IMPLEMENTATION OF CURRENCY CONVERTER USING AWT

MINI PROJECT REPORT

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INTRODUCTION

Swing is a part of the JFC (Java Foundation Classes). Building Graphical User Interface in Java requires the use of Swings. Swing Framework contains a large set of components which allow a high level of customization and provide rich functionalities , and is used to create window-based applications. Java swing components are lightweight, platform-independent, provide powerful components like tables, scroll panels, buttons, list, colour chooser.

The Currency Converter is a Java application built using the Swing framework that allows users to convert a specified amount from one currency to another. This project aims to provide a simple, user-friendly interface for currency conversion, incorporating basic functionalities to select a currency and enter an amount for conversion to USD.

Here we'll see how to make a currency converter which includes conversion between INR and Dollar. Two text fields are implemented with the labels Rupees and Dollar.

Example

Input: INR = 130.5

Output: 2.0

Explanation:

One dollar is 65.25 rupees. So, 130.5 rupees is two dollars.

Input: Dollar = 4.5

Output: 293.625

HOW WE APPROACHED?

To solve this problem, the following steps are followed:

1. First, we need to create a frame using JFrame.

2. Then, create two labels, two textfields and three buttons(the first button for rupees and the second button is for the dollar) using JLabel, JTextField and JButton.

3. Name these components accordingly and set their bounds.

4. Now, in order to perform the conversion on button click, we need to add Event Handlers. In this case, we will add ActionListener to perform an action method known as actionPerformed in which first we need to get the values from the text fields which is default as a “string”.

5. So, in order to perform mathematical operations, we need to convert them into double data type using Double.parseDouble(Object.getText()) and again converting from double to string to place the final value in the other text field using String.valueOf(object).

6. Finally, for changing the values, we use Object.setText(object), the second object is for selecting which field we want to replace.

The functionality of the program is straightforward:

Entering an amount in rupees and clicking the "INR" button converts the rupee amount to dollars based on a hardcoded conversion rate (65.25) and displays the result in the dollars text field.

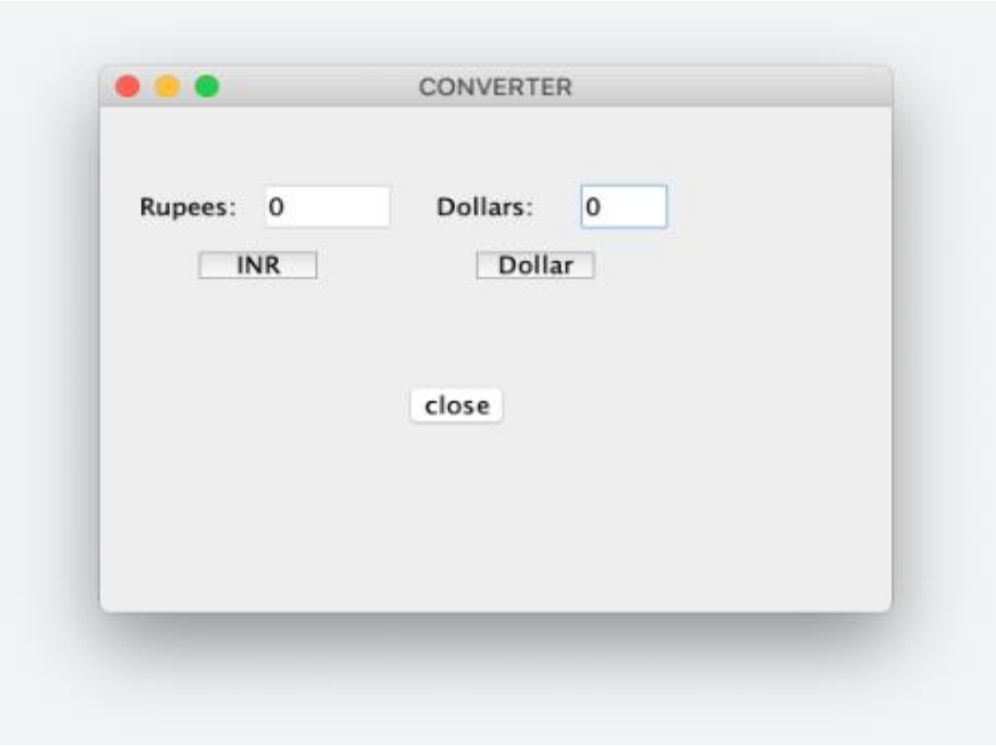
Entering an amount in dollars and clicking the "Dollar" button converts the dollar amount to rupees based on the same conversion rate and displays the result in the rupees text field.

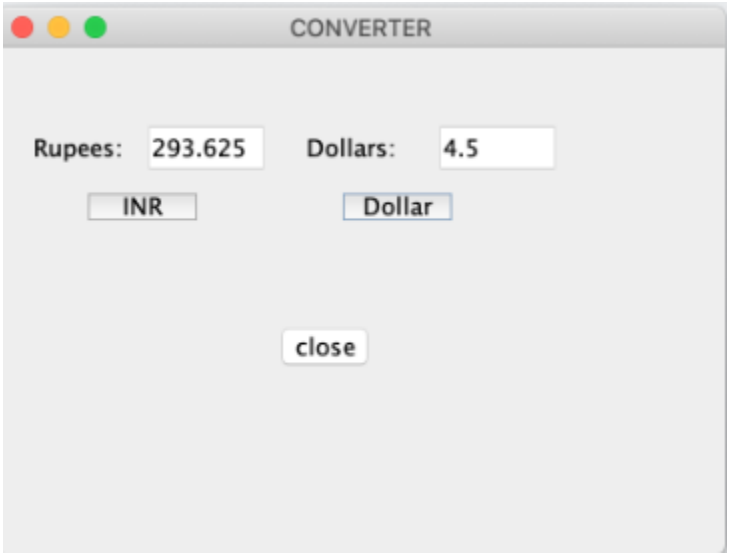
Clicking the "close" button or closing the window closes the application.

CONCLUSION

The Currency Converter project demonstrates the basic implementation of a currency conversion application using Java Swing. It offers a simple yet functional interface for users to convert an amount from selected currencies to USD. Further improvements, such as real-time rate updates and expanded currency support, can be implemented to make the application more comprehensive and user-friendly.

Here is how the output we generated looks like.


CONVERTER
Rupees: 0
Dollars: 0
INR
Dollar
close


CONVERTER
Rupees: 293.625
Dollars: 4.5
INR
Dollar
close


CONVERTER
Rupees:
130.5
Dollars:
2.0
INR
Dollar
close

REFERENCES

1. ChatGPT
2. GeekforGeeks
3. GitHub