

Deliverable 1

Gym System

The Gym Management System is an online platform designed to manage member and employee interactions within a gym. The system allows users to log in as either employees or members, each with specific capabilities according to their roles. The project's functionality is modeled based on a detailed UML diagram, outlining the core classes, controllers, and interactions.

Design Paradigm (Follows an MVC structure)

Model

User: An abstract class representing common attributes and methods for members and employees.

Address: A class that handles the address details of users, including validation of zip codes.

Member: A class extending User, representing gym members with specific attributes and methods.

Employee: A class extending User, representing gym employees with management capabilities.

Membership: A class managing the membership details, including type and price differences.

Payment: A class handling payment details, including the amount, payment type (cash/card), and processing logic.

Notification Interface: An interface defining the structure for notifications, allowing implementation of email and SMS notifications.

View

Handles user interface and interaction with the user.

Controller

UserController: A controller managing both members and employees within the system.

MemberController: A controller managing member-specific operations.

EmployeeController: A controller managing employee-specific operations.

Notification Interface: An interface representing the notification system, allowing both email and SMS notifications.

Features

Member

Login: Members can log in to access the system.

Profile Management: Members can view and update their personal details, including phone number, address, and membership type.

Membership Management: Members can view membership details and request updates to their membership type.

Balance Check: Members can view their account balance and make payments.

Notifications: Members can receive notifications from the gym system, such as updates, announcements, and alerts.

Report Issues: Members can report issues to the gym administration through the system.

Employee

Login: Employees can log in to access the system.

Manage Members: Employees can add, update, or remove member information, as well as manage their membership details and balances.

Process Payments: Employees can process membership payments made by members.

Notification Management: Employees can send notifications to members regarding updates, announcements, and promotions.

Review Reports: Employees can review reports submitted by members and take appropriate actions.

Getting Started

Log in as either a member or an employee.

Members can update profiles, manage memberships, check balances, and receive notifications.

Employees can manage member accounts, process payments, send notifications, and review reports.

UML Diagram

