Project Report

on

“GYM MEMBERSHIP”

SUBMITTED BY

Shantanu Ajit Jadhav AF04948093
Krushna Ganesh Karmalkar AF04948068

PROJECT GUIDE

Prof. Kajal Moghe

DEPARTMENT OF COMPUTER ENGINEERNG

D. Y. Patil Academic Education Excellence Federation’s

Dr. D. Y. PATIL TECHNICAL CAMPUS (Engg. & MCA)
VARALE-TALEGAON, PUNE–410507

Academic Year 2025-2026

DEPARTMENT OF COMPUTER ENGINEERING

CERTIFICATE

This is to certify that **Shantanu Ajit Jadhav** of S.E. C.E. has successfully completed the Project Based Learning titled **"GYM MEMBERSHIP"** towards the partial fulfillment for the requirements of the Bachelor Degree in Computer Engineering course under the University of Pune during Academic year **2025-2026.**

Project Guide
Prof. Kajal Moghe

Head of Department
Dr. S. P. Kosbatwar

Acknowledgement

I express my sincere gratitude towards the faculty members who made this project successful. I would like to express my thanks to my guide **Prof. Kajal Moghe** for his whole hearted co-operation and valuable suggestions, technical guidance throughout the seminar work.

Special thanks to Head of Department and Principal of Computer Engineering **Dr. S. P. Kosbatwar and Dr. S. D. Shirbahadurkar** for his kind official support and encouragement. Finally, I would like to thank to all my staff members of **Computer Engineering** department who helped me directly or indirectly to complete this work successfully.

Student Name
Shantanu Jadhav
Student ID AF04948093
Department Name
Computer Engineering
Batch Code ANP-D1489

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Student Name
Krushna Karmalkar
Student ID AF04948068
Department Name
Computer Engineering
Batch Code ANP-D1489

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ABSTRACT

The Gym Membership Management System is a Java-based Console application designed to help fitness centers efficiently manage their daily operations. The system streamlines the process of handling member registrations, managing membership plans, assigning plans, and maintaining accurate records of all related activities.

This application is developed using Java for implementing the core business logic, JDBC (Java Database Connectivity) for establishing a connection between the application and the database, and MySQL for storing all records securely and reliably. The system supports functionalities such as adding new members, updating personal and contact information, selecting or modifying membership plans, tracking plan validity, and assigning specific plans based on user requirements.

The admin interface enables staff to view all active and expired memberships, generate reports, and update payment status and attendance logs. The system minimizes the need for manual paperwork, reduces the chances of errors, and provides quick access to member and plan details in real-time.

By offering a structured, user-friendly interface, the Gym Membership Management System improves operational efficiency, enhances data accuracy, and provides a more professional experience to both staff and gym members. This project demonstrates the effective application of Java and database technologies in solving real-world fitness center management challenges.

CHAPTER I

INTRODUCTION

In today's fast-paced world, maintaining health and fitness has become a growing priority. As a result, the demand for well-organized and professionally managed gyms has increased significantly. With this growing demand, managing gym operations manually using paper records or spreadsheets becomes inefficient, time-consuming, and error-prone. To overcome these challenges, the Gym Membership Management System is developed as a Java-based application that simplifies and automates the daily administrative tasks of a gym or fitness center.

The main objective of this project is to build a reliable system that allows gym staff to manage member information, membership plans, and plan assignments efficiently. The application provides core features such as member registration, storing personal details, selecting or changing membership plans, assigning trainers, updating payment status, and tracking membership expiration. It also helps administrators quickly access and manage records, reducing manual effort and improving productivity.

This system is developed using Java for writing the core logic and functionalities, JDBC (Java Database Connectivity) for establishing communication between the application and the database, and MySQL for storing all gym-related data such as member profiles, plans, and payment history. The choice of these technologies ensures platform independence, strong backend support, and ease of future scalability.

By offering a structured and user-friendly interface, this system provides a professional and digital solution to gym management. It not only enhances the overall user experience for both members and staff but also ensures the security and accuracy of data. Additionally, the system can be extended with features such as login authentication, biometric check-ins, and automated SMS/email reminders for membership renewal.

In conclusion, the Gym Membership Management System addresses the key challenges faced by gyms in managing their operations. It demonstrates how software applications can be effectively used to modernize traditional workflows, reduce human errors, and improve service delivery in the health and fitness sector.

