

Algorithm: RizwanLab4

1. File header including:
2. State: This lab was made by Muhammad Ahmad Rizwan on 9/14/2023 for the COMPUTING 1 Lab 4 assignment.
3. Purpose: This lab will be a currency-conversion program.
4. Features: Users will input US dollars and choose an output currency among different global currencies.
5. Define a function called ``mainheadings``:
6. Print two blank lines.
7. Print the main description of the program (currency conversion calculator details).
8. List out all the available currencies for conversion.
9. Define a function called ``menu``:
10. Print a blank line.
11. Ask the user for the currency they'd like to convert to.
12. Display a menu with all available currency options.
13. Return the user's choice by calling the `'get_choice'` function.
14. Define a function called ``get_choice``:
15. Continuously ask the user for a choice until a valid number between the range of 0-10 is given.
16. If the choice is valid, then it will be returned. Otherwise, the user must be notified and try again.
17. Define the main function (``main``):
18. Display the main headings by identifying them as ``mainheadings``.
19. Call ``menu`` and store the result in the ``menuselected`` function.
20. Ask the user for the USD amount they would like to convert.
21. Call the ``currencycalculations`` function alongside the ``menuselected`` function as well as the inputted USD amount as parameters.
22. Define a function called ``currencyvalues`` that takes the ``menuselected`` function as a parameter:
23. Based on the value of ``menuselected``, return the exchange rate.
24. Define a function called ``currencysymbols`` that takes ``menuselected`` as a parameter:
25. Based on the value of ``menuselected``, return the currency symbol.
26. Define a function called ``currencycalculations`` that takes the ``currencymenu`` and ``usdamount`` functions as parameters:
27. Display the inputted USD amount.
28. Calculate the conversion rate and currency symbol based on the user's input choice.
29. Calculate the converted value by multiplying the USD amount by the conversion rate.
30. Display the converted amount with the corresponding currency symbol.
31. Execute the program by calling the ``main`` function and allowing the program to run.