“GYM MANAGEMENT SYSTEM”

A Project report submitted

In the partial fulfillment the award of degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING (2022-2023)

BY

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(2022-2023)

CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT

ANDHRA PRADESH

(2019-2023)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

BONAFIDE CERTIFICATE

This is to certify that the project work entitled **"GYM MANAGEMENT SYSTEM"** is a fulfillment of project work done by **A.VIKRANTH (Reg.No.211801340015)** for the award the degree of **BACHELOR OF TECHNOLOGY** in **COMPUTER SCIENCE AND ENGINEERING, CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT**, during the academic year **2022-2023**.

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ACKNOWLEDGEMENT

It is with at most pleasure and excitement we submit our project partial fulfillment of the requirement for the award of Bachelor of Technology.

The project is a result to the cumulate efforts, support, guidance, encouragement and inspiration from many of those for whom we have to give our truthful honor and express gratitude through bringing out this project at the outset as per our knowledge.

I convey my special thanks to our project **Guide Mrs. G. Rama Devi(Asst. Professor)** who has guided, encouraged and tremendously supported me to enhance my knowledge with present working of this project to bring out enriching the quality of project.

I express my appreciativeness to **Mr. R.LAKSHMAN RAO(Asst. Professor) and Head of the Department,** who facilitated us to providing the friendly environment which helped to enhance my skills in present project.

I would also like to extend my gratitude to **Dr. K. V. G. KRISHNA MURTHY, Dean-School of Engineering And Technology, Centurion University of Technology and Management** who has helped us to attain all the requirements of the project.

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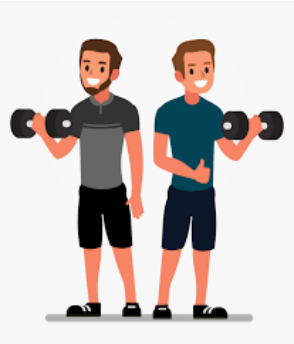
At the outset, we thank to **Sri. G.S.N.RAJU**, beloved **Vice Chancellor of Centurion University of Technology and Management** who is the back bone by providing for completion of this project, Thank you sir.

DECLARATION

I hereby declare that the project entitled **"GYM MANAGEMENT SYSTEM"** submitted to the fulfillment of award the degree of **B.TECH (CSE)** in **CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT**, **ANDHRA PRADESH.**

A.VIKRANTH **Reg.No:211801340015**



GYM MANAGEMENT SYSTEM

Software Requirements Specification

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1. Introduction

1.1 Purpose

The purpose of this document is to capture, in natural products and E-mart offers everything from food to clothes to necessary products, and provides a very large variety of merchandise. E-mart has a website, where products can be bought or viewed online. E-Mart is the first Korean retailer to advance into China with the aim to become one of top leading global retailers.

1.2 Scope

Gym management software is one of the most effective ways for modern gyms to achieve success and optimize their business potential and it has great future scope as well. This technology has progressed well beyond checking members into the gym and processing dues.

1.3 Definitions, Acronyms and Abbreviations

GYM- Glowing Years Ministry
SRS-Software Requirement Specification
GUI-Graphical user interface

1.4 References

1. Shah, Avni M., James R. Bettman, Peter A. Ubel, Punam Anand Keller, and Julie A. Edell (2014), "Surcharges plus Unhealthy Labels Reduce Demand for Unhealthy Menu Items," *Journal of Marketing Research*, 51 (6), 773–89.
2. Finkelstein, Eric Andrew (2020), "NUSmart: An Experimental Online Grocery Store to Promote Healthier Shopping,
3. Bettman, James R., Mary Frances Luce, and John W. Payne (1998), "Constructive Consumer Choice Processes," *Journal of Consumer Research*, 25 (3), 187–217,
4. Cadario, Romain, and Pierre Chandon (2020), "Which Healthy Eating Nudges Work Best?
5. Nunes (2001), "Reducing Assortment: An Attribute-Based Approach," *Journal of Marketing*, 65 (3), 50–63.

1.5 Overview

A gym management system is a software solution that is designed to help gym and fitness center owners manage various aspects of their business operations. It typically includes features for membership management, scheduling, staff management, billing and invoicing, inventory management, customer relationship management, and reporting and analytics. With a gym management system, gym owners can automate many of their day-to-day tasks, such as tracking membership plans, scheduling classes and appointments, managing staff schedules and payroll, and handling billing and invoicing. This can save time and increase efficiency, allowing owners to focus on other areas of their business.

Overall, a gym management system can be a valuable tool for gym and fitness center owners who want to streamline their operations, improve customer experience, and grow their business.

2. Overall Description

2.1 Product Perspective

The Gym Management System in Advanced Web Programming is a web-based application designed to provide gym owners and administrators with advanced tools for managing gym operations.

