57. Insert Interval

Description

You are given an array of non-overlapping intervals `intervals` where `intervals[i] = [start_i, end_i]` represent the start and the end of the `i^th` interval and `intervals` is sorted in ascending order by `start_i`. You are also given an interval `newInterval = [start, end]` that represents the start and end of another interval.

Insert `newInterval` into `intervals` such that `intervals` is still sorted in ascending order by `start_i` and `intervals` still does not have any overlapping intervals (merge overlapping intervals if necessary).

Return `intervals` *after the insertion*.

Example 1:

```
Input: intervals = [[1,3],[6,9]], newInterval = [2,5]
Output: [[1,5],[6,9]]
```

Example 2:

```
Input: intervals = [[1,2],[3,5],[6,7],[8,10],[12,16]], newInterval = [4,8]
Output: [[1,2],[3,10],[12,16]]
Explanation: Because the new interval [4,8] overlaps with [3,5],[6,7],[8,10].
```

Constraints:

- `0 <= intervals.length <= 10^4`
- `intervals[i].length == 2`
- `0 <= start_i <= end_i <= 10^5`
- `intervals` is sorted by `start_i` in **ascending** order.
- `newInterval.length == 2`
- `0 <= start <= end <= 10^5`