

Prime Number

Program Description:

Create a program which shows the factors of any integer inputted by the user. The factor outputs must be outputted in both a scrolling textbox as well as a list box. Required operations include finding the sum of factors and whether the inputted number is prime.

Rubric:

“B”

- factors - sum of factors - number of divisors - 2 ways of output: textbox and list box
- prime or not

“A”

-GCF -LCM -2 numbers

Sample output:

1. Gui before any input:

The GUI consists of four main colored panels for Number 1 (yellow), Number 2 (green), Number 3 (cyan), and Number 4 (magenta). Each panel contains a 'Factors' list box, a 'Sum of Factors' text box, and a 'Number of Factors' text box. To the right is a 'Primes to' panel with a list box. Below these panels are GCF and LCM sections. The GCF section has buttons for pairs (1,2), (1,3), (2,3), (1,4), (2,4), (3,4), and (1,2,3,4), each with a corresponding text box. The LCM section has similar buttons and text boxes. At the bottom are 'Clear' and 'Exit' buttons.

2. Gui after entering in numbers (only need 2 numbers, this project was tryhard)

The GUI shows the results of entering numbers. Number 1 is 23, which is prime. Number 2 is 18, which is not prime. Number 3 is 46, which is not prime. Number 4 is 128, which is not prime. The 'Primes to' list box shows primes up to 47. The GCF and LCM sections show results for the selected pairs. The 'Clear' and 'Exit' buttons are still present.

Number	Input	Factors	Sum of Factors	Number of Factors	Prime Status
1	23	1 23	24	2	It is prime!
2	18	1 2 3 6 9 18	39	6	It is not prime!
3	46	1 2 23 46	72	4	It is not prime!
4	128	1 2 4 8 16 32 64	255	8	It is not prime!

GCF	1,2	1,3	2,3	1,4	2,4	3,4	1,2,3,4
	1	23	2	1	2	2	1

LCM	1,2	1,3	2,3	1,4	2,4	3,4	1,2,3,4
	414	46	414	2944	1152	2944	2437632

If clear is pressed the program should go back to the way it was in figure 1.