

Final Report On

## **Aspire Fitness**



Submitted to

**Department of Computer Science and Engineering**

**Nepal Engineering College**

IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF B.E. IN COMPUTER

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## **ABSTRACT**

The purpose of Gym website is to automate the existing manual system by the help of computerized equipment's and complete computer software, fulfilling their requirements, so that their valuable data can be stored for a longer period with easy accessing and manipulations of the same. The required software and hardware are easily available and easy to work with. Gym website, as described above, can lead to error free, reliable and fast system. It can assist the user to concentrate on their activities rather to concentration the record keeping. Thus it will help organization in better utilization of resources. The organization can maintain computerized records without redundant of resources. That means that one not need to be distracted by information that is not relevant, while being able to reach the information. Basically the project describes how to manage for good performance and better services for the clients.

**Keywords:** aspire fitness, gym, record, services, registration, and classes.

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Sincerely

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# **CHAPTER 1: INTRODUCTION**

## **1.1 Introduction to Domain**

This project is designed to facilitate a gym fitness center to automate its operations of keeping records and store them in the form of a large and user-friendly database. Further facilitating easy access to the personnel. The purpose of this software is that this software is capable enough to allow the concerned person to store and retrieve any type of record with just a single click of mouse. The software allows Interactive, Self-describing Graphic User Interface environment where even standalone users can work very comfortably and easily.

## **1.2 Problem statement**

Existing system was manual. Time consuming as data entry which include calculations took lot of time. Searching was very complex as there could be 100's of entry every year. The system is expected to be faster than the existing system. For the registration of the gym user had to travel to the gym to register. The introduced system have the user self-registration feature. Existing system involves a lot of staff for the gym to maintain different activity where the new system will decrease no of staff.

## **1.3 Objectives**

The key objective of gym management system is to simplify the entire member management process. Some objective are given below:

- To provide information about services and facilities
- Online registration
- To provide different health and fitness resources
- Online payment
- Contact and customer support

## 1.4 Motivations

The way to engage gym members, based on psychological factors to motivate: Create an engaging environments.

- Help create habits.
- Tick off those tasks.
- Encourage loss rather than reward.
- Provide better equipment's.

## 1.5 Scopes

### 1.5.1 Membership information:

The website can provide different details about membership option, price of each membership and any offer available there.

### 1.5.2 Class and program:

Gyms offer different fitness classes and programs like yoga, cardio, Zumba, spa, etc. The website can display schedule of these classes.

### 1.5.3 Trainer's profile:

The website can display the trainer's name, highlighting their qualification and availability for personal training sessions.

### 1.5.4 Online booking and reservations:

If gym offers services that require booking or reservations, the website can provide online booking or reservation system.

### 1.5.5 Contact information and inquiry forms:

The website can display section with contact information, including phone number and email address so that potential members can reach out with questions feedback and inquiries.

### 1.5.6 Social media integration:

Website can integrate their gym social media account so that visitors can engage with the gym's social media profiles and share content easily.

