TASK 4 - CURRENCY CONVERTER

import java.net.HttpURLConnection;

import java.net.URL;

import java.io.InputStreamReader;

import java.io.BufferedReader;

import java.util.Scanner;

import org.json.JSONObject;

public class Main {

private static final String API\_KEY = "YOUR\_API\_KEY";

private static final String API\_URL = "https://v6.exchangerate-api.com/v6/" + API\_KEY + "/latest/";

public static double getExchangeRate(String baseCurrency, String targetCurrency) {

try {

URL url = new URL(API\_URL + baseCurrency);

HttpURLConnection conn = (HttpURLConnection) url.openConnection();

conn.setRequestMethod("GET");

BufferedReader in = new BufferedReader(new InputStreamReader(conn.getInputStream()));

String inputLine;

StringBuilder response = new StringBuilder();

while ((inputLine = in.readLine()) != null) {

response.append(inputLine);

}

in.close();

// Use org.json.JSONObject to parse the response

JSONObject jsonResponse = new JSONObject(response.toString());

JSONObject conversionRates = jsonResponse.getJSONObject("conversion\_rates");

return conversionRates.getDouble(targetCurrency);

} catch (Exception e) {

System.out.println("Error fetching exchange rates: " + e.getMessage());

return 0;

}

}

public static void displayCurrencyOptions() {

System.out.println("Available Currencies:");

System.out.println("USD - US Dollar");

System.out.println("EUR - Euro");

System.out.println("GBP - British Pound");

System.out.println("INR - Indian Rupee");

System.out.println("AUD - Australian Dollar");

System.out.println("JPY - Japanese Yen");

System.out.println("CAD - Canadian Dollar");

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

displayCurrencyOptions();

System.out.print("Enter base currency (e.g., USD): ");

String baseCurrency = scanner.nextLine().toUpperCase();

System.out.print("Enter target currency (e.g., EUR): ");

String targetCurrency = scanner.nextLine().toUpperCase();

double exchangeRate = getExchangeRate(baseCurrency, targetCurrency);

if (exchangeRate == 0) {

System.out.println("Unable to fetch exchange rate. Please try again.");

return;

}

System.out.print("Enter the amount to convert from " + baseCurrency + " to " + targetCurrency + ": ");

double amount = scanner.nextDouble();

double convertedAmount = amount \* exchangeRate;

System.out.printf("%.2f %s is equal to %.2f %s\n", amount, baseCurrency, convertedAmount, targetCurrency);

scanner.close();

}

}