

# Take home task - Applicant copy

## The Problem

Our friend Gary is a very active person with lots of hobbies and social activities, and he never says no to anything. Unfortunately, Gary is also really bad at keeping a schedule. As a result, he often ends up committing to multiple events at the same time.

During a lunch appointment which Gary managed to attend, he told us about this problem. Since Gary knows we specialise in scheduling, he asked for our help. These were his requirements:

- I do not want to cancel any commitment.
- I only want to do things on weekdays Monday - Friday between 09:00 and 18:00.
- If I've agreed to do things outside those hours, I want those events re-scheduled to the next possible time.
- If I've agreed to do more than one thing at the same time, I want to keep one of the commitments and re-schedule the rest to the next possible time.

## The Task

To help Gary with his scheduling issues, you have been tasked by your Tech Lead with building a command line tool that will take a list of events as an input (one per line) and output a time-ordered list of events.

The output should consist of a list of events, ordered by start date where all Gary's requirements are satisfied and have the following additional requirements:

- No events overlap.
- Every event from the original list is still present.

Events will have the following format:

`<start_date> -> <end_date> - <event_name>`

Where:

`<start_date>, <end_date>: YYYY/MM/DD HH:mm`

`<event_name>: Any valid character including spaces`

## Example Input:

```
2022/08/23 15:00 -> 2022/08/23 16:00 - Meet Jamie for coffee
2022/08/23 16:15 -> 2022/08/23 17:00 - Guitar lessons
```

If you do not have time to handle all possible scenarios, an app which handles a subset of them correctly is better than one which does not run or fails all requirements. For example, instead of re-scheduling events that overlap, keep the first event that was provided and drop any others that overlap with it.

You will be asked to extend the solution with additional features during the next interview stage.

You should see your Tech Lead as a member of the team you are handing the project over to. Please provide everything you feel would be relevant for them to easily review and potentially develop further without you. This might include tests, a README, and instructions for how to run your project in a clean OS X/Linux environment.