UNIVERSITY OF MUMBAI

PROJECT REPORT

ON

"GYM MANAGEMENT SYSTEM"

2018-2019

SUBMITTED BY

SIDDHI PARAB

ROLL NO. – 15

SEAT NO. :-

PROJECT GUIDE

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Submitted in partial fulfillment of the requirements for qualifying

T.Y.B.Sc.* (Information Technology) - *SEM V Examination

PEOPLE'S EDUCATION SOCIETY'S

DR. AMBEDKAR COLLEGE OF COMMERCE AND ECONOMICS

WADALA(W), MUMBAI :- 400 031

PROFORMA FOR THE APPROVAL PROJECT PROPOSAL

(Note: All entries of the proforma of approval should be filled up with appropriate and complete information. Incomplete proforma of approval in any respect will be summarily rejected.)

PNR **No.:……** Roll no**: 15**

1. Name of the Student

   _Parab Siddhi Ramdas_____

2. Title of the Project

   _Gym Management System_____

3. Name of the Guide

   _Prof. Prachita Sawant_____

4. Teaching experience of the Guide

   _____

5. Is this your first Submission?

   Yes ☐ No ☐

Signature of the Student Signature of the Guide

Date: …… Date: …….

Signature of the Coordinator

Date: ……

ABSTRACT

Any business that does not have a website is missing out on one of the most powerful marketing tools available to them. The main reason that it is important for businesses to have a website is how people are likely to find you. These days most people will go online and research products and companies before they make a purchase. For this reason of dependency on online, we develop a website for a gymnasium in which customer can get all information about the gymnasium and he/she can access or enroll at the gym via online. Usually, the client uses MS Excel or paper, and maintains their records, however it is not possible them to share the data from multiple system in multi user environment, there is lot of duplicate work, and chance of mistake. When the records are changed they need to update each and every excel file. The Gym Management System eliminates most of the limitations of the existing software. Increasing efficiency and effectiveness, automation, accuracy, user-friendly interface, information availability, communication capacity, maintenance, cost reduction makes our system smarter than the existing system. We integrate some new and prominent features along with all the necessary features. Some are like online gym tutorial video online diet facts online admission.

ACKNOWLEDGEMENT

The success and final outcome of this project required a lot of guidance and assistance for many people and I am extremely privileged to have got this all along the completion of my project. All that I have done is only due to such supervision and assistance and I would not forget to thank them.

I owe my deep gratitude to our project guide **Miss.Prachita Sawant**, who took keen interest in my project work and guided me all along, till the completion of my project work by providing all the necessary information for developing a good system.

I am thankful and fortunate to get constant encouragement, support and guidance from all the teaching staff of the **B.Sc. I.T. department of Dr. Ambedkar College**, which helped me in successfully completing my project work.

Lastly, I would like to express my appreciation towards my fellow classmates and friends for providing me the moral support and encouragement.

SIDDHI PARAB

DECLARATION

I hereby declare that the project entitled, **"Gym Management system"** done at **Mumbai,** has not been in any case duplicated to submit to any other university for the award of any degree. To the best of my knowledge other than me, no one has submitted to any other university.

The project is done in partial fulfilment of the requirements for the award of degree of **BACHELOR OF SCIENCE (INFORMATION TEHCNOLOGY)** to be submitted as final semester project as part of our curriculum.

Siddhi Parab

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

We all know health is a wealth. We do not need a fancy car, big apartment, a doctor degree without a health. Being healthy is a first thing we need to keep in mind. Because most of time our attitude depends on how we feel. Being healthy and fit gives us energy to do anything. Physical fitness is very necessary for a healthy and tension free life. Physical fitness includes diet, exercise and sleep. These three basic things have their own importance in each individual's life and everyone should be sensible with regard to these for a healthy life. This project is designed to facilitate a gym and fitness centre to automate its operations of keeping records and store them in a form of large user and friendly database further facilitating easy access to the user.

1.1 Background

Project is on Gym Management and database management and transactions. This system is proposed to be an automate database management &transactions. This stores Trainer, GYM member, payroll, receipts, and protein information. It also provides the facility of search & advanced search for searching the records efficiently & immediately. This system provides data storing & report generation of user. Gym management system project is a standalone user download project source code. Advantages of gym system: Gym management system project need of today’s software development in a G.U.I based front-end tool, which can connect to relational database engines. This gives gym management system project programmer opportunity to develop client/server based commercial website. Gym management system project give users gym management system project power and ease of use of a G.U.I with gym management system project multiuser capabilities of NT based RDBMS engines like oracle. A Project report on Gym Management System database server is key to solving gym management system project problems of information management. In general, a server must reliably manage a large amount of data in a multi-user environment so that many users can concurrently access gym management system project same data. All this must be accomplished while delivering high performance. A database server must also prevent unauthorized access and provide efficient solutions for failure recovery. The Gym

Management System eliminates most of the limitations of the existing software. Increasing efficiency and effectiveness, automation, accuracy, user-friendly interface, information availability, communication capacity, maintenance, cost reduction makes our system smarter than the existing system. We integrate some new and prominent features along with all the necessary features.

