

The below requirements are valid for all the coming assignments if not specified otherwise. Requirements might change in due course, changes will be announced. Remember when looking at these requirements you cannot fulfill all of them in one diagram (e.g. the class diagram can only show the static information and not a workflow). Each diagram represents a different view of our system. The diagrams together should represent all the requirements of the system, thus all diagrams need to be consistent. You will need to go over these requirements many times and you should always check that the diagrams are consistent and specify the behavior described here.

Always make sure that the user gets appropriate responses when interacting with the system. Always consider the “everything worked” case and the error case.

Remember when you look at these notes that we are talking about a very simple system with basic functionality. It’s not necessarily user-friendly, but we need to keep things simple. Keep your design as simple and clean as possible, but make sure the criteria below are fulfilled.

Tutoring

Notes from a meeting with the Tutoring Center for ASU

Attendees: Tutoring center manager

Goal: Design a system which can be used by students, tutors and the manager to schedule tutoring appointments.

Since we cannot do walk-in tutoring at the moment we need to limit how many tutors and students can be in our building at one time. So we need a new system, we also want to allow tutors/students to do online tutoring sessions via Zoom.

We want to design a system which helps the tutoring center schedule appointments for students, make sure we do not have too many people in the room and also schedule zoom sessions.

Below you find more specific requirements. You are also of course always welcome to ask the tutoring center (SER315 teaching team) for specifics since in meetings such as this not all things might be obvious. A design should always be based on clarifications if something is unclear.

Manager:

- Has a login name and a password with which s(he) needs to login before using the system
- There can be several people who hold the Manager role and one manager can add another manager
- For all actions the manager needs to be logged in
- Can add new **Subjects** to the system, these subjects represent the subjects that can be taught by tutors (EG. SER316, SER315, SER334, etc)
 - To add new subjects the manager just gives the new subjects name
 - If the subject already exists in the system, the system notifies the manager and does not add the subject again
 - If the subject does not already exist, then the subject is added to the systems subjects
- Can add new Tutors to the system

- To add a tutor the manager provides the tutors name and email address (email needs to be unique). The tutor will be notified by the system (with a temporary password) that s(he) was added to the system
- The system will add the tutor if the tutor did not already exist in the system (the manager will be notified either way of the outcome)
- Manager will create a new Zoom account for the tutor (this does not happen in our system but on Zoom). Then the manager can add the zoom meeting id to the tutors profile.
- Can delete Subjects by providing the name of the Subject
- Can delete Tutors by providing the name of the Tutor

Tutors:

- Apply via email (not through the system) for a tutoring job and will be added to the system by the manager if the manager approves them
- Then the Tutor needs to sign-up with their email address and temporary password.
- Tutors can set a new password, they need their old (or temporary password) and add the new password twice. Make sure this gives error and success messages appropriate to the scenario.
- Can sign up for subjects. Meaning they can choose from the given subjects and these subjects will be linked to them, so students know that they can ask the tutor about these specific topics.
 - To do so the tutor provides the name of the subject s(he) wants to teach. If the subject exists the system will link the subject to the tutor, if not the system will send an error message
- Campus appointments are always between 8am-6pm while online appointments can be setup anytime.
- Can create appointments, which can later be booked by students
 - to create an appointment the tutor provides a time at which he is available (these are always 30min time slots), the tutor also needs to provide the information if (s)he wants to do the appointment online or in person.
 - If in person the system needs to check how many tutors are already set-up for appointments at this time. If there are already 5 then an in-person appointment is not allowed. If the time is not in the range provided above the system will only give an error message
 - If online it does not matter how many appointments happen at the same time.
 - The system will then create a new appointment for him/her or give an error message.
 - If the tutor already had an appointment at this time then there will also be an error message.
- Can delete appointments as long as no student has booked it yet. If the appointment is booked the

tutor can still delete it, as long as it is an in-person appointment, since we do not want tutors to come in, in case they do not feel well. We want things to be as safe as possible. If it is online and already booked and the tutor really feels sick and cannot do the tutoring lesson, they can cancel and the student will get a refund plus one more free class. Cancelling on students should be avoided as much as possible though and tutors should not cancel if not absolutely necessary. The system will store how often a tutor cancels a booked appointment and might be let go if it happens too often (unless tutor was sick of course).

Student:

- Can sign up with their email address, name and a password
- Can buy credits, so they can attend a tutoring appointment (1 credit equals one tutoring appointment)
- Can search for tutors teaching a specific subject which will result in a list of appointments from tutors teachings this subject
- Can search for tutors by name, which results in a list of appointments by this tutor.
- Can book an appointment by subject and time, they can also specify if they want to come in in-person or do an online session:
 - To book an appointment they provide the subject they would like to be tutored on and a time
 - If they still have enough credit,
 - The system checks if there is a tutor with this subject available at the specified time, if there is and the appointment is not booked by another student yet, the student is linked to this appointment and the student's credits are reduced by one and the tutor is informed
 - If there are no tutors available at that time for this subject the system will provide an error message.
 - If they do not have enough credit the system will provide an error message.
- Can book by appointment id:
 - This assumes the student selected an already available appointment (not booked by another student yet). If the student still has enough credit the appointment will be linked to the student.
- Can cancel an appointment:
 - To cancel they provide the appointment id and email
 - First the system checks if the appointment is linked to the student with the given email and will give an error message in case it is not, if it is then it proceeds
 - The tutor is informed about the cancelled appointment
 - If the appointment is canceled 24 hour in advanced then the appointment is canceled

without penalty (credit is given back to the student)

- If the appointment is canceled less than 24 hours in advanced the appointment will still be cancelled (unlinked from the student) but the student will not get his/her credit back
- If the student can provide proof that they are sick then they can cancel as late as needed (this would be done in a separate action by the manager who would give them credit back)