GYM MANAGEMENT SYSTEM

HPT/RYK SCIENCE COLLEGE NASHIK

THIRD YEAR BACHELOR OF COMPUTER SCIENCE

CS :-3611 PROJECT

Submitted To

SAVITRIBAI PHULE PUNE UNIVERSITY

BY

PURNENDU JIUT PANDEY	**Roll no: 32**
SAWAN DEVENDRA SINGH	**Roll no: 52**
AMAN SHAMBHU SINGH	**Roll no: 50**
RAJ ABHAY SINGH	**Roll no:51**

**UNDER THE GUIDENCE OF **

MR NILESH MAHAJAN

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INTRODUCTION

The fitness industry has grown rapidly in recent years, and with this growth, the demand for efficient gym management systems has increased. A gym management system is a software application designed to streamline the management of a fitness center or gym. This system helps gym owners and managers to manage their facilities, services, and members effectively. It typically includes features like membership management, scheduling, billing, reporting, and communication tools.

The gym management system has become an essential tool for gym owners and managers as it helps them to automate many of the administrative tasks, reducing manual workloads and errors. The system also provides members with more convenient and accessible ways to manage their accounts, including making payments, and accessing account information.

Acknowledgement

We would like to express our sincere gratitude to everyone who has supported us throughout the development of this gym management system project. Firstly, we extend our appreciation to our project supervisor **MR.NILESH MAHAJAN** Sir, for providing us with valuable guidance, constructive feedback, and motivation to carry out this project successfully.

We also want to thank the **gym management** team for their continuous support and assistance throughout the project development process. Their valuable inputs and feedback have been essential in shaping the system's features and functionalities to meet the needs of the gym.

We are also grateful to our friends and colleagues who provided us with their support, feedback, and encouragement during the project's development. Their involvement helped us to **stay motivated and focused**, and we appreciate their contribution to the success of this project.

Finally, we acknowledge the support of our families who have been our constant source of motivation and encouragement throughout our academic journey. Their unwavering support has been instrumental in enabling us to complete this project successfully.

Thank you all for your invaluable contribution to this project.

PROBLEM DEFINATION

Health and Safety Management: Gym owners and managers need to ensure that the gym environment is safe and hygienic for users. A gym management system can help track cleaning and disinfecting schedules, manage capacity limits, and enforce safety protocols such as mask-wearing and social distancing.

Member Engagement and Retention: Gym owners and managers need to keep members engaged and motivated to improve retention rates. A gym management system can provide personalized workout plans, nutritional recommendations, and fitness challenges to keep users interested and motivated.

Staff Management: Gym owners and managers need to manage staff schedules, payroll, and performance. A gym management system can help track staff hours, create work schedules, and provide performance metrics to improve staff productivity and accountability.

Inventory Management: Gym owners and managers need to manage inventory levels of gym supplies, such as towels, cleaning supplies, and supplements. A gym management system can help track inventory levels, set reorder thresholds, and automate supply orders.

Marketing and Sales Management: Gym owners and managers need to attract new members and increase revenue through marketing and sales efforts. A gym management system can provide marketing tools, such as email campaigns, social media integration, and referral programs, and track sales metrics to measure the effectiveness of these efforts.

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PROPOSED SYSTEM

A gym management system involves software that can help manage various aspects of a gym, including membership management, billing and payments, staff management and equipment maintenance. Below is the proposed system for a gym management system.

Membership Management: The system should allow gym owners to manage memberships, including creating new memberships, modifying existing ones, and cancel memberships. The system should also allow gym owners to set up membership plans, such as monthly or annual memberships, and set different pricing tiers for each plan.

Billing and Payments: The system should be able to manage billing and payments.

Equipment Maintenance: The system should allow gym owners to track the maintenance and repair of equipment.

Reporting: The system should provide gym owners with a variety of reports, such as charts, pie charts, viewing active members status ,etc.

Security: The system should be secure and protect sensitive member data, including personal and payment information.