2.1.1 System Interface

Xampp will be used as web server. The user inputs data via the web server using PHP forms. The actual program that will perform the operations is written in HTML, CSS, JAVA Script.

2.1.2 User Interface

This system used by the user to login into system. A user must login with his user name and password to the system after registration. If they are invalid, the user not allowed to enter the system. A new user will have to register in the system by providing essential details in order to view the products in the system. The admin must accept a new user by unblocking him.

2.1.3 Hardware Interface

a) Server side:

Xampp will be used as web server. The user inputs data via the web server using PHP forms.

b) Client side:

Monitor screen – the software shall display information to the user via the monitor screen

Mouse – the software shall interact with the movement of the mouse and the mouse buttons. The mouse shall activate areas for data input, command buttons and select options from menus.

Keyboard – the software shall interact with the keystrokes of the keyboard. The keyboard will input data into the active area of the database.

2.1.4 Software Interface

a) Server side

An Apache web server will accept all requests from the client and forward it accordingly. A database will be hosted centrally using MySQL.

b) Client side

An OS which is capable of running a modern web browser which supports JavaScript and HTML5.

2.1.5 Communication Interfaces

The HTPP or HTTPS protocol(s) will be used to facilitate communication between the client and server.

2.1.6 Memory Constraints

Memory constraints will come into play when the size of MySQL grows to aconsiderable size.

2.1.7 Operations

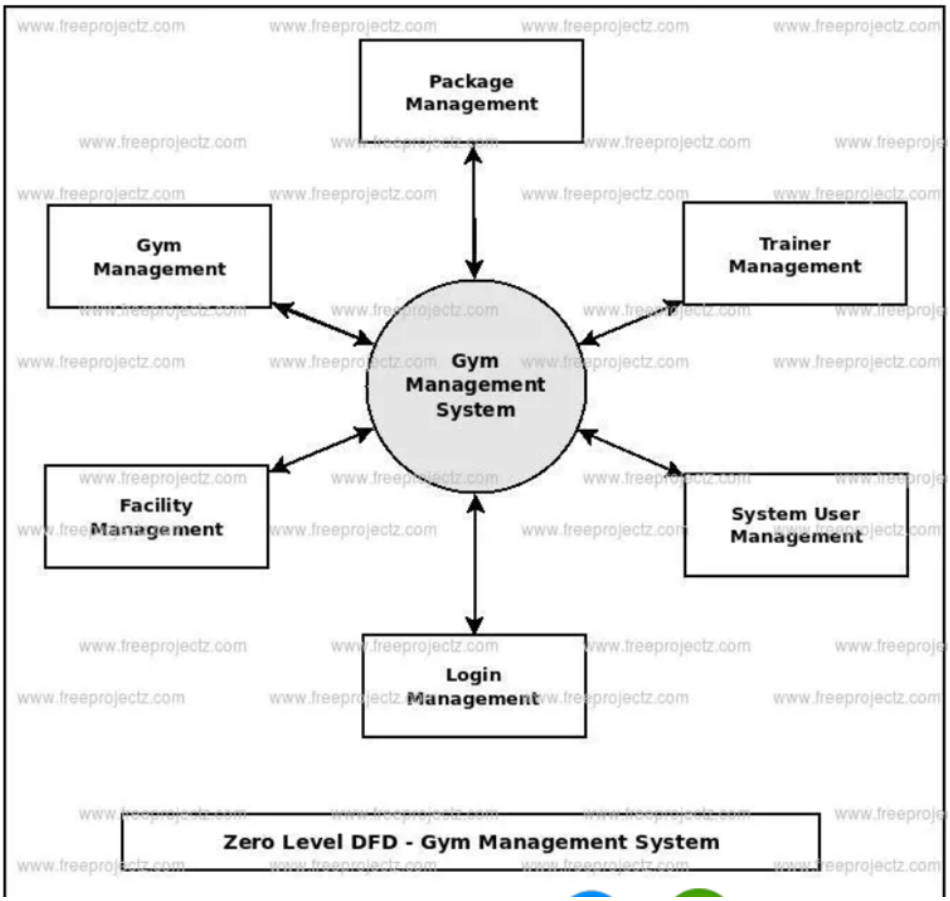
The product shall have operations to protect the database from being corrupted or accidentally altered during a system failure.

