layout\_toEndOf="@+id/textView5"  
 android:text="TextView" />  
</RelativeLayout>