CURRENCY CONVERTER

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Introduction

Overview

The ability to view the exchange rate between two different currencies is provided by a currency converter. For a given amount of currency such as Ngultrum it indicates how much money you would receive in other currency such as US dollars,Euros and many more. The market value is reflected in the exchange rates that currency converters provide which are updated throughout the day due to fluctuations. Travelers, companies, and everyone else who needs to exchange money can quickly and easily utilize them. Thus this mini-project it created for them to easily convert currencies.

Through this application users can select two currencies from the option, users can enter an amount in their chosen source currency and the program applies the exchange rate to convert the amount to the target currency. And the converted amount is displayed for the user.

AIM

The **primary aim** of the mini-project is to develop a graphical user interface (GUI) that is easy to use in order to greatly improve proficiency and expertise in Java programming. In order to create a user-friendly and visually appealing interface which requires applying Java coding principles practically. This helps to improve one's grasp of GUI development concepts and polish one's Java coding abilities.

The **secondary aim** of this min-project focuses on building a program that allows users to convert between two currencies with a hardcoded exchange rate which allow users to select currencies from option and enter the amount for conversion and clearly present the converted amount in the target currency.

Objectives

The first objective is to design an interactive GUI using Java Swing or JavaFX or Java AWT and apply OOP principles like encapsulation, inheritance, and polymorphism. Then implement event handling and input validation for smooth user experience and utilize GUI components like buttons, text fields, and drop-down menus for interactive interface.

The second objective is implement database for storing hardcoded exchange rates and to develop conversion algorithm based on selected currencies and hardcoded rates. Then to integrate conversion functionality with GUI for currency selection and input and provide clear output displaying converted amount in target currency. Implement error handling and input validation, rate updates.

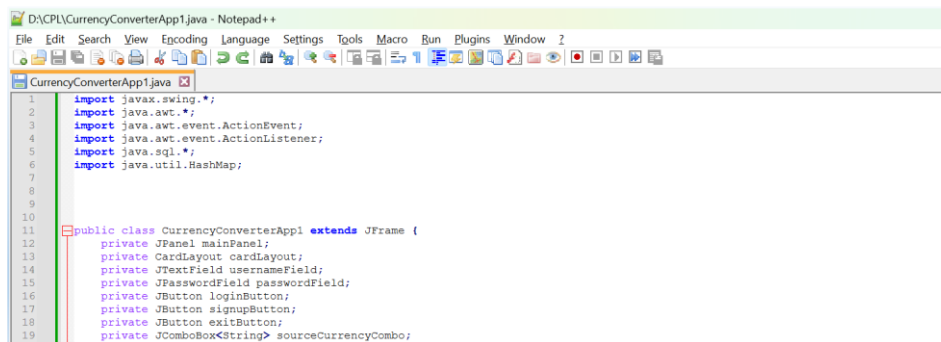# Requirements

To use the GUI the following things are required;

- Notepad+++ or VS code for running the code
- Mysql or Xampp for storing data and doing query.
- Use Command Prompt(cmd)to run the code if and only if you are using Notepad+++ since code can be directly ran on VS code.

Usage Instruction

Step1:

Open the java file using NotePad+++ or through VScode the java file called CurrencyConverterApp1 in a folder and save as "CurrencyConverterApp1.java"

Example: Using notepad+++ and saved as "CurrencyConverterApp1.java"

Step2:

You need to do the following code in Xampp sql to create database for the connection.

User name Choki, Password Choki is the default for converterUI.

Username Admin and Password pass for adminUI

Do this in sql

create database currencyconverterdb;

use currencyconverterdb;

create table users(SI_NO int, user_name varchar(50),password varchar(10));

insert into users values(1,"Admin","pass"),(2,"Choki","Choki");

