

Verification and Test Plan

For
TEMPO

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1. Objectives

Features to Test (We will test each use case scenario)

Students

- Sign Up
- Login/logout
- Reservation System
 - Reservation without Approval
 - Reservation with Approval
- Facility Status Check
- My Page
 - Check reservation status
 - Manage reservations
 - Check Past Reservation
 - View penalty status
 - Report system

Admin (Staff)

- Sign Up
- Login/logout
- Reservation System
 - Add, delete, and edit facilities
 - Approve and decline reservation requests
 - Cancel reservations
 - Mark off time slots
 - Check Past Reservation
- Facility Status Check

- Penalty System
 - Give/remove penalty to/from students

2. Testing Strategy

We will do automated and manual testing and code reviews to ensure our software works as we planned.

3. Test List

Use Case 1

Use Case:	Register
Primary Actor:	User
Goal in Context:	The user wants to register for the website.
Preconditions:	The user is viewing the login page without anything typed.
Scenario:	<ol style="list-style-type: none">1. The user clicks the 'Register' button on the top right corner.2. The system gives a form to fill in.3. After filling in information, the user clicks the 'Complete' button.
Extensions:	2a. When the user fails to fill in the form, the system gives an error message to fill in accurately.
Postconditions:	The user is viewing the login page.

Use Case 1: Tests

Precondition: The user is viewing the login page without anything typed.

Title	Inputs	Expected Output for Pass	Type of Test
T1.1 Register: Success	Name: student1 E-mail: student1@gmail.com Role: student Password: 12345678 Confirm Password: 12345678	Displays the Login page.	Manual
T1.2 Register: Missing Name	Name: <blank> E-mail: student1@gmail.com Role: student Password: 12345678 Confirm Password: 12345678	The system provides an alert to fill in the missing field.	Manual
T1.3 Register: Missing E-mail	Name: student1 E-mail: <blank> Role: student Password: 12345678 Confirm Password: 12345678	The system provides an alert to fill in the missing field.	Manual
T1.4 Register: Missing Role	Name: student1 E-mail: student1@gmail.com Role: <nothing selected> Password: 12345678 Confirm Password: 12345678	The system provides an alert to select the field.	Manual
T1.5 Register: Missing Password	Name: student1 E-mail: student1@gmail.com	The system provides an alert to fill in the missing field.	Manual

	Role: student Password: <blank> Confirm Password: 12345678		
T1.6 Register: Missing Confirm Password	Name: student1 E-mail: student1@gmail.com Role: student Password: 12345678 Confirm Password: <blank>	The system provides an alert to fill in the missing field.	Manual
T1.7 Register: Password with less than 8 characters	Name: student1 E-mail: student1@gmail.com Role: student Password: 11111 Confirm Password: 11111	The system provides an alert that says “The password must be at least 8 characters”.	Manual

Use Case 2

Use Case:	Login
Primary Actor:	User
Goal in Context:	The user wants to log in to his/her account.
Preconditions:	The user is viewing the login page without anything typed.
Scenario:	<ol style="list-style-type: none">1. The user types his/her ID(school email address) and Password.2. The user clicks the 'Login' button.
Extensions:	2a. When the user fails to login, a message will appear 'incorrect ID or Password' on the login page.
Postconditions:	The user is viewing the main page.

Use Case 2: Tests

Precondition: The user is viewing the login page without anything typed.

Title	Inputs	Expected Output for Pass	Type of Test
T2.1 Login: Success	E-mail: student1@gmail.com Password: 12345678	Displays the Login page.	Automated
T2.2 Login: Missing Email	E-mail: <blank> Password: 12345678	The system provides an alert to fill in the missing field.	Automated
T2.3 Login: Missing Password	E-mail: student1@gmail.com Password: <blank>	The system provides an alert to fill in the missing field.	Automated
T2.4 Login: Incorrect Email	E-mail: stu1@gmail.com Password: 12345678	The system provides an alert that says “The email or password you typed is incorrect”.	Automated
T2.5 Login: Incorrect Password	E-mail: student1@gmail.com Password: 11112222	The system provides an alert that says “The email or password you typed is incorrect”.	Automated

Use Case 3

Use Case:	Add the Facility to the list
Primary Actor:	User (staff)
Goal in Context:	The user wants to add the facility to the list.
Preconditions:	The user is viewing the facility list on the reservation page after clicking ‘Approval’ or ‘Open’ button.
Scenario:	<ol style="list-style-type: none">1. The user clicks ‘Create Facility’ button.2. The user fills in the details: the room name, number, building, capacity, type, status, and picture.3. The user clicks ‘Create’ button.
Postconditions:	The user is viewing the facility list with the facility that he/she just added.

Use Case 3: Tests

Precondition: The user is viewing the facility list on the reservation page after clicking ‘Approval’ button.

