123. Best Time to Buy and Sell Stock III

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

- Find the maximum profit you can achieve. You may complete at most two transactions.

- Note: You may not engage in multiple transactions simultaneously (i.e., you must sell the stock before you buy again).

Example 1:

- **Input:** prices = [3,3,5,0,0,3,1,4]

- **Output:** 6

- **Explanation:**

- Buy on day 4 (price = 0) and sell on day 6 (price = 3), profit = 3-0 = 3.

- Then buy on day 7 (price = 1) and sell on day 8 (price = 4), profit = 4-1 = 3.

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.

- Note that you cannot buy on day 1, buy on day 2 and sell them later, as you are engaging multiple transactions at the same time. You must sell before buying again.

Example 3:

- **Input:** prices = [7,6,4,3,1]

- **Output:** 0

- **Explanation:** In this case, no transaction is done, i.e. max profit = 0.

Constraints:

- 1 <= prices.length <= 105

- 0 <= prices[i] <= 105