

Day 18 coding Statement : Write a program to Add two fractions

Description: Get the values for numerator and denominator of two fractions, then add that fractions. Consider the following format

$$x_3/y_3 = (x_1/y_1) + (x_2/y_2)$$

here $x_3 = (x_1*y_2) + (x_2*y_1)$ and $y_3 = (y_1*y_2)$

Input:

2 3

4 3

Output: 2/1

CODE:

```
def GCD(num1, num2):
    if num1 == num2:
        return num1
    else:
        if num1 > num2:
            greater = num1
        else:
            greater = num2
        li = []
        for i in range(1, (greater // 2)+1):
            if num1 % i == 0 and num2 % i == 0:
                li.append(i)
        return li[-1]

x1, y1 = map(int, input("Enter numerator and denominator for 1st number: ").split())
x2, y2 = map(int, input("Enter numerator and denominator for 2nd number: ").split())
x3 = (x1 * y2) + (x2 * y1)
y3 = (y1 * y2)
gcd = GCD(x3, y3)
numerator = x3 // gcd
denominator = y3 // gcd
print("Addition of 2 fractions =", numerator, "/", denominator)
```

OUTPUT:

```
Enter numerator and denominator for 1st number: 2 3  
Enter numerator and denominator for 2nd number: 4 3  
Addition of 2 fractions = 2 / 1  
  
Process finished with exit code 0
```