Overall, a gym management system should be user-friendly, customizable, and scalable, allowing gym owners to efficiently manage their operations and provide a positive experience for their members.

FUNCTION SPECIFICATION

Virtual Training: The system should allow users to access virtual training programs, including live or pre-recorded video sessions, to work out from home or on-the-go. The system should also provide users with personalized virtual training plans based on their fitness goals and preferences.

Health Data Tracking: The system should allow users to track health metrics, including weight, body fat percentage, and blood pressure, and integrate this data with fitness and nutrition goals to provide a more holistic view of health and wellness.

Facility Management: The system should allow administrators to manage gym facilities, including equipment maintenance and repair, temperature and lighting controls, and facility access controls.

Personalized Recommendations: The system should use machine learning algorithms to analyze user data and provide personalized recommendations for workouts, nutrition, and overall health and wellness.

Accessibility Features: The system should provide accessibility features, such as audio descriptions and closed captioning, to make the system more accessible to users with disabilities.

By including these additional functions, a gym management system can provide a more comprehensive and modern approach to fitness and health management, making it easier for users to achieve their fitness goals and stay motivated.

SYSTEM ANALYSIS

A) Requirement analysis

User Management: The system should allow for the creation and management of user accounts. These accounts should be used to track the membership status of each user, as well as their personal information, such as name, address, and contact details.

Membership Management: The system should allow users to sign up for memberships, as well as manage their memberships, including renewals, cancellations, and upgrades. The system should also be able to generate reports on membership trends and usage.

Class and Schedule Management: The system should allow users to view and sign up for classes and schedule sessions with trainers. The system should also be able to generate reports on class and trainer availability and usage.

Equipment Management: The system should allow for the tracking of equipment usage and maintenance. It should also be able to generate reports on equipment availability and usage.

Reporting and Analytics: The system should be able to generate various reports and analytics to track the performance of the gym and identify areas for improvement.

Security: The system should ensure the safety and security of user data, as well as provide access control mechanisms to protect against unauthorized access.

By considering these requirements, you can develop a comprehensive gym management system that meets the needs of all stakeholders involved.

.Hardware Requirements:

Computer: Any modern computer with at least **4GB of RAM** and a dual-core processor.

Storage: At least **500GB** of storage space to store the **gym management** software, data, and backups.

Display: A monitor with a resolution of at least 1280 x 768 pixels.

Internet Connection: A stable internet connection for online features like payments and member portal access.

Software Requirements:

Operating System: The server should run a stable operating system such as Linux or Windows Server to support the system's software requirements,

Web Server: The system requires a web server software such as Apache or Xampp to serve web pages to users and handle requests from the browser.

Database Management System: The system requires a database management system such as **MySQL or MongoDB** to store and manage data.

Programming Language: The system should be developed using a programming language such as **PHP, HTML , JAVASCRIPT , BOOTSTRAP,CSS**

It's important to note that these requirements may change depending on the size of the gym, the number of members, and the complexity of the gym management system. It's always a good idea to consult with a professional to determine the best hardware and software requirements for your gym

FEASIBILITY STUDY

A feasibility study for a gym management system would typically involve analyzing the viability of implementing such a system, **taking into account** various factors such as costs, benefits. Here are some key considerations for conducting a feasibility study for a gym management system:

Technical feasibility: This project will utilize common web technology web development such as **JavaScript, CSS, HTML PHP, MYSQL** which are used widely.

Market Analysis: The first step is to assess the demand for a gym management system. This can be done by analyzing the current market and identifying the potential customer base for the system. This analysis can include researching existing gym management systems, their features, and their pricing.

Cost Analysis: A cost analysis should be conducted to determine the initial investment required to implement the system, including software and hardware costs, installation and setup fees, and ongoing maintenance costs.

Operational Feasibility: An operational feasibility analysis should be conducted to determine whether the system can be integrated into existing gym operations without major disruptions. This analysis should consider the impact of the system on day-to-day gym operations, including staff training and member communication.

