Recursion

Sum of first N natural numbers

Problem:
Write a recursive function to find the sum of the first N natural numbers.

Input Format:
A single integer N.

Output Format:
Print the sum of the first N natural numbers.

Sample Input:

5

Sample Output:

15

Factorial of a number

Problem:
Write a recursive function to find the factorial of a number.

Input Format:
A single integer N.

Output Format:
Print the factorial of N.

Sample Input:

5

Sample Output:

120

Print numbers from 1 to N

Problem:
Using recursion, print numbers from 1 to N.

Input Format:
A single integer N.

Output Format:
Print numbers from 1 to N separated by a space.

Sample Input:

5

Sample Output:

1 2 3 4 5

Print numbers from N to 1

Problem:
Using recursion, print numbers from N to 1.

Input Format:
A single integer N.

Output Format:
Print numbers from N to 1 separated by a space.

Sample Input:

5

Sample Output:

5 4 3 2 1

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5. Find Nth Fibonacci number

Problem:
Write a recursive function to find the Nth Fibonacci number.

Input Format:
A single integer N.

Output Format:
Print the Nth Fibonacci number.

Sample Input:

6

Sample Output:

8

Sum of digits of a number

Problem:
Find the sum of the digits of a given number using recursion.

Input Format:
A single integer N.

Output Format:
Print the sum of its digits.

Sample Input:

1234

Sample Output:

10

Reverse a string using recursion

Problem:
Write a recursive function to reverse a string.

Input Format:
A single string S.

Output Format:
Print the reversed string.

Sample Input:

hello

Sample Output:

olleh

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8. Check if a string is a palindrome

Problem:
Using recursion, check whether a string is a palindrome or not.

Input Format:
A single string S.

Output Format:
Print "Palindrome" if the string is a palindrome, otherwise "Not Palindrome".

Sample Input:

madam

Sample Output:

Palindrome

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9. Power of a number (x^n)

Problem:
Write a recursive function to find x raised to the power n.

Input Format:
Two integers x and n are separated by a space.

Output Format:
Print the value of x^n.

Sample Input:

2 5

Sample Output:

32

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10. Count digits in a number

Problem:
Write a recursive function to count the digits in a number.

Input Format:
A single integer N.

Output Format:
Print the number of digits.

Sample Input:

12345

Sample Output:

5