

Problem 2363: Merge Similar Items

Problem Information

Difficulty: Easy

Acceptance Rate: 77.21%

Paid Only: No

Tags: Array, Hash Table, Sorting, Ordered Set

Problem Description

You are given two 2D integer arrays, `items1` and `items2`, representing two sets of items. Each array `items` has the following properties:

* `items[i] = [valuei, weighti]` where `valuei` represents the **value** and `weighti` represents the **weight** of the `ith` item. * The value of each item in `items` is **unique**.

Return _a 2D integer array_ `ret` _where_ `ret[i] = [valuei, weighti]`_,_,_with_ `weighti` _being the**sum of weights** of all items with value_ `valuei`_.

Note: `ret` should be returned in **ascending** order by value.

Example 1:

Input: items1 = [[1,1],[4,5],[3,8]], items2 = [[3,1],[1,5]] **Output:** [[1,6],[3,9],[4,5]]

Explanation: The item with value = 1 occurs in items1 with weight = 1 and in items2 with weight = 5, total weight = 1 + 5 = 6. The item with value = 3 occurs in items1 with weight = 8 and in items2 with weight = 1, total weight = 8 + 1 = 9. The item with value = 4 occurs in items1 with weight = 5, total weight = 5. Therefore, we return [[1,6],[3,9],[4,5]].

Example 2:

Input: items1 = [[1,1],[3,2],[2,3]], items2 = [[2,1],[3,2],[1,3]] **Output:** [[1,4],[2,4],[3,4]]

Explanation: The item with value = 1 occurs in items1 with weight = 1 and in items2 with weight = 3, total weight = 1 + 3 = 4. The item with value = 2 occurs in items1 with weight = 3 and in items2 with weight = 1, total weight = 3 + 1 = 4. The item with value = 3 occurs in items1 with weight = 2 and in items2 with weight = 2, total weight = 2 + 2 = 4. Therefore, we

```
return [[1,4],[2,4],[3,4]].
```

****Example 3:****

****Input:**** items1 = [[1,3],[2,2]], items2 = [[7,1],[2,2],[1,4]] ****Output:**** [[1,7],[2,4],[7,1]]

****Explanation:**** The item with value = 1 occurs in items1 with weight = 3 and in items2 with weight = 4, total weight = 3 + 4 = 7. The item with value = 2 occurs in items1 with weight = 2 and in items2 with weight = 2, total weight = 2 + 2 = 4. The item with value = 7 occurs in items2 with weight = 1, total weight = 1. Therefore, we return [[1,7],[2,4],[7,1]].

****Constraints:****

```
* `1 <= items1.length, items2.length <= 1000` * `items1[i].length == items2[i].length == 2` * `1 <= valuei, weighti <= 1000` * Each `valuei` in `items1` is **unique**. * Each `valuei` in `items2` is **unique**.
```

Code Snippets

C++:

```
class Solution {
public:
vector<vector<int>> mergeSimilarItems(vector<vector<int>>& items1,
vector<vector<int>>& items2) {

}
};
```

Java:

```
class Solution {
public List<List<Integer>> mergeSimilarItems(int[][] items1, int[][] items2)
{
}
}
```

Python3:

```
class Solution:  
    def mergeSimilarItems(self, items1: List[List[int]], items2: List[List[int]])  
        -> List[List[int]]:
```