## **1.6 Applications**

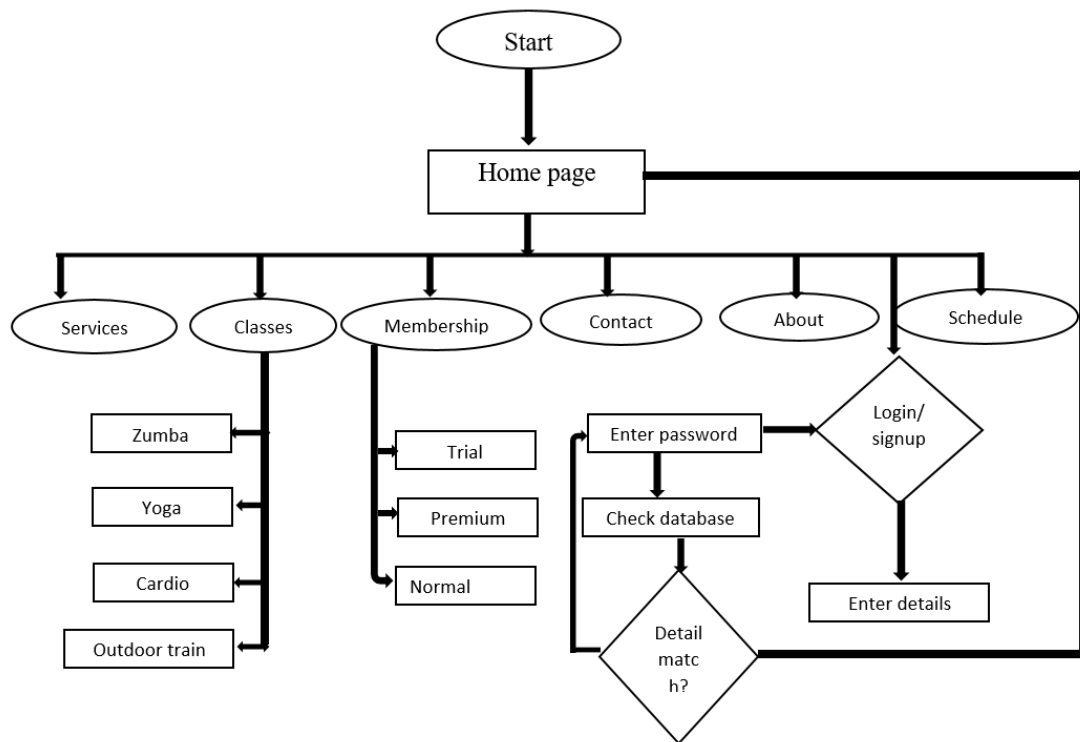
A gym website serves as an essential platforms for fitness enthusiasts, providing a wide range of applications and benefits. Firstly it allows users to explore and access information about the gym's facilities, equipment's and services, enabling them to make informed decisions about their fitness goals. Additionally, the website often offers online membership registration and booking features. Furthermore Gym websites can often provide comprehensive fitness resources, including workout plans, nutrition's tip, and experts advice empowering users to enhance their fitness journeys.

## **Chapter 2: LITERATURE REVIEW**

In today world, maintaining good physical fitness is crucial for overall health and well-being .Gyms and fitness centers have emerged as popular destinations for individuals seeking to improve their fitness levels. A gym is a facility that provides exercise and fitness to its members. These establishments vary in size and offerings, ranging from large-scale commercial gyms to specialized fitness centers and community-based facilities. The primary goal of gyms is to facilitate physical exercise and promote wellness. [1] Regular participation in gym activities offers numerous benefits to individuals. Research indicates that engaging in exercise can improve cardiovascular health, enhance weight management, reduce stress levels, elevate mood, and enhance cognitive function. Furthermore, physical fitness has been linked to a decreased risk of chronic diseases, including diabetes, heart disease, and certain types of cancer. Gyms have undergone significant transformations throughout history. From traditional weightlifting rooms to modern fitness centers, the evolution of gym culture reflects changing societal attitudes towards physical fitness. Advancements in fitness technology have transformed the industry. Wearable devices, mobile applications, virtual fitness classes, and online training platforms are revolutionizing the way individuals engage with fitness. These technological innovations offer personalized workout tracking, enhanced exercise experiences, and opportunities for remote participation. Integrating these technologies into gym settings can attract tech-savvy members and facilitate data-driven fitness tracking. Looking ahead, the gym and fitness industry is expected to continue evolving. Emerging trends such as immersive fitness experiences, and wellness programs are shaping the future of fitness establishments. However, gym owners and managers face challenges such as increasing competition, changing consumer preferences, and the need to strike a balance between technology and personalized experiences. Overcoming these challenges will require innovation, adaptability, and a keen understanding of customer needs. [2]

## Chapter 3: SYSTEM DESIGN

The section describes the system study, analysis, design strengths and weaknesses of the current system, context level diagrams, entity relationship diagram, architecture design. After interpretation of the data, tables were drawn and process of data determined to guide the researcher of the implementation stage of the project. The tools, which were employed during this methodology stage, were mainly tables, flow chart and entity relationship diagrams. [3]



*Figure 1: System Design*

This system will be completed web-based and will be developed using PHP.

Following are the system design of the system:

- Enter into the website

- View categories
- Select one from the categories
- View the selected section
- Provide payment details
- Receive conformation

## **3.1 Functional requirement**

Functional requirements are the primary requirements that are to be fulfilled by the portal. Their fulfillment allows the user to use the site. The proposed system provides features for clients and admin. The following subsections illustrate functional requirements to be fulfilled by the proposed system.

