



**Parshvanath Charitable Trust's**  
**A. P. SHAH INSTITUTE OF TECHNOLOGY, THANE**  
**(All Programs Accredited by NBA)**  
**Department of Information Technology**



## **Exercism**

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**Project Guide**  
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# 1. Introduction

- **Problem Identified :**

- Difficulty in managing gym memberships, schedules, and payments manually, leading to inefficiency and errors.

- **Solution Proposed :**

- Implement a digital gym management system to automate membership tracking, scheduling, and payment processing for smoother operations.

## 2. Objectives

1. To streamline the process of managing gym memberships, schedules, and payments through an automated platform.
2. To provide gym members with an easy-to-use interface for managing their profiles, bookings, and payments online.
3. To enhance overall gym management efficiency by centralizing data storage and simplifying administrative tasks.

### 3. Scope

1. Can be streamlined for managing gym memberships, schedules, and payments through an automated platform.
2. Can be provided for easy-to-use interface for gym members to manage their profiles, bookings, and payments online.
3. Can be enhanced for overall gym management efficiency by centralizing data storage and simplifying administrative tasks.

## 4. Literature Survey

Paper Title	Author	Year	Key Findings
A cloud-based gym management system for health and fitness centers	N i t i n Reddy	2023	This paper presents a cloud-based management system that enhances operational efficiency in health and fitness centers through real-time data management, automated scheduling, and streamlined payment processing.
Development of a web-based gym membership management system	J o r g e Madson	2022	The study discusses the design and implementation of a web-based system that simplifies member registration, session booking, and payment management, improving user experience and administrative efficiency.
F i t n e s s management system using IoT and cloud computing	V i c k y Brasseur	2023	This research explores the integration of IoT devices and cloud computing in gym management, facilitating real-time data collection and analysis for membership monitoring, schedule management, and user engagement.

# 5. Proposed System

Feature 1 : Issuing the timetable of batch on system

- Automate the issuance of batch timetables through the system to enhance scheduling efficiency and accessibility for members.

Feature 2 : Increase transparency between stakeholders

- Enhancing communication and data sharing among stakeholders fosters accountability and trust, leading to better decision-making and collaboration.

Feature 3 : Issuing the timetable of batch on system

- Automated issuance of batch timetables through the system for efficient scheduling and improved communication.

## 6. Methodology

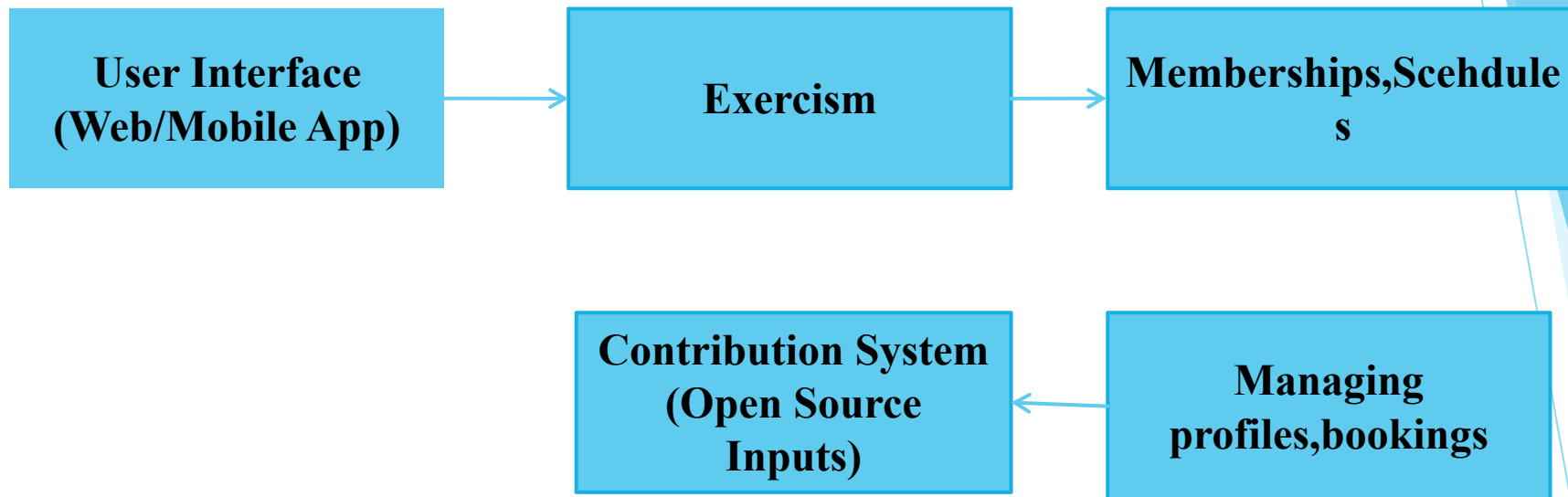
- ▶ Data Collection: Gather necessary data on class schedules, instructor availability, and student preferences through surveys or existing records.
- ▶ Algorithm Development: Design an algorithm to optimize timetable generation, considering constraints such as room capacity, instructor schedules, and course requirements.
- ▶ System Integration: Implement the timetable generation algorithm into the gym management system, allowing for automated updates and user-friendly access.
- ▶ User Testing and Feedback: Conduct user testing with gym members and staff to ensure the timetable meets their needs, followed by iterative improvements based on feedback.



