Clinic Application

Guidelines:

1. This assignment can be completed and submitted as either an individual effort or a team effort. If you are working as a team, teams of maximum of 2 students are only allowed.

2. Assignment submission only through MS Teams. Each member from the team needs to submit the same assignment.

3. No hard copies are accepted.

4. You can include in your assignment submission a text file that includes the full names of the team members, or you can email them to the professor.

5. Any late assignment will not be accepted.

6. Academic Fraud: Cases of plagiarism will be dealt with according to university regulations. A tool will be used to detect similarities between current submissions and old projects from previous semesters. The tool will be run on all submissions. Submissions that are flagged by the system will receive a mark of zero.

7. As this is a group assignment, it is important that you distribute the assignment evenly among the team members. Remember to double check each other's work. You are a team, so work together to successfully complete this assignment.

Clinic Application

Task: You are requested to design and develop an appointment system for a dentistry clinic. So we sat down with one of the receptionist there and this is what have:

- **Me**: What is the actual capacity of the clinic?

- **Receptionist**: we have 2 rooms for doctors and a waiting room with 5 chairs as you can see.

- **Me**: And how do you schedule an appointment right now? Can you walk me through the process?

- **Receptionist**: Well, whenever I take a phone call from a patient I ask to get some basic information, just in case he was a new patient, like: name and phone number (if it's different than the one he is calling me from) and then ask about the type of appointment he wants, we have 3 types, one is a quick checkup which takes 30 minutes and second one is extensive care which may take up to 1 hour, and the last one in case of operation we need to have at least 2 hours.

  - Otherwise, if he fills a form from our website we will see that a patient asked us to call him and schedule an appointment so we do that.

  - Lastly, once the patient comes to the clinic, we confirm his appointment by taking his insurance number.

- **Me**: What will happen if a doctor takes a vacation and he has an appointment during his vacation?

- **Receptionist**: He can't

- **Me**: Can you elaborate why?

- **Receptionist**: Well in order for a doctor to take a vacation he must have a clear schedule during his vacation period, otherwise his vacation won't be approved

- **Me**: But what if he had an emergency? or a sick leave?

- **Receptionist**: Then we usually take the effort to reschedule his appointments one by one, it would be nice if we could automate such process

- **Me**: What are the opening hours of the clinic?

- **Receptionist**: We open regularly from 8am till 5pm with one hour lunch break around 1pm

- **Me**: How can a patient cancel his appointment? And what do you do if that happen

- **Receptionist**: Either via email or a phone call he can cancel it, and we immediately clear that appointment from our calendar

- **Me**: OK but what if the same patient has multiple scheduled appointments?

- **Receptionist**: Well he either defines a specific appointment by telling the scheduled date and time, or he can ask to cancel all of them.

Requirements

As software engineers we are supposed to read the above and come up with the technical specs of the application, and then start implementing the technical solution of that application.

Notes:

- You have the freedom to choose any language or framework for your application.
- You are requested to utilize the concepts and techniques you learned during the course, such as SOLID principles, design patterns, clean code, etc.