

Currency Converter

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Problem.

Write a program to convert U.S. Dollars into either the Yen, Euro, or British Pound. You can either make up or research the appropriate conversion factors. Code these as constants. Once the program greeting runs, present the following menu:

1. USD -> Yen
2. USD -> Euro
3. USD -> British Pound
4. Flip Conversion

If options 1 .. 3 are selected perform the conversion after prompting for the dollar amount to convert. If option 4 is selected present the reverse conversion in a menu similar to this:

1. Yen -> USD
2. Euro -> USD
3. Pound -> USD
4. Quit w/o conversion

Implement the various menu options.

Requirements.

- Store the results of all computations.
- Include your specification comments above the main portion of your code where you implement the specification. No credit if this is missing!
- Use white-space and comments to make your code more readable.
- Put a Source File Header at the top of your source file.
- Include a ProgramGreeting() function.
- Use function prototypes for all functions.
- Do not use c (.h) style libraries. Use C++ libraries instead.
- Your program must compile in C++ on Ubuntu.
- Your program must generate logically correct output.
- Program activities are split into logical 'chunks' or paragraphs. I'm expecting paragraphs for input, processing (if any), and output operations.
- If there is non integer output, force the computer to always display 3 places to the right of the decimal.

Specifications.

// Specification C1 - Main Menu

This is the first menu listed in the problem section.

// Specification C2 - Reverse Menu

This is the second menu listed in the problem section.

// Specification C3 - Input

Show me where you input the amounts to convert.

// Specification B1 - Menu Logic

Using a switch statement implement the logic to process the main menu.

Using an else-if else ladder implement the logic to process the reverse menu.

// Specification B2 - Option Functions

Implement the conversions in functions which are called from your menu logic section (rather than just calculating the values right then and there). You can prompt for the inputs and display the outputs from these functions if you wish or you can extend it with B3.

// Specification B3 - Pass Arguments

Prompt for the values to convert once and pass it to the appropriate function(s). Display the output in a single function which receives the computed value from the conversion function.

// Specification A - Reflection

Using the following prompts, generate feedback on your assignment using ChatGPT. Often shift-return will generate a blank line without submitting the prompt.

Analyze this student's code in relationship to commonly accepted C++ programming practices and standards. This is an assignment from an Introductory C++ programming course. Indicate if this code is likely to compile or run correctly in addition to your other feedback.

<Copy and Paste your source code here>

Review and reflect on the feedback the system gives you. Write this up in 250 words or more. Include your write up as a block comment at the bottom of your assignment. **Also indicate the number of words in your write up, as well.** You may wish to:

Comment on the overall quality of the assessment. Was it accurate? Did it make sense? Did you find it useful? Does it align with what you coded? You may wish to discuss one or two main themes the AI identified in relationship to your coding.

Memorialize your reaction to the feedback. Do you find it easier to get feedback from a computer or a human? Was there any advice in particular which was helpful to you? Can you think of a better prompt to generate the information you need?

I am NOT interested in the feedback from the generative AI. Do NOT copy and paste that in your program. I am interested in your thoughts about it however. You are free to use multiple prompts as well. I do not use this tool to grade your assignments - it's not accurate enough for my purposes. I will not grade the quality of your content. I want this to be useful to you and not worry about saying something "grade worthy". I suggest this is the last step you perform before you turn in your assignment. You can do it earlier if you wish, but the feedback will not be as useful. You are free to revise your code in light of the feedback you get, but remember, the assignment is what I grade to, not ChatGPT. Make sure you confirm your code runs before you turn it in.