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901. Online Stock Span

Medium 155 43 Favorite Share

Write a class `StockSpanner` which collects daily price quotes for some stock, and returns the *span* of that stock's price for the current day.

The span of the stock's price today is defined as the maximum number of consecutive days (starting from today and going backwards) for which the price of the stock was less than or equal to today's price.

For example, if the price of a stock over the next 7 days were `[100, 80, 60, 70, 60, 75, 85]`, then the stock spans would be `[1, 1, 1, 2, 1, 4, 6]`.

Example 1:

```
Input: ["StockSpanner","next","next","next","next","next","next","next"], [[],[100],[80],
[60],[70],[60],[75],[85]]
Output: [null,1,1,1,2,1,4,6]
Explanation:
First, S = StockSpanner() is initialized.  Then:
S.next(100) is called and returns 1,
S.next(80) is called and returns 1,
S.next(60) is called and returns 1,
S.next(70) is called and returns 2,
S.next(60) is called and returns 1,
S.next(75) is called and returns 4,
S.next(85) is called and returns 6.

Note that (for example) S.next(75) returned 4, because the last 4 prices
(including today's price of 75) were less than or equal to today's price.
```

Note:

1. Calls to `StockSpanner.next(int price)` will have `1 <= price <= 10^5`.
2. There will be at most `10000` calls to `StockSpanner.next` per test case.
3. There will be at most `150000` calls to `StockSpanner.next` across all test cases.
4. The total time limit for this problem has been reduced by 75% for C++, and 50% for all other languages.

Accepted 7,352 Submissions 16,217

Seen this question in a real interview before? Yes No

Contributor

Companies 0

Python

```python
class StockSpanner(object):

    def __init__(self):
        self.prices = []
        self.spans = []

    def next(self, price):
        """
        :type price: int
        :rtype: int
        """
        span = 1
        r = len(self.prices) - 1
        while r >= 0 and price >= self.prices[r]:
            span += self.spans[r]
            r -= self.spans[r]
        self.prices.append(price)
        self.spans.append(span)
        return span


# Your StockSpanner object will be instantiated and called as such:
# obj = StockSpanner()
# param_1 = obj.next(price)
```

Your previous code was restored from your local storage. Reset to default

Testcase | Run Code Result

Finished Runtime: 20 ms

Your input
["StockSpanner","next","next","next","next","next","next","next"]
[[],[100],[80],[60],[70],[60],[75],[85]]

Output [null,1,1,1,2,1,4,6] Diff

Expected [null,1,1,1,2,1,4,6]

Problems | Pick One | Prev 896/978 Next | Console | How to create a testcase | Run Code | Submit