Title	Inputs	Expected Output for Pass	Type of Test
T3.1 Create Facility: Success	Room Name: Study Room 1 Room Number: AA101 Building: Dorm A Status: Available Capacity: 10	Displays the Approval or Open page.	Manual
T3.2 Create Facility: Missing Room Name	Room Name: <blank> Room Number: AA101 Building: Dorm A Status: Available Capacity: 10	The system provides an alert to fill in the missing field.	Manual
T3.3 Create Facility: Missing Room Number	Room Name: Study Room 1 Room Number: <blank> Building: Dorm A Status: Available Capacity: 10	The system provides an alert to fill in the missing field.	Manual
T3.4 Create Facility: Missing Building	Room Name: Study Room 1 Room Number: AA101 Building: <blank> Status: Available Capacity: 10	The system provides an alert to select the field.	Manual
T3.5 Create Facility: Missing Status	Room Name: Study Room 1 Room Number: AA101	The system provides an alert to fill in the missing field.	Manual

	Building: Dorm A Status: <blank> Capacity: 10		
T3.6 Create Facility: Missing Capacity	Room Name: Study Room 1 Room Number: AA101 Building: Dorm A Status: Available Capacity: <blank>	The system provides an alert to fill in the missing field.	Manual
T3.7 Create Facility: Cancel during creating a new facility	Room Name: Study Room 1 Room Number: AA101 Building: Dorm A Status: Available Capacity: 10 Click 'Back' button on Create Facility page.	The system cancels the creation in progress and goes back to the Approval or Open page.	Manual

Use Case 4

Use Case:	Edit Facility
Primary Actor:	User (staff)
Goal in Context:	The user wants to edit the selected facility.
Preconditions:	The user is viewing the facility list on the 'Approval' or 'Open' page.
Scenario:	<ol style="list-style-type: none">1. The user clicks 'Approval' or 'Open' button.2. The user clicks 'Edit' button next to the room name.3. The user edits the facility.4. The user clicks 'Update' button.
Postconditions:	The user is viewing the facility list on the 'Approval' or 'Open' page.

Use Case 4: Test

Precondition: The user is viewing the facility list on the ‘Approval’ page and click the ‘edit’ button.

Title	Inputs	Expected Output for Pass	Type of Test
T4.1 Edit Facility: Success	Room Name: Music Room Room Number: Dorm B (BB1) Building: Multi-Complex Type: Approval Status: Available Capacity: 10 Picture: musicRoom.jpg	Displays the Edit Facility page.	Manual
T4.2 Edit Facility: Missing Room Name	Room Name: <blank> Room Number: Dorm B (BB1) Building: Multi-Complex Type: Approval Status: Available Capacity: 10 Picture: musicRoom.jpg	The system provides an alert to fill in the missing field.	Manual
T4.3 Edit Facility: Missing Room Number	Room Name: Music Room Room Number: <blank> Building: Multi-Complex Type: Approval Status: Available Capacity: 10 Picture: musicRoom.jpg	The system provides an alert to fill in the missing field.	Manual
T4.4 Edit Facility:	Room Name: Music Room	The system provides an alert to fill	Manual

Missing Building	Room Number: Dorm B (BB1) Building: <blank> Type: Approval Status: Available Capacity: 10 Picture: musicRoom.jpg	in the missing field.	
T4.5 Edit Facility: Change Status radio button	Room Name: Music Room Room Number: Dorm B (BB1) Building: Multi-Complex Type: Approval Status: <select other radio button> Capacity: 10 Picture: musicRoom.jpg	The system will be updated Status	Manual
T4.6 Edit Facility: Missing Capacity	Room Name: Music Room Room Number: Dorm B (BB1) Building: Multi-Complex Type: Approval Status: Available Capacity: <blank> Picture: musicRoom.jpg	The system provides an alert to fill in the missing field.	Manual
T4.7 Edit Facility: Missing Picture	Room Name: Music Room Room Number: Dorm B (BB1) Building: Multi-Complex Type: Approval Status: Available Capacity: 10 Picture: <no file chosen>	Uploading the picture is optional, so it is also a success without uploading the picture. Displays the Edit Facility page.	Manual

T4.8 Edit Facility: Cancel during editing a facility information	Click 'Cancel' or 'Back' button on Edit Facility page.	The system cancels the edition in progress and goes back to the Approval or Open page.	Manual
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Use Case 5

Use Case:	Delete the Facility from the list
Primary Actor:	User (admin)
Goal in Context:	The user wants to delete the facility from the list.
Preconditions:	The user is viewing the facility list on the reservation page after clicking ‘Approval’ or ‘Open’ button.
Scenario:	<ol style="list-style-type: none">1. The user clicks ‘Delete’ button.2. The system gives the alert message: ‘Do you really want to delete this facility?’3. The user clicks ‘Yes’ button.
Postconditions:	The user is viewing the facility list without the facility that the user just deleted.

Use Case 5: Test

Precondition:The user is viewing the facility list on the reservation page after clicking ‘Approval’ or ‘Open’ button.

