Application Requirements Specification For <MyGym Management System>

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Purpose and Scope Statement

Purpose

The purpose of this project is to develop a management system for a fitness center. The system will streamline the interaction between admins and members, focusing on features such as profile management and course management.

Scope

The project has two users — admin and member. Admins can view and edit member information, and view course registration information. Members can view and update their profile, view class listings, reserve and cancel class reservations. The mapping of classes between members and admins as well as the billing system is not part of the scope of this project and therefore will not be implemented. The system will focus primarily on the interaction between admins and members.

Requirements Narrative

In this project, users are given an option to login as either an admin or a member. Once an option is selected the user will be able to log into the system using their email and password. If the entered credentials match with the database, the user will be sent to the next screen.

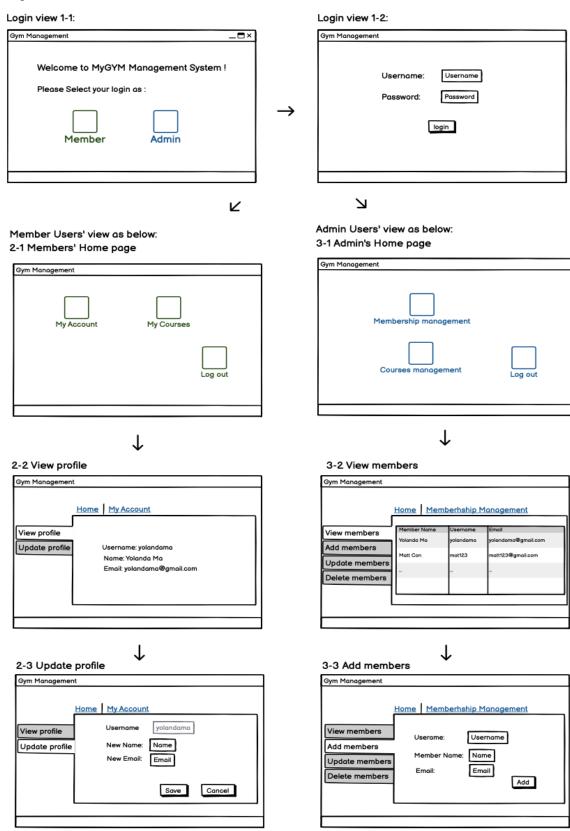
Users in this system can realize the following functions according to different types: Members can perform the following functions:

- 1. **View profiles**: Members can view their personal profile information.
- 2. **Update profiles**: Members can modify and update their profile information.
- 3. **View course list**: Members can access a list of all available fitness courses.
- 4. **Reserve courses**: Members can reserve a spot in a fitness course.
- 5. **Cancel course reservations**: Members can cancel a previously reserved spot in a fitness course.
- 6. **Login and Logout**: Members can log in and out of the system.

Admins can perform the following functions:

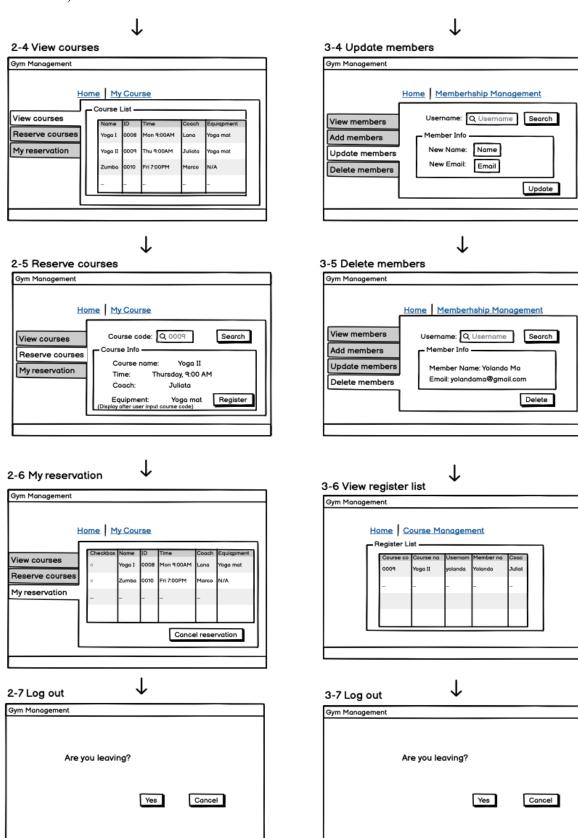
- 1. **View member list**: Admins can access a comprehensive list of all members registered in the gym.
- 2. Add members: Admins can record new memberships.
- 3. **Update members**: Admins can update members information.
- 4. **Delete members**: Admins can delete non-renewing members.
- 5. **View registration list**: Admins can view course registration list.
- 6. **Login and Logout**: Admins can log in and out of the system.

