



Software Requirements Specification

for

Gym Management System

Version 1.0.0

Prepared by

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Course: CS4097D Object Oriented Systems Laboratory

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1 Introduction

The "Gym Management System" is a desktop-based java project and has been deployed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and in some cases reduce the hardships faced by the existing system.

1.1 Document Purpose

This documentation covers the features and functionality of Gym Management System v1.0.0. The purpose of the project is to maintain the details of the Gym . The main purpose of this project is to maintain ease.

1.2 Product Scope

Gym management system is one of the most effective ways for modern gyms to achieve success and optimize their business potential and it has great future scope as well. This technology has progressed well beyond checking members into the gym and processing dues.

1.3 Definitions, Acronyms and Abbreviations

- UI/UX - User Interface/User Experience
- F1 - Functional Requirement 1

1.4 Document Conventions

In general this document follows the IEEE formatting requirements. Arial font size 11, or 12 is used throughout the document for text. Times font size 18 is used for main headings. Italics are used for comments. Document text is kept single-spaced and the 1" margins are maintained in this document.

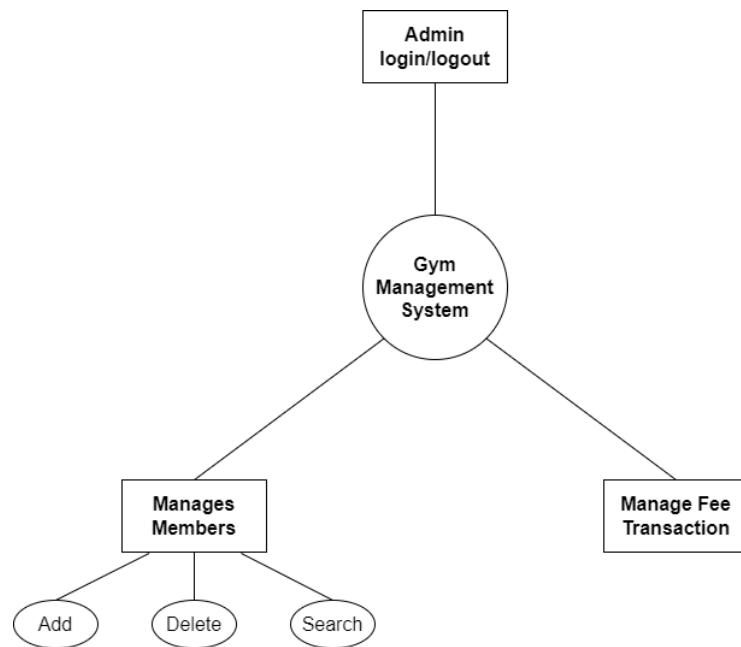
1.5 References and Acknowledgments

- <http://www.cse.msu.edu/~cse870/IEEEExplore-SRS-template.pdf> (Courtesy: Dept. of CSE, Michigan State University)
- <https://app.diagrams.net/>

2 Overall Description

2.1 Product Overview

The Gym management System has an Admin module and one relational database. Admin uses a login portal to login with their ID and Password after successful Sign Up. Now Admin can see the Total Members, Add, Update, Delete, Search Member and can Add, check Fee Details, change his/her password and can logout. A relational Database is used to store all the data such as list of registered members, etc.



2.2 Product Functionality

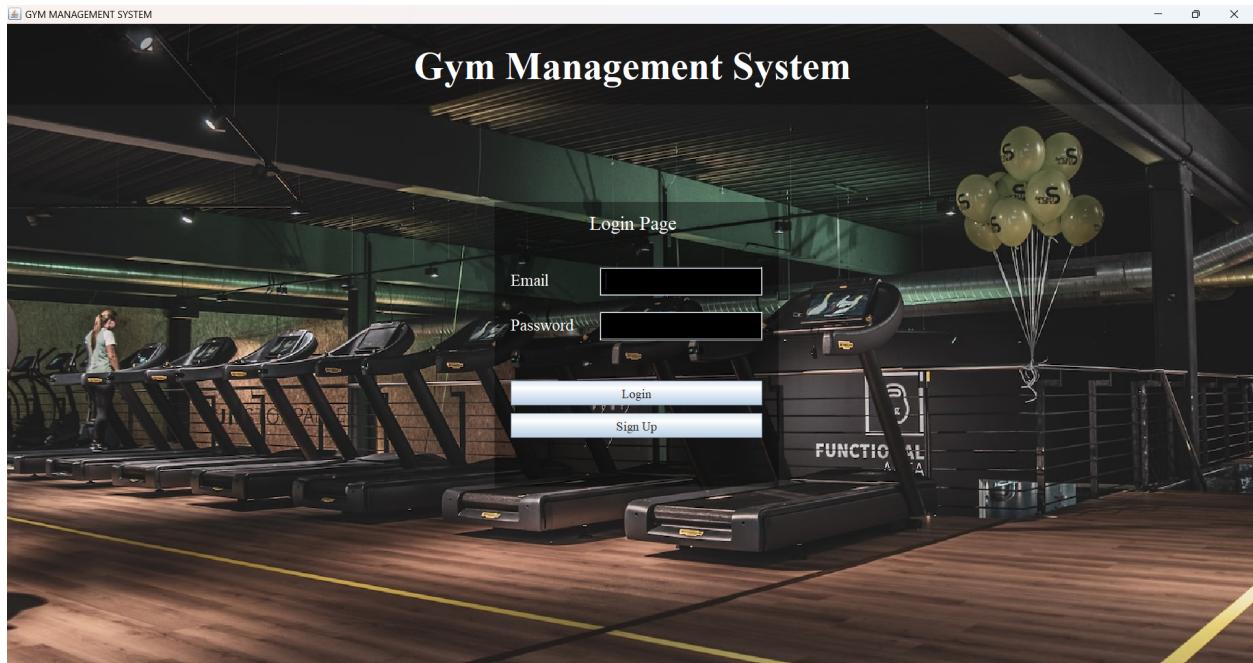
- The Gym Management System allows admin to Sign Up and then Login to the System.
- It allows admin to manage the members like see the Total Members, Add, Update, Delete, Search Member.
- Admin can Add and Check Fee Details, change his password and can logout.

3 Specific Requirements

3.1 User Interfaces

3.1.1 login page

Admin will login the application.



3.1.2 sign up page

Admin will login the application.

GYM MANAGEMENT SYSTEM

Admin Sign Up

Email

Name

Password

Confirm

Create New Account

3.1.3 Home - page



3.1.4 Add Member page

The Member will be registered by Admin.

