For While Do while Break Continue Assignment

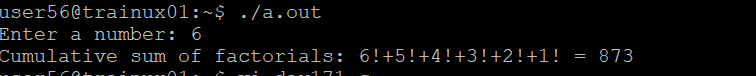
1. WAP to read a number n and to display the cumulative sum of factorial of all numbers upto n . (use for or while)

Input: 4

Ouput: 4!+3!+2!+1! = 32

A screen shot of a computer program

Description automatically generated



2. Write a program to accept “N” integers from the user. “N” also has to be taken from the user. Take the count of +ve numbers, -ve numbers and 0’s.

However the program should not accept a non-integer value. If a non-integer value is entered, used must be asked to re-enter.

[Hint:

a. Use the return value of scanf to find out whether the user has entered integer or not.

b. You also will have to clear the input buffer before taking the next input.

For clearing the input buffer, use one of the following approaches

Ø while (getchar() != '\n'); // keep reading till newline and discard the characters

Ø scanf(“%\*s”); // read and discard one string

]

A computer screen shot of colorful text

Description automatically generated

A screen shot of a computer

Description automatically generated

3. Write a program to continuously read a string of maximum length 80 chars, End the program if string is END, else convert to upper case, display and continue. (use while)

A computer screen shot of a code

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A screen shot of a computer code

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4. Refer the program “value\_out\_of\_domain.c”. Try to run the program with a large value say 255. Check the output? Is it correct? Fix the issue observed.

What improvements do you suggest?

A computer screen with text on it

Description automatically generated

A black background with white text

Description automatically generated

\*Changed the fact variable to long long to store larger values without overflow.

\*Added a simple check to handle negative inputs. Factorial is not defined for negative numbers, so if the user enters a negative number, the program will exit gracefully and display a message.

5. Refer the code below. It does not output anything. Fix it.

#include <stdio.h>

int main()

{

int x = 5;

while (x > 0);

{

printf( "Value of x :%d \n", x);

x--;

}

return 0;

}

A computer screen with text and numbers

Description automatically generated

A screen shot of a computer

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\*In the given code there is a semicolon after while, there should not be a semicolon because it will terminate the loop and it will not enter into loop. And printf statement is outside the loop.

6. Analyse the code, identify the issues

#include <stdio.h>

int main()

{

float cnt = 0, num = 1000;

do

{

printf ("\n%d\n%d", num,cnt);

num /= cnt;

} while (cnt --); /\* End of while \*/

return 0;

}A computer screen with numbers and symbols

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\*Ensure that cnt is initialized to a non-zero value, and use proper logic to avoid division by zero.