



Backend Dev - Calendar app

Background

Your task is to implement a simple RESTful API for managing calendar events and conference room availability. The application would be deployed in a multitenant model, where multiple companies would store their data on a central server.

For simplicity, please assume that the user model contains a UUID field - `company_id`. Users sharing the same `company_id` will belong to the same company.

Business requirements

Each user should have his/her default timezone. All endpoints should be timezone-aware and return results in the timezone of the currently logged in user.

There's no need to implement the user management API, but please provide a script or a SQL command that allows one to set up a user.

The business domain of the application should consists of two core resources:

1. Conference room (location):
 - a. Manager (a user on the platform)
 - b. Name
 - c. Address
2. Calendar event (meeting):
 - a. Owner (a user on the platform)
 - b. Event name
 - c. Meeting agenda
 - d. Start
 - e. End
 - f. Participant list (platform users, input provided by their email addresses)
 - g. Location (optional)

On top of the basic create/retrieve operations, the API should also allow clients to:

- retrieve events happening on a specific day (`?day=2020-12-12`)
- retrieve events happening in a specific conference room (`?location_id=6fb94459`)
- search events by name / agenda (`?query=sprint+retrospective`)
- retrieve details (such as an address) of a conference room when listing events

To keep things simple, there is no need to implement update and delete operations.

There are three additional requirements that should be met:

- meeting owner should always be the person who created the meeting
- meetings shouldn't be longer than 8 hours
- events shouldn't be visible to people who are not participating, unless they are the manager of the corresponding conference room

Tips

The goal of this task is to provide a discussion context for the subsequent technical interview and is not meant to be time consuming.

Do not invest your time into implementing additional business requirements that are not listed, e.g. managing the actual room availability. We would like to see a unit test being showcased, but by any means please do not try ensuring 100% coverage.

Evaluation criteria

There are certain aspects that will be considered when evaluating your solution:

- code quality
- expertise in using the framework
- speed and scalability
- data protection and security