Experiment 3.1

Student Name: Rohan Jaiswal
UID: 21BCS2856
Branch: CSE
Section/Group:KRG_CC-1/B
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Subject Name: AP Lab 2
Subject Code: 21CSP-351

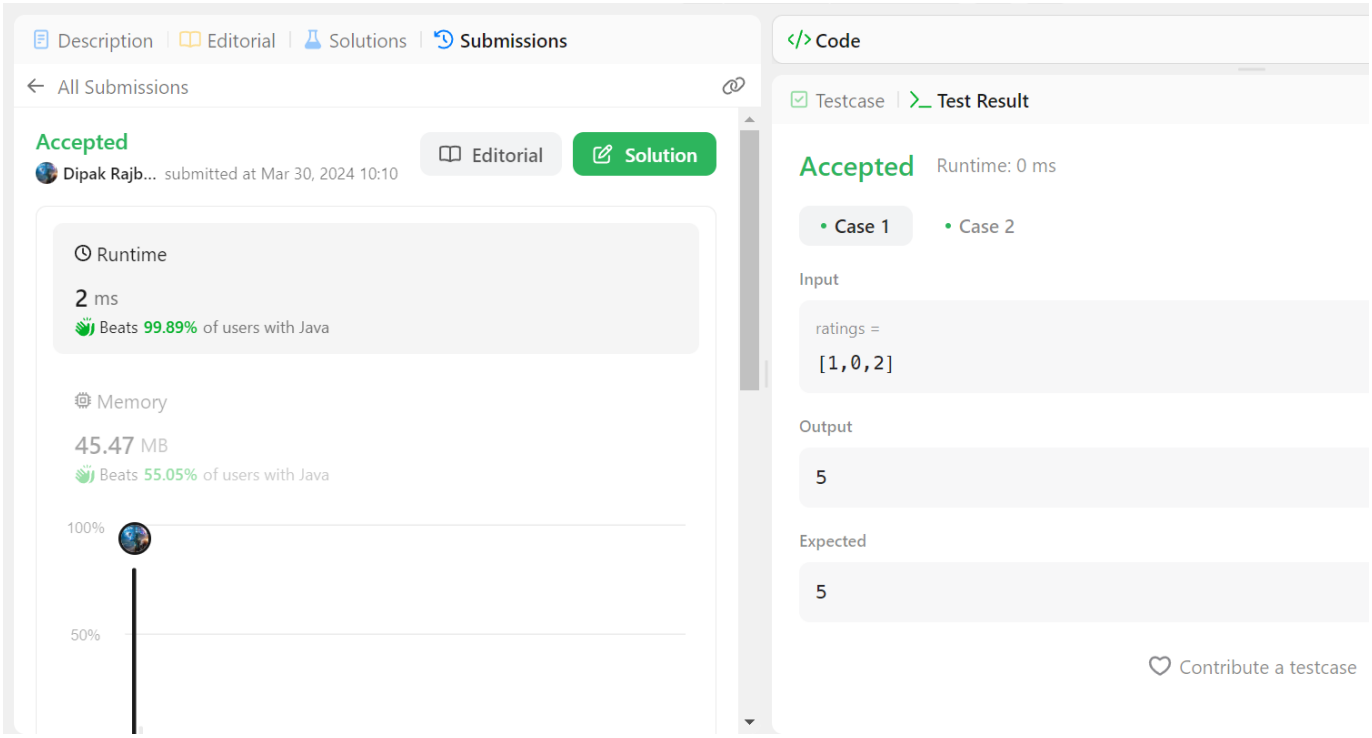
1. **Aim:** To demonstrate the concept of Greedy Approach.
2. **Objective:**
   (a) Candy: There are n children standing in a line. Each child is assigned a rating value given in the integer array ratings. You are giving candies to these children subjected to the following requirements: Each child must have at least one candy. Children with a higher rating get more candies than their neighbors. Return the minimum number of candies you need to have to distribute the candies to the children.
   (b) Best Time to Buy and Sell Stock II: 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
   Script and Output:
   (a) Candy

```
import java.util.Arrays;

class Solution {
    public int candy(int[] ratings) {
        int n = ratings.length;
        int count = 0;
        int[] candyArray = new int[n];
        Arrays.fill(candyArray, 1);
        // Traverse from left to right
        for (int i = 1; i < n; i++) {
            if (ratings[i] > ratings[i - 1]) {
                candyArray[i] = candyArray[i - 1] + 1;
            }
        }
        // Traverse from right to left
        for (int i = n - 2; i >= 0; i--) {
```

```
            if (ratings[i] > ratings[i + 1] &&
candyArray[i] <= candyArray[i + 1]) {
                candyArray[i] = candyArray[i + 1] + 1;
            }
        }
        // Count total candies
        for (int it : candyArray) {
            count += it;
        }
        return count;
    }
}
```