2.1.8 Site Adaption Requirements

Not applicable

2.2 Product Functions

2.2.1 Context Diagram



2.1.2 **Use case narratives**

Use case Name	Member registration
Use case ID	UC1
Priority	High
Participating actors	Member, supervisor, trainer
Description	Registration process of new member
Post condition	Add, update, delete member

Use case Name	Make payments
Use case ID	UC2
Priority	High
Participating actors	supervisor, trainer
Description	Payments collection
Post condition	Update payments

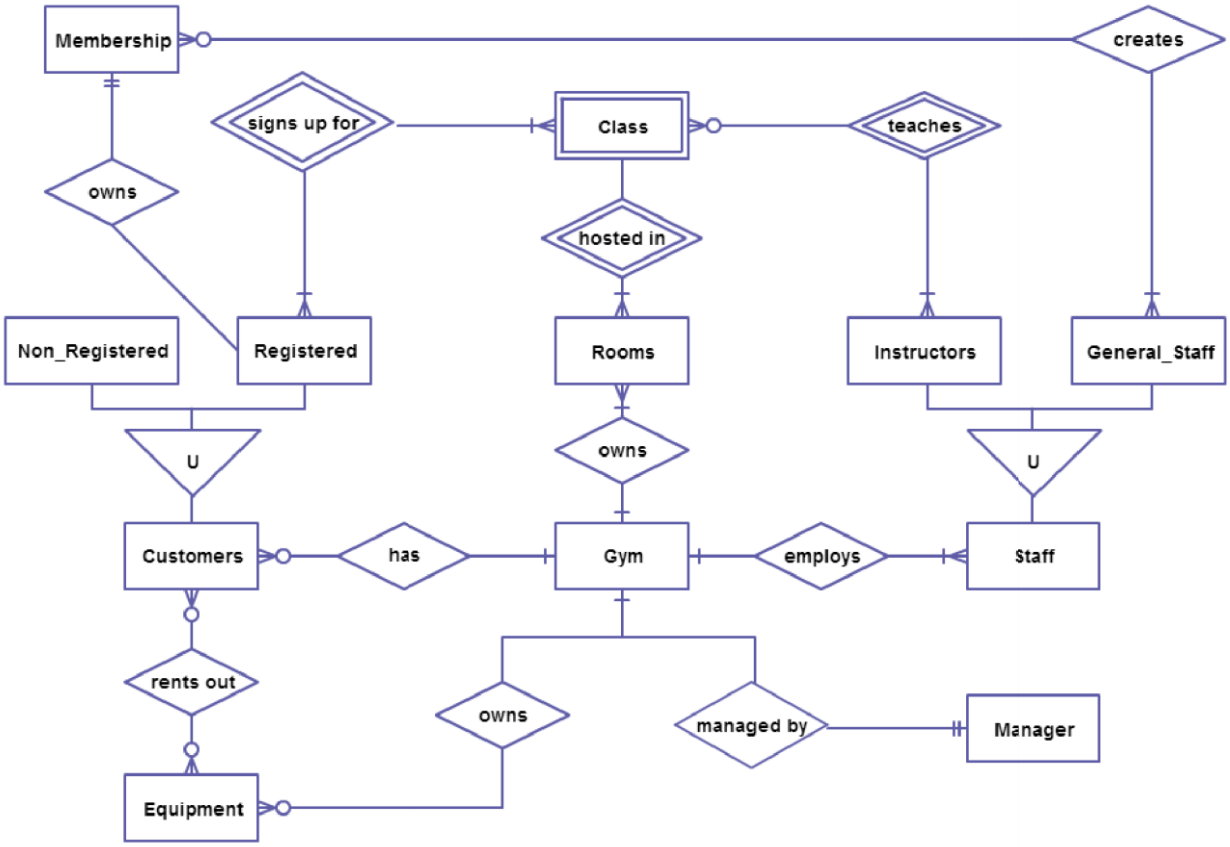
Use case Name	Assign supervisor
Use case ID	UC3
Priority	Normal
Participating actors	Supervisor
Description	Supervisor allocation by the administration for specific member
Post condition	Update trainer records

Use case Name	Assign schedules
Use case ID	UC4
Priority	Normal
Participating actors	supervisor, trainer
Description	Create, update work out for members
Post condition	Add, update or delete records in schedule management

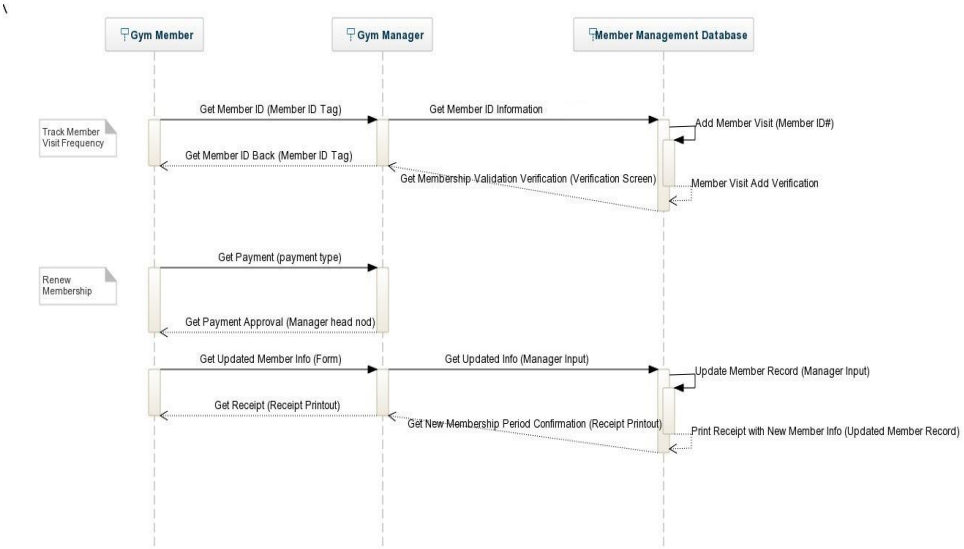
Use case Name	Provide service
Use case ID	UC5
Priority	Normal
Participating actors	External service providers
Description	Keeping the service records
Post condition	Update records

