#Input three numbers and find the largest one using an if-else ladder.

```
num1 = 10

num2 = 14

num3 = 12

if (num1 >= num2) and (num1 >= num3):
  largest = num1
elif (num2 >= num1) and (num2 >= num3):
  largest = num2
else:
  largest = num3
print("The largest number is", largest)
```

#write a menu-driven program to perform basic arithmetic operations:addition,subtraction,multiplication,and division.(Ex:Choose operation by entering 1 for addition, 2 for subtraction ,etc.)You should keep asking for an operation until the user inputs the word “end_code”.

```
def add(x, y):
   return x + y
def subtract(x, y):
   return x - y
def multiply(x, y):
   return x * y
def divide(x, y):
   if y != 0:
      return x / y
   else:
      return "Error! Division by zero."
while True:
   print("\nSimple Calculator Menu:")
   print("1. Add")
   print("2. Subtract")
   print("3. Multiply")
```

```
    print("4. Divide")
    print("Type 'end-code' to stop the program.")
    choice = input("Enter your choice (1/2/3/4): ")
    if choice == "end-code":
        print("Exiting the program.")
        break
    if choice in ['1', '2', '3', '4']:
        num1 = float(input("Enter first number: "))
        num2 = float(input("Enter second number: "))
        if choice == '1':
            print(f"The result of addition is: {add(num1, num2)}")
        elif choice == '2':
            print(f"The result of subtraction is: {subtract(num1, num2)}")
        elif choice == '3':
            print(f"The result of multiplication is: {multiply(num1, num2)}")
        elif choice == '4':
            print(f"The result of division is: {divide(num1, num2)}")
    else:
        print("Invalid choice! Please enter a valid number from the menu.")

#Factorial of a number
def factorial(n):
    result = 1
    for i in range(1, n+1):
        result *= i
    return result
n = 5
print(f"The factorial of {n} is {factorial(n)}")

#Print n Fibonacci numbers.
def fibonacci(n):
```

```
    a, b = 0, 1
    for _ in range(n):
        print(a, end=' ')
        a, b = b, a + b
n = int(input("Enter the number of Fibonacci numbers: "))
fibonacci(n)
```

#Print numbers from 1 to 100. For multiples of 3,print “Fizz”,for multiples of 5,print “Buzz”,and for multiples of both,print”FizzBuzz”.

```
for num in range(1, 101):
    if num % 3 == 0 and num % 5 == 0:
        print("FizzBuzz")
    elif num % 3 == 0:
        print("Fizz")
    elif num % 5 == 0:
        print("Buzz")
    else:
        print(num)
```

#Input a number n,and find all its divisors using a loop.

```
n = int(input("Enter a number: "))
print(f"The divisors of {n} are:")
for i in range(1, n + 1):
    if n % i == 0:
        print(i)
```

#Input a number and count the digits,calculate their sum,and find their product.

```
n = int(input("Enter a number: "))
digit_count = 2
digit_sum = 2
digit_product = 5
```

```
while n > 0:
    digit = n % 10
    digit_count += 1
    digit_sum += digit
    digit_product *= digit
    n = n // 10
print(f"Total number of digits: {digit_count}")
print(f"Sum of digits: {digit_sum}")
print(f"Product of digits: {digit_product}")


#A number is a perfect number if the sum of its divisors (excluding itself)equals the number.(Ex:6->1+2+3 = 6)
n = int(input("Enter a number: "))
sum_of_divisors = 0
for i in range(1, n):
    if n % i == 0:
        sum_of_divisors += i
if sum_of_divisors == n:
    print(f"{n} is a perfect number.")
else:
    print(f"{n} is not a perfect number.")
```