

# Problem 56: Merge Intervals

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 50.47%

**Paid Only:** No

**Tags:** Array, Sorting

## Problem Description

Given an array of `intervals` where `intervals[i] = [starti, endi]`, merge all overlapping intervals, and return `_`an array of the non-overlapping intervals that cover all the intervals in the input\_.

**Example 1:**

**Input:** `intervals = [[1,3],[2,6],[8,10],[15,18]]` **Output:** `[[1,6],[8,10],[15,18]]` **Explanation:** Since intervals `[1,3]` and `[2,6]` overlap, merge them into `[1,6]`.

**Example 2:**

**Input:** `intervals = [[1,4],[4,5]]` **Output:** `[[1,5]]` **Explanation:** Intervals `[1,4]` and `[4,5]` are considered overlapping.

**Example 3:**

**Input:** `intervals = [[4,7],[1,4]]` **Output:** `[[1,7]]` **Explanation:** Intervals `[1,4]` and `[4,7]` are considered overlapping.

**Constraints:**

`1 <= intervals.length <= 104` * `intervals[i].length == 2` * `0 <= starti <= endi <= 104``

## Code Snippets

**C++:**

```
class Solution {  
public:  
    vector<vector<int>> merge(vector<vector<int>>& intervals) {  
  
    }  
};
```

**Java:**

```
class Solution {  
    public int[][] merge(int[][] intervals) {  
  
    }  
}
```

**Python3:**

```
class Solution:  
    def merge(self, intervals: List[List[int]]) -> List[List[int]]:
```