Figure 3: Use case narratives

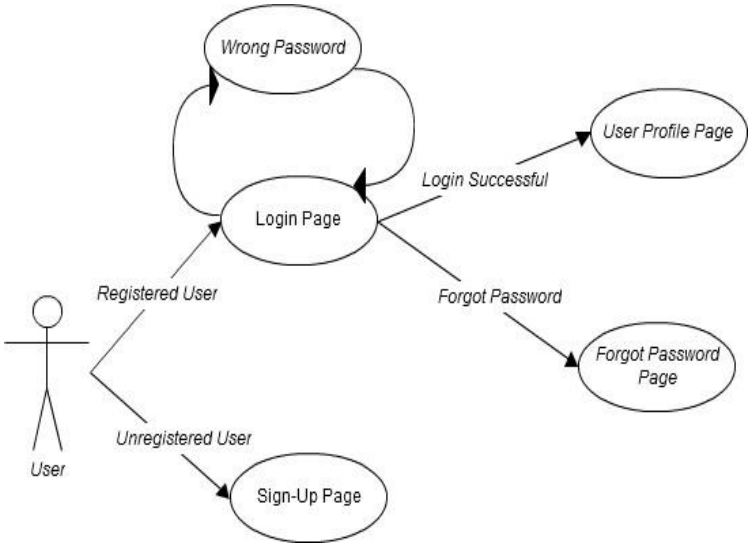
2.2.2 ER Diagram



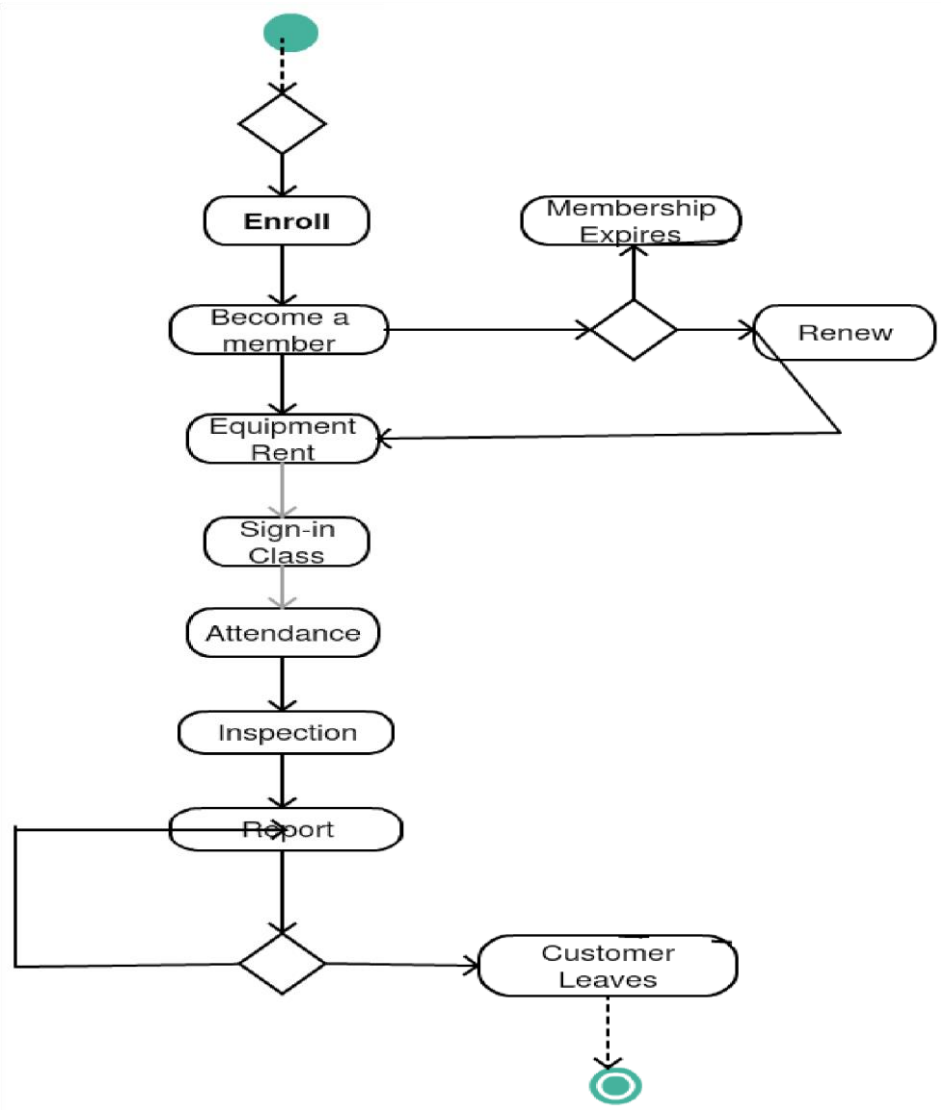
2.2.2.1 Sequence diagram for Member management



