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GitHub link: https://github.com/ilyasaqsa/Python-lab

LAB 3:

TASK 01

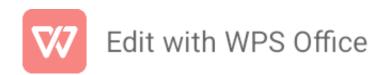
Write a python program to take 2 numbers as input and perform all arithmetic operations on them.

Program:

```
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))
print("Addition:", num1 + num2)
print("Subtraction:", num1 - num2)
print("Multiplication:", num1 * num2)
print("Division:", num1 / num2)
print("Modulus (Remainder):", num1 % num2)
print("Exponent (Power):", num1 ** num2)
print("Floor Division:", num1 // num2)
Enter first number: 2
```

Enter second number: 7
Addition: 9.0
Subtraction: -5.0
Multiplication: 14.0
Division: 0.2857142857142857
Modulus (Remainder): 2.0

TASK 02



Create a function that takes two numbers and return their sum, difference, product, and quotient.

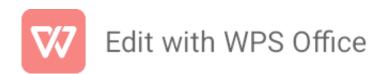
Program:

```
]: def calculate(a, b):
       sum_result = a + b
       difference = a - b
        product = a * b
        if b != 0:
            quotient = a / b
        else:
            quotient = "Undefined (division by zero)"
        return sum result, difference, product, quotient
    num1 = float(input("Enter first number: "))
    num2 = float(input("Enter second number: "))
    sum_result, difference, product, quotient = calculate(num1, num2)
    print("Sum:", sum_result)
    print("Difference:", difference)
    print("Product:", product)
    print("Quotient:", quotient)
    Enter first number: 6
    Enter second number: 9
    Sum: 15.0
    Difference: -3.0
    Product: 54.0
    Ouotient: 0.666666666666666
```

TASK 03

Write a python script to find the remainder when one number is divided by another.

Program:



```
num1 = int(input("Enter the first number: "))
num2 = int(input("Enter the second number: "))
remainder = num1 % num2
print("The remainder is:", remainder)

Enter the first number: 4
Enter the second number: 9
The remainder is: 4
```

TASK 04

Write a program to calculate the area of a circle using the formula: area=pi*r^2.

Program:

```
import math
r = float(input("Enter the radius of the circle: "))
area = math.pi * r ** 2

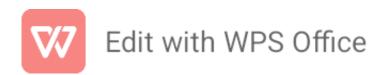
# Showing the result
print("Area of the circle is:", area)

Enter the radius of the circle: 7
Area of the circle is: 153.93804002589985
```

Task 05:

Implement a program that takes a number as input and returns its square and cube using exponentiation.

Program:



```
[27]: num = float(input("Enter a number: "))
    square = num ** 2
    cube = num ** 3
    print("Square of the number is:", square)
    print("Cube of the number is:", cube)

Enter a number: 5
    Square of the number is: 25.0
Cube of the number is: 125.0
```

TASK 06:

Create a simple calculator in python that allows the user to choose an operation(addition, subtraction, etc.) and inputs two numbers.

Program:

```
]: print("Select operation:")
    print("1. Addition")
    print("2. Subtraction")
    print("3. Multiplication")
    print("4. Division")
    choice = input("Enter choice (1/2/3/4): ")
    num1 = float(input("Enter first number: "))
    num2 = float(input("Enter second number: "))
    if choice == '1':
        print("Result:", num1 + num2)
    elif choice == '2':
        print("Result:", num1 - num2)
    elif choice == '3':
        print("Result:", num1 * num2)
    elif choice == '4':
        if num2 != 0:
            print("Result:", num1 / num2)
            print("Error: Cannot divide by zero.")
    else:
        print("Invalid choice.")
```



else: print("Invalid choice.") Select operation: 1. Addition 2. Subtraction 3. Multiplication 4. Division Enter choice (1/2/3/4): 3 Enter first number: 8 Enter second number: 6

Result: 48.0