

Gym Membership System

A Database Management System Project

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Introduction

- The Gym Membership System is a database management project designed to streamline and automate gym operations. It maintains accurate and organized records, eliminating the issues of manual or fragmented systems.
- The system manages members, trainers, subscriptions, payments, classes, attendance, and equipment, storing all data in a centralized SQL database.
- It provides real-time access for administrators and trainers to monitor memberships, track class enrollments, manage trainer schedules and maintain payment records.
- By ensuring efficiency, accuracy and automation, the system minimizes errors, reduces redundancy and generates queries and reports to support data-driven decision-making.

Problem Statement

Managing a gym involves multiple tasks like member registrations, trainer assignments, class scheduling, equipment maintenance, memberships and payments. Manual or fragmented systems often cause:

- Data redundancy and inconsistency and Limited analytical reporting
- Difficulty tracking renewals and expired subscriptions
- Inefficient trainer/class management
- No real-time insights on payments, attendance or equipment

A centralized SQL-based Gym Membership System solves these issues by:

- Storing all gym data in a structured relational database
- Supporting member, trainer, subscription, payment, attendance and feedback management
- Enabling efficient queries and reports for administrators
- Improving efficiency, accuracy and automation of gym operations



Objectives



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Simplify member and trainer management.

Automate subscriptions and payments.

Maintain equipment records.

Track attendance and class enrollments.

Generate reports and insights for decision-making.

Tables and Sample Data

Members Table

Payments Table

Feedback Table

Trainers Table

Attendance Table

Trainer Schedule Table

Membership Plans Table

Equipment Table

Admins Table

Subscriptions Table

Class Table

REGISTER NO	FIRST NAME	LAST NAME	EMAIL
101	Saarah	John	saarah.john@gmail.com
102	soya	Jack	soya.jack@gmail.com

Key Queries with Output

Join Query: List members and their enrolled classes.

```
SELECT M.first_name, M.last_name, C.class_name
FROM Members M
JOIN Attendance A ON M.member_id = A.member_id
JOIN Classes C ON A.class_id = C.class_id;
```

Output Example:

FIRST NAME	LAST NAME	CLASS NAME
Saarah	John	Yoga
soya	Jack	Strength Training

Group By Query: Count members in each class.

```
SELECT C.class_name, COUNT(A.member_id) AS total_members
FROM Classes C
LEFT JOIN Attendance A ON C.class_id = A.class_id
GROUP BY C.class_name;
```

Output Example:

CLASS NAME	TOTAL MEMBERS
Yoga	2
Strength Training	3

conclusion

- A complete database solution for gym management.
- Tracks members, trainers, payments, classes and feedback.
- Provides flexible queries for reporting and insights.
- Enhances operational efficiency and accuracy.

Future Enhancement

- Integration with web & mobile applications.
- Real-time notifications for payments and schedules.
- Analytics dashboard for admins/trainers.
- Biometric / RFID-based attendance tracking.
- Support for multi-branch gym networks.

thank you