

Problem 1705: Maximum Number of Eaten Apples

Problem Information

Difficulty: Medium

Acceptance Rate: 41.33%

Paid Only: No

Tags: Array, Greedy, Heap (Priority Queue)

Problem Description

There is a special kind of apple tree that grows apples every day for `n` days. On the `ith` day, the tree grows `apples[i]` apples that will rot after `days[i]` days, that is on day `i + days[i]` the apples will be rotten and cannot be eaten. On some days, the apple tree does not grow any apples, which are denoted by `apples[i] == 0` and `days[i] == 0`.

You decided to eat **at most** one apple a day (to keep the doctors away). Note that you can keep eating after the first `n` days.

Given two integer arrays `days` and `apples` of length `n`, return _the maximum number of apples you can eat._

Example 1:

Input: apples = [1,2,3,5,2], days = [3,2,1,4,2] **Output:** 7 **Explanation:** You can eat 7 apples: - On the first day, you eat an apple that grew on the first day. - On the second day, you eat an apple that grew on the second day. - On the third day, you eat an apple that grew on the second day. After this day, the apples that grew on the third day rot. - On the fourth to the seventh days, you eat apples that grew on the fourth day.

Example 2:

Input: apples = [3,0,0,0,0,2], days = [3,0,0,0,0,2] **Output:** 5 **Explanation:** You can eat 5 apples: - On the first to the third day you eat apples that grew on the first day. - Do nothing on the fourth and fifth days. - On the sixth and seventh days you eat apples that grew on the sixth day.

****Constraints:****

* `n == apples.length == days.length` * `1 <= n <= 2 * 104` * `0 <= apples[i], days[i] <= 2 * 104`
* `days[i] = 0` if and only if `apples[i] = 0`.

Code Snippets

C++:

```
class Solution {  
public:  
    int eatenApples(vector<int>& apples, vector<int>& days) {  
  
    }  
};
```

Java:

```
class Solution {  
public int eatenApples(int[] apples, int[] days) {  
  
}  
}
```

Python3:

```
class Solution:  
    def eatenApples(self, apples: List[int], days: List[int]) -> int:
```