Problem 2279: Maximum Bags With Full Capacity of Rocks

Problem Information

Difficulty: Medium
Acceptance Rate: 67.85%
Paid Only: No
Tags: Array, Greedy, Sorting

Problem Description

You have `n` bags numbered from `0` to `n - 1`. You are given two **0-indexed** integer arrays `capacity` and `rocks`. The `ith` bag can hold a maximum of `capacity[i]` rocks and currently contains `rocks[i]` rocks. You are also given an integer `additionalRocks`, the number of additional rocks you can place in **any** of the bags.

Return _the**maximum** number of bags that could have full capacity after placing the additional rocks in some bags._

Example 1:

Input: capacity = [2,3,4,5], rocks = [1,2,4,4], additionalRocks = 2 **Output:** 3 **Explanation:** Place 1 rock in bag 0 and 1 rock in bag 1. The number of rocks in each bag are now [2,3,4,4]. Bags 0, 1, and 2 have full capacity. There are 3 bags at full capacity, so we return 3. It can be shown that it is not possible to have more than 3 bags at full capacity. Note that there may be other ways of placing the rocks that result in an answer of 3.

Example 2:

Input: capacity = [10,2,2], rocks = [2,2,0], additionalRocks = 100 **Output:** 3 **Explanation:** Place 8 rocks in bag 0 and 2 rocks in bag 2. The number of rocks in each bag are now [10,2,2]. Bags 0, 1, and 2 have full capacity. There are 3 bags at full capacity, so we return 3. It can be shown that it is not possible to have more than 3 bags at full capacity. Note that we did not use all of the additional rocks.

Constraints:

* `n == capacity.length == rocks.length` * `1 <= n <= 5 * 104` * `1 <= capacity[i] <= 109` * `0 <= rocks[i] <= capacity[i]` * `1 <= additionalRocks <= 109`

Code Snippets

C++:

```
class Solution {
public:
int maximumBags(vector<int>& capacity, vector<int>& rocks, int
additionalRocks) {

}
};
```

Java:

```
class Solution {
public int maximumBags(int[] capacity, int[] rocks, int additionalRocks) {

}
}
```

Python3:

```
class Solution:
def maximumBags(self, capacity: List[int], rocks: List[int], additionalRocks:
int) -> int:
```