Title	Inputs	Expected Output for Pass	Type of Test
T5.1 Delete Facility: Success	Click ‘Delete’ button on Approval or Open page.	Displays the Approval or Open page.	Manual

Use Case 6

Use Case:	Reservation without approval (Dorm Page)
Primary Actor:	User (student)
Goal in Context:	The user wants to reserve a study room.
Preconditions:	The user has clicked the 'Dorm' from the facility list.
Scenario:	<ol style="list-style-type: none">1. The user is viewing a list of study rooms available in the dorm.2. The user selects the 'Timetable' button of a study room that he/she wants.3. The screen shows a timetable of the study room that the user chose.4. The user selects a time slot that he/she wants.5. The user fills in the details (number of members, purpose).6. The user clicks the 'Complete' button to complete a reservation.
Postconditions:	The screen goes back to the timetable.

Use Case 6: Tests

Precondition: The user has clicked the 'Dorm' from the facility list.

Title	Inputs	Expected Output for Pass	Type of Test
T6.1 Make a Reservation: Success	Purpose: Studying Number of Students: 10	Displays the timetable.	Manual
T6.2 Make a Reservation: Cancel during selecting the time and date	Click 'Cancel' button on 'Select Time' modal.	The system displays the timetable.	Manual
T6.3 Make a Reservation: Missing Purpose	Purpose: <blank> Number of Students: 10	The system provides an alert to fill in the missing field.	Manual
T6.4 Make a Reservation: Missing Number of Students	Purpose: Studying Number of Students: <blank>	The system provides an alert to select the field.	Manual
T6.5 Make a Reservation: Cancel during filling in Purpose and Number of Students	Click 'Cancel' button on Make a Reservation page.	The system displays the timetable.	Manual

Use Case 7

Use Case:	Give penalty to students
Primary Actor:	User (admin)
Goal in Context:	The user wants to give the penalty to students
Preconditions:	The user is viewing the penalty page.
Scenario:	<ol style="list-style-type: none">1. The user types student's email addresses in the search box.2. The user writes the details: the reason.3. The user clicks the 'Complete' button.
Postconditions:	The penalty of the student that the user just sent is increased.

Use Case 7: Tests

Precondition: The user is viewing the penalty page.

Title	Inputs	Expected Output for Pass	Type of Test
T7.1 Penalty: Success	Type students' email addresses in the search box and gives the reason on the form by clicking the 'Submit' button.	Displays the Penalty page with the list of students' emails. The value of the chosen student's penalty status will increment by 1.	Manual
T7.2 Penalty: Missing E-mail	The user is viewing the penalty page.	The system provides an alert to type in the E-mail.	Manual
T7.3 Penalty: Cancel during filling in Reson	Click 'Cancel' button on the form.	Displays the Penalty page with the list of students' emails.	Manual
T7.4 Penalty: Missing reason on the form	Reason: <blank>	The system provides an alert to fill in the missing field.	Manual
T7.5 Penalty: Give Penalty over the limit	Click 'Give Penalty' button next to the student who has penalty status with the value of three	The system provides an alert that the maximum has been reached.	Manual
T7.6 Penalty: Reset Penalty success	Click 'Reset Penalty' button next to the student's name.	Displays the Penalty page with the list of students' emails. The value of the chosen student's penalty status will change to zero.	Manual

Use Case 8

Use Case:	My Page (Cancel the reservation)
Primary Actor:	User (student)
Goal in Context:	The user wants to cancel the reservation.
Preconditions:	The user has clicked the 'My Page' from the tab.
Scenario:	<ol style="list-style-type: none">1. The user sees the page with different tabs on the left.2. The user selects 'Current Reservation'.3. The user selects the 'Cancel' button, then the reservation will be deleted from the list.

Use Case 8: Test

Precondition: The user has clicked the 'My Page' from the tab.

Title	Inputs	Expected Output for Pass	Type of Test
T8.1 Current Reservation: Cancel Success	Click 'Cancel' button on My Page - Current Reservation tab.	Displays My Page - Current Reservation..	Manual

Test 9: Facility Status Check

Goal: We want to make sure that a facility's timetable reflects all time slots that are filled in successfully.

Precondition: A new facility that does not have any reservation is prepared. The user is viewing the blank timetable.

T9.1 Facility Status Check: Success (manual)

1. Select a time slot of 10 pm on today's date.
2. Click the 'Confirm' button.
3. Fill in the reservation form correctly and click the 'Complete' button.
4. Selects a timetable of the facility that a user just made a reservation.

The timetable should have a time slot of 10 pm on today's date filled in.

4. Additional Testing

Additionally, we will have quality analysis by outside users, mainly our friends. We will distribute our website links to testers five days before the final release and gather feedback. We will improve the website based on the feedback until the final release.

5. Process and Schedule

We have been doing code reviews all together for every backend functions when each of them is successfully implemented. We will keep up with it for code reviews. For automated and manual testing, we will do it all together at the final milestone before distributing to testers.

Prospective Schedule

12/8~12/9	Start implementing automated test codes
12/10~12/11	Perform automated and manual testing
12/12	Distribute website links to testers (around 5)
12/13~12/16	Final check up