### **3.1.1User**

All users of the software shall have the ability to create an account that is used to store user data and tie user actions to a user identified.

- User registration and login shall be mandatory.

### **3.1.2Create an Account**

- The system should provide the user with an easy to use GUI to facilitate their creating an account.
- The system shall ask for an email address and password.
- The system shall notify the user if incorrect characters are used in the email or password fields.
- The system should notify the user if any required fields are left empty.
- Admin User will be able to Login into the system with his unique Email Password Type and get required limited access to system. The system

should provide a user-friendly GUI to allow the user to log in when the application launches.

- The system should prompt the user for their email address and password.

### **3.1.3 Manage Users**

- Admin can manage all Members and their records on one click.
- Here, manage means ADD, UPDATE, VIEW, and DELETE record.

### **3.1.4 Manage Transactions**

Admin will be able to manage (Add delete update view) transactions of members by using just a unique ID. The system will clearly update the status of members.

## **3.2 Nonfunctional requirement**

### **3.2.1 Performance**

System should be able to handle multiple users at a time using any of web browsers.

### **3.2.2 Reliability**

Database updating should follow transaction processing to avoid data inconsistency.

### **3.2.3 Availability**

The project will be deployed on a public shared server so it will be available all the time and will be accessible anywhere of the world using internet.

### **3.2.4 Security**



We have implemented a lot of security mechanism to avoid hack the system by outer world.

### 3.2.5 Maintainability

It is very easy to maintain system. The system has been developed on HTML so anyone has the knowledge of HTML can easily maintain the system.

**3.2.6 Portability:** This system will be portable and we can switch the servers very easily. [4]

## 3.3 Tools and Technologies

The hardware/software tools and technologies used in implementation of the project.

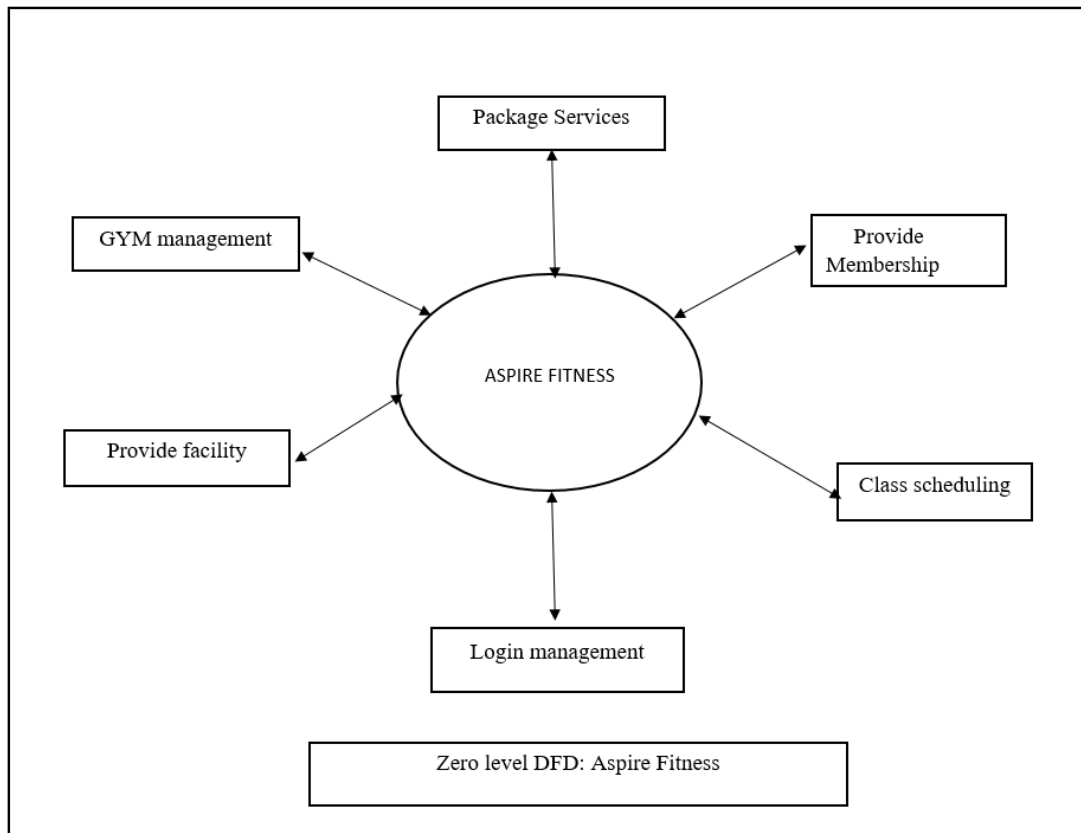
DESCRIPTIONS	TYPE
Operating system	windows
Language	HTML5,CSS3,java script
Database	My sql
IDE	Visual studio code
backend	php

