**Module Introduction**

Write a program to take a set of intervals as input, merge the overlapping intervals and output the modified set of intervals.

Problem Solving

**Objective**

Given a collection of intervals as input, merge overlapping intervals and output the result.

The input may not specify intervals in sorted order i.e a lower interval could be specified after a higher interval. The output intervals have to be in sorted order.

Note: Handle cases where an interval could overlap with more than one other interval.

**Examples**

**Example 1**

Input: [1,4],[2,5],[12,15],[8,10]

Output: [1,5],[8,10],[12,15]

Intervals [1,4] and [2,5] have overlap and have been merged into [1,5]

**Example 2**

Input: [1,3],[4,5]

Output: [1,3],[4,5]

No overlap seen; not merged.