INSERT INTO `1usd` (`Country`, `Rate_in_1USD`) VALUES

('Afghanistan - Afghani', 87.68),

('Albania - Lek', 107.11),

('Algeria - Dinar', 134.62),

('Andorra - Euro', 0.92),

('Angola - Kwanza', 497.58),

('Antigua and Barbuda - Dollar', 2.7),

('Argentina - Peso', 131.9),

('Armenia - Dram', 389.16),

('Aruba - Florin', 1.79),

('Australia - Dollar', 1.48),

('Austria - Euro', 0.92),

('Azerbaijan - Manat', 1.7),

('Bahamas - Dollar', 1),

('Bahrain - Dinar', 0.38),

('Bangladesh - Taka', 107.11),

('Barbados - Dollar', 2),

('Belarus - Ruble', 2.58),

('Belgium - Euro', 0.92),

('Belize - Dollar', 2.01),

('Benin - Franc', 611),

('Bermuda - Dollar', 1),

('Bhutan - Ngultrum', 83),

('Bolivia - Boliviano', 6.91),

('Bosnia and Herzegovina - Marka', 1.82),

('Botswana - Pula', 12.7),

('Brazil - Real', 5.01),

('Brunei - Dollar', 1.34),

('Bulgaria - Lev', 1.8),

('Burkina Faso - Franc', 611),

('Burundi - Franc', 2148),

('Cabo Verde - Escudo', 110.27),

('Cambodia - Riel', 4100),

('Cameroon - Franc', 611),

('Canada - Dollar', 1.35),

('Cayman Islands - Dollar', 0.82),

('Central African Republic - Franc', 611),

('Chad - Franc', 611),

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('China - Yuan', 6.9),

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('Croatia - Kuna', 6.99),

('Cuba - Peso', 24),

('Curacao - Guilder', 1.8),

('Cyprus - Euro', 0.92),

('Czechia - Koruna', 21.87),

('Denmark - Krone', 6.78),

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('Ethiopia - Birr', 53.45),

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('Fiji - Dollar', 2.18),

('Finland - Euro', 0.92),

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('Gabon - Franc', 611),

('Gambia - Dalasi', 62.26),

('Georgia - Lari', 2.69),

('Germany - Euro', 0.92),

('Ghana - Cedi', 10.8),

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('Grenada - Dollar', 2.7),

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('Mozambique - Metical', 63.59),

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('New Zealand - Dollar', 1.61),

('Nicaragua - Cordoba', 36.87),

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('Oman - Rial', 0.38),

('Pakistan - Rupee', 283.71),

('Palau - Dollar', 1),

('Panama - Balboa', 1),

('Papua New Guinea - Kina', 3.54),

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('Peru - Sol', 3.75),

('Philippines - Peso', 55.11),

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('Romania - Leu', 4.52),

('Russia - Ruble', 80.33),

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('Saint Lucia - Dollar', 2.7),

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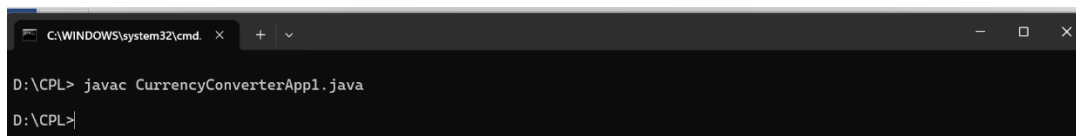
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('Montenegro - Euro', 0.92),

('Morocco - Dirham', 10.28),

('Mozambique - Metical', 63.59),

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('Namibia - Dollar', 17.61),

('Nauru - Dollar', 1.09),

('Nepal - Rupee', 134.79),

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('Oman - Rial', 0.38),

('Pakistan - Rupee', 283.71),

('Palau - Dollar', 1),

('Panama - Balboa', 1),

('Papua New Guinea - Kina', 3.54),

('Paraguay - Guarani', 7328.37),

('Peru - Sol', 3.75),

('Philippines - Peso', 55.11),

('Poland - Zloty', 4.27),

('Portugal - Euro', 0.92),

('Qatar - Rial', 3.64),

('Romania - Leu', 4.52),

('Russia - Ruble', 80.33),

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('San Marino -\n Euro', 0.92),

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('Saudi Arabia - Riyal', 3.75),

('Senegal - Franc', 611),

('Serbia - Dinar', 108.04),

('Seychelles - Rupee', 13.77),

('Sierra Leone - Leone', 16610),

('Singapore - Dollar', 1.34),

('Sint Maarten - Guilder', 1.8);

Step3:

If you are using vsCode it can be directly ran but if you are using notepad++ you must run it in the command prompt.

