

Problem 2323: Find Minimum Time to Finish All Jobs II

Problem Information

Difficulty: Medium

Acceptance Rate: 65.85%

Paid Only: Yes

Tags: Array, Greedy, Sorting

Problem Description

You are given two **0-indexed** integer arrays `jobs` and `workers` of **equal** length, where `jobs[i]` is the amount of time needed to complete the `i`th job, and `workers[j]` is the amount of time the `j`th worker can work each day.

Each job should be assigned to **exactly** one worker, such that each worker completes **exactly** one job.

Return the **minimum** number of days needed to complete all the jobs after assignment.

Example 1:

Input: `jobs = [5,2,4]`, `workers = [1,7,5]` **Output:** 2 **Explanation:** - Assign the 2nd worker to the 0th job. It takes them 1 day to finish the job. - Assign the 0th worker to the 1st job. It takes them 2 days to finish the job. - Assign the 1st worker to the 2nd job. It takes them 1 day to finish the job. It takes 2 days for all the jobs to be completed, so return 2. It can be proven that 2 days is the minimum number of days needed.

Example 2:

Input: `jobs = [3,18,15,9]`, `workers = [6,5,1,3]` **Output:** 3 **Explanation:** - Assign the 2nd worker to the 0th job. It takes them 3 days to finish the job. - Assign the 0th worker to the 1st job. It takes them 3 days to finish the job. - Assign the 1st worker to the 2nd job. It takes them 3 days to finish the job. - Assign the 3rd worker to the 3rd job. It takes them 3 days to finish the job. It takes 3 days for all the jobs to be completed, so return 3. It can be proven that 3 days is the minimum number of days needed.

****Constraints:****

* `n == jobs.length == workers.length` * `1 <= n <= 105` * `1 <= jobs[i], workers[i] <= 105`

Code Snippets

C++:

```
class Solution {
public:
    int minimumTime(vector<int>& jobs, vector<int>& workers) {

    }
};
```

Java:

```
class Solution {
    public int minimumTime(int[] jobs, int[] workers) {

    }
}
```

Python3:

```
class Solution:
    def minimumTime(self, jobs: List[int], workers: List[int]) -> int:
```