CURRENCY CONVERTER

Project submitted to the

SRM University – AP, Andhra Pradesh

for the partial fulfillment of the requirements to award the degree of

Bachelor of Technology

In

Computer Science and Engineering

School of Engineering and Sciences

Submitted by

Y ABHIRAM---AP21110010373

KODURI C S N V SATYANARAYANA---AP21110011199

T NIKHIL---AP21110011200

Under the Guidance of

K.JYOTHSNA DEVI

SRM University–AP

Neerukonda, Mangalagiri, Guntur

Andhra Pradesh – 522 502

AIM

The aim of the project is to convert amount from one currency to another currency and you can choose different currencies and enter a value in one currency to be convert into other selected currencies. The primary goal of a currency converter is to accurately and quickly provide the equivalent value. The project is a helpful tool for people who need to quickly convert currencies for travel, or personal reasons.

OBJECTIVES

- Enable quick and easy currency conversions.
- Support multiple currencies.
- User friendly interface.
- Provide accurate exchange rates.

INTRODUCTION

A currency converter project is a tool that you convert the value of one currency into another currency, with a currency converter, you can easily find out how much your money is worth in a different currency. It's useful when you're traveling to another country or when you're making international purchases. The currency converter project aims to provide a user-friendly interface where you can enter the amount you want to convert and select the currencies involved. It then gives you an accurate conversion based on the exchange rates. The goal of the project is to make currency conversions quick, easy, and reliable for users.

SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS

- RAM : At least 8 GB
- Disk Space : 124 MB for JRE, 2 MB for Java Update
- Processor : 11th Gen Intel(R) Core(TM) i5-1135G7 @ 2.40GHz 2.42 GHz.

SOFTWARE REQUIREMENTS

- Eclipse IDE is a software that is used in development and execution of java programs.
- Eclipse Window Builder for using GUI application.

MODULES

There are 2 modules in the Project

1. Interface
2. Currency Exchange Rates

The role of interface:

- User friendly interface it can easily access by anyone.
- JLabel: displays text labels (Amount, Result, convert from, convert to)
- JTextField: a text field where the user can enter the amount to convert.

- JComboBox: a drop-down list for selecting the currency to convert from and to.
- JTextArea: displays the result of the conversion.
- JButton: a button to convert currency.

The role of currency exchange rates:

- Added currencies of (USD, INR, EUR, JPY, RUB, GBP)
- In this we will provide the exchange rates.
- getExchangeRate(): a method that fetches the exchange rate for the selected currencies.

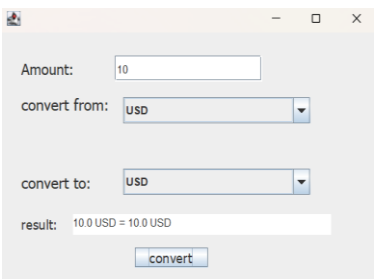
CODE&RESULTS

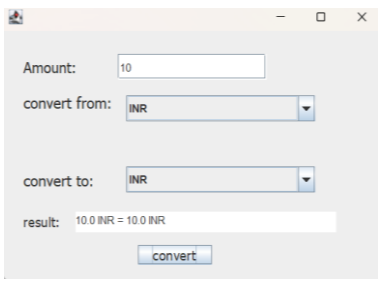
```
package currencyconverter;

import java.awt.*;
import javax.swing.*;
import javax.swing.border.EmptyBorder;

public class Source extends JFrame {

    private JPanel contentPane;
    private JTextField txtamount;

    /**
     * Launch the application.
     */
    public static void main(String[] args) {
        EventQueue.invokeLater(new Runnable() {
            public void run() {
                try {
                    Source frame = new Source();
                    frame.setVisible(true);
                } catch (Exception e) {
                    e.printStackTrace();
                }
            }
        });
    }

    /**
     * Create the frame.
     */
    public Source() {
        setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
```

