Library Room Reservation App

This document illustrates user stories, use cases, and user acceptance tests in the context of a library room reservation application.

The example illustrates the format for use cases well but describes a system that would be impractical to implement in a single quarter.

User Stories

- Use Case 1 -- As a student working in the library, I would like to be able to login so I can reserve a room.
- Use Case 2 -- As a student working in the library, I would like to be able to reserve a library room for my weekly meetings so that I will have a consistent weekly pattern.
- Use Case 3 -- As a student who has made a recurring reservation, I would like to be able to log in and edit my meeting's details so that I can adjust as other requirements come up throughout the quarter and so that I can confirm the information is entered correctly.
- Use Case 4 -- As a student studying for an exam, I would like to see if there is a room available for study RIGHT NOW so that I don' have to walk over to the library unless the room is available.
- Use Case 5 -- As a librarian, I would like to be able to enter new rooms into the system so that students can sign up for them.
- Use Case 6 -- As a librarian, I would like to block off rooms for special events so that students don't have any surprises.
- Use Case 7 -- As a librarian, I would like to monitor room use to get a sense for the utilization of my rooms and to secure funding for library expansion.

[Insert diagram showing all user stories]

Stakeholders

- Librarians
- Students making reservations
- Other students in the group whose reservations are made

"Feature requests"

- Integration with class schedule system. This would be great for faculty, too!
- Allow scheduling fractions of an hour (to the minute?)
- Live update of options during entry based on availability

Use Case

Use Case 1 – Login

User Story
As a student working in the library, I would like to be able to login so I can reserve a room.

Preconditions
The student's username and login credentials are stored in the system.

Postconditions
The student is logged in.

Use Case 2 – Student Weekly Room Reservation

User Story
As a student working in the library, I would like to be able to reserve a library room for my weekly meetings so that I will have a consistent weekly pattern.

Goal
The student would like to log in, find a time that works for their entire team, and reserve that time for the remainder of the quarter/semester. They would like an email confirmation and the ability to log in and edit the reservation later on (as part of a different Use Case).

Actor
- The student making the reservation

Preconditions
- The student has an active school account with integrated login and status testing
- The room to be reserved has been entered into the system
- There is a time that can be registered weekly available still

Scenario 1.1 – Sunny-Day Path – Weekly first
1. The student logs in to the system using their school account on their laptop. The student's account is checked, confirming they have an active status.
2. The system displays a schedule showing the number of rooms available each hour of the day for the next week. It also displays a list of all the rooms and allows the student to select options including recurrent scheduling.
3. The student selects a time.
4. The student selects recurrent scheduling. Options of daily, weekly, bi-weekly, and monthly reoccurrence are presented, along with start and stop dates.
5. The student selects a weekly reoccurrence.
6. The student opens the stop date. A calendar is displayed.
7. The student selects a stop date at the end of the quarter (manually checking school's schedule on a separate site). The date is displayed in the main window.

8. The student selects a room.
9. The student submits the request. The system confirms that the room is available at the selected time.
10. A summary screen displays the room name, day(s) of week, time, and stop and start dates.
11. The student finalizes the reservation request. The system reserves the room and displays a final confirmation screen.

Scenario 1.2 – Rainy Day Path – Non-current student

1. The student logs in to the system using their school account on their laptop. The system confirms the student's log in is valid but finds the student does not have an active status.
2. The system displays "Your status is not active" along with contact information for whom to contact about this problem. It also includes a prompt for the librarian on how to change this information (since the librarian would have a challenging time reproducing this error message by logging in themselves).

Scenario 1.3 – Rainy Day Path – Hard to find room

1. The student logs in to the system using their school account on their laptop. The student's account is checked, confirming they have an active status.
2. The system displays a schedule showing the number of rooms available each hour of the day for the next week. It also displays a list of all the rooms and allows the student to select options including recurrent scheduling.
3. The student selects a time.
4. The student selects recurrent scheduling. Options of daily, weekly, bi-weekly, and monthly reoccurrence are presented, along with start and stop dates.
5. The student selects a weekly reoccurrence.
6. The student opens the stop date. A calendar is displayed.
7. The student selects a stop date at the end of the quarter (manually checking school's schedule on a separate site). The date is displayed in the main window.
8. The student selects a room.
9. The student submits the request. The system finds that there is a conflict with the schedule on a few dates. It displays these dates to the student.
10. Consulting with the team, the student selects a different hour of the week.
11. The student submits the request again. The system confirms there are no conflicts this time.
12. A summary screen displays the room name, day(s) of week, time, and stop and start dates.
13. The student clicks "reserve" button to reserve the room. A final confirmation screen is displayed with a summary of the reservation.

Postconditions
- The room is marked as reserved for the specific hours named on the schedule.

Use Case 3 – Edit meeting

User Story
As a student who has made a recurring reservation, I would like to be able to log in and edit my meeting's details so that I can adjust as other requirements come up throughout the quarter and so that I can confirm the information is entered correctly.

Actor
- A student who has made a recurring reservation

Preconditions
- Student has made a recurring reservation

Postconditions
- The student's edits are saved

Use Case 4 – See current availability (Quick Book)

User Stories
As a student studying for an exam, I would like to see if there is a room available for study RIGHT NOW so that I don' have to walk over to the library unless the room is available

As a librarian sorting books in the library, I would like to find a free room that is available for the next two hours so that I can clean up this huge mess of books in front of me.

Actor
- A student
- A librarian

Preconditions
- Some rooms (may) have already been reserved

Postconditions
- The system displays rooms that are not reserved for a given length of time.

Use Case 5 – Room entry

User Stories
As a librarian, I would like to be able to enter new rooms into the system so that students can sign up for them.

Actor
- A librarian

Postconditions
- The new room is stored in the system with its room name, capacity, and amenities (such as projectors)

Use Case 6 – Large event planning

User Stories
As a librarian, I would like to block off rooms for special events so that students don't have any surprises.

As a Greek student, I would like to reserve all the rooms in the library for my chapter's conference

Actor
- A librarian
- A student

Preconditions
- Rooms are entered in the system
- Some rooms may already be reserved
- The user has an account on the system.

Postconditions
- All of the rooms are marked as reserved
- An event object summarizing the event is created

Use Case 7 – Utilization monitoring

User Stories
As a librarian, I would like to monitor room use to get a sense for the utilization of my rooms and to secure funding for library expansion.

Actor
- A librarian

Preconditions
- Rooms have been reserved for some time in the past

Postconditions
- The system displays the percentage of time that the each room was reserved during the hours 8 to 5 on average.