Legal Feasibility: A legal feasibility analysis should be conducted to ensure that the system complies with relevant laws and regulations, including data protection and privacy laws.

Based on the results of these analyses, the feasibility study should provide a comprehensive assessment of the viability of implementing a gym management system and help determine the best course of action.

7) NORMALISED DATABASE (DATA DICTIONARY)

ENTITY: ADMIN

FIEDNAME	DATATYPE	KEYS	DESCRIPTION
User_id	Int(11)	Primary key	Unique id
username	varchar(50)	NOT NULL	Username
password	varchar(50)	NOT NULL	password
fname	varchar(50)	NOT NULL	Name of admin

ENTITY: MEMBER

FIEDNAME	DATATYPE	KEYS	DESCRIPTION
user_id	int(11)	Primary key	Unique id
fullname	varchar(20)	NOT NULL	Fullname of member
username	varchar(20)	NOT NULL	Username
password	varchar(100)	NOT NULL	Password of member
gender	varchar(20)	NOT NULL	Gender
D.O.R	Date	NOT NULL	Date of registration
amount	int(100)	NOT NULL	Amount
plan	varchar(100)	NOT NULL	Plans
address	varchar(20)	NOT NULL	Address of member

contact	varchar(10)	NOT NULL	Contact no of member

ENTITY: EQUIPMENT

FIEDNAME	DATATYPE	KEYS	DESCRIPTION
id	int(11)	Primary key	Unique id
name	varchar(50)	NOT NULL	Name of equipment
amount	int(100)	NOT NULL	Amount in integer
quantity	int(100)	NOT NULL	Quantity of equipment
vendor	varchar(50)	NOT NULL	Vendor's name
description	varchar(50)	NOT NULL	Description
address	varchar(50)	NOT NULL	Address of vendor
contact	varchar(50)	NOT NULL	Contact no
date	date	NOT NULL	Date of purchased

ENTITY: STAFF

FIEDNAME	DATATYPE	KEYS	DESCRIPTION
user_id	int(11)	Primary key	Id of staff
username	varchar(50)	NOT NULL	Username
password	varchar(50)	NOT NULL	Password
email	varchar(50)	NOT NULL	Email of staff member
fullname	varchar(50)	Foreign key	Name of staff member

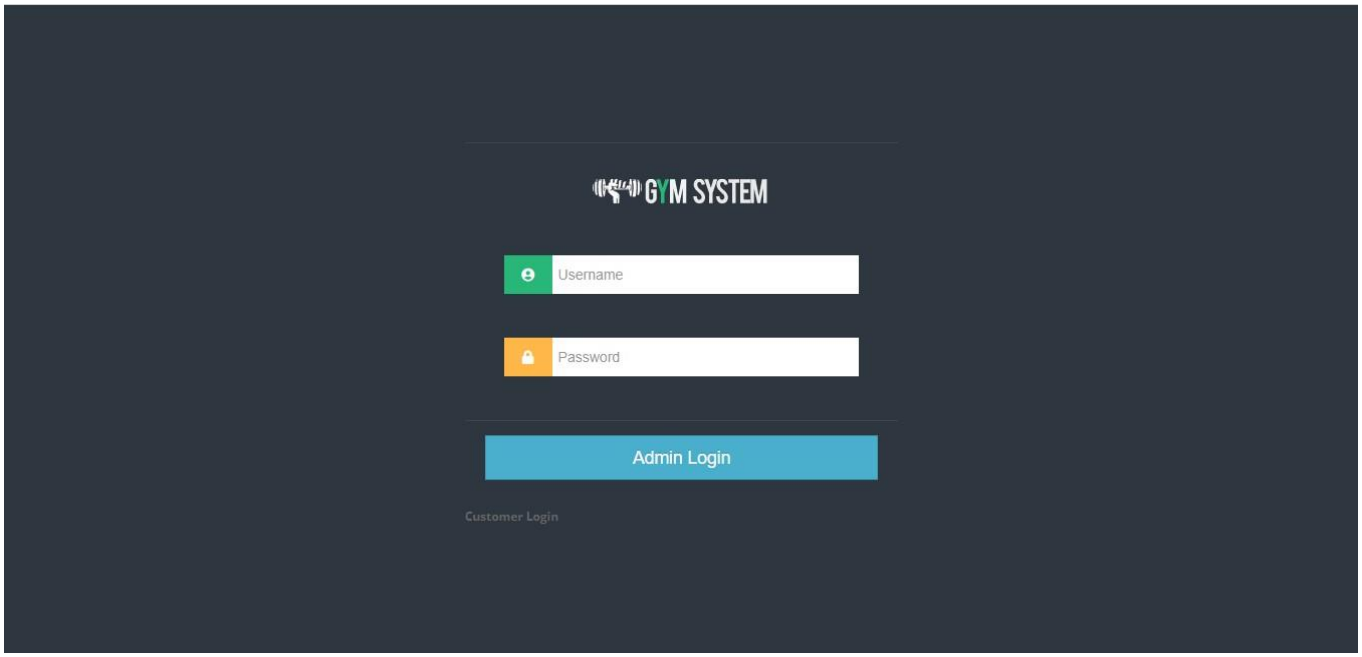
address	varchar(20)	NOT NULL	Address
designation	varchar(20)	NOT NULL	Designation of staff
gender	varchar(10)	NOT NULL	Gender
contact	int(10)	NOT NULL	Contact number

