

## Ex 2.

### Reverse String

Write a function that reverses a string. The input string is given as an array of characters `s`. You must do this by modifying the input array *in-place* with  $O(1)$  extra memory.

Example 1:

```
Input: s = ["h","e","l","l","o"]  
Output: ["o","l","l","e","h"]
```

Example 2:

```
Input: s = ["H","a","n","n","a","h"]  
Output: ["h","a","n","n","a","H"]
```

Constraints:

- $1 \leq s.length \leq 100$
- `s[i]` is a printable ascii character.

#### **Solve it in 3 different ways -**

- With JS functions only (e.g split, etc.)
- With loop (for)
- With recursion

## Ex 3 -

The Fibonacci numbers, commonly denoted  $F(n)$  form a sequence, called the Fibonacci sequence, such that each number is the sum of the two preceding ones, starting from 0 and 1. That is,

$$F(0) = 0, F(1) = 1$$

$$F(n) = F(n - 1) + F(n - 2), \text{ for } n > 1.$$

Given  $n$ , calculate  $F(n)$ .

Example 1:

Input:  $n = 2$

Output: 1

Explanation:  $F(2) = F(1) + F(0) = 1 + 0 = 1$ .

Example 2:

Input:  $n = 3$

Output: 2

Explanation:  $F(3) = F(2) + F(1) = 1 + 1 = 2$ .

Example 3:

Input:  $n = 4$

Output: 3

Explanation:  $F(4) = F(3) + F(2) = 2 + 1 = 3$ .

Constraints:

- $0 \leq n \leq 30$