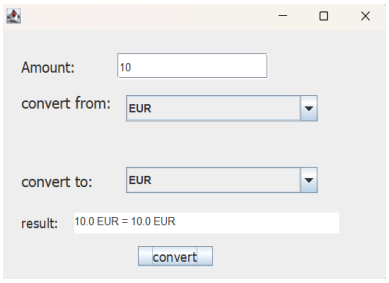
```
        setBounds(100, 100, 450, 300);
        contentPane = new JPanel();
        contentPane.setBorder(new EmptyBorder(5, 5, 5, 5));

        setContentPane(contentPane);
        contentPane.setLayout(null);

        JLabel from = new JLabel("convert from:");
        from.setFont(new Font("Tahoma", Font.PLAIN, 17));
        from.setBounds(24, 63, 133, 28);
        contentPane.add(from);

        JLabel to = new JLabel("convert to:");
        to.setFont(new Font("Tahoma", Font.PLAIN, 17));
        to.setBounds(24, 147, 133, 28);
        contentPane.add(to);

        txtamount = new JTextField();
        txtamount.setBounds(133, 25, 171, 28);
        contentPane.add(txtamount);
        txtamount.setColumns(10);

        JLabel amount = new JLabel("Amount:");
        amount.setFont(new Font("Tahoma", Font.PLAIN, 16));
        amount.setBounds(24, 28, 85, 25);
        contentPane.add(amount);

        JComboBox<String> from_convert = new JComboBox<String>();
        from_convert.setModel(new DefaultComboBoxModel<String>(new String[]
{"USD", "INR", "EUR", "JPY","RUB","GBP"}));
        from_convert.setBounds(143, 70, 217, 28);
        contentPane.add(from_convert);

        JComboBox<String> to_convert = new JComboBox<String>();
        to_convert.setModel(new DefaultComboBoxModel<String>(new String[]
{"USD", "INR", "EUR", "JPY","RUB","GBP"}));
        to_convert.setBounds(143, 147, 217, 28);
        contentPane.add(to_convert);

        JButton convert = new JButton("convert");
        convert.setFont(new Font("Tahoma", Font.PLAIN, 15));
        convert.setBounds(156, 232, 85, 21);
        contentPane.add(convert);

        JTextArea txtResult = new JTextArea();
        txtResult.setBounds(84, 196, 300, 22);
        contentPane.add(txtResult);

        JLabel r = new JLabel("result:");
        r.setFont(new Font("Tahoma", Font.PLAIN, 15));
        r.setBounds(24, 197, 64, 19);
        contentPane.add(r);

        convert.addActionListener(e -> {
            double txtamountValue =
Double.parseDouble(txtamount.getText());
            String fromCurrency =
from_convert.getSelectedItem().toString();
            String toCurrency = to_convert.getSelectedItem().toString();

            double rate = getExchangeRate(fromCurrency, toCurrency);
```

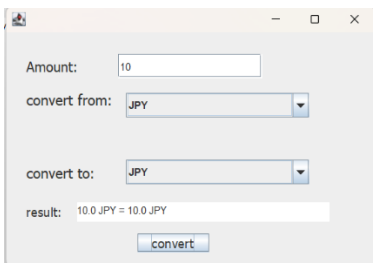
```
            double result = txtamountValue * rate;

            String resultText = txtamountValue + " " + fromCurrency + " = "
+ result + " " + toCurrency;
            txtResult.setText(resultText);
        });
    }

    public static double getExchangeRate(String fromCurrency, String
toCurrency) {
      if (fromCurrency.equals(toCurrency)) {
            return 1;
        } else if (fromCurrency.equals("USD") && toCurrency.equals("INR"))
{
            return 82.19;
        } else if (fromCurrency.equals("USD") && toCurrency.equals("EUR"))
{
            return 0.92;
        } else if (fromCurrency.equals("USD") && toCurrency.equals("JPY"))
{
            return 134.72;
        } else if (fromCurrency.equals("USD") && toCurrency.equals("RUB"))
{
            return 76.86;
        } else if (fromCurrency.equals("USD") && toCurrency.equals("GBP"))
{
            return 0.80;
        } else if (fromCurrency.equals("INR") && toCurrency.equals("USD"))
{
            return 0.012;
        } else if (fromCurrency.equals("INR") && toCurrency.equals("EUR"))
{
            return 0.011;
        } else if (fromCurrency.equals("INR") && toCurrency.equals("JPY"))
{
            return 1.64;
        } else if (fromCurrency.equals("INR") && toCurrency.equals("RUB"))
{
            return 0.94;
        } else if (fromCurrency.equals("INR") && toCurrency.equals("GBP"))
{
            return 0.0097;
        } else if (fromCurrency.equals("EUR") && toCurrency.equals("USD"))
{
            return 1.09;
        } else if (fromCurrency.equals("EUR") && toCurrency.equals("INR"))
{
            return 89.78;
        } else if (fromCurrency.equals("EUR") && toCurrency.equals("JPY"))
{
            return 147.17;
        } else if (fromCurrency.equals("EUR") && toCurrency.equals("RUB"))
{
            return 83.98;
        } else if (fromCurrency.equals("EUR") && toCurrency.equals("GBP"))
{
            return 0.87;
        } else if (fromCurrency.equals("JPY") && toCurrency.equals("USD"))
{
            return 0.0074;
```

