TP11-Function (part 2)

Lab's objectives:

- Using function and using global variables
- Deadline: 6 days

Write a C program to allows the user to be able to perform 5 operations below:

a-Tell a user whether a number is Prime number or not using function

b-Display all odd numbers from 0 to n and display all even numbers from 0 to m using the function, where n and m are the parameters of the function.

c-Display all prime numbers between n and m using function, where n and m are the parameters of the function.

d-Compute summation of a suite: 112 + 122 + 132 + … + 1n2, where n is a user input.

e-Exit program. The program tells the user the number of times that the user has tried the menu. Then, close the program.

Test your program in main by creating a menu for the user to test your functions. Make the program running as an infinite loop.

Example:

/*……Program Menu: ……..*/

a-Tell a user whether a number is Prime number
b-Display all odd numbers from 1 to n and display all even numbers from 1 to m
c-Display all prime numbers between n and m
d-Compute summation of a suite: 112 + 122 + 132 + … + 1n2
e-Exit program

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INPUT & OUTPUT:

Enter your choice: b

OUTPUT: You choose option b. We are going to display all odd numbers from 1 to n and display all even numbers from 1 to m.

Enter number n: 10
Enter number m: 20

OUTPUT: All odd numbers from 1 to 10: 1 3 5 7 9
All even numbers from 1 to 20: 2 4 6 8 10 12 14 16 18 20

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/*……Program Menu: ……..*/

a-Tell a user whether a number is Prime number
b-Display all odd numbers from 1 to n and display all even numbers from 1 to m
c-Display all prime numbers between n and m
d-Compute summation of a suite: 112 + 122 + 132 + … + 1n2

e-Exit program

……

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INPUT & OUTPUT:

Enter your choice: a

OUTPUT: You choose option a about “Tell a user whether a number is Prime number”

Enter number n: 7

OUTPUT: You choose option a. Tell a user whether a number is Prime number.
7 is a prime number!

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/*……Program Menu: ……..*/

a-Tell a user whether a number is Prime number
b-Display all odd numbers from 1 to n and display all even numbers from 1 to m
c-Display all prime numbers between n and m
d-Compute summation of a suite: 112 + 122 + 132 + … + 1n2
e-Exit program

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INPUT and OUTPUT

Enter your choice: c

OUTPUT: You chose option c. Display all prime numbers between n and m using the function, where n and m are the parameters of the function.

Enter number n: 2
Enter number m: 15

OUTPUT: All primes numbers between 2 and 15 are: 2 3 5 7 11 13 17 19

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/*……Program Menu: ……..*/

a-Tell a user whether a number is Prime number
b-Display all odd numbers from 1 to n and display all even numbers from 1 to m
c-Display all prime numbers between n and m
d-Compute summation of a suite: 112 + 122 + 132 + … + 1n2
e-Exit program

……

INPUT and OUTPUT

Enter your choice: e

OUTPUT: We are exiting the program, You have tried our menu for 3 times.
Thank you and see you next time!!!

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/*……Program Menu: ……..*/

a-Tell a user whether a number is Prime number
b-Display all odd numbers from 1 to n and display all even numbers from 1 to m
c-Display all prime numbers between n and m
d-Compute summation of a suite: 112 + 122 + 132 + … + 1n2
e-Exit program

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INPUT and OUTPUT

Enter your choice: d

OUTPUT: You chose option c. Display all prime numbers between n and m using the function, where n and m are the parameters of the function.

Enter the value of n: 5

OUTPUT: The summation of the sequence is: 112 + 122 + 132 + 142 + 152 = 660

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