

Assignments

1. Factorials

a. Input: Allow user to input the number they want to find the factorial of

b. Output the following

Print what the factorial is for the user input

I.E Input: 3

The Factorial of 3! = 6

(1*2*3=6)

HINT: Use a For Loop

c. Variable factorial=1 //represents starting point

Formula to calculate factorial within a for loop: factorial = factorial * x

d. 1st Declare Variable type int (integer);

Test program with a number greater than 75 what happens?

2nd change Variable type double; what happens?

e. Ask if the user would like to find another factorial. Repeat until user wants to exit.

2. Coin Change

Scenario: User purchases a product. Program will output the lowest denomination of coins a user can get back. This program will not be concerned with bills only with change that is less than a \$1

- a. Input: User enters as a decimal the change they received from a purchase
- b. Output:
 - i. The total number of quarters, dimes, nickels and pennies the user will receive back.
Note: Program will be designed to give back the fewest amount of coins (I.E \$0.54 = 2 quarters and 4 pennies; NOT 54 pennies or another combination).
 - ii. Hint: use subtraction to lower the users inputted number. DO NOT use division this will give you remainders that are hard to clean up and deal with.
 - iii. Hint 3 Loops will need to be used to total the number of coins up
- c. Ask the user if they would like to run the program again