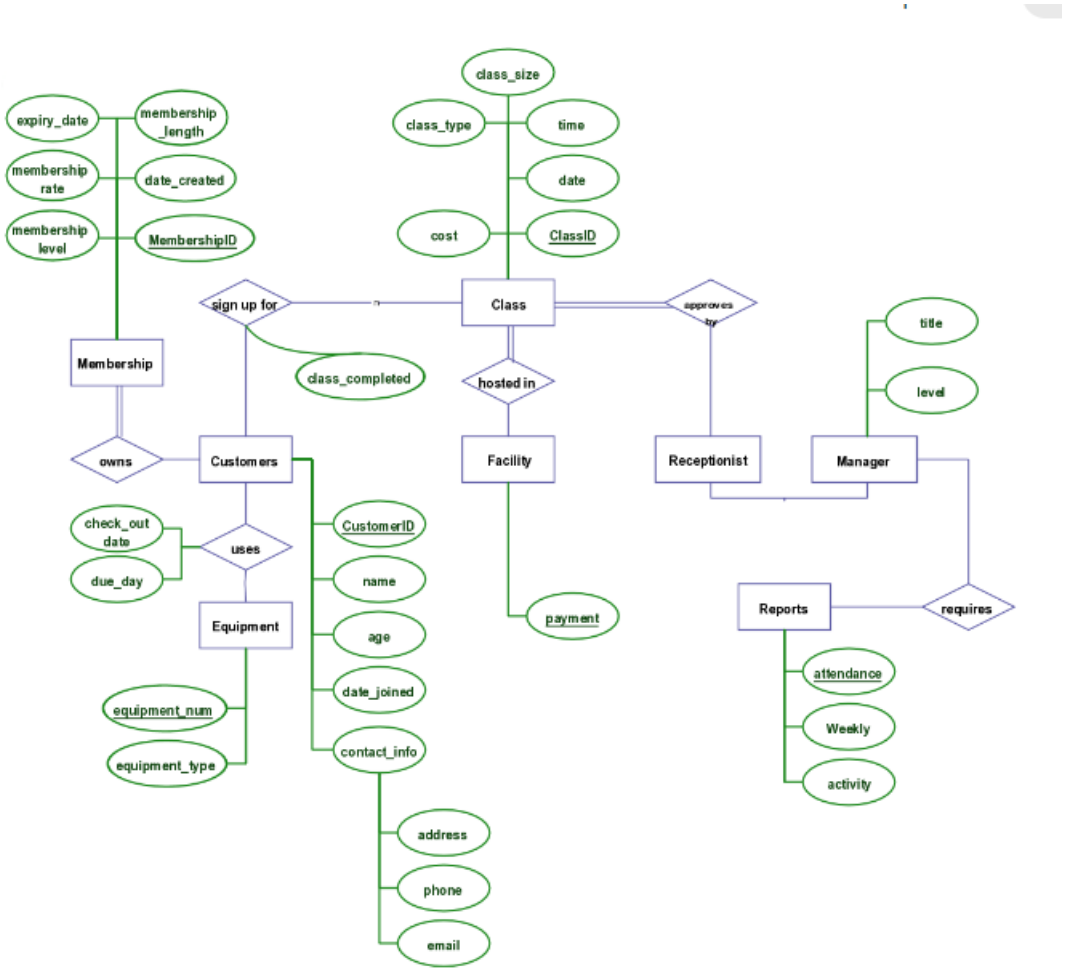
2.2.2.2 User login



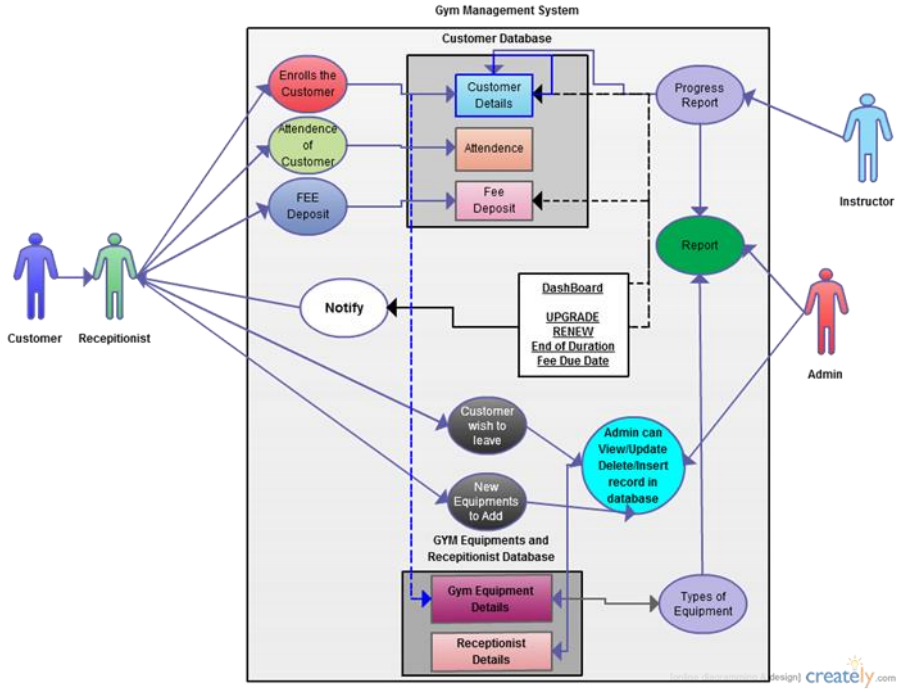
2.2.2.3 Activity diagram of member enrolment