ENTITY: TO DO LIST

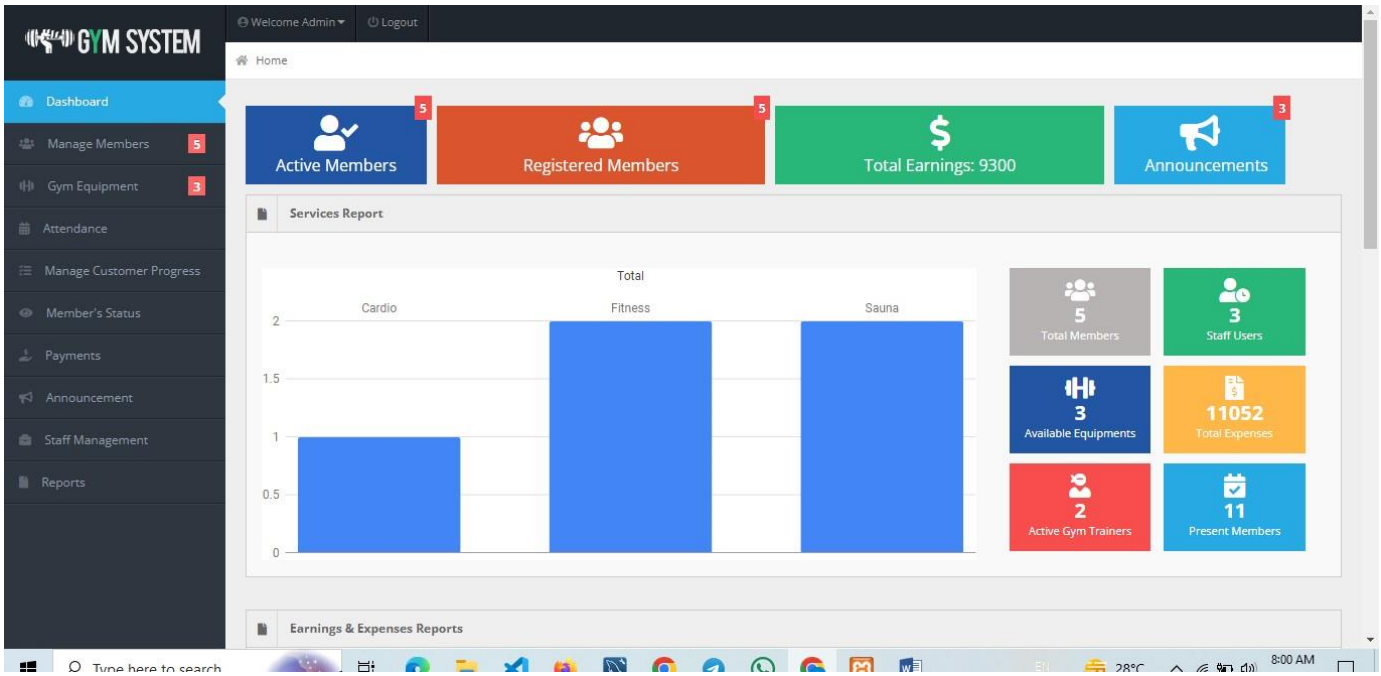
FIEDNAME	**DATATYPE**	**KEYS**	**DESCRIPTION**
id	int(11)	Primary key	Unique id
task_status	varchar(50)	NOT NULL	Task status
task_desc	varchar(30)	NOT NULL	task description
user_id	int(7)	NOT NULL	User id

