DARSHAN UNIVERSITY PLACEMENT DRIVE

Problem 1 : Largest Number

Objective:

Given a list of non-negative integers **nums**, arrange them such that they form the largest number and return it.

Since the result may be very large, so you need to return a string instead of an integer.

Example 1:

Input:

nums = [10,2]

Output:

"210"

Example 2:

Input:

nums = [3,30,34,5,9]

Output:

"9534330"

Problem 2 : Jump Game.

Objective:

You are given an integer array **nums**. You are initially positioned at the array's first index, and each element in the array represents your maximum jump length at that position.

Return **true** if you can reach the last index, or **false** otherwise.

Example 1:

Input:

nums = [2,3,1,1,4]

Output:

True

Explanation:

Jump 1 step from index 0 to 1, then 3 steps to the last index.

Example 2:

Input:

nums = [3,2,1,0,4]

Output:

false

Explanation:

You will always arrive at index 3 no matter what. Its maximum jump length is 0, which makes it impossible to reach the last index.

Problem 3 : Best Time to Buy and Sell Stock

Objective:

You are given an integer array **prices** where **prices[i]** is the price of a given stock on the **ith** day.

On each day, you may decide to buy and/or sell the stock. You can only hold **at most one** share of the stock at any time. However, you can buy it then immediately sell it on the **same day**.

Find and return the **maximum** profit you can achieve.

Example 1:

Input:

prices = [7,1,5,3,6,4]

Output:

7

Explanation:

Buy on day 2 (price = 1) and sell on day 3 (price = 5), profit = 5-1 = 4. Then buy on day 4 (price = 3) and sell on day 5 (price = 6), profit = 6-3 = 3. Total profit is 4 + 3 = 7.

Example 2:

Input:

prices = [1,2,3,4,5]

Output:

4

Explanation:

Buy on day 1 (price = 1) and sell on day 5 (price = 5), profit = 5-1 = 4. Total profit is 4.

Example 3:

Input:

prices = [7,6,4,3,1]

Output:

0

Explanation:

There is no way to make a positive profit, so we never buy the stock to achieve the maximum profit of 0.