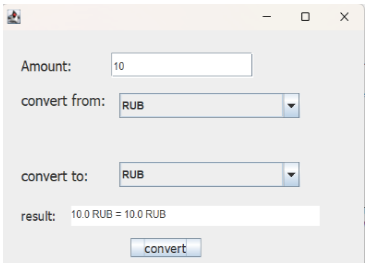
```
        } else if (fromCurrency.equals("JPY") && toCurrency.equals("INR"))
{
            return 0.61;
        } else if (fromCurrency.equals("JPY") && toCurrency.equals("EUR"))
{
            return 0.0068;
        } else if (fromCurrency.equals("JPY") && toCurrency.equals("RUB"))
{
            return 0.57;
        } else if (fromCurrency.equals("JPY") && toCurrency.equals("GBP"))
{
            return 0.0059;
        } else if (fromCurrency.equals("RUB") && toCurrency.equals("USD"))
{
            return 0.013;
        } else if (fromCurrency.equals("RUB") && toCurrency.equals("INR"))
{
            return 1.07;
        } else if (fromCurrency.equals("RUB") && toCurrency.equals("EUR"))
{
            return 0.012;
        } else if (fromCurrency.equals("RUB") && toCurrency.equals("JPY"))
{
            return 1.76;
        } else if (fromCurrency.equals("RUB") && toCurrency.equals("GBP"))
{
            return 0.010;
        } else if (fromCurrency.equals("GBP") && toCurrency.equals("USD"))
{
            return 1.25;
        } else if (fromCurrency.equals("GBP") && toCurrency.equals("INR"))
{
            return 102.82;
        } else if (fromCurrency.equals("GBP") && toCurrency.equals("EUR"))
{
            return 1.15;
        } else if (fromCurrency.equals("GBP") && toCurrency.equals("JPY"))
{
            return 168.61;
        } else if (fromCurrency.equals("GBP") && toCurrency.equals("RUB"))
{
            return 95.97;
        } else {
            return 0;
        }
    }
}
```