INPUT AND OUTPUT SCREENS

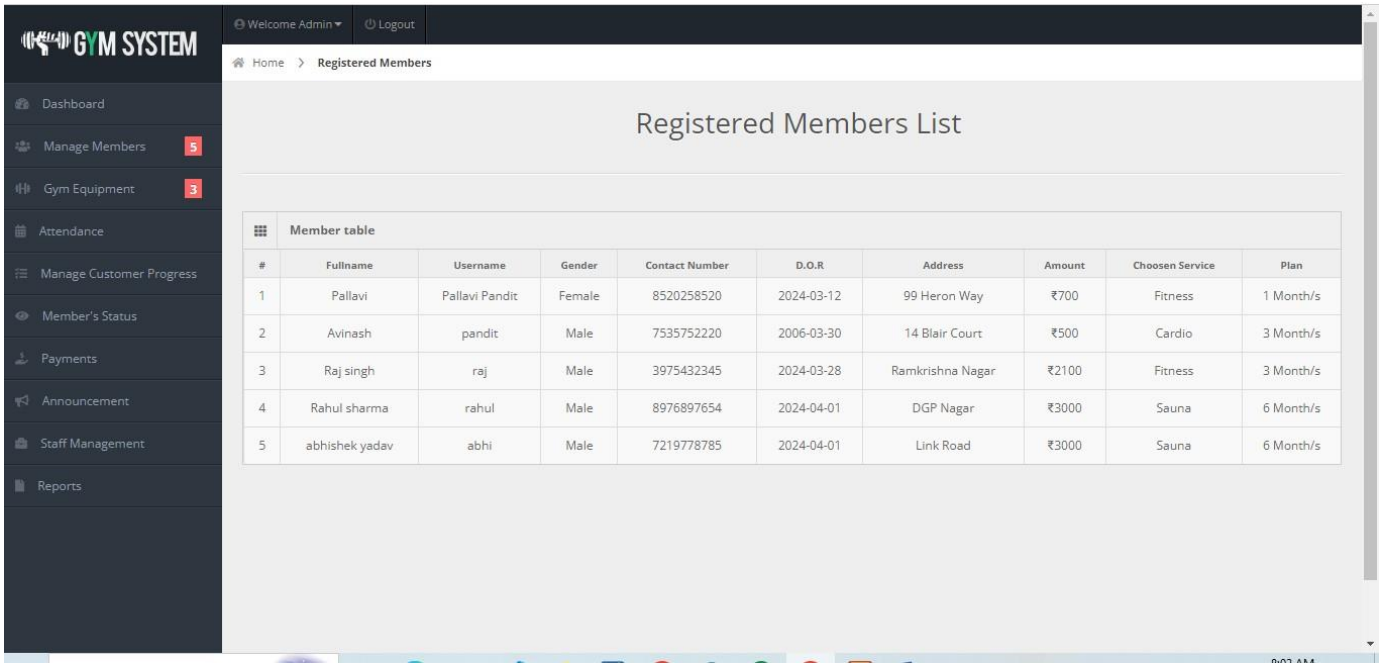
a) Login page for admin



b) Once the admin has logged in , the