*Table 1: Tools and Technology*

## 3.4 Data flow diagram

Gym website data flow diagram is often used as a preliminary step to create an overview of aspire fitness without going into details. It normally consists of overall application dataflow and processes of this project. It contains all of the user flow and their entities such as gym shift, facilities, package, trainer, payment etc. the below diagrams has been used for the visualization of data processing and structures design

of this project. A data flow diagram for a gym website would depict the flow of data and information within the system. It provides a visual representation of how data is processed, stored and exchanged between different components or processes in the system.



*Figure 2: Zero level DFD*

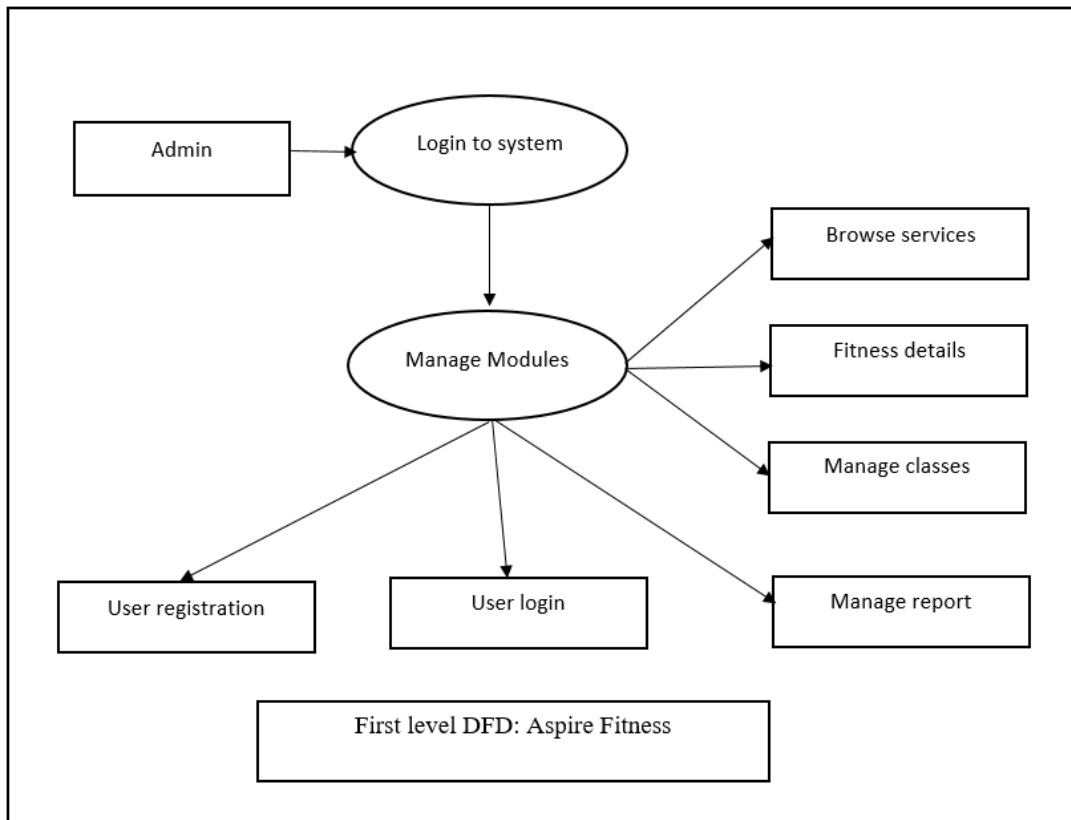
This is zero level DFD of aspire fitness, where we have elaborated the high level process of gym website. It is a basic overview of the whole website or process being analyzed or module. It is designed to be an at-a-glance view of trainer, payment classes showing the system as a single level process, with its relationship to external entities of gym services and facilities. It should be easily understood by a wide audience,

including gym, gym facilities, trainer, classes, services etc. here are a components typically found in a zero-level DFD for a aspire fitness.