The screenshot shows a Windows application window titled "GYM MANAGEMENT SYSTEM". At the top, there are three radio buttons: "Add Member" (selected), "Add Trainer", and a third option with a "choose" button. Below this, the title "Add Member" is centered. The form contains six input fields arranged in two rows of three. The first row includes "Name" (text box), "Email" (text box), and "Gender" (dropdown menu). The second row includes "Phone" (text box), "Address" (text box), and "Time" (dropdown menu). To the right of the "Gender" and "Time" fields are "DOB" and "DOJ" (text boxes). At the bottom are "Submit" and "Cancel" buttons.

Name		Email	
Phone		Address	
Gender	(dropdown)	DOB	
Time	(dropdown)	DOJ	

Submit Cancel

3.1.5 Add Trainer

The Trainer will be registered by admin.

This screenshot shows the same application window as the previous one, but with the "Add Trainer" radio button selected. The title "Add Trainer" is centered above the form. The input fields are identical to the "Add Member" form: Name (text box), Email (text box), Phone (text box), Address (text box), Gender (dropdown menu), DOB (text box), Time (dropdown menu), DOJ (text box), "Submit" button, and "Cancel" button.

Name	
Email	
Phone	
Address	

Submit Cancel

3.1.6 Payment :

Payment entry will be entered by Admin.

The screenshot shows a window titled "GYM MANAGEMENT SYSTEM" with a sub-title "Payment". The window contains four input fields: "Member Id" (text box), "Date" (text box), "Month" (dropdown menu showing "January"), and "Amount" (dropdown menu showing "650"). At the bottom are two buttons: "Submit" and "Cancel".

3.2 Functional Requirements

F1: Admin SignUp

Initially, when we run the project, the application will ask the admin to sign up. The admin can sign up using the sign up portal. After that, all the details of the admin will be added to the database and he/she will be redirected to the login page with a proper message on the screen.

F2: Admin Login

Admin can login using the login portal after signup. Once an admin successfully logs in, he/she will be redirected to the **Home Page** with a proper message on the screen.

F3: Add Members

After entering proper details of members, when admin presses the button **Add Member** details will get added into the database.

F4: See Total Members

Admin can see total members present in the database.

F5: Search Members

Admin can search Members by their Name and Id.

F6: Fee Payment

Admin can add member fee payment by using their Member Id.

F7: Check Fee Details

Admin can check Member fee details by using their member Id.

F8: Update Members

Admin can update Members by using their member Id.

F9: Delete Members

Admin can delete Members by using their member id.

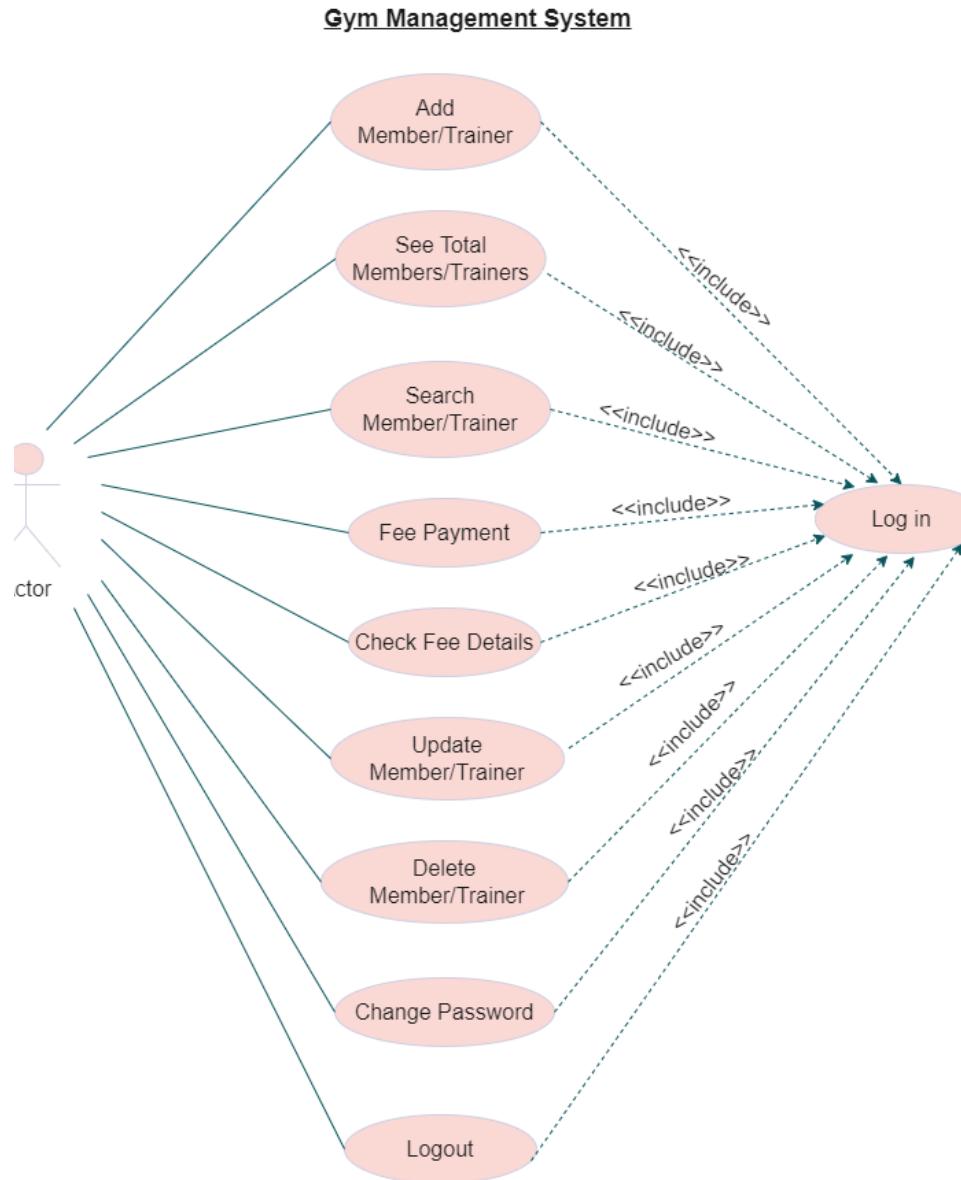
F10: Change Password

Admin can change Password if he wants to change.

F11: Logout

Admin can logout.

3.3 Use Case Model



3.3.1 Use Case #1

Purpose - Admin can login to their respective account.

Requirements Traceability – F2

Actors – Human

3.3.2 Use Case #2

Purpose - Admin can Add members to the system.

Requirements Traceability – F3

Actors – Human

3.3.3 Use Case #3

Purpose - Admin can see list of total members.