main dashboard page appears

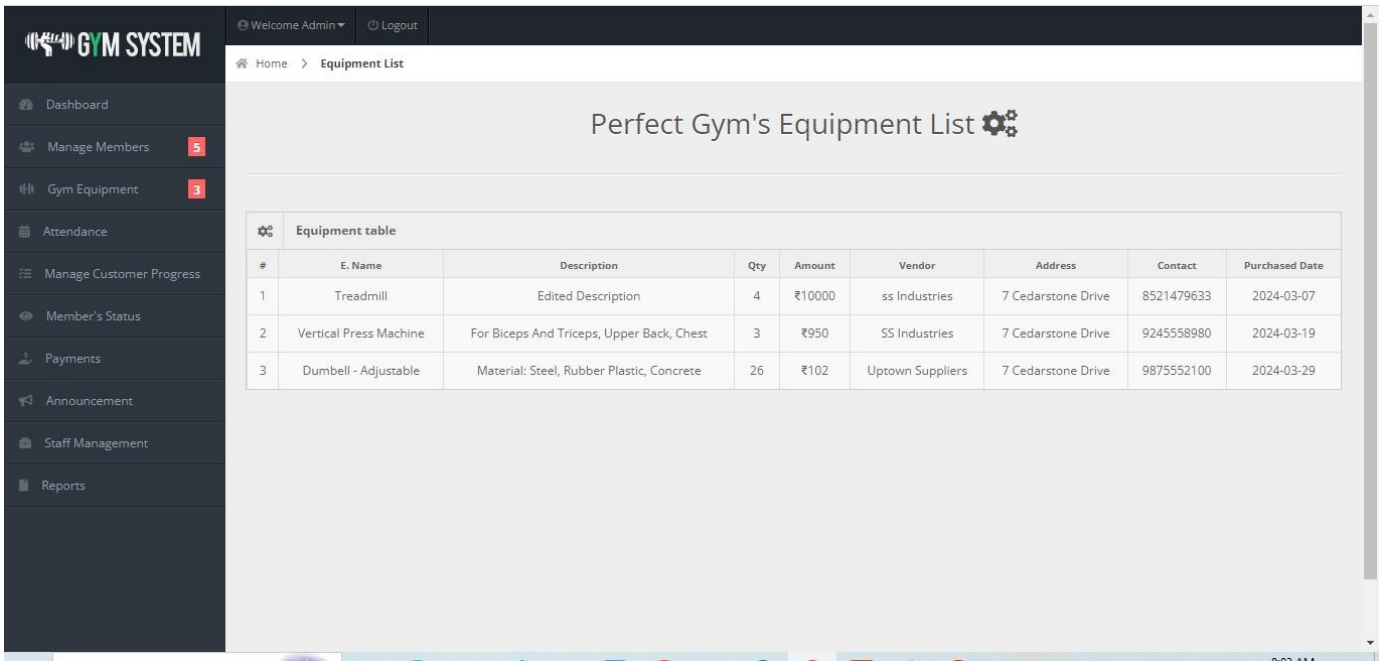


c) Here is the details of members who has registers.