First you need to compile the file .

```
C:\WINDOWS\system32\cmd.    ×    +    ∨                                                    —    □    ×

D:\CPL> javac CurrencyConverterApp1.java
D:\CPL>
```
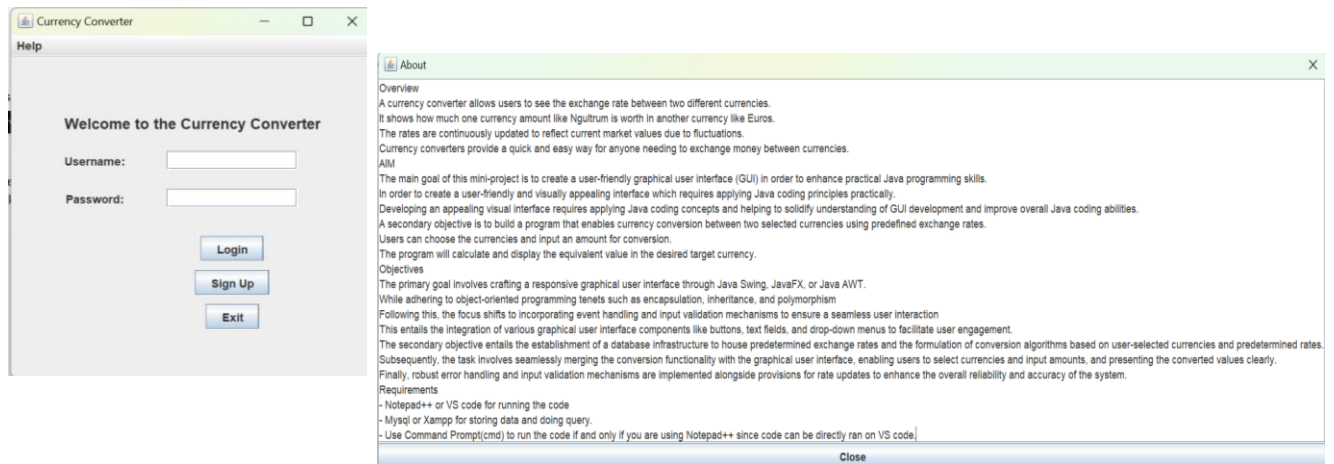
Step4:

Now Run the file using this command:

```
D:\CPL>java -cp  cc.jar CurrencyConverterApp1.java
```
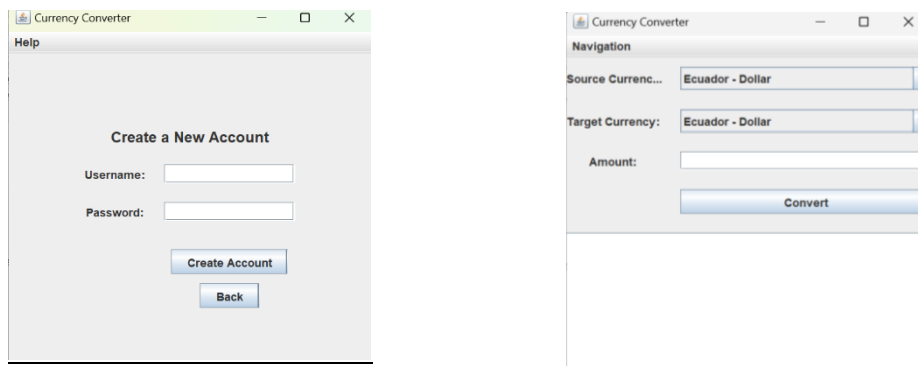
Step5:

UI like this will appear on the screen where u can learn more about the GUI buy clicking on the Help menu and then clicking on about.
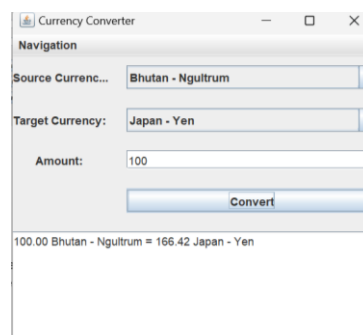

Step6:

You can login by creating a account and the rate of the currencies will be updated by the admin every 2days by referring the currency rate from RBA.

Step7:

You can change currency rate by choseing the source currency in the source currency option and target currency from the target currency option.By entering the amount you want convert and the convertion will be displayed below.

Conclusion

Thank you for using our Currency Converter GUI and taking the time to read this manual. We hope that you have found the application user-friendly and that it has streamlined the process of converting between different currencies. As we all know Currency conversion is a crucial task in today's globalized world, whether you're a frequent traveler, an international business, or simply someone who needs to understand the value of different currencies. Our Currency Converter aims to provide a reliable and efficient solution for your currency conversion needs with its intuitive interface and accurate exchange rate calculations.

In conclusion, we would like to emphasize that the Currency Converter is designed to be a versatile tool that can adapt to your specific requirements. Whether you need to convert between major currencies or more obscure ones, our interface has you covered. Additionally, we will be constantly working on improving the interface and adding new features to enhance your experience.

If you have any further questions, feedback, or suggestions, please don't hesitate to reach out to our team. We value your input and are committed to providing the best possible currency conversion solution.

For more resources and information about currency conversion, we recommend exploring reputable financial websites, central bank publications, or online forums dedicated to foreign exchange and international finance. These resources can provide valuable insights into currency trends, exchange rate fluctuations, and best practices for managing currency-related transactions. Once again, thank you for choosing our currency converter GUI. We appreciate your support and look forward to serving you in the future.