DP-S007 (E026)

Solved Challenges 1/2

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Stock Buy & Sell Multiple Times - Maximum Profit

ID:11119 Solved By 630 Users

The program must accept the stock prices on **N** days as the input. A person can buy a stock on a particular day and he can sell it once on any other given day. He can not buy and sell on the same day. The program must print the maximum possible profit **P** that can be obtained by buying and selling the stocks **multiple times** as the output.
Note: The person can buy only one stock at a time and the person can buy another stock only after selling it.

Boundary Condition(s):
2 <= N <= 10^5
1 <= Each integer value <= 10^5

Input Format:
The first line contains N.
The second line contains N integers separated by a space.

Output Format:
The first line contains P.

Example Input/Output 1:
Input:
10
5 8 10 12 9 6 14 21 15 10

Output:
22

Explanation:
Here N = **7**.
The maximum profit is obtained by buying & selling the stocks in the following ways.
On buying the stock on the 1st day and selling it on the 4th day can earn the profit **7** (12 - 5 = 7).
On buying the stock on the 6th day and selling it on the 8th day can earn the profit **15** (21 - 6 = 15).
So the total profit is **22** (7 + 15).

Example Input/Output 2:
Input:
9
1 2 3 1 20 30 10 5 6

Output:
32

Max Execution Time Limit: 500 millisecs

Ambiance

Python3 (3.x)

Reset

```
1  N = int(input())
2  prices = list(map(int, input().strip().split()))
3
4  profit=0
5  for index in range(1,N):
6      if(prices[index]>prices[index-1]):
7          profit += prices[index] - prices[index-1]
8
9  print(profit)
```

Code did not pass the execution

TestCase ID: 63836

Input:

10
5 8 10 12 9 6 14 21 15 10

Expected Output:

22

Your Program Output:

```
Traceback (most recent call last):
  File "Hello.py", line 6, in
    if(prices[index+1]>prices[profit]):
IndexError: list index out of range
```

Save Run

Run with a custom test case (Input/Output)