M.Ibrahim Tariq BIT-23F-054. Lab No 4

Python Programming Tasks

1. Arithmetic Operations on Two Numbers

Code:

# Input two numbers

num1 = float(input("Enter first number: "))

num2 = float(input("Enter second number: "))

# Perform arithmetic operations

print("Addition:", num1 + num2)

print("Subtraction:", num1 - num2)

print("Multiplication:", num1 \* num2)

print("Division:", num1 / num2)

print("Modulus:", num1 % num2)

print("Exponentiation:", num1 \*\* num2)

Sample Output:

Enter first number: 10

Enter second number: 5

Addition: 15.0

Subtraction: 5.0

Multiplication: 50.0

Division: 2.0

Modulus: 0.0

Exponentiation: 100000.0

==================================================

2. Function for Arithmetic Operations

Code:

def arithmetic\_operations(a, b):

return a + b, a - b, a \* b, a / b

# Example usage

sum\_, diff, prod, quot = arithmetic\_operations(20, 4)

print("Sum:", sum\_)

print("Difference:", diff)

print("Product:", prod)

print("Quotient:", quot)

Sample Output:

Sum: 24

Difference: 16

Product: 80

Quotient: 5.0

==================================================

3. Find Remainder of Division

Code:

# Input two numbers

num1 = int(input("Enter dividend: "))

num2 = int(input("Enter divisor: "))

# Find remainder

remainder = num1 % num2

print("Remainder:", remainder)

Sample Output:

Enter dividend: 17

Enter divisor: 4

Remainder: 1

==================================================

4. Area of a Circle

Code:

import math

# Input radius

radius = float(input("Enter the radius of the circle: "))

# Calculate area

area = math.pi \* radius \*\* 2

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

Sample Output:

Enter the radius of the circle: 3

Area of the circle is: 28.274333882308138

==================================================

5. Square and Cube using Exponentiation

Code:

# Input number

num = int(input("Enter a number: "))

# Calculate square and cube

square = num \*\* 2

cube = num \*\* 3

print("Square:", square)

print("Cube:", cube)

Sample Output:

Enter a number: 4

Square: 16

Cube: 64

==================================================

6. Simple Calculator

Code:

def calculator():

print("Select operation: +, -, \*, /")

op = input("Enter operation: ")

a = float(input("Enter first number: "))

b = float(input("Enter second number: "))

if op == '+':

print("Result:", a + b)

elif op == '-':

print("Result:", a - b)

elif op == '\*':

print("Result:", a \* b)

elif op == '/':

if b != 0:

print("Result:", a / b)

else:

print("Error: Division by zero.")

else:

print("Invalid operation.")

calculator()

Sample Output:

Select operation: +, -, \*, /

Enter operation: \*

Enter first number: 6

Enter second number: 7

Result: 42.0

==================================================