

ASSIGNMENT 3:

Module 4: Functions & Modules in Python

Task 1: Calculate Factorial Using a Function

Problem Statement: Write a Python program that:

1. Defines a function named factorial that takes a number as an argument and calculates its factorial using a loop or recursion.
2. Returns the calculated factorial.
3. Calls the function with a sample number and prints the output.

Expected Output:

For example, if the function is called with 5, it should return:

```
Enter a number: 5
Factorial of 5 is: 120
```

Task 2: Using the Math Module for Calculations

Problem Statement: Write a Python program that:

1. Asks the user for a number as input.
2. Uses the math module to calculate the:
 - Square root of the number

- Natural logarithm (log base e) of the number
 - Sine of the number (in radians)
3. Displays the calculated results.

Expected Output:

For example, if the user enters 25, the output should be:

```
Enter a number: 25
Square root: 5.0
Logarithm: 3.2188758248682006
Sine: -0.13235175009777303
```