

Interview Case Study

You have to build a conference room booking **REST API** for your company's internal use.

As of now, there are 4 conference rooms available in the building and all have different maximum capacities.

Conference Room Details

Conference Name	Capacity
Amaze	3 Person
Beauty	7 Person
Inspire	12 Person
Strive	20 Person

Every conference room require some cleaning and maintenance, so every day at some fixed time it would be serviced and hence cannot be used.

Maintenance Timings for Rooms

9:00 - 9:15

13:00 - 13:15

17:00 - 17: 15

Rules to follow

1. Booking can be done only for the current date, so if the current date is 12 JUN 2020 no booking for 13 JUN 2020 can be done.
2. Booking can be done only in intervals of 15 mins, **2:00 - 2:15** or **2:00 - 2:30** or **2:00 - 3:00**
3. Booking happens on First Come First Serve.
4. Booking should be optimal, i.e If someone books a room for 5 people then the ideal room for this booking will be **Beauty** if not then move to **Inspire**.

5. Booking cannot be done during maintenance time, if a booking overlaps maintenance a message should be displayed stating the same.
6. The number of people allowed for booking should be greater than 1 and less than or equal to the maximum capacity.

You can safely assume the following points for any input to be always true.

1. Booking time will always be given by the user in intervals of 15 minutes.
2. Booking time will always be in a 24-hour format
3. Start Time will always be lesser than End Time.

Use Cases

1. As a user, I should be able to book a conference meeting room by giving the time and number of people attending.
2. As a user, I should be able to see meeting rooms available by giving the time range.

What we look for

1. Good object oriented design
2. Extensibility
3. Readability
4. Testability
5. Correctness
6. Good design principles.
7. Ease of running the application

Technology Stack Recommendation

1. Java 11 or above
2. Spring Boot
3. Maven

4. In Memory Database

Before Submitting

This is an offline exercise so take your time and give your best shot. We don't mind if you get creative and any extra but relevant feature as well.

Please ensure any special instructions required to run your project is clearly mentioned in a readme.txt file.