## Climbing the Leaderboard ☆

302.41 more points to get your next star!

Rank: **25097** | Points: **1897.59/2200** 

Author

Difficulty

①



**Shafaet** 

Medium

**Problem** Submissions Leaderboard Discussions Editorial 🖰

Alice is playing an arcade game and wants to climb to the top of the leaderboard and wants to track her ranking. The game uses Dense Ranking, so its leaderboard works like this:

- The player with the highest score is ranked number 1 on the leaderboard.
- Players who have equal scores receive the same ranking number, and the next player(s) receive the immediately following ranking number.

For example, the four players on the leaderboard have high scores of 100, 90, 90, and 80. Those players will have ranks 1, 2, 2, and 3, respectively. If Alice's scores are 70, 80 and 105, her rankings after each game are  $\mathbf{4}^{th}$  ,  $\mathbf{3}^{rd}$  and  $\mathbf{1}^{st}$  .

#### **Function Description**

Complete the climbingLeaderboard function in the editor below. It should return an integer array where each element res[j] represents Alice's rank after the  $\jmath^{th}$  game.

climbingLeaderboard has the following parameter(s):

- scores: an array of integers that represent leaderboard scores
- alice: an array of integers that represent Alice's scores

#### **Input Format**

The first line contains an integer n, the number of players on the leaderboard.

The next line contains  $m{n}$  space-separated integers  $m{scores}[m{i}]$ , the leaderboard scores in decreasing order.

The next line contains an integer, m, denoting the number games Alice plays.

The last line contains  $m{m}$  space-separated integers  $m{alice}[m{j}]$  , the game scores.

### **Constraints**

- $1 \le n \le 2 \times 10^5$
- $1 \leq m \leq 2 \times 10^5$
- $0 \leq scores[i] \leq 10^9$  for  $0 \leq i < n$
- $0 \leq alice[j] \leq 10^9$  for  $0 \leq j < m$
- The existing leaderboard, **scores**, is in descending order.

## Subtask

For 60% of the maximum score:

- $1 \le n \le 200$
- $1 \le m \le 200$

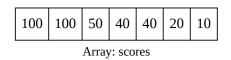
#### **Output Format**

Print m integers. The  $j^{th}$  integer should indicate Alice's rank after playing the  $j^{th}$  game.

Copy Download Sample Input 1

Max Score 20 Submitted By 80189 NEED HELP? View discussions **W** View editorial • View top submissions RATE THIS CHALLENGE 公公公公公 MORE DETAILS Download sample test cases

**Suggest Edits** 



100	100	50	40	40	2
4					
5 2	5 50	120	9		

5	25	50	120	
Arrav: alice				

## Sample Output 1

6

4

2

1

## **Explanation 1**

Alice starts playing with  $oldsymbol{7}$  players already on the leaderboard, which looks like this:

Rank	Name	Score
1	Emma	100
1	David	100
2	Caroline	50
3	Ritika	40
3	Tom	40
4	Heraldo	20
5	Riley	10

After Alice finishes game  ${f 0}$ , her score is  ${f 5}$  and her ranking is  ${f 6}$ :

Rank	Name	Score
1	Emma	100
1	David	100
2	Caroline	50
3	Ritika	40
3	Tom	40
4	Heraldo	20
5	Riley	10
6	Alice	5

After Alice finishes game  ${\bf 1}$ , her score is  ${\bf 25}$  and her ranking is  ${\bf 4}$ :

nank	ivanie	Score
1	Emma	100
1	David	100
2	Caroline	50
3	Ritika	40
3	Tom	40
4	Alice	25
5	Heraldo	20
6	Riley	10

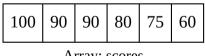
After Alice finishes game  ${\bf 2}$ , her score is  ${\bf 50}$  and her ranking is tied with Caroline at  ${\bf 2}$ :

Rank	Name	Score
1	Emma	100
1	David	100
2	Caroline	50
2	Alice	50
3	Ritika	40
3	Tom	40
4	Heraldo	20
5	Riley	10

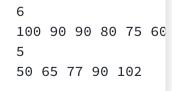
After Alice finishes game  ${\bf 3}$ , her score is  ${\bf 120}$  and her ranking is  ${\bf 1}$ :

Rank	Name	Score
1	Alice	120
2	Emma	100
2	David	100
3	Caroline	50
4	Ritika	40
4	Tom	40
5	Heraldo	20
6	Riley	10

Copy Download Sample Input 2



Array: scores



65 77 90 102 50

Array: alice

Sample Output 2

```
4
2
1
```

# Welcome to the dark

We've introduced a new Dark Mode for a better coding experience.

Try Dark Mode

```
Change Theme
                                       C++
    #include <bits/stdc++.h>
1
2
3
    using namespace std;
4
5
    vector<string> split_string(string);
6
7
    // Complete the climbingLeaderboard function below.
8
    vector<int> climbingLeaderboard(vector<int> scores, vector<int> alice) {
9
10
    }
11
12
13
    int main()
14
         ofstream fout(getenv("OUTPUT_PATH"));
15
16
         int scores_count;
17
18
         cin >> scores_count;
         cin.ignore(numeric_limits<streamsize>::max(), '\n');
19
20
21
         string scores_temp_temp;
22
         getline(cin, scores_temp_temp);
23
24
         vector<string> scores_temp = split_string(scores_temp_temp);
25
         vector<int> scores(scores_count);
26
27
28
         for (int i = 0; i < scores_count; i++) {
29
             int scores_item = stoi(scores_temp[i]);
30
31
             scores[i] = scores_item;
32
33
         int alice_count;
34
         cin >> alice_count;
35
         cin.ignore(numeric_limits<streamsize>::max(), '\n');
36
37
         string alice_temp_temp;
38
         getline(cin, alice_temp_temp);
39
40
                                                               Line: 1 Col: 1
```

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Test against custom input

**Run Code** 

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