

EA Project Description

CS544 May 2021

Goal

The goal of this project is to give you hands-on, practical experience with building a web application using the technologies we have been discussing in the past 3 weeks.

Working as a team

You will be required to work with your team to create a project. You need to work together and share responsibilities and workload. But you should be aware that everyone still has to give their own personal presentations and be familiar with the entire architecture and design of the project. Although I do ask that members of a team present consecutively (no gaps / other people in between).

Appointment Reservation Software

We are trying to create a web application that will automate the process of making appointments. A sample use of this system would be to create TM checking appointments online.

Step 1 – Requirements

This system has a database of users and roles and based on roles, users will be able to perform actions.

- This system supports three roles: **Admin, Counselor and Customer**.
- A “**Person**” is a user of the system, we need to keep track of person ID, first and last name, email address and obviously username, password and set of roles. Person can have multiple roles.
- Appointments are made for “**Sessions**”. Each session has a date, start time, duration (in minutes), number of seats (capacity), location and counselor (the person leading the session).
- “**Appointments**” connect persons to sessions. Remember that in general, each person can make multiple appointments.
- Each session can have multiple “**AppointmentRequests**”, but in the end, only one of these requests can be approved as an “**Appointment**”. If an appointment gets cancelled, the first **AppointmentRequest** from the list can fill its position.
- Appointments can only be changed for future sessions. Past sessions cannot be changed by anyone
- **AppointmentRequests** can only be made for future sessions.
- Admins can create and manage (CRUD operations) “**Sessions**”.
- Each person can create new appointments for himself/herself and manage his/her existing appointments. Appointments can be cancelled or modified up to 48 hours before the session after that only admin can make changes.
- Send an email (to the creator of appointment, counselor and customer), each time an appointment is created or modified.

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Step 2 - Architectural Analysis and Design

Sit with your team and agree on a high-level architecture for your application. Your decision should include your choice of technologies (list of your full stack of technologies).

Step 3 – Proof of Concept (POC)

Choose one simple use-case and make sure it works end to end. For example login and home page for one type of user.

Step 4 – Divide and Conquer

Carefully read the requirements and divide the tasks (use-cases) among team members. Each team member is responsible for designing, developing and testing his/her use-case.

Step 5 – Integration Testing

At least once a day sit together and integrate your code and test together and iterate (correct mistakes and refactor your design and development).

Presentation Delivery

I will schedule your presentations from 9:30-12:30 and 1:30 – 4:30 on Thursday and 1:30-4:30 on Wednesday (early birds!). You will have to present individually. Each group will have one hour, which means each member of the group gets to present for about 9 minutes.

I will evaluate you based on the following factors:

1. Clarity of Speech – Your presentation should be coherent and understandable. It is ok if you have an accent. It is ok if your English is not as fluent as a native speaker. However, it is not ok if you talk too fast! Enunciate and speak clearly.
2. Knowledge of Your Application – You are expected to be knowledgeable about the overall design of your app
3. Ability to Answer Questions – You need to be able to answer questions about the design and coding of your app. It always shows when your team members have done all the work and you have been mostly observing. Try to be an active participant and you will get full grade for this category.
4. Working Demo – Your app needs to work (obviously!). So if you succeed to show me working features, you will get maximum grade.
5. Creativity – Your whole team will get the same grade on creativity. You will be evaluated based on your creative choice of technologies you have used in your application.