Objectives



(To be continued)

(Continued)



Functional Specification

MyGym Management System is basically divided between 2 users - Members and Admins.

The function will be invoked based on who logs in to the system.

Member Functions:

1. viewProfile():

Description: Allows members to view their personal profile information.

Inputs: None

Outputs: Member details (Name, Username, Email).

2. updteProfile():

Description: Allows members to update their personal profile information.

Inputs: Personal information (Name, Email)

Outputs: Confirmation of successful update.

3. viewCourse():

Description: Permits members to view the list of available fitness courses.

Inputs: None.

Outputs: Course details (Course Name, Schedule, Capacity, etc.).

4. reserveCourse():

Description: Allows members to reserve a spot in a fitness course.

Inputs: Course Code.

Outputs: Confirmation of successful course reservation.

5. cancelReservation():

Description: Permits members to cancel a previously reserved fitness course.

Inputs: None.

Outputs: Confirmation of successful course reservation cancellation.

6. memberLogin():

Description: Allows members to log into the system.

Inputs: Username, Password.

Outputs: Successful login message.

7. memberLogout():

Description: Allows members to log out of the system.

Inputs: None

Outputs: Successful logout message.

Admin Functions:

1. viewMember:

Description: Allows admins to access a comprehensive list of all members registered in the gym.

Inputs: None

Outputs: List of members (Name, Username, Email).

2. addMember():

Description: Permits admins to add membership information.

Inputs: Member details (eg. Name, Email, etc.)

Outputs: Confirmation of successful member addition.

3. updateMember():

Description: Permits admins to update a member's information.

Inputs: Member details (eg. Name, Email, etc.)

Outputs: Confirmation of successful member deletion.

4. deleteMember():

Description: Permits admins to delete a member from the gym management system.

Inputs: Username.

Outputs: Confirmation of successful member deletion.

5. viewRegistrationList():

Description: Permits admins to view the course registration list.

Inputs: None.

Outputs: List of registration information.

6. adminLogin:():

Description: Allows admins to log into the system.

Inputs: Username, Password.

Outputs: Successful login message.

7. adminLogout():

Description: Allows admins to log out of the system.

Inputs: None.

Outputs: Successful logout message.

Class Needed in the project:

- Member Class:
 - o Attributes:

■ Username: String (Unique identifier for each member)

name: Stringemail: String

password (for login authentication)

- Methodss:
 - viewProfile(): Retrieves and returns details of the member (Name, Username, email, etc.).
 - updateProfile(): Updates the member's profile with the provided information.
 - viewCourse(): Retrieves and returns a list of available fitness courses.
 - reserveCourse(): Reserves a spot in a fitness course.
 - cancelReservation(): Cancels a previously reserved fitness course.
 - login(): Authenticate member login.
 - logout(): Logout the member from the system.
- Admin Class:
 - Attributes:
 - Username: String (Unique identifier for each admin)
 - Methods:
 - viewMember(): Display a list of all members (Name, Username, Email).
 - addMember(): Add a new member to the system and provide a confirmation.
 - updateMember(): Update a member's information.
 - deleteMember(): Delete a member from the system and provide a confirmation.
 - viewRegistrationList(): View course registration list.
 - login(): Authenticate admin login.
 - logout(): Logout the admin from the system.
- Course Class:
 - o Attributes:

• courseCode: String (Unique identifier for each course)

courseName: Stringschedule: Stringcapacity: int

- Methods:
 - getCourseDetails(): This method is designed to retrieve the details of a specific course identified by its CourseCode.
 - getAvailableCourses(): This method is intended to provide a list of all available courses in the system.
- Reservation Class:

- o Attributes:
 - reservationCode: String (Unique identifier for each reservation)
 - Username
 - CourseCode
- o Methods:
 - reserveCourse(): Reserve a spot for a student in a fitness course.
 - cancelReservation(): Cancel a previously reserved fitness course.

Technologies Needed in the project:

Java framework;

UI for application - Java Swing;

Database - file management: storage, read and write;

Json serialization and deserialization.

Logic Specification

Users log in to the system from the UI interface. Based on the user's role, the system leads the user to the corresponding interface.