CHAPTER II

BACKGROUND

As the fitness industry grows, gyms are increasingly required to manage large volumes of member data, payments, and memberships efficiently. Traditionally, many fitness centers rely on manual record-keeping or spreadsheets, which often lead to errors, data loss, and inefficiencies. These outdated methods make it difficult to track membership plans, renewals, and attendance effectively.

To address these issues, a need arises for a reliable, automated system that simplifies daily operations. The Gym Membership Management System was developed to fill this gap. By leveraging Java, JDBC, and MySQL, the system offers a digital platform that stores member details, manages subscriptions, tracks payments, and enhances overall administrative productivity in an organized and scalable manner.

LITERATURE REVIEW

Paper No	Title	Author	Outcomes	Future scope	Remark
1	Design & Implementation of GYM Management System	Dono Zhao	Efficient Members Management	Biometric Integration	(PDF) Design and Implementation of Gym Management System Based on Web
2	Online Fitness Club Management System	Harshta Choudaj	Time and Resource Optimization	Web and Mobile Integration	Enter Title for Paper

CHAPTER III

AIM

The main aim of the Gym Membership Management System is to design and develop a Java-based application that automates and simplifies the daily operations of a fitness center. The system is intended to manage member records, assign and track membership plans, monitor payments, and maintain organized, secure data storage.

By replacing manual processes with a digital platform, the application aims to reduce administrative workload, minimize human errors, and provide a more efficient and professional system for both gym staff and members. It also seeks to enhance overall productivity, improve service delivery, and lay the foundation for scalable future enhancements such as biometric login, notifications, and online access. The key objectives of this project include

- **To develop a Java-based Gym Membership Management System** that automates the process of managing member registrations, membership plans, and payment tracking to improve efficiency and accuracy in gym operations.

- **To replace manual and paper-based systems** with a secure, user-friendly, and scalable digital platform that simplifies administrative tasks and enhances the overall experience for both gym staff and members.

OBJECTIVE

- **To create a centralized system** for storing and managing gym member information, including personal details, contact information, and membership history.

- **To implement functionality** for selecting, assigning, and tracking different membership plans and their validity periods.

- **To manage payments and renewals** effectively by recording transactions and notifying users or staff of due or expired memberships.

- **To reduce manual workload and errors** by automating repetitive administrative tasks and providing a user-friendly interface for easy access and updates.

CHAPTER IV

METHODOLOGY

1. System Overview

The Gym Membership Management System is a desktop-based application developed using Java, JDBC, and MySQL. It is designed to automate the core administrative functions of a gym, providing a structured and efficient method to handle member registrations, plan assignments, and payment records. The system follows a modular approach, ensuring ease of maintenance, scalability, and future expansion.

The application operates in two main modules: Admin Module and User Module. The Admin Module allows gym staff to add new members, assign or modify membership plans, track payment history, monitor subscription validity, and manage overall records. The User Module, if extended, can be used by members to view their profiles, check plan status, and receive renewal notifications.

Data entered through the user interface is processed using Java logic and stored in a MySQL database via JDBC connectivity. This ensures secure storage, fast access, and proper data management. Validation checks are incorporated to avoid duplicate entries and ensure data integrity.

The system reduces manual paperwork, saves time, and minimizes the possibility of human errors. Its user-friendly interface ensures that even non-technical staff can operate the system easily, making it an effective solution for managing gym operations smoothly and professionally.

2. Software Implementation

1. Programming Language: Core Java

Core Java is used to write the main application logic, including user input handling, validation, and business logic processing. The system is built using object-oriented programming (OOP) principles to ensure modularity and reusability of code.