- **Package services:** Manage all the operations of package
- **Gym management:** manage all the operation of gym
- **Member class:** Manage all the operations of member
- **Provide Facility:** Manage all the operations of facilities
- **Login management:** Manage all the operations of login.

The zero-level DFD of a gym website primarily shows the website as the central components that facilitates interactions between users and gym's online platforms. It serves as an initial step in understanding the system's scope before examining into more detailed DFDs that break down specific processes and data flows within the website.

### 3.4.1 Data flow diagram



*Figure 3: first level DFD*

First level DFD of this website shows how the system is divided into sub-processes, each of which deals with one or more of data flows to or from an external agent, and which together provide all the functionality of the this website. It also identifies internal data stores of payment, trainer, package, facilities that must be present in order for this system to do its job and shows the flow of data between the various parts of gym facilities, payment, trainer, classes of the system.

The main outputs of first level DFDs are as follows:

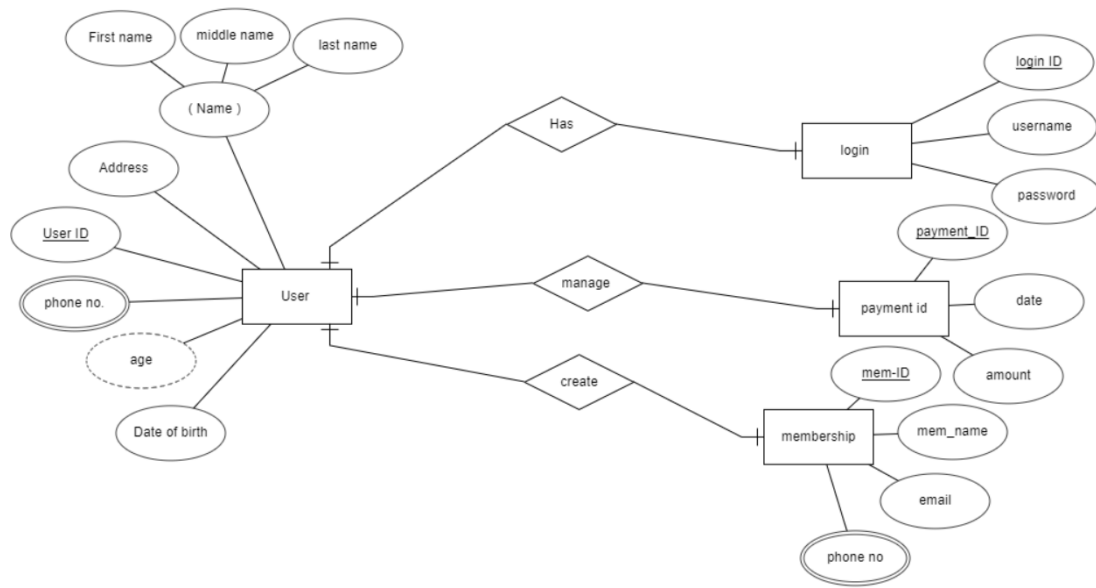
- Admin logs in to the system and manage all the functionalities of this website

- Admin can add, edit, and view the records of gym, gym facilities, trainer, classes etc.
- Admin can manage all the details of gym shift, package, and payment
- Admin can also generate reports of gym, gym shift, facilities, package, and payment
- Admin can track the detailed information of gym shift, facilities, and package
- Admin can manage user registration detail

This second-level DFD provides a more detailed view of the data and processed involved in the gym website.

### **3.5 ER Diagram**

An entity-relationships model describes interrelated things of interest in a specific domain of knowledge. A basic ER model is composed of entity types and specifies relationships that can exist between entities. An entity set is a collection of similar entities and these entities can have attributes that define its properties. By defining the entities, their attributes, and showing the relationships between them, an ER diagram illustrates the logical structure of databases. In simple words, ER diagrams are used to drawing out the design of a database. This ER diagram represents the model of this gym website. The entity-relationship diagram of this website shows all the visual instrument of database tables and the relations between user, login, payment, member etc. it used structure data and to define the relationships between structured data group of this website.