Requirements Traceability – F4

Actors – Human

3.3.4 Use Case #4

Purpose - Admin can search members from added members.

Requirements Traceability – F5

Actors – Human

3.3.5 Use Case #5

Purpose - Admin can add member fee payment by using their Member Id.

Requirements Traceability – F6

Actors – Human

3.3.6 Use Case #6

Purpose - Admin can check Member fee details by using their member Id.

Requirements Traceability – F7

Actors – Human

3.3.7 Use Case #7

Purpose - Admin can update details of existing members.

Requirements Traceability – F8

Actors – Human

3.3.8 Use Case #8

Purpose - Admin can delete Members.

Requirements Traceability – F9

Actors – Human

3.3.9 Use Case #9

Purpose - Admin can change his/her password whenever he wants.

Requirements Traceability – F10

Actors – Human

3.3.8 Use Case #10

Purpose - Admin can logout from the system..

Requirements Traceability – F11

Actors – Human

Design Document
for
Gym Management System

Version 1.0.0

Prepared by Team 13:
(Based on SRS Version 1.0.0 prepared by Team 13)

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Course: CS4096 Software Engineering Laboratory

Date: 14/11/2022

Glossary

Database	Organised collection of all the information monitored by this server.
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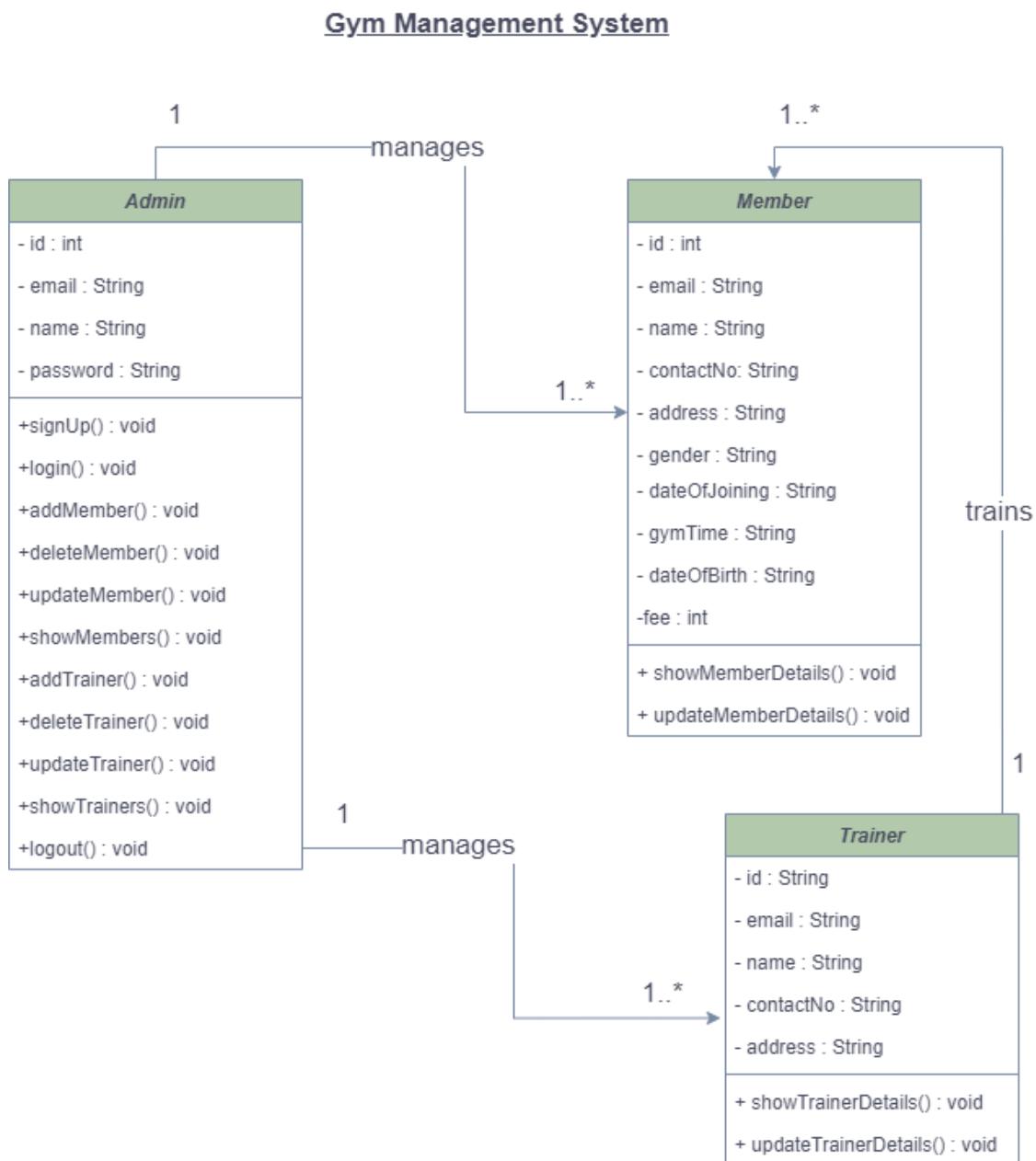
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1. Detailed Design through UML diagrams