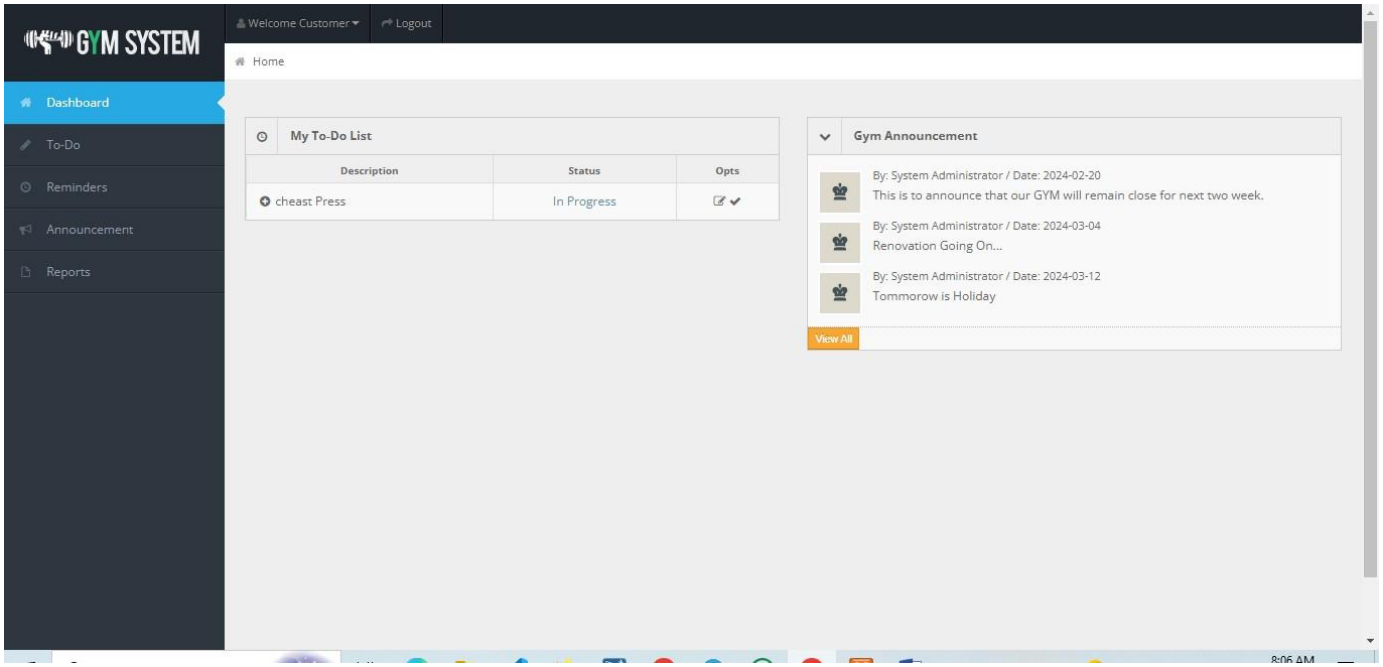
#	Fullname	Username	Gender	Contact Number	D.O.R	Address	Amount	Choosen Service	Plan
1	Pallavi	Pallavi Pandit	Female	8520258520	2024-03-12	99 Heron Way	₹700	Fitness	1 Month/s
2	Avinash	pandit	Male	7535752220	2006-03-30	14 Blair Court	₹500	Cardio	3 Month/s
3	Raj singh	raj	Male	3975432345	2024-03-28	Ramkrishna Nagar	₹2100	Fitness	3 Month/s
4	Rahul sharma	rahul	Male	8976897654	2024-04-01	DGP Nagar	₹3000	Sauna	6 Month/s
5	abhishek yadav	abhi	Male	7219778785	2024-04-01	Link Road	₹3000	Sauna	6 Month/s

d) The admin can view the list of equipments and can manage the details through it.