*Figure 4: ER Diagram*

Aspire fitness website entities and their attributes:

- **User Entity:** Attributes of user are Name, Address, User\_id, phone no, age, date of birth
- **Login Entity:** Attribute of login are login\_id, username, password
- **Payment Entity:** Attribute of payment are payment\_id, date, amount
- **Membership Entity:** Attribute of Membership are mem\_id, mem\_name, phone\_no, email.'

This simplified Entity Relation Diagram outlines the main entities and relationships in a gym website database. In practice, we may need to extend and refine this diagram to include additional details, such as more attributes and entities for things like booking, class, gym equipment, admin and more other.

## **CHAPTER 4: IMPLEMENTATION AND TESTING**

### **4.1 Module complete**

#### **4.1.1 Classes**

The “class’s “module displays the schedule and information about the fitness classes offered by the gym.it helps user to find their classes.

#### **4.1.2 Services**

The “services” module provides information about the various services or programs offered by the gym. Such as personal training, time.

#### **4.1.3 Schedule**

The “schedule” module displays the timetable or calendar of the gyms classes, including class their date, time.

#### **4.1.4 Membership**

The “membership” module provides information about the gyms membership plans, pricing, benefits, and the process to sign up for a membership.

#### **4.1.5 Contact us**

The “contact us” module provides users with the necessary contact information to reach out to the gym, such as address, phone no, and email.

#### **4.1.6 About gyms**

The “about gym” module provides an overview of the gym, including its history, mission statement etc.

#### **4.1.7 Responsiveness**

When discussing responsiveness in the context of gym website, it refers how well the website adapts and functions across different devices and screen size.

#### **4.1.8 Online booking and payment**

When examining online booking and payment in this context, the focus is on the integration of convenient and secure booking and payment systems for gym services such as membership registrations, class booking etc.

#### **4.1.9 Content Update**

It refers to the regular update and addition of new content to keep the website current, engaging and informative for visitors. This includes updating information about services, classes, fitness tips and so on.

## **4.2 Gantt chart**

A Gantt chart, commonly used in project management, is one of the most popular and useful ways of showing activities (task and events) displayed against time. One the left of the chart is a list of activities and along the top is a time scale. Each activity is represented by a bar; the position and length of bar reflects the start date, duration and end date of the activity. This allows you to see at a glance

- What the various activity are and when activity begin and end
- How long each activity is scheduled to last



<b>Weeks</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
<b>Works</b>						
Pre-analysis phase						
Project proposal						
Detailed study and analysis						
Implementation of system						
Testing						
Documentation of project work						

*Table 2: Schedule Schema Table*

## **4.3 Testing**

Testing a gym website is crucial to ensure that it functions correctly, offers an excellent user experience, and meets the objective of the gym. Here are various aspects and types of testing that can be performed on a gym website.

### **4.3.1 Functionality testing**

**4.3.1.1 Membership signup and login:** Test the process of signing up for memberships and logging in to ensure it works smoothly.

**4.3.1.2 Class Booking:** verify that users can book classes without encountering errors.

**4.3.1.3 Payment processing:** Ensure that online payments for memberships or service are secure and functioning correctly.

**4.3.1.4 Contact forms:** test all contact forms to confirm that inquiries or feedback submissions are received.

### **4.3.2 Usability testing**

Evaluate the website overall user friendly and ease of navigation. Check if the website is responsive and looks good on various devices, including smartphones, tablets and desktops. Evaluate the website is loading speed to ensure that it performs efficiently.

### **4.3.3 Compatibility testing**

Test the website on various devices, operating systems, and screen size to ensure compatibility. Verify that the website works well with different screen resolutions.

### **4.3.4 Database testing**

Verify that data is stored and retrieved accurately from the database. Test data integrity, consistency, and backups to prevent data loss.

#### **4.3.5 Error handling testing**

Test how the website handles various error scenarios, such as invalid input, server error, and network issues. Ensure that users receive clear error messages and guided to resolve issues.

#### **4.3.6 Performance testing**

Conduct load testing to evaluate how the website handles multiple simulations users, simulating peak traffic conditions. Test the website's response time and server performance to ensure it can handle the expected load without slowdowns or crashes.

