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Problem 1:

Initialize variables for temperature in both Fahrenheit and Celsius

Input the temperature in Fahrenheit

Set Celsius to (5/9) * (Fahrenheit -32)

Output Celsius

Problem 2:

Initialize variable for population

Input starting population

Add annual births to population

Annual Births: (7.5 births a minute*60 minutes in an hour * 24 hours in a day * 365 days in a year.)

Subtract annual deaths from population

Annual deaths: (5 deaths a minute * 60 minutes in an hour *24 hours in a day* 365 days in a year.)

Add annual immigrations

Annual immigrations: (111/50 immigrations a minute * 60 minutes in an hour * 24 hours in a day* 365 days in a year.)

Output total population after calculations for the U.S. population in a year.

Problem 3:

Initialize species variable to 0

While species variable is not 4

    Set agility speed and strength variables to 0

    Set hire score to 1.8*agility + 2.16*strength + 3.24*speed

    Display menu of each species

    Input species variable

If species variable is 1

Input agility

Input strength

Display hire score

If species variable is 2

Input agility

Input speed

Display hire score

If species variable is 3

Input strength

Input speed

Display hire score

If species variable is 4

Quit

Else

Set species variable to 0

Problem 4:

Part a:

Initialize bank balance variable

Initialize interest variable

Initialize number of months double variable at 0

Set bank balance to 10000

While bank balance > 0

Set interest variable to 0

Subtract 500 from bank balance

Set interest to .06* bank balance

Add interest to bank balance

Increment number of months 1 greater

Initialize number of years variable as number of months divided by 12

Display number of years variable

Part b:

Initialize Principal balance

Initialize interest rate value

Initialize monthly expense variable

Initialize number of months variable at 0

Input user principal bank balance

Input user bank interest rate

While bank balance > 0

Set interest variable to 0 (Not rate but amount from interest)

Set monthly expense variable to 0

Subtract 500 from bank balance

Ask user for monthly expense input

Subtract the monthly expense

Set interest to the user inputted percentage of bank balance

Add interest value to bank balance.

If interest is greater than (monthly expense + 500)

Display a message saying interest outweighs expense

Return 0

Else

Increment number of months 1 greater

Initialize number of years variable as a double that is equal to number of months divided by 12.

Display number of years variable.

5.

The first compile time error is that they wrote “cot” instead of cout on line 11. This is going to make the program not run as it won’t know what it is supposed to be doing when it reaches that line. The second compile time error is on the same line at the very end. endl is not followed with a semicolon meaning that the program will not know what to do with that line of code.

The run-time error is the typo on line 11 saying “hello 1300!” as opposed to “Hello 1300!” This issue will not stop the code from running but will mean that the code will output something that the user is not looking for.