1.2 Objective

What was the problem?

- 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 proposed system is expected to be faster than the existing system.
- The Project was made to effectively and efficiently cater to requirements of the fitness centre. Very frequently the person who generally holds the tasks to manage the centre needs to keep records of all the transactions as well as data manually. Generally, to structure these tasks Separate Registers are maintained. This whole process thus becomes quite cumbersome for them to control manually. Moreover, any wrong data entered mistakenly can brings serious results.
- This manually managed system of the store was also heavily prone to data loss due to certain causes Misplacement of Registers, Destruction of Registers, Unauthorized access to registers etc. which can bring in disastrous consequences.
- The cost of maintenance of data and records of occurrence of transactions is very high.
- Searching a data specific to requirements is also very tedious in such system. To retrieve records, the responsible person needs to manually locate the appropriate register and locate the appropriate placement of that particular record which may be very time consuming.
- Data Redundancy is also a great issue in such kind of system. "Redundancy" means repetition; Thus, data modified or updated at a particular place may not be data modified or updated at the other related place which may create inconsistencies in data handling, Destroys Data Integrity and creates confusion for the owner.

- The main objective of the project is to design and develop a user friendly efficient computerized Gym Management System.
- An accurate system without any data redundancy.
- Secured data storage for Authority end.
- Secure the user ends data by providing each user's own personal credentials.
- A flexible system which can manoeuvre the customer-staff relationship in an effective manner.
- Computerization can be helpful as means of saving time & money

1.3 Purpose, Scope, and Application

1.3.1 Purpose

Our proposed "Gym Management System" is for those who run a gym business. Before doing anything we did a decent research on major difficulties for gym owners. We examined carefully about how to make a huge registering system without failure as well as different functions for different kind of user depending on their privilege.

The Gym Management requires a system that will handle all the necessary and minute details easily and proper database security accordingly to the user. They require software, which will store data about members, trainer, protein, payroll, receipts of members & all transactions that occur in Gym.

1.3.2 Scope

- Storing information of members, employees.
- Check validity of information provided by user.
- Storing information of members according to their id.
- Generating reports for different id.

1.3.3 Applicability

- This system helps members to register for gym
- This system registers members profile
- It has trainers profile which makes easy for members to select their trainer
- Gym schedule can be checked online
- Diet plan for members are available
- Different types of protein and cost of proteins are available

1.4 Achievements

- Member login
- Member profile
- Trainer profile
- Time schedule
- Diet plans
- Protein availability
- Easy to use interface
- User friendly environment

1.5 Organisation of report:

This chapter provides a brief information about its project, objectives and goal achieved. It also focused on the scope and purpose of the project and how it is applicable in the real world.

The 2nd chapter will focus on the technologies used in the project, such as the hardware components and the programming language used.

Example: HTML,CSS,BOOTSTRAP,PHP,SQL, Etc...

The 3 rd chapter will describe the problem definition of the traditional waste collection system. It will also cover the requirements of the components that I will be using and also the drawbacks of the existing system that lead to requirements to eliminate the problems of the old system. Planning and Scheduling activity is shown using Gantt chart which will show how whole project is scheduled. This chapter also includes the conceptual models which will help to understand the Gym management system much more clearly.

The 4th chapter will determine the design of the Gym management system describingthe modules or the components which will be used. It will also focus on the data design, the way data is being used and handled, sent and received, updated and deleted. It willalso show a basic user interface that will help to get a brief idea of how the system will look like to the user. It shall also discuss security concerns regarding the project and also testing phases that will help to eliminate errors and mistakes in a minimum period of time and with the least effort.

The 5thchapter will focus on the implementation of system design. This will include the implementation approaches, important snippet of codes, the kind of testing approaches took and modifications and improvements that have been done to the project over time.

The 6thchapter gives us results of the project implementation. It shows us the results of what has been completed. It will discuss these results in different scenarios and will help to determine the success rate in all types of scenarios. It will also provide a user documentation of the system, which will include all the necessary details required to use the system and get it working immediately.

The 7thchapter will conclude the project, describing the limitations of the system and how they can be eliminated in the future. It will also include ideas in the improvements in of the project which might not be feasible at present but have a future scope.

CHAPTER 2: SURVEY OF TECHNOLOGIES

2.1 Existing System

An Existing system refers to the system that is being followed till now. The gym is working manually. The current system is time consuming and it is very costly, because it involves a lot of paperwork. In gym management system, if we take the current system and compare with the proposed it is far behind. Every work in the existing is manual and done on the paper.

