

ASSIGNMENT 1

Introduction to Programming

Assignment Questions:

1. Power_Question

Write a C program to calculate the power of a number. The program should take a base number and exponent as inputs(both should be positive integers) from the user in the main() function, then using a function calculate_power(), the user has to calculate the power of the number. The result of the calculation will be returned by the function back to the main() function and prints the result.

Sample Input

Enter the base number and exponent

2 3

Sample Output

The result is 8

2. Sum_Question

Write a C program that accepts an integer n and calculates the sum of the series $1 + 1/2 + 1/3 + \dots + 1/n$ using a function. The function should take an integer as input (value of n) and return the sum of the series up to the nth term.

Sample Input

Enter a number

5

Sample Output

Sum of the series up to 5

terms is 2.28333

3. DigitSum_Question

Write a C program that calculates the sum of digits of a number. The program should take a number as input from the user in the main() function, then using a function sum_of_digits(), calculate the sum of the digits of the number. The result of the calculation will be returned by the function back to the main() function and prints the sum.

Sample Input

Enter a number

12345

Sample Output

The sum of digits is

15