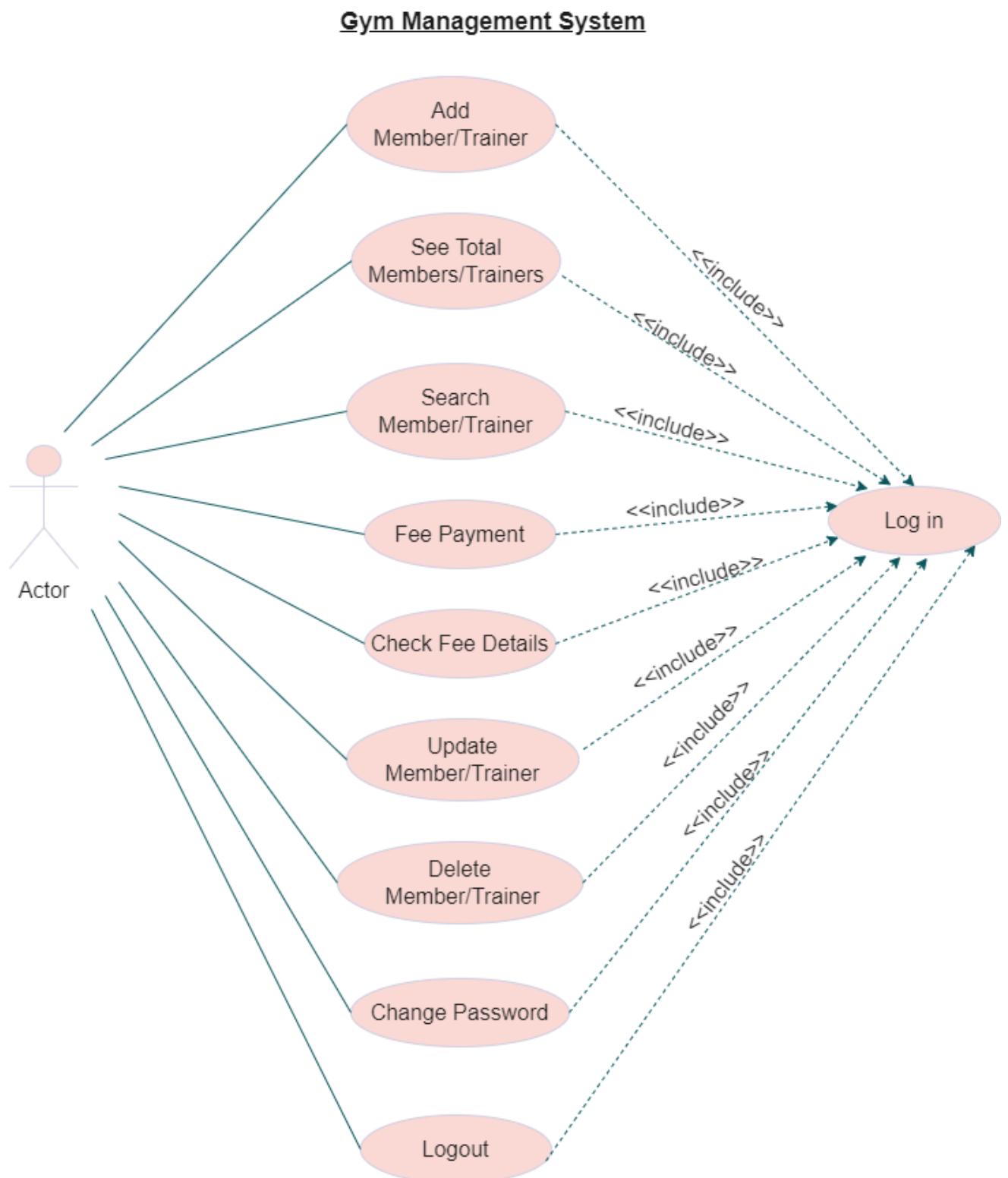
1.1 System model using Class Diagram

Class Diagram in the Unified Modelling Language is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods) and the relationships among classes.