By following these testing steps and addressing any issues discovered during testing, we can ensure that our gym website functions smoothly and provides a positive experience for its users.

### **4.4 Outcomes**

The outcomes of a gym website refers to the goals and benefits that can be achieved by both the gym owner and the members or users of the website. It can vary depending on it goals, design, functionality and how well it is promoted. Here are some common outcomes that a gym website may aim to achieve.

For gym Owners and Administrators:

#### **4.4.1 Membership sales:**

One of the primary goals of this website is to attract new members. This can be achieved by showcasing the gym's facilities, equipment, and classes as well as by offering special promotions and discounts to encourage sign-up.

#### **4.4.2 Event promotions**

Promote special events, promotions and challenges organized by the gym, such as fitness challenges, workshops, or wellness seminars.

#### **4.4.3 Contact and location information**

This website should provide clear contact information, including phone numbers, email address etc.

#### **4.4.4 Member Engagement**

By offering online features like class booking, progress tracking the website can enhance member engagement and loyalty.

#### **4.4.5 Class and schedule management**

Gym administrators can efficiently manage class schedules, allocate resources, and monitor class attendance through the website.

For gym members or users:

#### **4.4.6 Information and education**

A gym website can provide valuable information about fitness, health, nutrition's to members.

#### **4.4.7 Motivations**

Assess to work out plans, fitness articles, and success stories on the website can motivate members to achieve their fitness.

#### **4.4.8 Health and security**

The website can provide important health and safety information, nutrition guides etc.

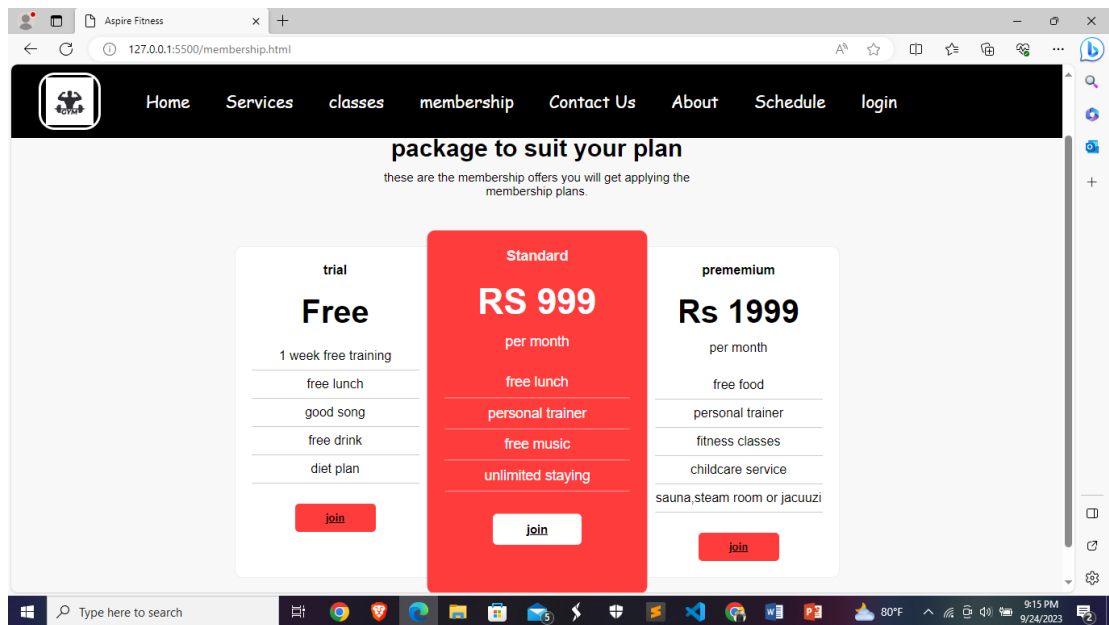
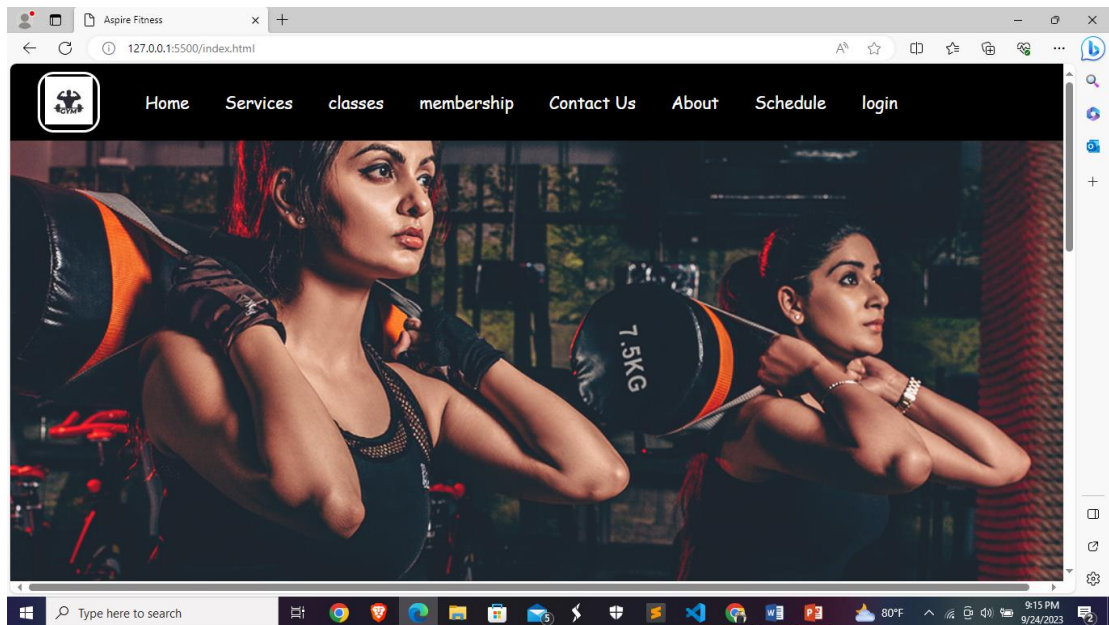
#### **4.4.9 Communication**

