Problem 3447: Assign Elements to Groups with Constraints

Problem Information

Difficulty: Medium
Acceptance Rate: 26.44%
Paid Only: No
Tags: Array, Hash Table

Problem Description

You are given an integer array `groups`, where `groups[i]` represents the size of the `ith` group. You are also given an integer array `elements`.

Your task is to assign **one** element to each group based on the following rules:

* An element at index `j` can be assigned to a group `i` if `groups[i]` is **divisible** by `elements[j]`. * If there are multiple elements that can be assigned, assign the element with the **smallest index** `j`. * If no element satisfies the condition for a group, assign -1 to that group.

Return an integer array `assigned`, where `assigned[i]` is the index of the element chosen for group `i`, or -1 if no suitable element exists.

Note : An element may be assigned to more than one group.

Example 1:

Input: groups = [8,4,3,2,4], elements = [4,2]

Output: [0,0,-1,1,0]

Explanation:

* `elements[0] = 4` is assigned to groups 0, 1, and 4. * `elements[1] = 2` is assigned to group 3. * Group 2 cannot be assigned any element.

Example 2:

Input: groups = [2,3,5,7], elements = [5,3,3]

Output: [-1,1,0,-1]

Explanation:

* `elements[1] = 3` is assigned to group 1. * `elements[0] = 5` is assigned to group 2. * Groups 0 and 3 cannot be assigned any element.

Example 3:

Input: groups = [10,21,30,41], elements = [2,1]

Output: [0,1,0,1]

Explanation:

`elements[0] = 2` is assigned to the groups with even values, and `elements[1] = 1` is assigned to the groups with odd values.

Constraints:

* `1 <= groups.length <= 105` * `1 <= elements.length <= 105` * `1 <= groups[i] <= 105` * `1 <= elements[i] <= 105`

Code Snippets

C++:

```
class Solution {
public:
vector<int> assignElements(vector<int>& groups, vector<int>& elements) {

}
```

```
};
```

Java:

```
class Solution {
public int[] assignElements(int[] groups, int[] elements) {

}
}
```

Python3:

```
class Solution:
def assignElements(self, groups: List[int], elements: List[int]) ->
List[int]:
```