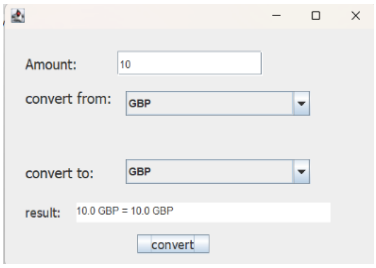


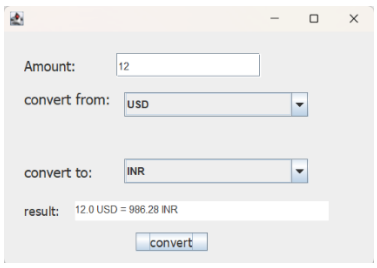


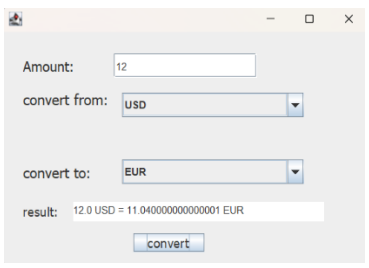


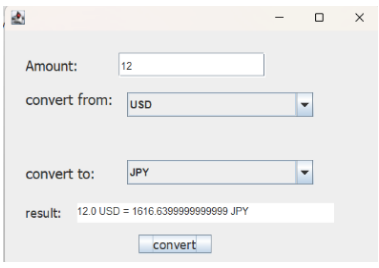

Amount: 10
convert from: JPY
convert to: JPY
result: 10.0 JPY = 10.0 JPY
convert

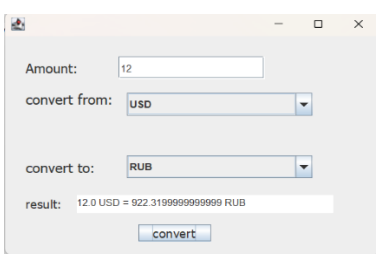

Amount: 10
convert from: RUB
convert to: RUB
result: 10.0 RUB = 10.0 RUB
convert

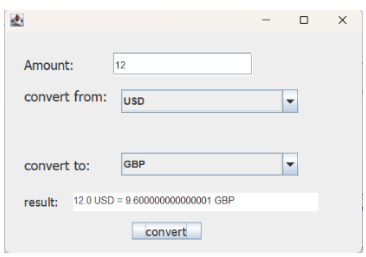

Amount: 10
convert from: GBP
convert to: GBP
result: 10.0 GBP = 10.0 GBP
convert

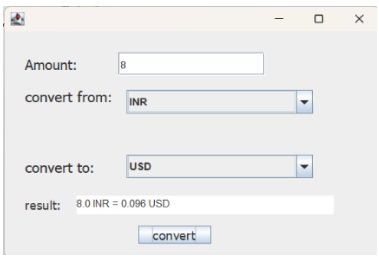

Amount: 12
convert from: USD
convert to: INR
result: 12.0 USD = 986.28 INR
convert

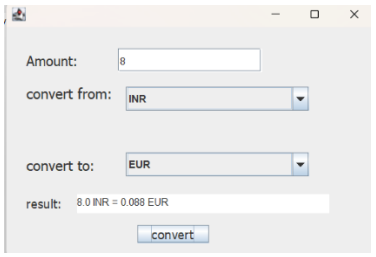

Amount: 12
convert from: USD
convert to: EUR
result: 12.0 USD = 11.040000000000001 EUR
convert

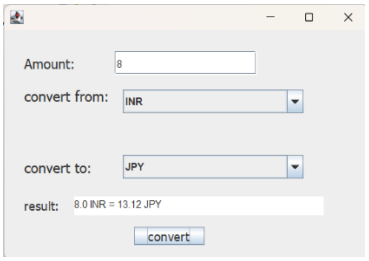

Amount: 12
convert from: USD
convert to: JPY
result: 12.0 USD = 1616.6399999999999 JPY
convert

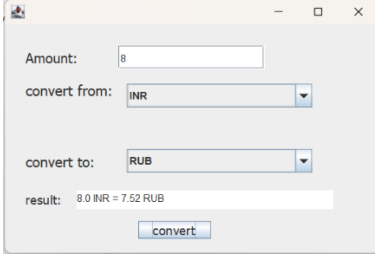

Amount: 12
convert from: USD
convert to: RUB
result: 12.0 USD = 922.3199999999999 RUB
convert

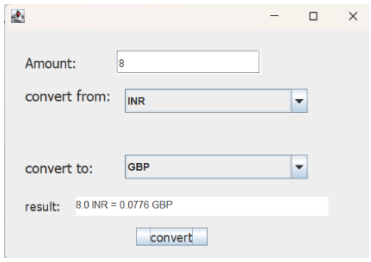

Amount: 12
convert from: USD
convert to: GBP
result: 12.0 USD = 9.600000000000001 GBP
convert

