

Problem Challenge 2

We'll cover the following ^

- Maximum CPU Load (hard)
- Try it yourself

Maximum CPU Load (hard)

We are given a list of Jobs. Each job has a Start time, an End time, and a CPU load when it is running. Our goal is to find the **maximum CPU load** at any time if all the **jobs are running on the same machine**.

Example 1:

```
Jobs: [[1,4,3], [2,5,4], [7,9,6]]
Output: 7
Explanation: Since [1,4,3] and [2,5,4] overlap, their maximum CPU load (3+4=7) will be when both the jobs are running at the same time i.e., during the time interval (2,4).
```

Example 2:


```
Jobs: [[6,7,10], [2,4,11], [8,12,15]]
Output: 15
Explanation: None of the jobs overlap, therefore we will take the maximum load of any job which is 15.
```


Example 3:


```
Jobs: [[1,4,2], [2,4,1], [3,6,5]]
Output: 8
Explanation: Maximum CPU load will be 8 as all jobs overlap during the time interval [3,4].
```


Try it yourself

Try solving this question here:

 Java

 Python3

 JS


 C++

```
1 import java.util.*;
2
3 class Job {
4     int start;
5     int end;
6     int cpuLoad;
7
8     public Job(int start, int end, int cpuLoad) {
9         this.start = start;
10        this.end = end;
11        this.cpuLoad = cpuLoad;
12    }
13 };
14
15 class MaximumCPULoad {
16
17     public static int findMaxCPULoad(List<Job> jobs) {
18         // TODO: Write your code here
19         return -1;
20     }
21
22     public static void main(String[] args) {
23         List<Job> input = new ArrayList<Job>(Arrays.asList(new Job(1, 4, 3), new Job(2, 5, 4), new Job(7, 9, 6)));
24         System.out.println("Maximum CPU load at any time: " + MaximumCPULoad.findMaxCPULoad(input));
25
26         input = new ArrayList<Job>(Arrays.asList(new Job(6, 7, 10), new Job(2, 4, 11), new Job(8, 12, 15)));
27         System.out.println("Maximum CPU load at any time: " + MaximumCPULoad.findMaxCPULoad(input));
28     }
29 }
```

Run

Save

Reset



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