Members can communicate with trainers, instructors and other members

#### **4.4.10 Community building**

Online forums, social media integration, and virtual challengers can help members connect and build a sense of belonging to the gym community.

The specific outcomes and benefits of a gym website can vary depending on its features, functionality, and how well it aligns with the needs and goals of both gym owners and members.



Aspire Fitness

127.0.0.1:5500/register.html

Home Services classes membership Contact Us About Shedule login

### Registration

<b>Full Name</b> <input type="text"/>	<b>Username</b> <input type="text" value="Enter your username"/>
<b>Email</b> <input type="text" value="Enter your email"/>	<b>Phone Number</b> <input type="text" value="Enter your number"/>
<b>Password</b> <input type="text" value="Enter your password"/>	<b>Confirm Password</b> <input type="text" value="Confirm your password"/>

**Gender**

☐ Male ☐ Female ☐ Prefer not to say

select membership

**Register**

Type here to search

9:15 PM 9/24/2023

Aspire Fitness

127.0.0.1:5500/signup.html

Home Services classes membership Contact Us About Shedule login

### Sign up

Create a free account with your email.

<b>Full Name</b> <input type="text"/>
<b>Email</b> <input type="text"/>
<b>Password</b> <input type="text"/>

**Sign up**

Have an account? [Log in](#)

Type here to search

9:15 PM 9/24/2023

## **CHAPTER 5: CONCLUSION**

In conclusion, Aspire Fitness offers a comprehensive and user friendly platform for individuals seeking to achieve their fitness goals. With its wide range of fitness programs, equipment, and experienced trainers, Aspire fitness provides a conducive environment for individuals of all fitness level. The website effectively conveys the gyms commitment to promoting a healthy lifestyle and offers convenient features like registration and payment, membership option. Whether one is beginner or experienced athlete, Aspire fitness provides all the necessary tools and resources to succeed in reaching their fitness aspirations.

For gym-goers, the website represents a hub of convenience, offering easy access to class schedule and the ability to manage memberships and payments from the comfort of their homes. It provides motivation and support through personalized workout plans, fitness resources, and a sense of community.

Finally, a gym website is more than just an online presence; it's a dynamic platform that links the gap between gym owners and members, promoting engagements, fitness progress, and a booming gym community. Its multifaceted benefits contribute to a more efficient, member-focused and successful gym operation.

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