## Task - 1:

Write a C++ function to find the factorial of a number using recursion.
>       Input: 5
>       Output: 120

## Task - 2:

Write a recursive program that reverses an input string.
>       Input String: Hello
>       Output String: olleH

## Task - 3:

Write a program in C++ to convert a decimal number to binary using recursion.
>       Input any decimal number: 66
>       The Binary value of decimal no. 66 is: 1000010

## Task - 4:

Write a recursive program to print the Hailstone sequence from a given input number to 1.

Also print the number of steps required to generate the sequence.

In the Hailstone sequence each term is obtained from the previous term as follows: If the previous term is even, the next term is one half the previous term. If the previous term is odd, the next term is 3 times the previous term plus 1.

**Test Case:**

```
Enter a number:
45
45 136 68 34 17 52 26 13 40 20 10 5 16 8 4 2 1
steps = 17
```

**Congratulations! You have done well. Proud of you for the progress. If you want to practice more, Google is your best companion. I am providing you with one good resource.**

[GeeksforGeeks Recursion Problems](#)