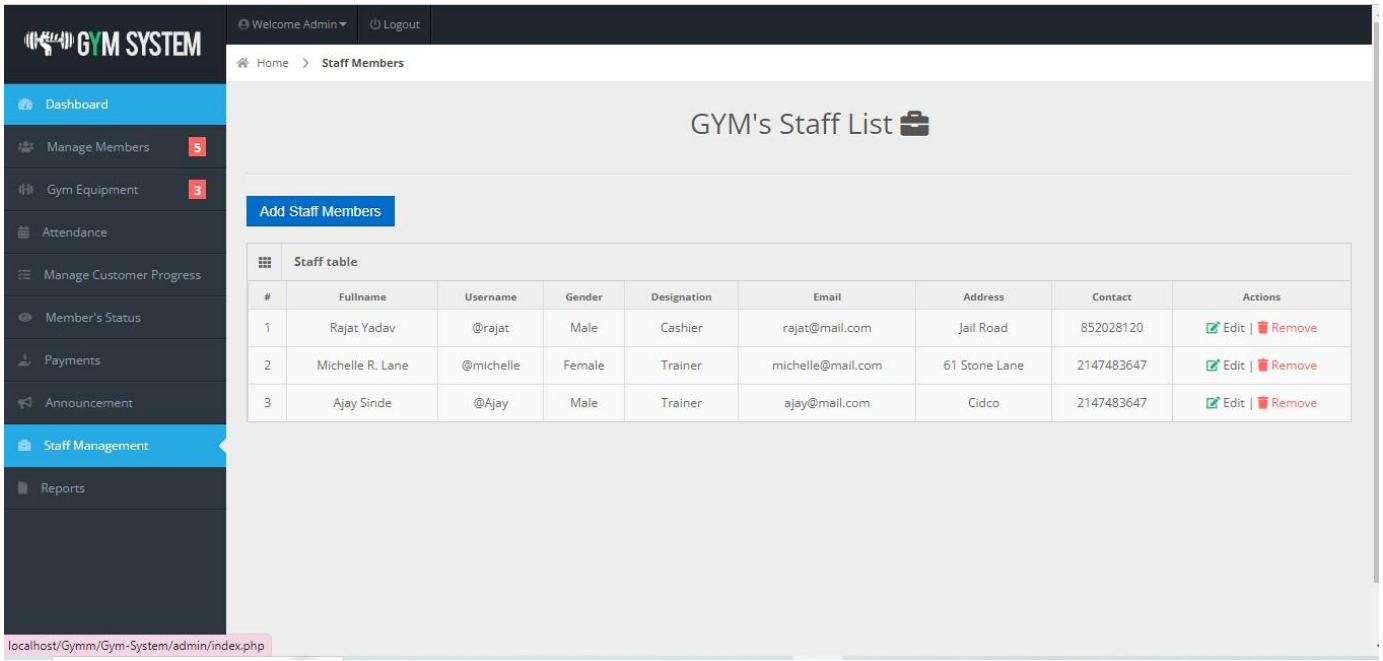


#	E. Name	Description	Qty	Amount	Vendor	Address	Contact	Purchased Date
1	Treadmill	Edited Description	4	₹10000	ss Industries	7 Cedarstone Drive	8521479633	2024-03-07
2	Vertical Press Machine	For Biceps And Triceps, Upper Back, Chest	3	₹950	SS Industries	7 Cedarstone Drive	9245558980	2024-03-19
3	Dumbell - Adjustable	Material: Steel, Rubber Plastic, Concrete	26	₹102	Uptown Suppliers	7 Cedarstone Drive	9875552100	2024-03-29

e) Customer can view their details and other things after login in the website.



f) The admin can manage the staff member through it.



FUTURE ENHANCEMENT

As an AI language model, I don't have access to specific details of any gym website, but in general, some possible future enhancements for a gym website could include:

1. **Virtual Training:** Offering online classes or virtual training sessions can be a great way to provide flexibility and convenience to gym-goers, especially those who may not be able to attend classes in-person.

2. **Personalized workout plans**: Providing a personalized workout plan based on a user's fitness goals, health conditions, and fitness level can be an excellent way to offer a customized experience and help users achieve their fitness goals.

3. **Social media integration: I**ntegrating social media features on the website can help gym-goers connect with others who share similar fitness interests, promote community engagement, and help users stay motivated.

4. **Mobile app:** Developing a mobile app can make it easier for gym-goers to book classes, track their progress, and access personalized workout plans.

5. Gamification: Adding game-like elements, such as rewards and challenges, to the website can help keep gym-goers engaged and motivated.

6. **Nutrition tracking:** Providing tools and resources for tracking nutrition can help users achieve their fitness goals by keeping them accountable and helping them make healthier food choices.

7. **Feedback and ratings:** Providing a platform for gym-goers to leave feedback

and ratings can help improve the overall gym experience and help other users make informed decisions.

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