Objective: Develop a program to convert currencies using real-time exchange rates.

Imagine you are an international traveler, jumping between countries every day, needing to make purchases in different currencies. You need a real-time currency converter on your device that helps you convert USD to INR, EUR to JPY, or any currency quickly using live exchange rates. Build a tool that pulls real-time data from an API, so you never get stuck overpaying for a cup of coffee in Paris or missing a deal in Tokyo!

Task:

Use the forex-python or requests module to get exchange rates. Allow users to select currencies and amounts. Display the converted amount and allow for reverse conversion (e.g., USD to INR or INR to USD). Key Concepts: APIs, data retrieval, user input, conditional statements.

```
!pip install forex-python
```

```
Requirement already satisfied: forex-python in /usr/local/lib/python3.11/dist-packages (1.8)
Requirement already satisfied: requests in /usr/local/lib/python3.11/dist-packages (from forex-python) (2.32.3)
Requirement already satisfied: simplejson in /usr/local/lib/python3.11/dist-packages (from forex-python) (3.20.1)
Requirement already satisfied: charset-normalizer<4,>=2 in /usr/local/lib/python3.11/dist-packages (from requests->forex-python) (3
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.11/dist-packages (from requests->forex-python) (3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in /usr/local/lib/python3.11/dist-packages (from requests->forex-python) (2.3.0)
Requirement already satisfied: certifi>=2017.4.17 in /usr/local/lib/python3.11/dist-packages (from requests->forex-python) (2025.1.3
```

```python
import requests

def get_exchange_rate(from_currency, to_currency):
    url = f"https://api.exchangerate-api.com/v4/latest/{from_currency}"
    response = requests.get(url)

    if response.status_code == 200:
        data = response.json()
        return data['rates'].get(to_currency, None)
    else:
        return None

def currency_converter():
    print("Welcome to the Real-Time Currency Converter!")

    from_currency = input("Enter the base currency (e.g., USD, EUR, INR): ").upper()
    to_currency = input("Enter the target currency (e.g., JPY, GBP, INR): ").upper()
    amount = float(input("Enter the amount to convert: "))

    rate = get_exchange_rate(from_currency, to_currency)
    if rate:
        converted_amount = amount * rate
        print(f"{amount} {from_currency} is equal to {converted_amount:.2f} {to_currency}")
    else:
        print("Error fetching exchange rates. Please check your currency codes and try again.")

if __name__ == "__main__":
    currency_converter()
```

```
Welcome to the Real-Time Currency Converter!
Enter the base currency (e.g., USD, EUR, INR): USD
Enter the target currency (e.g., JPY, GBP, INR): JPY
Enter the amount to convert: 50
50.0 USD is equal to 7455.50 JPY
```