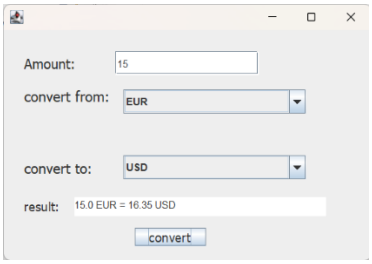

Amount: 8
convert from: INR
convert to: USD
result: 8.0 INR = 0.096 USD
convert

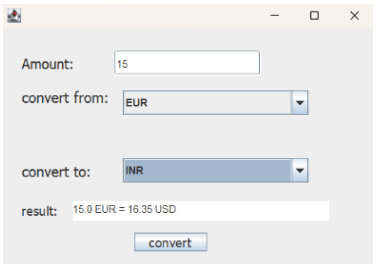

Amount: 8
convert from: INR
convert to: EUR
result: 8.0 INR = 0.088 EUR
convert

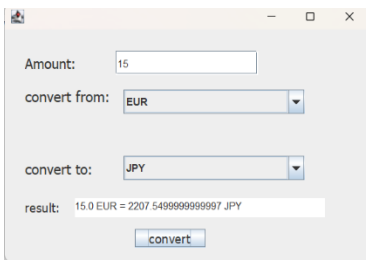

Amount: 8
convert from: INR
convert to: JPY
result: 8.0 INR = 13.12 JPY
convert

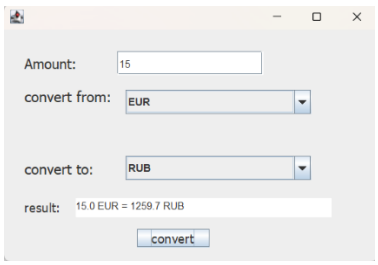

Amount: 8
convert from: INR
convert to: RUB
result: 8.0 INR = 7.52 RUB
convert

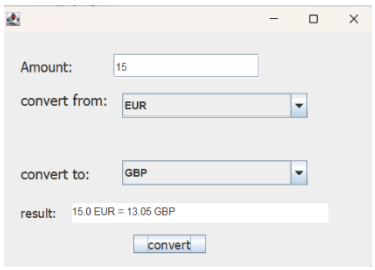

Amount: 8
convert from: INR
convert to: GBP
result: 8.0 INR = 0.0776 GBP
convert

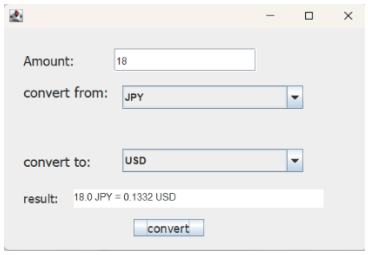

Amount: 15
convert from: EUR
convert to: USD
result: 15.0 EUR = 16.35 USD
convert

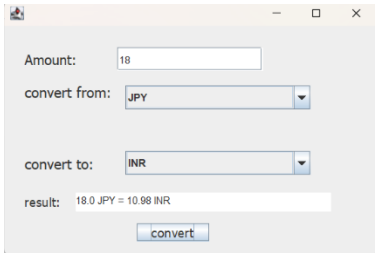

Amount: 15
convert from: EUR
convert to: INR
result: 15.0 EUR = 16.35 USD
convert

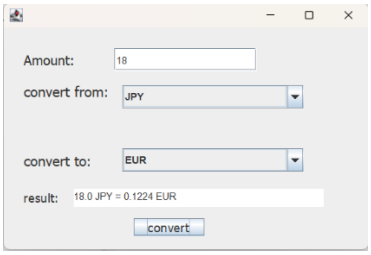

Amount: 15
convert from: EUR
convert to: JPY
result: 15.0 EUR = 2207.5499999999997 JPY
convert

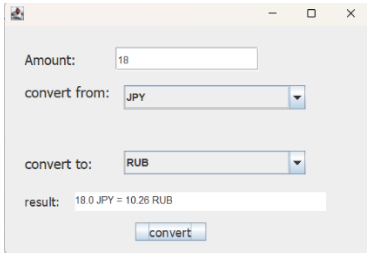

Amount: 15
convert from: EUR
convert to: RUB
result: 15.0 EUR = 1259.7 RUB
convert

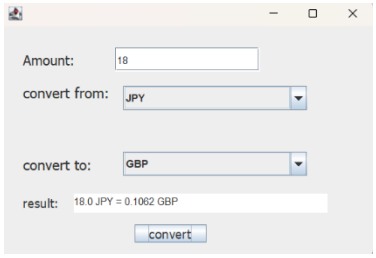

Amount: 15
convert from: EUR
convert to: GBP
result: 15.0 EUR = 13.05 GBP
convert

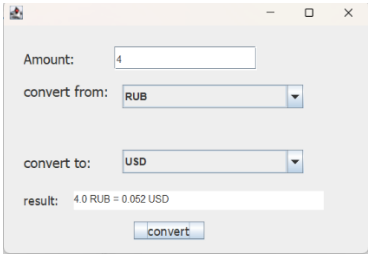

Amount: 18
convert from: JPY
convert to: USD
result: 18.0 JPY = 0.1332 USD
convert

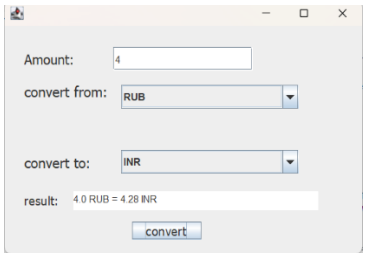

Amount: 18
convert from: JPY
convert to: INR
result: 18.0 JPY = 10.98 INR
convert

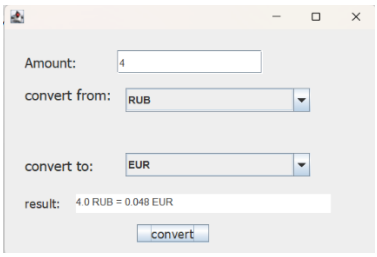

Amount: 18
convert from: JPY
convert to: EUR
result: 18.0 JPY = 0.1224 EUR
convert

