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Medium ♥ Topics ② Companies ② Hint
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There is a battle and in heroes are trying to defeat in monsters. You are given two 1-indexed arrays of positive integers heroes and monsters of length in and in, respectively. heroes [i] is the power of ith hero, and monsters [i] is the power of ith monster.

The i^{th} hero can defeat the j^{th} monster if monsters [j] <= heroes [i].

You are also given a 1-indexed array coins of length m consisting of positive integers. coins [i] is the number of coins that each hero earns after defeating the ith monster.

Return an array ans of length n where ans [i] is the **maximum** number of coins that the ith hero can collect from this battle.

Notes

- The health of a hero doesn't get reduced after defeating a monster.
- Multiple heroes can defeat a monster, but each monster can be defeated by a given hero only once.

Example 1:

```
Input: heroes = [1,4,2], monsters = [1,1,5,2,3], coins = [2,3,4,5,6]
Output: [5,16,10]
Explanation: For each hero, we list the index of all the monsters he can defeat:

1st hero: [1,2] since the power of this hero is 1 and monsters[1], monsters[2] <= 1. So this hero collects coins[1] + coins[2] = 5 coins.

2nd hero: [1,2,4,5] since the power of this hero is 4 and monsters[1], monsters[2], monsters[4], monsters[5] <= 4. So this hero collects coins[1] + coins[2] + coins[4] + coins[5] = 16 coins.

3rd hero: [1,2,4] since the power of this hero is 2 and monsters[1], monsters[2], monsters[4] <= 2. So this hero collects coins[1] + coins[2] + coins[4] = 10 coins.

So the answer would be [5,16,10].</pre>
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Example 2:

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Input: heroes = [5], monsters = [2,3,1,2], coins = [10,6,5,2]
Output: [23]
Explanation: This hero can defeat all the monsters since monsters[i] <= 5. So he collects all of the coins: coins[1] + coins[2] + coins[3] + coins[4] = 23, and the answer would be [23].</pre>
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Example 3:

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Input: heroes = [4,4], monsters = [5,7,8], coins = [1,1,1]
Output: [0,0]
Explanation: In this example, no hero can defeat a monster. So the answer would be [0,0],
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Constraints:

O Hint 3

Discussion (18)

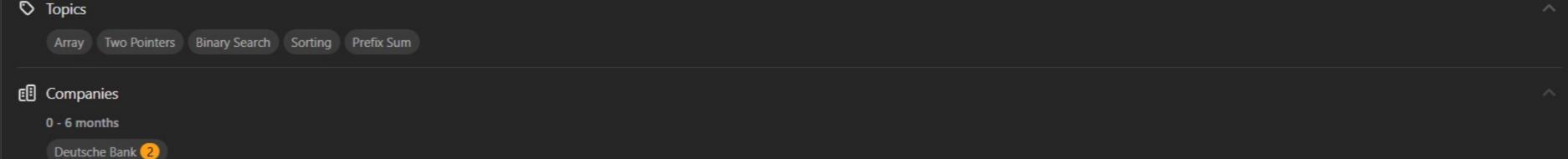
- 1 <= n == heroes.length <= 10⁵
- 1 <= m == monsters.length <= 10⁵
- coins.length == m
- 1 <= heroes[i], monsters[i], coins[i] <= 109

Seen this question in a real interview before? 1/5

Yes No

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Construct a prefix sum array for the updated coins array.



Q Hint 1

If a hero can defeat the ith monster, then he defeats all the monsters having a power less than monster[i].

Sort monsters by their powers. Also change the order of the coins array according to this sort.

For each hero, do a binary search and find the last position of the most powerful monster that this hero can defeat.

Q Hint 5

If said monster has index i, then the ith element of the partial sum array would be the answer.

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