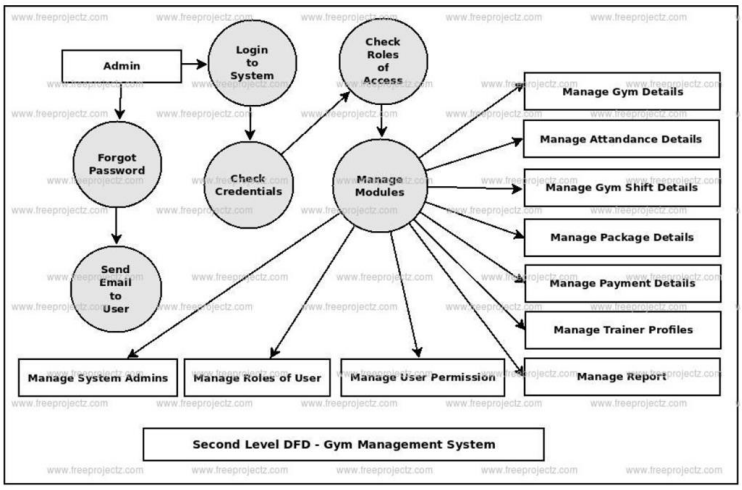
2.2.2.4 LOGIN AND BOOKING PACKAGES



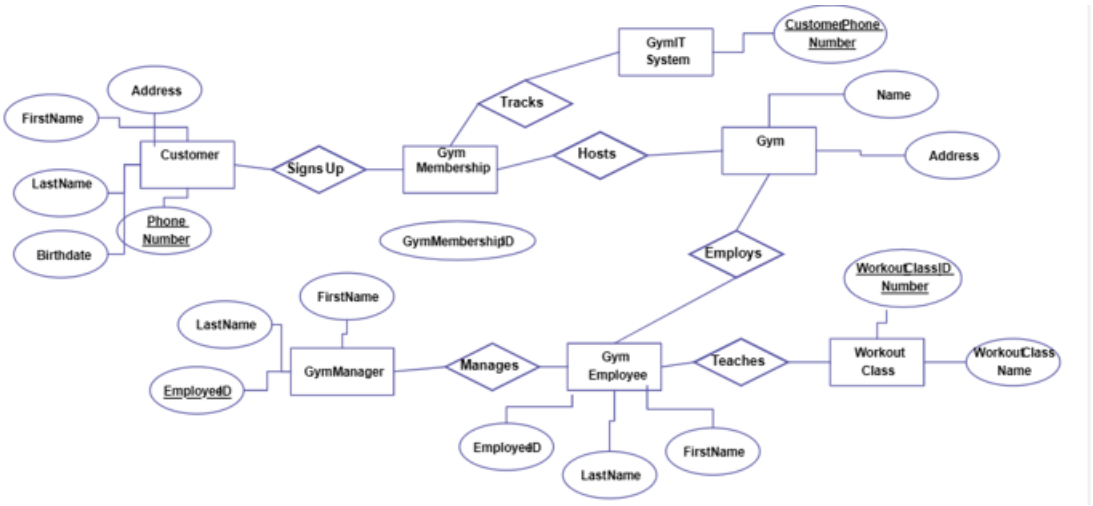
2.2.2.5 Users

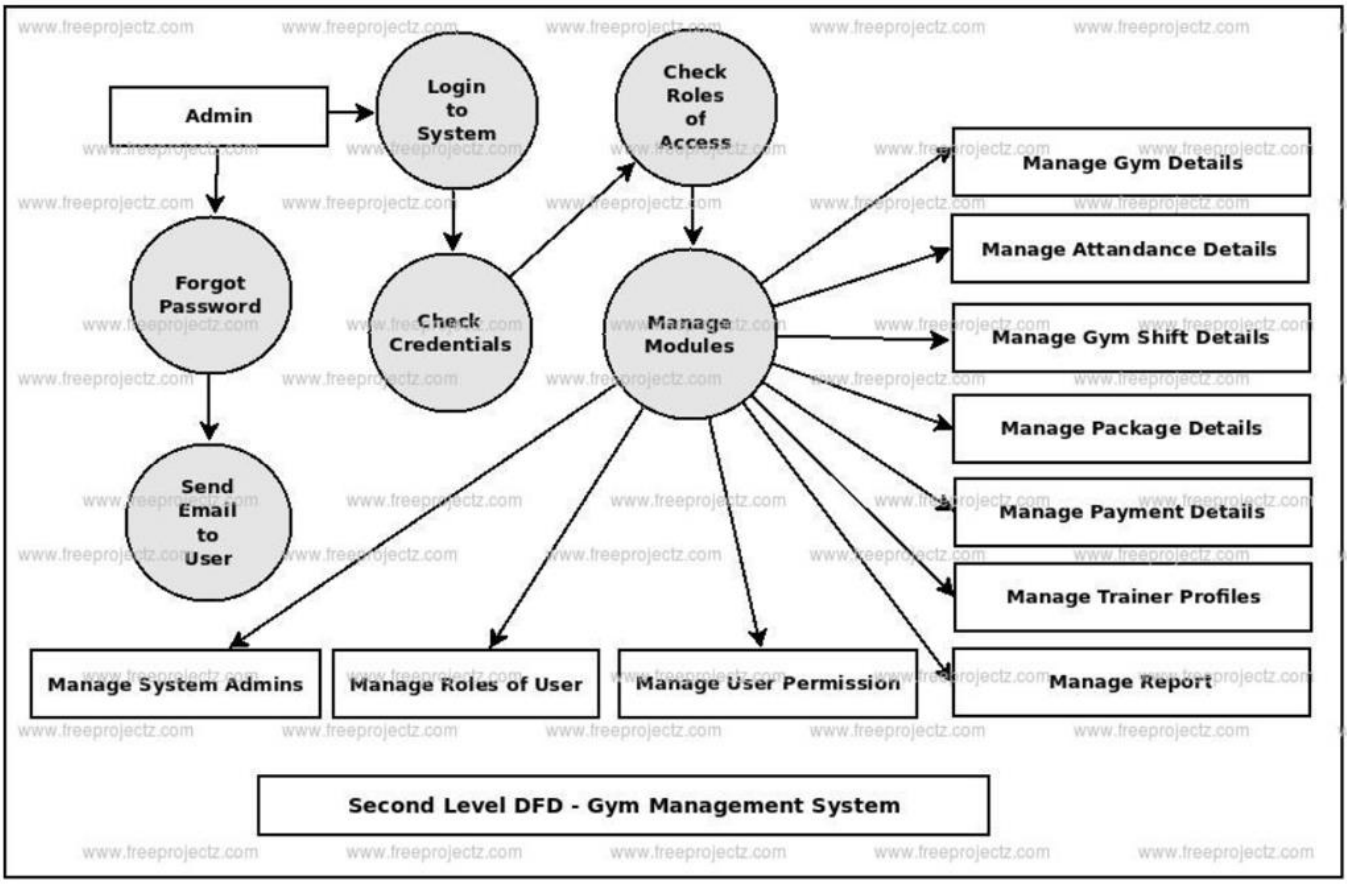


2.2.2. 6Admin page and User page



2.2.2.7 Overview of Gym portal





2.3 User Characteristics

2.3.1 Registration

A new user will have to register in the system by providing essential details in order to view the products in the system. The admin must accept a new user by unblocking him.

2.3.2 Login

A user must login with his user name and password to the system after registration.

2.3.3 View Products

User can view the list of products based on their names after successful login. A detailed description of a particular product with product name, product details, product image, price can be viewed by users.

