

# Currency Converter Documentation

## 1. Description

A currency converter is a tool that allows users to convert the value of one currency into another based on the current exchange rate. This project demonstrates a simple implementation of a currency converter using a programming language or interface that supports fetching live exchange rates or manually defined conversion rates.

## 2. Approach

1. Define a set of supported currencies (e.g., USD, EUR, INR).
2. Use a predefined exchange rate table or access live exchange rates via an API.
3. Take user input for source currency, target currency, and amount.
4. Apply the exchange rate formula:

$$\text{Converted Amount} = \text{Amount} * (\text{Target Rate} / \text{Source Rate})$$

5. Display the converted amount to the user.

Optional: Include error checking for invalid input or unavailable currencies.

## 3. Results

The currency converter successfully converted input currency values to the desired target currency.

Example:

Input: 100 USD to INR

Exchange Rate: 1 USD = 83.25 INR

Output: 100 USD = 8325 INR

This result verifies that the converter logic works correctly based on the provided exchange rate.