Output

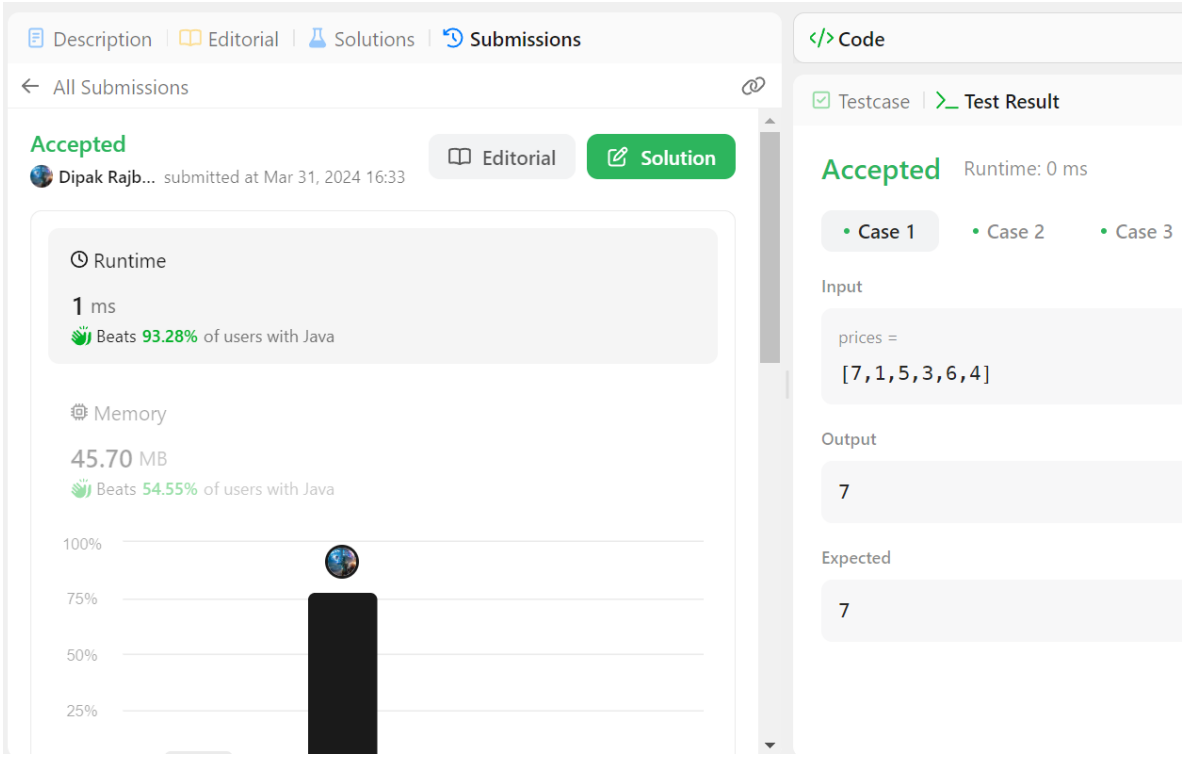


(c) Minimum Time to Buy and Sell Stocks II

```
class Solution {
    public int maxProfit(int[] prices) {
        int profit=0;
        for(int i=1;i<prices.length;i++){
            if(prices[i]>prices[i-1]){
                profit+=prices[i]-prices[i-1];
            }
        }
        return profit;
```

```
        }
}
```

Output :


Description
Editorial
Solutions
Submissions
Code
All Submissions
Testcase
Test Result
Accepted
Dipak Rajb... submitted at Mar 31, 2024 16:33
Editorial
Solution
Runtime
1 ms
Beats 93.28% of users with Java
Memory
45.70 MB
Beats 54.55% of users with Java
100%
75%
50%
25%
Accepted
Runtime: 0 ms
Case 1
Case 2
Case 3
Input
prices =
[7,1,5,3,6,4]
Output
7
Expected
7