Booking Ressources

Scenario

Now that Covid19 is on the decline, more and more people are coming back to the office. This has created issues with booking meeting rooms. Therefore the administration at TV2 has asked you to create a web service where the employees can have a nice overview of available meeting rooms when they are booking. The web service should interact with a central server, which you are also responsible for writing.

Requirements

- The solution for the server and client must be written in TypeScript.
- The client must be written with ReactJS.
- Limit yourself to as few external libraries and components as possible (both for logic and styles).
- The solution must be able to build and run (for giving us a demo).
- The code must be written by you.
- A user must be able to book a meeting room for an avaiable time slot through the client. Double bookings are not allowed.
- A user must be able to see an overview of meeting rooms and the associated bookings.
- The data should be persisted, you decide how.

Bonus feature suggestions

- From a given time slot it should be able to suggest an available meeting room. If there are no available meeting rooms at the given time, the system should suggest the meeting room with the closest available time slot.
  E.g. trying to book the time slot 13.30-14.00, when the closest available time slot is in Room X at 13.15-13.50, will result in the system suggesting Room X at 13.20-13.50.
- Handling multiple users trying to book the same meeting room at the same time.
- Having a booking taking into account the number of participants versus the capacity of the meeting room.
- Suggest for a given user, their most often booked meeting room.
- Own creative suggestions...

Evaluation points

- Code quality and structure, including usage of types.
- Ability to describe and discuss choices made.
- Bonus points: Testing your solution.
- Bonus points: Usability of the user interface.