# 7. Outcome of Project

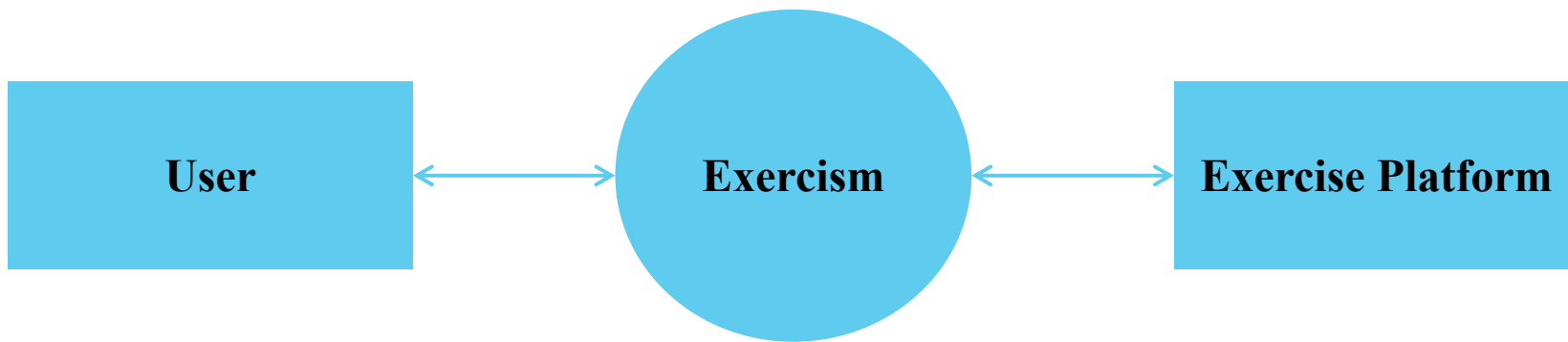
1. Streamlined Scheduling: Automated timetable issuance reduces manual effort and time, improving efficiency.
2. User-Friendly Interface: Members can easily log in to access personalized timetables and manage bookings online.
3. Optimized Resource Utilization: Improved allocation of gym facilities and instructors reduces scheduling conflicts.
4. Data-Driven Insights: Analytical tools provide insights into attendance patterns, aiding in future scheduling decisions.