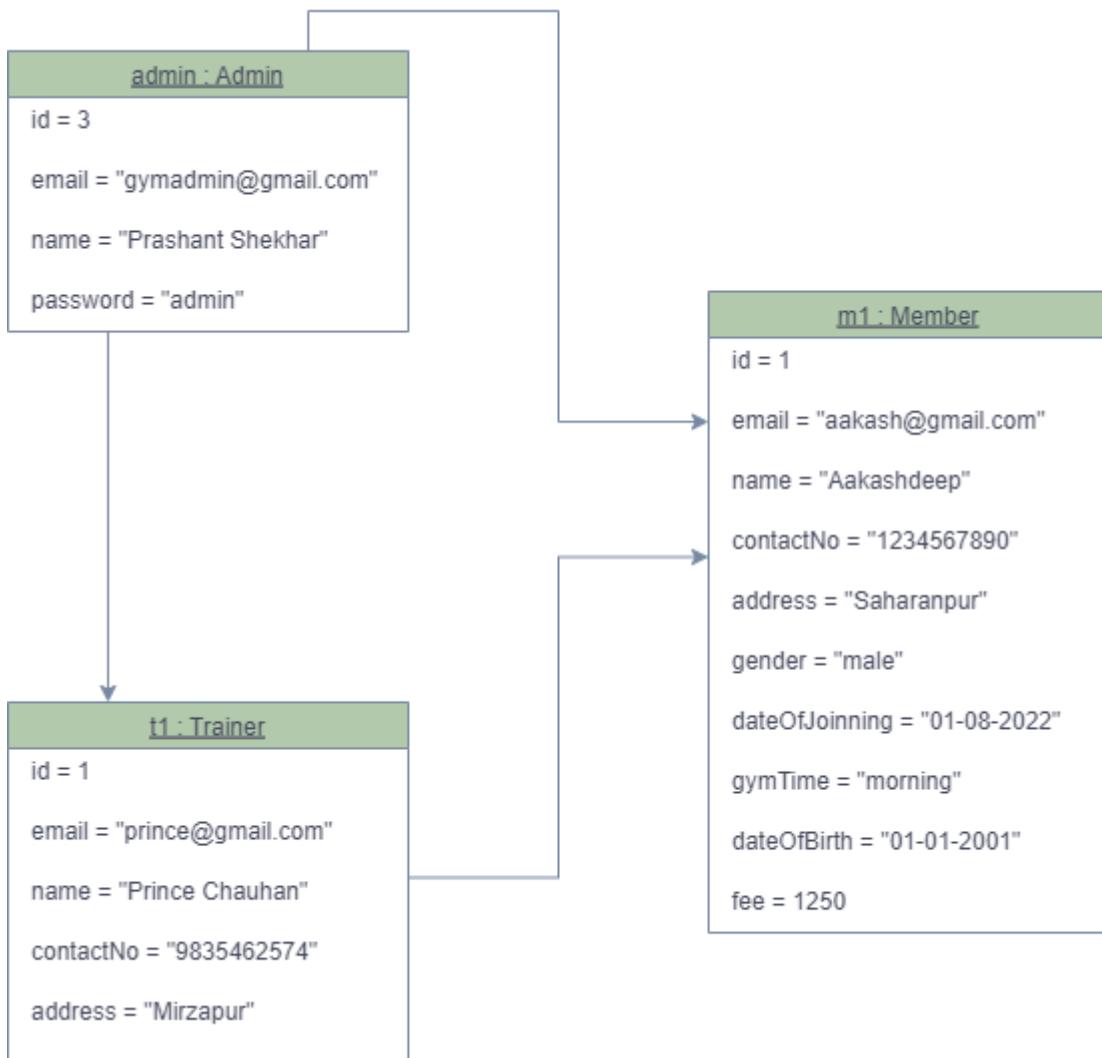
1.1.1 Class Diagram



1.2 Responsibilities - Use Case Diagram



1.3 Static snapshot of the system - Object Diagram

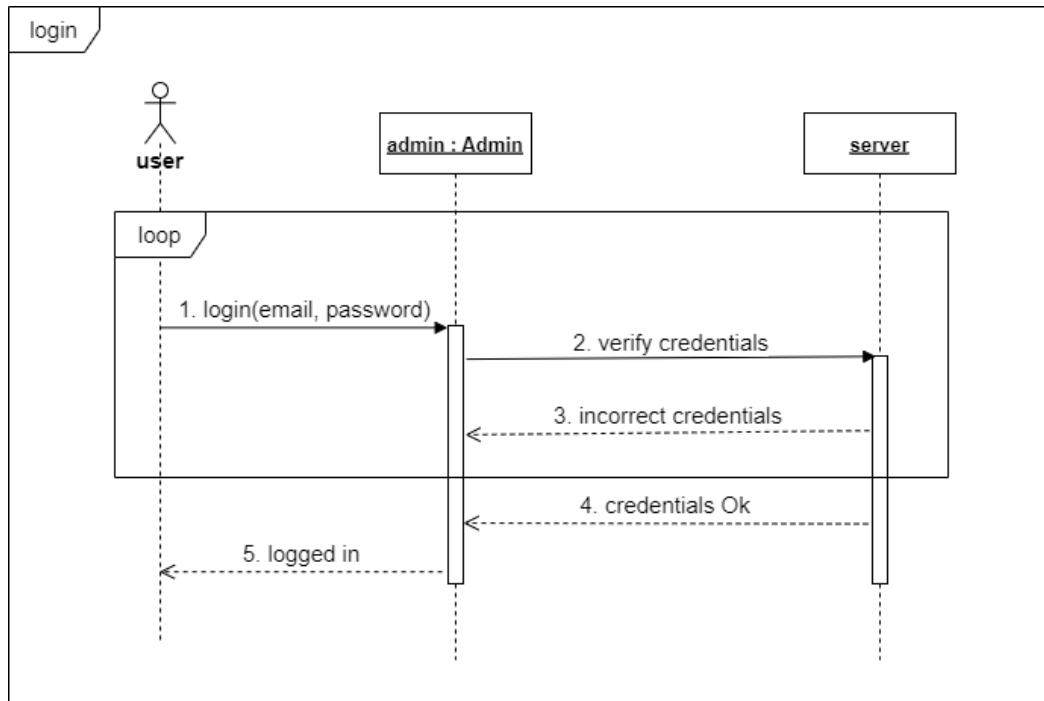


1.4 System Interactions through Sequence Diagrams

Sequence diagrams are interaction diagrams that show the sequence of messages exchanged by the set of objects performing a certain task. A sequence diagram shows, as parallel vertical lines (lifeline), different processes or objects that live simultaneously, and as horizontal arrows, the messages exchanged between them, in the order in which they occur.

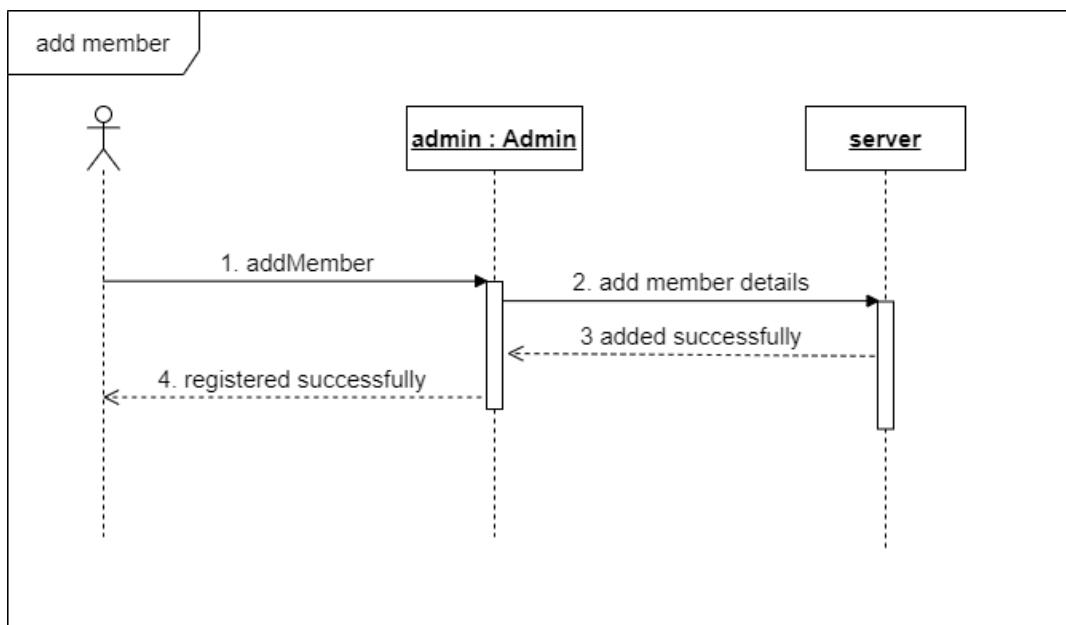
1.4.1 Admin login

This sequence diagram shows the sequence of the actions the admin should perform in order to log in.



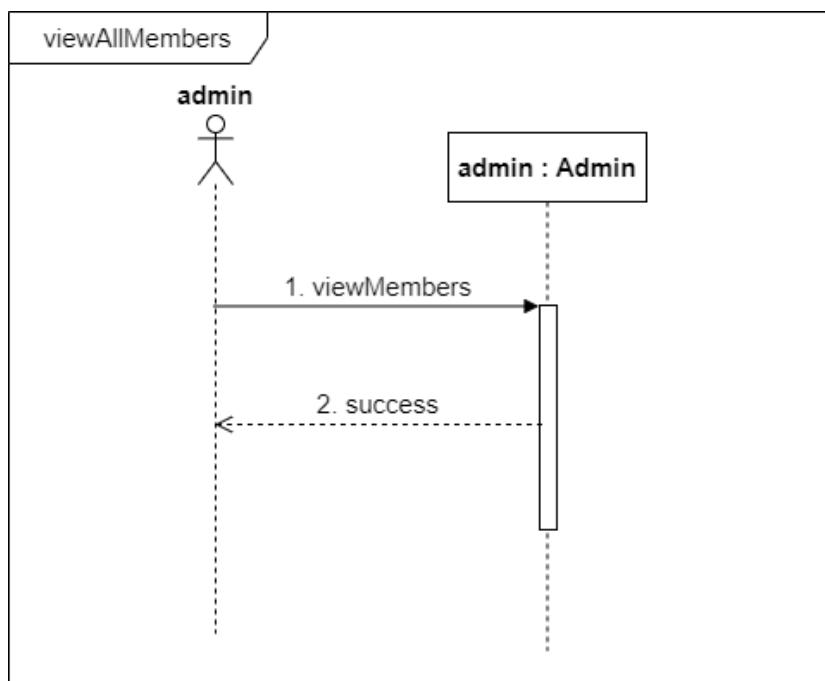
1.4.2 Add member

This sequence diagram shows the sequence of action in order to register a new member.