There might be a computer used somewhere for the work, but it's is not doing exactly it's is supposed which is reducing the manual work. Entering everything manual to the computer by creating a file is not exactly we are talking in computerization.

The existing system requires a lot of manual work which results in taking more time than it should. The operations like updating and synchronizing data are also done manually in the existing system that is not automated and again time-consuming process.

These practices are not at all reliable as the one wrong entry can take a lot of time in detection and then there is a correction. Humans are prone to errors and can mistakes often unless it has some inbuilt programs which can take check the input and save from error.

We introduced the system to reduce the manual work effectively as there is the backend of the system which will take care of synchronizing and updating of the data for the system.

So, if there is any change in the system data it will appear to all other users of the system. As the system was not online the member cannot see their timeline that the event generated by them in past such as fee payment, attendance, batch timing and trainer profile etc.

Keeping an automated system is also helps in managing the member's information secure and safe. As it can only be seen by the administrator with the correct credentials which is not an option in the existing system.

Unless the records are kept in a physically safe location such as a locker. Some major drawbacks of the existing system:

Required a lot of paperwork and the process takes time.

Everything is done on the paper and these are highly prone to damages and requires a good amount of security and space to store.

- Required Buying of goods more frequent as compared to online system e.g.: paper, pen.

- Likely to have an error.

- Lack of storage space for the handwritten documents.
- Require more physical work and manpower
- Information is not available globally to both clients and employees hence location restriction

To manually handle the system was very difficult task. But now-a-days computerization made easy to work. In the existing system the performance of the gym is only done manually but in the proposed system we have more of computerized system. The following are the reasons why the current system should be computerized:

- To increase efficiency with reduced cost
- Lack of security of data
- Needs manual calculations and control
- To reduce the burden of paper work.
- To save time management for recording details of each member and employee.
- To generate required reports easily.

2.2 Proposed System

HTML

- Hypertext Markup Language (HTML), the languages of the World Wide Web (WWW), allows users to produces Web pages that include text, graphics and pointer to other Web pages (Hyperlinks).
- HTML provides tags (special codes) to make the document look attractive.
- Without HTML, a browser would not know how to display text as elements or load images or other elements.
- HTML tags are not case-sensitive.
- Using graphics, fonts, different sizes, color, etc., can enhance the presentation of the document. Anything that is not a tag is part of the document itself

CSS

- CSS stands for Cascading Style Sheets is a language used to describe the look and formatting of a document written in a markup language.
- It is a way for Web developers to define the look and feel of their Web pages since CSS was first developed in 1997.
- It is a very powerful and important tool for the Web site developer.
- A single CSS file may be linked to multiple web pages, which allows a developer to change the appearance of all the web pages at the same time.
- For example, HTML is used to create the basic layout of a web page such as this paragraph of text.

JAVASCRIPT

- JavaScript client side scripting provides many advantages over server side scripts. For example, using JavaScript, you can check if any user has entered a correct email address in a form field.
- JavaScript is one of the most simple, lightweight, versatile and interpreted programming language used to extend functionality in websites.
- It also possesses some negative effects which can make you think twice before applying JavaScript on your website.
- Let's see some of its advantages and disadvantages of JavaScript.

BOOTSTRAP

Bootstrap and Foundation are the top 2 front end frameworks/CSS frameworks that are mainly used by front-end developers for various reasons like:

- A framework comes up with predefined terms, thus giving you the ability to use these codes instead of having to create the codes from scratch.
- No more tweaking of the base to make it look same across all the browsers.

- No more adjusting of pixel widths and wondering if the sidebar has standards compliant for widgets or images.
- Synergy is maintained across the website and on all web pages because the framework will remember everything that you did on each web page saving you the time and energy to try and remember specifications of each element.

MYSQL

- MySQL is developed, distributed and supported by Oracle Corporation.
- It's the most popular and widely used open source SQL database management system.
- Even though MySQL is open source software, you can buy a commercial license version from Oracle to get a premium support services.
- SQL stands for Structured Query language and is used for communicating with the database.
- It's a standard language for relational data management system according to American National Standards Institute (ANSI).
- A database is a collection of structured data. A database management system is needed to add, access, delete and process data in a computer database.
- MySQL can run on various platforms UNIX, Linux, Windows, etc. You can install it on a server or even in a desktop.

PHP

PHP (Hypertext Preprocessor) is a server-side scripting language utilized by web programmers to create web applications and websites. This popular programming language was first created by Ramus Laird in 1994. PHP was installed on more than 240 million websites and 2.1 million internet servers in 2013. Its files have many extensions like.PHP, .Python 1 or.php5. Even though PHP is the most widespread programming language used for creating websites, it has some advantages and disadvantages. This article attempts to figure out the advantages and disadvantages of PHP frameworks.