## 8. Block Diagram

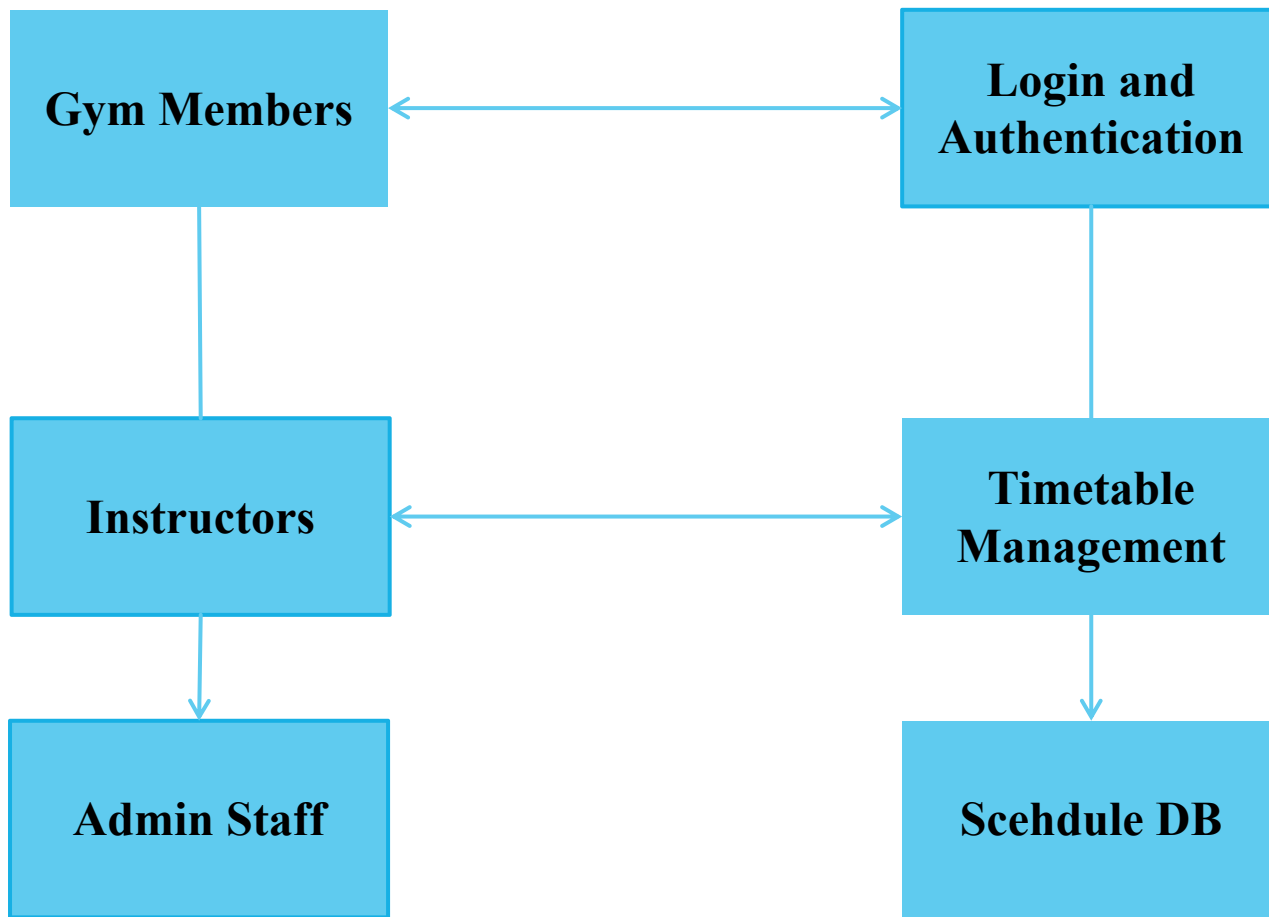


**Fig 8.1 : Block diagram**

# 9. Data Flow Diagram



**Level 0 - Overall System**



**Level 1 - Gym Management System**

# 10. Technology Stack

1. Programming Language: Html,CSS,JS,Bootstrap
2. Backend:Python
3. Database:MYSQL
4. Version Control: Git
5. Hosting Platform: GitHub
6. Community Interaction: Issues and Pull Requests

Thank You...!!