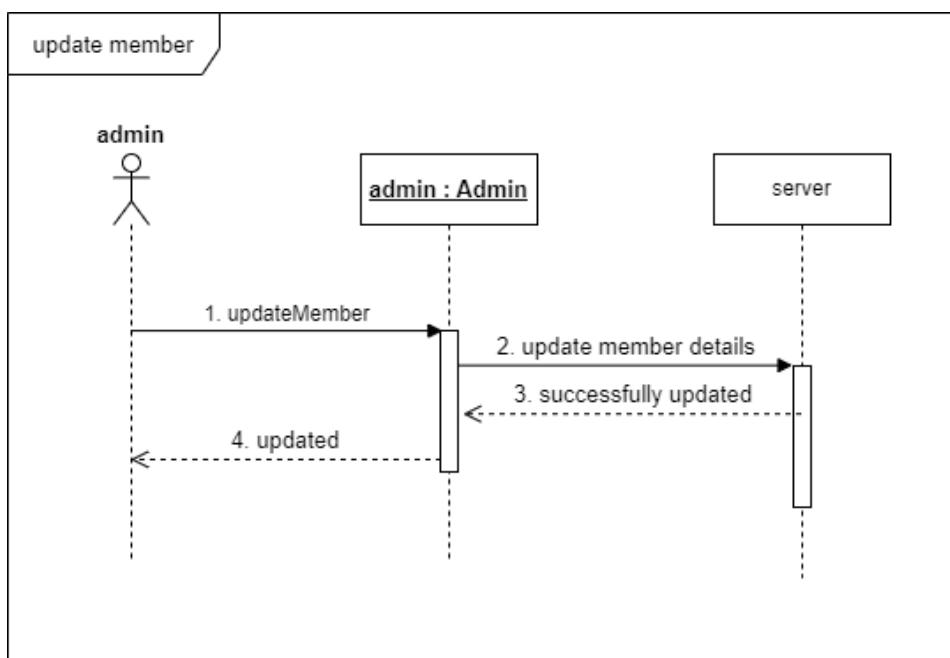
1.4.3 View All Members

This sequence diagram shows the sequence of action to view all registered members.



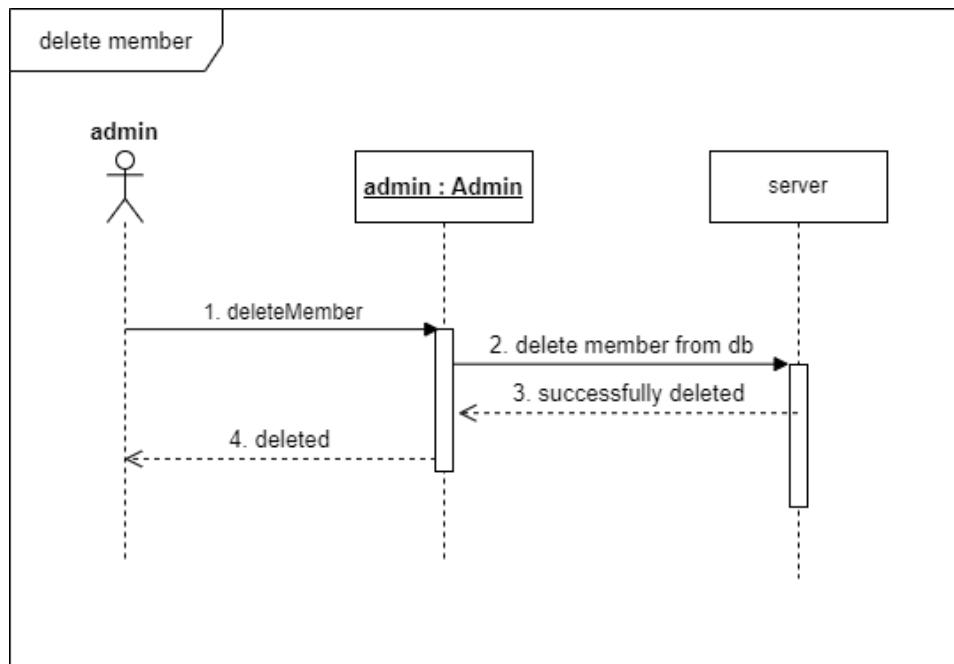
1.4.4 Update member

This sequence diagram shows the sequence of action in order to update details of the member.