2.3.4 Search Product

Users can search for a particular product in the list by name.

2.3.5 Add to Cart

The user can add the desired product into his cart by clicking add to cart option on the product. He can view his cart by clicking on the cart button. All products added by cart can be viewed in the cart. User can remove an item from the cart by clicking remove.

2.3.6 Submit Cart

After confirming the items in the cart the user can submit the cart by providing a delivery address. On successful submitting the cart will become empty.

2.4 Constraints

2.4.1 User Interface Constraints

Using this system is fairly simple and intuitive. A user familiar with basic browser navigation skills should be able to understand all functionality provided by the system.

2.4.2 Hardware Constraints

The system should work on most home desktop and laptop computers which support JavaScript and HTML5.

2.4.3 Software Constraints

The system will be intended to run on Firefox 4 and above, Google Chrome 10 andabove and Internet Explorer 8 and above.

2.4.4 Data Management Constraints

System shall be able to interface with other components according to their specifications.

2.4.5 Operational Constraints

The system is limited by its operating server in terms of the maximum number of usersit can support at a given time.

2.4.6 Site Adaptation Constraints

The component will be adapted to the overarching system at the conclusion of the system creation.

2.4.7 Design Standards Compliance

The system shall be implemented in PHP.

2.5 Assumptions and Dependencies

The user can add the desired product into his cart by clicking add to cart option on the product. He can view his cart by clicking on the cart button. All products added by cart can be viewed in the cart. User can remove an item from the cart by clicking remove. After confirming the items in the cart the user can submit the cart by providing a delivery address. On successful submitting the cart will become empty.

3. Specific Requirements

3.1 External interface

3.1.1 Web Server

- Apache will be used as web server:
- The user inputs data via the web server using HTML forms
- The web server executes the PHP as a module and PHP script retrieves the postdata if available.
- The web server receives information back from the PHP script.
- The web server displays a HTML page as result to the end-user.

3.1.2 PHP Application

The actual program that will perform the operations is written in PHP. All data will bestored in a database.

3.1.3 MySQL Database

It's an open source SQL database to store all data which communicates with the application on the server.

3.2 Functional Requirements

3.2.1 User

Username and password will be provided after user registration is confirmed. Password should be hidden from others while typing it in the field. System must be able to verify and validate information. The system must encrypt the password of the customer to provide security. System must ensure that, only a registered customer can purchase items.

3.2.2 Admin

The system must identify the login of the admin. Admin account should be secured so that only owner of the shop can access that account.

3.2.3 Moderator

The system must identify the login of a moderator.

3.2.4 payment

In this system we are dealing the mode of payment by cash. We will extend this to online payment also in future.

3.2.5 Logout

After ordering or any other issues for customer then he can logout from the website.

3.2.6 Report Generation

After ordering for the product, the system will sent one copy of the bill to the customer's email-address and another one for the database.

3.3 Performance requirements

In order to maintain an acceptable speed at maximum number of uploads allowed them for a particular customer as any number of users can access to the system at any time. Also the connections to the servers will be based on the attributes of the user like location and server will be working 24X7 times.

3.4 Logical database requirements

All data will be saved in the database: user accounts and profiles, discussion data, messages etc. (except files which are stored on the disk.) The database allows concurrent access and will be kept consistent at all times, requiring a good database design.

3.5 Design constraints

1. The communication between the portal software and the database will be in SQL.
2. The portal layout will be produced with HTML/CSS.
3. The product will be written in PHP.
4. The output must be compatible with W3C XHTML 1.0
5. The source code must follow the coding conventions of PHP.
6. System administrators must have access to comprehensive documentation.

3.6 Software System Attribute

The software consists of the following elements:

1. The apache web server
2. The PHP application
3. The MySQL database
4. The database should remain consistent at all times in case of an error.

3.6.1 Reliability

The reliability of the overall program depends on the reliability of the separate components.

3.6.2 Availability

The system should be available at all times, meaning the user can access it using a web browser, at any time and at any time he use the browser. There is no restrictions for user to use a web browser. But for shopping or to deliver any product to home then the user should login to the website.

3.6.3 Security

1. Phone numbers and email-address will be saved encrypted in the database in order to ensure the user's privacy.
2. The user's IP will be logged.
3. The system will be protected against vulnerabilities such as SQL injection attacks.
4. It doesn’t share your details with any third parties.
5. It keeps your personal information safely.

3.6.4 Maintainability

MySQL is used for maintaining the database and the Apache server takes care of the site. In case of a failure, a re-initialization of the program is recommended. You can also backup the database or data from the xampp.

3.6.5 Portability

The application is Linux-based and should be compatible with other systems. Apache, PHP and MySQL programs are practically independent of the OS-system which they communicate with. The end-user part is fully portable and any system using any web browser should be able to use the features of the application.