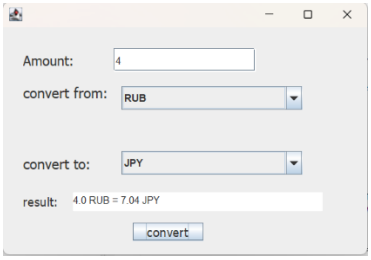

Amount: 18
convert from: JPY
convert to: RUB
result: 18.0 JPY = 10.26 RUB
convert

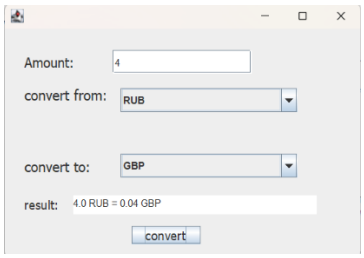

Amount: 18
convert from: JPY
convert to: GBP
result: 18.0 JPY = 0.1062 GBP
convert

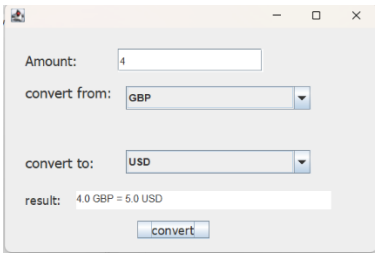

Amount: 4
convert from: RUB
convert to: USD
result: 4.0 RUB = 0.052 USD
convert

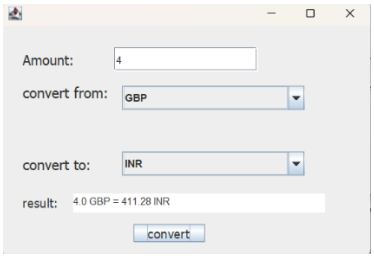

Amount: 4
convert from: RUB
convert to: INR
result: 4.0 RUB = 4.28 INR
convert

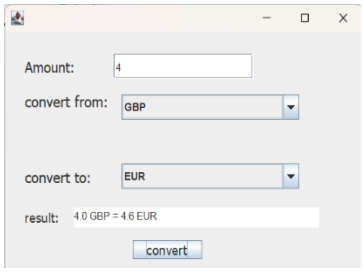

Amount: 4
convert from: RUB
convert to: EUR
result: 4.0 RUB = 0.048 EUR
convert

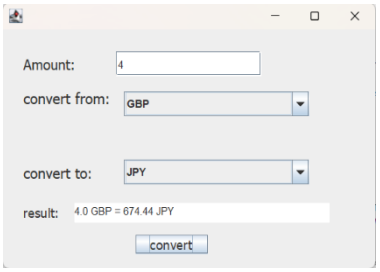

Amount: 4
convert from: RUB
convert to: JPY
result: 4.0 RUB = 7.04 JPY
convert

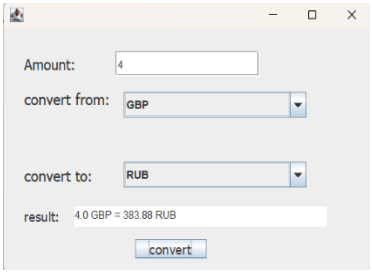

Amount: 4
convert from: RUB
convert to: GBP
result: 4.0 RUB = 0.04 GBP
convert


Amount: 4
convert from: GBP
convert to: USD
result: 4.0 GBP = 5.0 USD
convert


Amount: 4
convert from: GBP
convert to: INR
result: 4.0 GBP = 411.28 INR
convert


Amount: 4
convert from: GBP
convert to: EUR
result: 4.0 GBP = 4.6 EUR
convert


Amount: 4
convert from: GBP
convert to: JPY
result: 4.0 GBP = 674.44 JPY
convert


Amount: 4
convert from: GBP
convert to: RUB
result: 4.0 GBP = 383.88 RUB
convert

CONCLUSION

This is a currency converter program written in Java using GUI. The program provides a graphical user interface for the user to input an amount in a specific currency and convert it to another currency. The program fetches the exchange rate from a fixed set of exchange rates for different currency pairs and calculates the converted amount. The program converts between six currencies: USD, INR, EUR, JPY, RUB, and GBP.

Overall, this program provides basic currency conversion using java GUI.