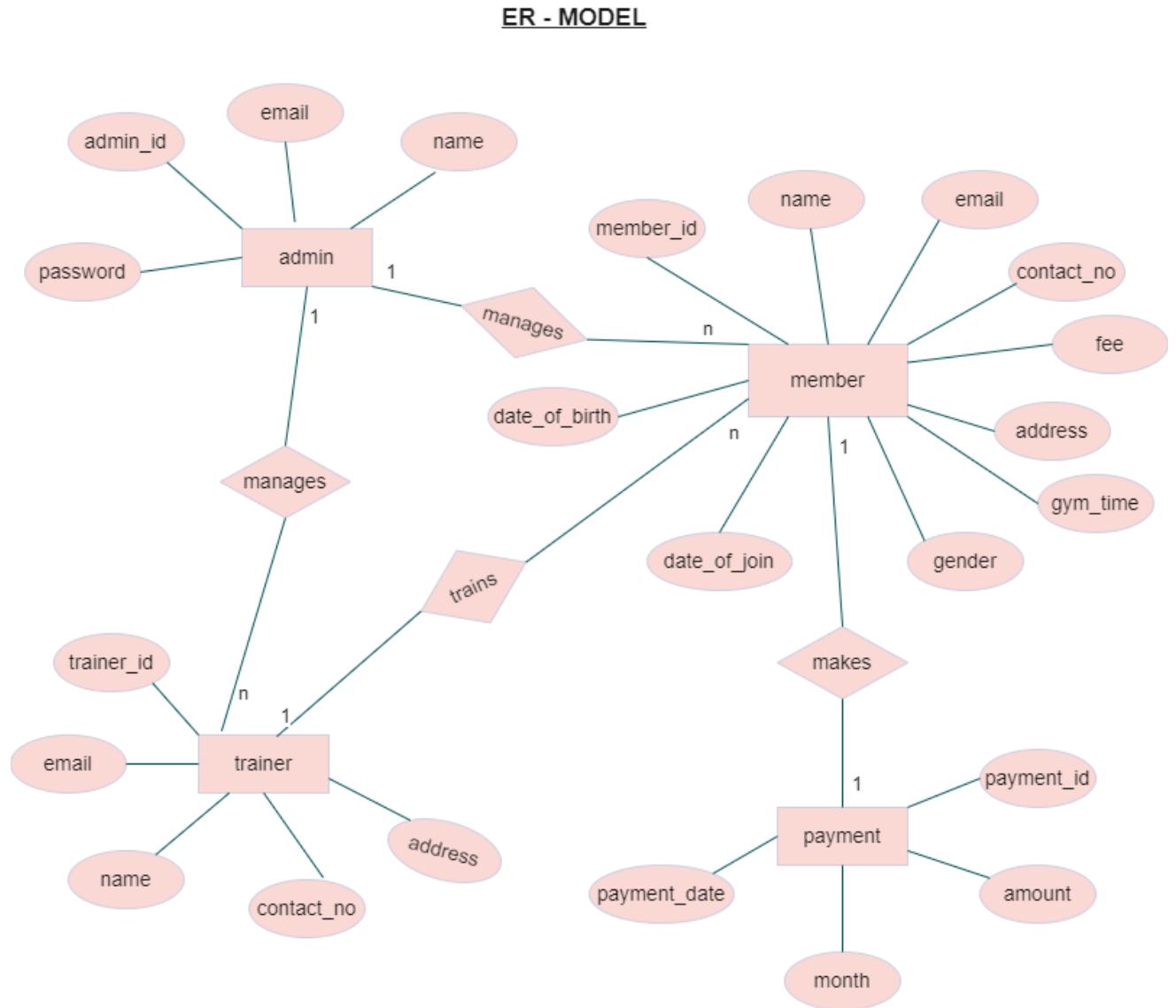
1.4.5 Delete member

This sequence diagram shows the sequence of action in order to delete details of the member.



2. Database Design

2.1 ER Diagram



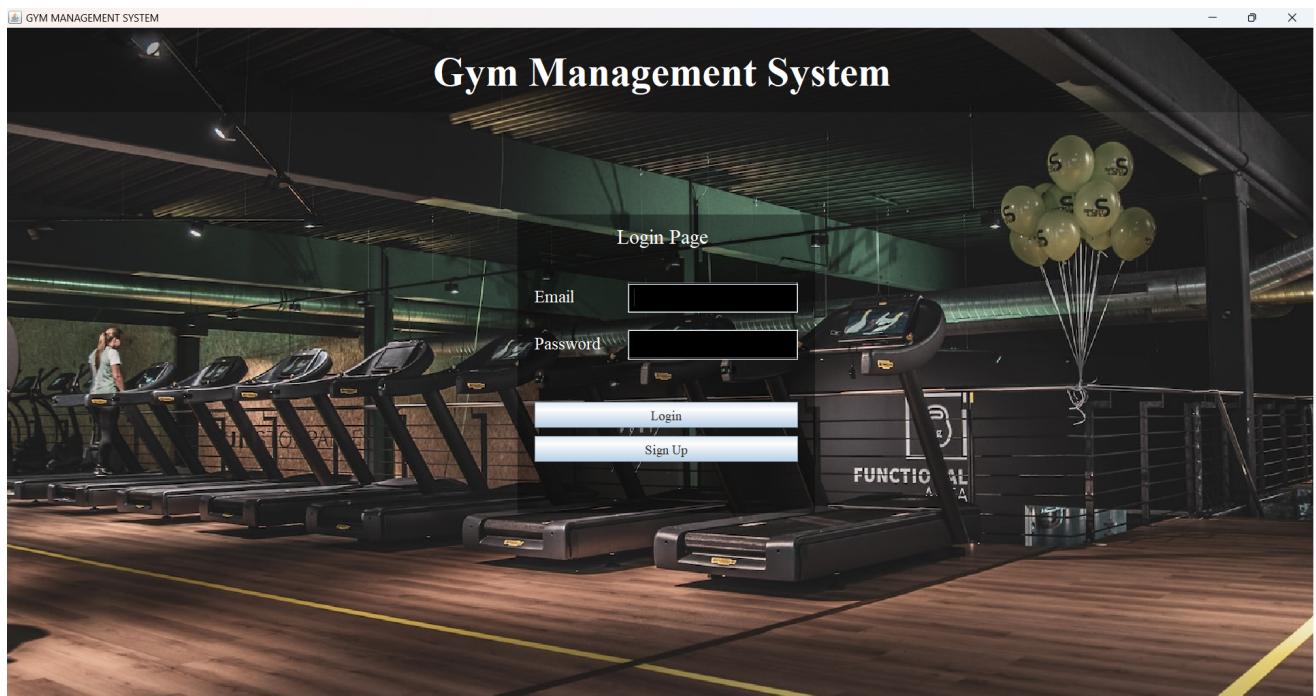
3. Implementation Plans

3.1 Technology Stack

- User Interface - Java swing
- Database - MySQL
- Programming Language - Java
- IDE - IntelliJ Idea

3.2 User Interface Prototyping

3.2.1 login page



3.2.2 Admin sign-up page

A screenshot of a Windows application window titled "GYM MANAGEMENT SYSTEM". The title bar also has "GYM MANAGEMENT SYSTEM" text. The main area is titled "Admin Sign Up". It features four input fields: "Email", "Name", "Password", and "Confirm", each with a corresponding redaction box. Below these fields is a large blue button labeled "Create New Account".

3.2.3 Home - page



3.2.4 Add member

A screenshot of a Windows application window titled "GYM MANAGEMENT SYSTEM". At the top, there are two radio buttons: one selected for "Add Member" and one for "Add Trainer", followed by a "choose" button. Below this is a section titled "Add Member" with six input fields arranged in a 3x2 grid. The first row contains "Name" and "Email". The second row contains "Phone" and "Address". The third row contains "Gender" (a dropdown menu) and "DOB" (a text input field). The fourth row contains "Time" (a dropdown menu) and "DOJ" (a text input field). At the bottom are two buttons: "Submit" and "Cancel".

3.2.5 Add Trainer

The screenshot shows a window titled "Add Trainer" within the "GYM MANAGEMENT SYSTEM". At the top, there is a radio button group with "Add Member" and "Add Trainer" options, where "Add Trainer" is selected. A "choose" button is also present. Below the title, there are four input fields labeled "Name", "Email", "Phone", and "Address", each with a corresponding text input box. At the bottom of the window are two buttons: "Submit" and "Cancel".

