

1. The Drumbeats of the Festival (Print 1 to n)

Story:

In a village festival, a drummer plays beats in increasing order. He starts with beat 1 and goes up to beat n.

👉 Can you print the beats in order using recursion?

Input:

- Integer n (number of beats).

Output:

- Numbers from 1 to n separated by space.

Constraints:

- $1 \leq n \leq 1000$

Example:

Input: 5

Output: 1 2 3 4 5

2. The Echo in the Cave (Print n to 1)

Story:

Inside a magical cave, a traveler shouts a number n .
The echo answers back in **descending order** down to 1 .

👉 Print numbers from n to 1 using recursion.

Input:

- Integer n .

Output:

- Numbers from n to 1 separated by space.

Constraints:

- $1 \leq n \leq 1000$

Example:

Input: 5

Output: 5 4 3 2 1

3. The King's Treasury (Sum of First n Numbers)

Story:

The King of Numberia has n treasure chests.
Each chest contains exactly the same number of coins as its position.
(Chest 1 has 1 coin, Chest 2 has 2 coins, ... Chest n has n coins).

👉 Find the total coins using recursion.

Input:

- Integer n .

Output:

- The sum of numbers from 1 to n .

Constraints:

- $1 \leq n \leq 10^4$

Example:

Input: 5

Output: 15

Explanation: $1+2+3+4+5 = 15$

4. The Wizard's Mirror (Reverse String)**Story:**

The wizard's mirror reverses any word spoken into it.

👉 Reverse a string using recursion.

Input:

- String s .

Output:

- Reversed string.

Constraints:

- $1 \leq s.length \leq 100$

Example:

Input: hello

Output: olleh

5. The Treasure Boxes (Sum of Array)**Story:**

A hero finds n treasure boxes, each with some coins.
He opens them one by one and counts the coins.

👉 Find the total coins using recursion.

Input:

- First line: integer n
- Second line: n integers (coins in each box).

Output:

- Sum of coins.

Constraints:

- $1 \leq n \leq 100$
- $1 \leq coins[i] \leq 1000$

Example:

Input:

5

2 5 3 8 6

Output:

24

6. The Traveler's Steps (Climbing Stairs)**Story:**

A traveler must climb a staircase with n magical steps.

He can climb **1 step or 2 steps at a time**.

👉 Find the number of distinct ways to reach the top using recursion.

Input:

- Integer n .

Output:

- Number of ways to climb.

Constraints:

- $1 \leq n \leq 30$

Example:

Input: 3

Output: 3

Explanation: {1+1+1, 1+2, 2+1}

7. The Princess's Lock (Factorial)

Story:

The princess is locked behind n magical locks.
She can only unlock them in **every possible order**.

👉 How many ways can she open them? (factorial)

Input:

- Integer n .

Output:

- Factorial of n .

Constraints:

- $1 \leq n \leq 12$

Example:

Input: 4

Output: 24

Explanation: $4! = 4 \times 3 \times 2 \times 1$

8 . The Rabbit's Family (Fibonacci)

Story:

In a magical forest, rabbits grow as:

- Month 1 \rightarrow 1 rabbit
- Month 2 \rightarrow 1 rabbit
- From Month 3 \rightarrow rabbits = sum of previous two months.

👉 Find number of rabbits after n months.

Input:

- Integer n .

Output:

- Fibonacci number at month n .

Constraints:

- $1 \leq n \leq 40$

Example:

Input: 6

Output: 8

Explanation: 1,1,2,3,5,8