2. Database Connectivity: JDBC

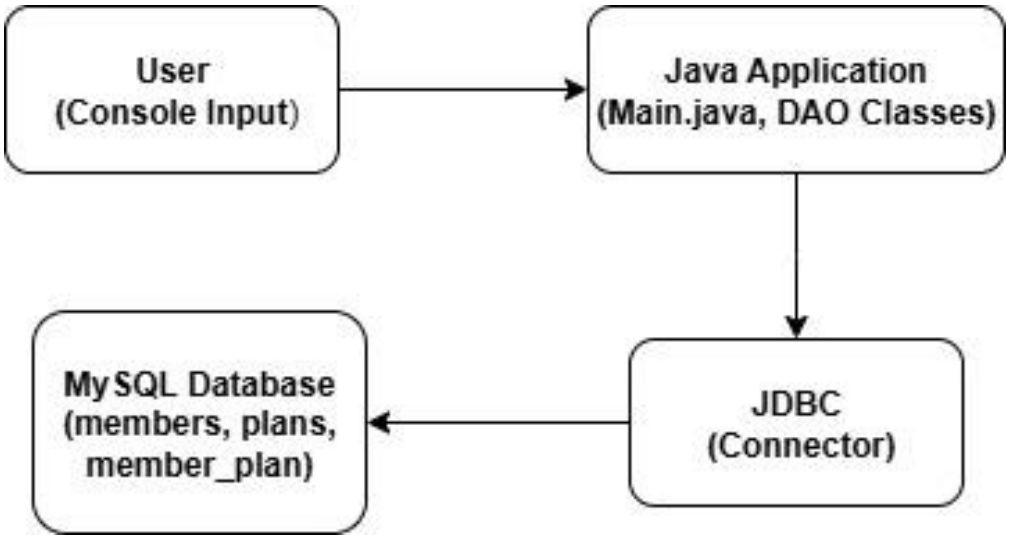
Java Database Connectivity (JDBC) is used to connect the application to the MySQL database. JDBC allows executing SQL queries from Java code, enabling operations like insert, update, delete, and retrieve on database tables.

3. Database: MySQL

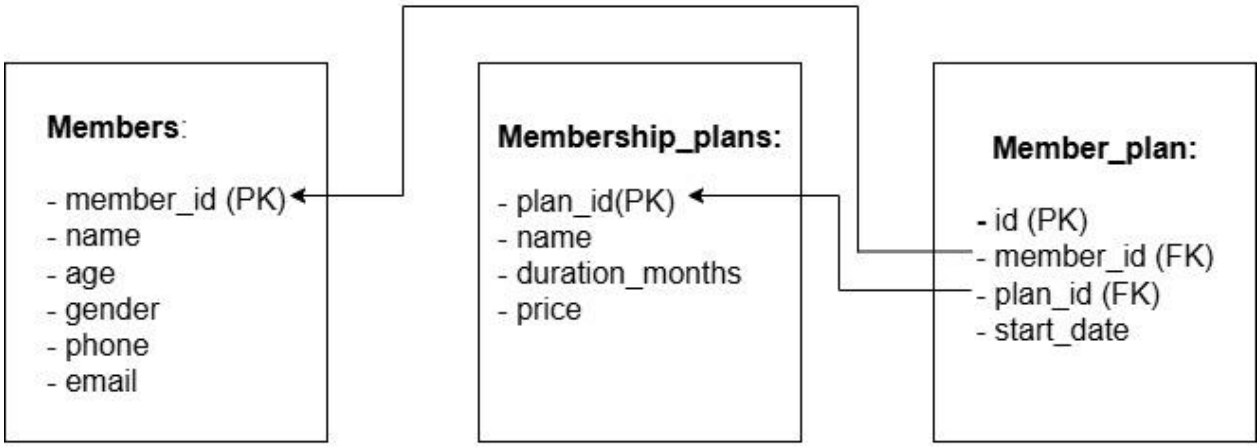
MySQL is used to store and manage all data related to gym members, membership plans, payments, and admin login credentials. Proper normalization techniques are followed to ensure efficient data storage.

3. Diagram

i. Architecture



ii. Entity Relation



CHAPTER V

CONCLUSION

The Gym Membership Management System *successfully* achieves its objective of automating and simplifying the core operations of a gym using **Core Java** and **MySQL**. By replacing traditional manual processes with a digital solution, the system enhances data accuracy, reduces administrative workload, and improves overall efficiency.

The application provides essential functionalities such as member registration, membership plan management, payment tracking, and record maintenance. Through the use of **JDBC**, the system ensures secure and seamless communication between the Java application and the MySQL database.

The user-friendly interface and modular code structure make the system easy to use and maintain. Additionally, the project lays a strong foundation for future enhancements such as biometric authentication, online access, and mobile app integration.

In conclusion, this project demonstrates the effective use of programming and database skills to solve real-world problems and offers a practical, scalable solution for modern gym management.

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