3.2.6 Payment

The screenshot shows a window titled "Payment" within the "GYM MANAGEMENT SYSTEM". It contains four input fields: "Member Id" with a text input box, "Date" with a text input box, "Month" with a dropdown menu set to "January", and "Amount" with a dropdown menu set to "650". At the bottom are "Submit" and "Cancel" buttons.

4. Test Cases

4.1 Test Case #1 (TC_SIGNUP_001)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the admin sign up

Test case : Enter email address, name, password and confirm password

Pre-Conditions:

- Need a valid Gmail account to sign up.
- Admin must not be signed up using the same email address.

Test Steps:

- Enter email address
- Enter name
- Enter password
- Enter confirm password
- Click Create New Account button

Password and confirm password should be the same otherwise error message would be shown to the user.

Test Data:

email : aakash2001jnv@gmail.com

name : Aakashdeep

password : 12345678

confirm : 12345678

Expected Result:

- On successful sign up a message would be shown to the admin and the Login page would open.
- Message : “You are successfully registered”.
- On Failure, message : “Try Again!”.

Post Condition:

- Entered details of admin will be stored in the database.

4.2 Test Case #2 (TC_LOGIN_001)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the admin Login.
Test case : Enter email address and password.

Pre-Conditions:

- The Admin must be signed up.
- The Admin should be logged out.

Test Steps:

- Enter email address
- Enter password
- Click Login button

Test Data:

email : aakash2001jnv@gmail.com
password : 12345678

Expected Result:

- On successful login, the admin will be redirected to the home page.
- On Failure, message : “Try Again!” or “Enter valid email or password!”.

Post Condition:

- The admin will be logged into the application successfully and will be redirected to the homepage.

4.3 Test Case #3 (TC_ADD_MEMBER)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the member registration.

Test case : Enter details of the member.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Enter name
- Enter email
- Enter contact number
- Enter Address
- Choose Gender
- Choose gym time
- Choose subscription
- Enter DOB
- Enter DOJ
- Click the Submit button or Click Cancel to cancel the registration.

Test Data:

name : Salman Khan

email : salmankhan420@gmail.com

contact number : 7867095798

Address : Bandra West

Gender : Male

gym time : Morning

subscription : Gold

DOB : 01-05-1965

DOJ : 08-08-2022

Expected Result:

- On successful registration, the message will be shown to the admin.
- On success, message : “Successful registration!”
- On Failure, message : “Try Again!”.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.4 Test Case #4 (TC_ADD_TRAINER)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the trainer registration.

Test case : Enter details of the trainer.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Enter name
- Enter email
- Enter contact number
- Enter Address
- Click the Submit button or Click Cancel to cancel the registration.

Test Data:

name : Sahil Khan

email : sahilkhhan420@gmail.com

contact number : 9867095798

Address : Bandra West

Expected Result:

- On successful registration, the message will be shown to the admin.
- On success, message : “Successful registration!”
- On Failure, message : “Try Again!”.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.5 Test Case #5 (TC_PAYMENT)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the payment entry.

Test case : Enter payment details.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Enter Member Id
- Enter Date
- Choose Month
- Choose Amount
- Click the Submit button or Click Cancel to cancel the payment.

Test Data:

Member Id : 5

Date : 11-11-2022

Month : October

Amount : 650

Expected Result:

- On successful payment, the message will be shown to the admin.
- On Success, message : “Successful payment!” .
- On Failure, message : “Try Again!” .

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.6 Test Case #6 (TC_VIEW_TOTAL_MEMBERS)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the registered member.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click Total Member on the home page.
- Choose the member option.
- All the registered members will be listed in the table.

Test Data: NULL

Expected Result:

- All the registered members will be listed in the table.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.7 Test Case #7 (TC_VIEW_TOTAL_TRAINERS)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the registered trainers.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click Total Member on the home page.
- Choose the trainer option.
- All the registered trainers will be listed in the table.

Test Data: NULL

Expected Result:

- All the registered members will be listed in the table.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.8 Test Case #8 (TC_UPDATE_MEMBER)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the update member function.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click Update Member on the home page.
- Choose the member option.
- Enter Member Id
- Click on Search Button.
- A form will be displayed with already filled values of the searched member.
- Admin can edit values of any field.
- Click the Update button or Cancel to cancel the update.

Test Data:

Member Id = 4

Expected Result:

- Details of the member will be updated.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.9 Test Case #9 (TC_UPDATE_TRAINER)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the update trainer function.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click Update Member on the home page.
- Choose the trainer option.
- Enter Trainer Id
- Click on Search Button.
- A form will be displayed with already filled values of the searched trainer.
- Admin can edit values of any field.
- Click the Update button or Cancel to cancel the update.

Test Data:

Trainer Id = 3

Expected Result:

- Details of the trainer will be updated.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.10 Test Case #10 (TC_DELETE_MEMBER)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the delete member function.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click Delete Member on the home page.
- Choose the member option.
- Enter Member Id
- Click on Search Button.
- A form will be displayed with already filled values of the searched member.
- Click on delete button

Test Data:

Member Id = 4

Expected Result:

- Details of the member will be Deleted.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.11 Test Case #11 (TC_DELETE_TRAINER)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the delete trainer function.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click Delete Member on the home page.
- Choose the trainer option.
- Enter Trainer Id
- Click on Search Button.
- A form will be displayed with already filled values of the searched member.
- A form will be displayed with already filled values of the searched member.
- Click on the delete button.

Test Data:

Trainer Id = 4

Expected Result:

- Details of the trainer will be deleted.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.12 Test Case #12 (TC_SEARCH_MEMBER)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the search member.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click Search Member on the home page.
- Choose the member option.
- Enter Member Id
- Click on Search Button.

Test Data:

Member Id = 3

Expected Result:

- Details of the member will be displayed in the table.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.13 Test Case #13 (TC_SEARCH_TRAINER)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify the search trainer.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click Search Member on the home page.
- Choose the trainer option.
- Enter Trainer Id
- Click on Search Button.

Test Data:

Trainer Id = 4

Expected Result:

- Details of the trainer will be displayed in the table.

Post Condition:

- The admin will remain on the same page and can go back to the home page.

4.14 Test Case #14 (TC_LOGOUT)

Author: Prashant Shekhar

Test Case Description:

Test scenario : Verify logout of admin.

Pre-Conditions:

- The Admin must be logged in.

Test Steps:

- Click the Logout button on the home page.

Test Data: Null

Expected Result:

- Admin will be logged out and redirected to the login page.

Post Condition:

- The admin will remain on the same page and can go back

References

- <https://app.diagrams.net/>