

Fitness slot booking application

Problem Statement:

We want to build a fitness training platform to allow a user to choose & book a class.

1. Classes can be of multiple types - yoga, gym, dance.
2. Each class has a capacity. This refers to the maximum number of users that can attend the class.
3. Users can book a class if the capacity is not yet reached.
4. If a class is already at capacity, the system should maintain a waiting list of interested users.
5. Users can cancel the slot upto 30 mins before the class starts. When a user cancels their booking, allocate the canceled slot to the first user from the waitlist.

Assume that:

1. Users and classes are already registered in the system. APIs to register them are not needed.
2. Authentication and authorization is not necessary. You can accept a username and assume that it is valid.

Demonstrate:

1. Seed data of users and classes. At least 3 users and 3 classes are expected
2. Book a slot in the list of classes available
 - a. If the size limit is not reached, booking is done
 - b. If the size limit is reached, put the user in the waiting list
3. User should be able to cancel a class within 30 mins before the class starts. When a user cancels the class, allocate it to the first person in the waiting list if not empty

Evaluation Criteria:

1. Code walkthrough to showcase structure and modelling.
2. A demonstration of the functional requirements stated above.

For the demonstration, you can choose any of - CLI, API, Unit tests or a runner class.

Additional Notes:

1. You may use any programming language.
2. Database is optional. We don't recommend setting up a db, it takes a lot of time. In memory stores or flat files are acceptable for storing data.
3. You may access documentation and any other resources as needed over the internet.
4. You have to share your entire screen and keep your video on throughout the interview.
5. If you have any questions during the interview, drop a mail to nikhil@kuddle.pet, we will get back to you ASAP.