Why HTML?

HTML is a type of mark-up language. It encapsulates, or “marks up” data within HTML tags, which define the data and describe its purpose on the webpage. The web browser then reads the HTML, which tells it things like which parts are headings, which parts are paragraphs, which parts are links, etc.

Why CSS?

CSS is the language for describing the presentation of Web pages, including colours, layout, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. **CSS** is independent of HTML and can be used with any XML-based mark-up language.

Why JAVASCRIPT?

JavaScript is most commonly used as a client side scripting language. This means that JavaScript code is written into an HTML page. When a user requests an HTML page with JavaScript in it, the script is sent to the browser and it's up to the browser to do something with it.

Why BOOTSTRAP 4?

Bootstrap 4 ships with a lot of new features and adds spice to the most popular CSS framework in the world. ... It is an open source toolkit that provides a responsive grid system, Sass variables and mixins, prebuilt components for developing with HTML, CSS, and JS.

Why PHP?

PHP stands for Hypertext Pre-processor and is a server-side programming language. There are many reasons to use **PHP** for server side programming, firstly it is a free language with no licensing fees so the cost of using it is minimal. ... **PHP** can also run on Windows, Linux and Unix servers.

Why MySQL?

MySQL is a relational database management system based on SQL – Structured Query Language. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications. The most common use for **MySQL** however, is for the purpose of a web database.

Why not ASP.NET?

- **Cost.** A solid .NET development setup for a team of three or four, plus the licenses for all the server-side software you'll need to run things, can probably buy you half a man-year of developer time. This isn't a HUGE issue if you're launching a start up with funding, but quite a few of the ground-breaking sites out there started out as experimental skunk-works projects. You can cut costs by using free development tools (the C# compiler, after all, is a free download) but you lose a lot of the benefits that come with the platform.

- **Fewer hackers.** This is very close to the first point, but it's a bit different. The barrier for entry for most of the 'hot' languages on the *NIX side is low, closer to old-school ASP than the heavy-duty stuff of ASP.NET. That means a smaller pool of hobbyists-turned-coders to feed the project mill. While you probably don't mind the higher barrier for entry if you're hiring a team to develop some enterprise software, most start-ups don't happen that way. This isn't even a .Net specific issue -- it's more about the changing view of 'scripting languages' when compared to 'real languages' like C, Java, C#, C++, and... well. Whatever flavour of C you can think of.

- **Not the best fit for web RAD.** .NET is an amazing platform for developing Windows applications. Truly awesome. Unfortunately, ASP.NET tends to err on the side of 'making the web work like Win Forms'. When it comes time to web-enable your .NET based client/server application, you'll thank your lucky stars for ASP.NET's familiarity. When you're trying to pound out a prototype of a new social networking

site, however, you'll feel like you're dragging a Volvo uphill. It just doesn't make as much sense.

- **The people are the platform.** It's obviously not universal, but the GPL/MIT/Creative Commons influence that permeates the non-corporate *NIX side of the development world affects a lot more than just the software itself. Rapid dissemination of best practices, novel tools, and open-sourced solutions to common problems are standard operating procedure in the *NIX side of the fence. Ultimately, this is far more important than the details of the specific software platform**.** The Open Source world is a 'gift economy' -- you gain karma and status by giving people things of value. Whether that's a new caching API, patches for bugs in an existing framework, or hard-won knowledge about esoteric optimization issues, sharing is built into that development community's fabric. This makes life hell if you're trying to figure out how to sell boxed software, but if you're trying to implement a cool idea and launch a startup in your spare time, the difference is night and day.

CHAPTER 3: REQUIREMENT AND ANALYSIS

3.1 Problem Definition

Defining a problem is one of the important activities of the project. The objective is to define precisely the business problem to be solved & thereby determined the scope of the new system. This phase consist of 2 main tasks. The 1st task within this activity is to review the organization needs that originally initiated the project. The 2nd task is to identify, at an abstract or general level, the expected capabilities of the new system. Thus, it helps us to define the goal to be achieved & the boundary of the system. A clear understanding of the problem will help us in building a better system & reduce the risk of project failure. It also specifies the resources that have to be made available to the project. Three important factors project goal, project bounds & the resource limits are sometimes called the project's term of reference.

3.2 Requirement Analysis

Requirement analysis is done in order to understand gym management system project problem gym management system project software system is to solve. Gym management system project problem could be automating an existing manual process, developing a new automated system, or a combination of gym management system project two. Gym management system project emphasis in requirements analysis is on identifying what is needed from gym management system project system, not how gym management system project system will achieve its goals. Gym management system projected are at least two parties involved in gym management system project software development-a client and a developer. Gym management system project developer has to develop gym management system project system to satisfy gym management system project client's needs. Gym management system project developer does not understand gym management system project client's problem domain, and gym management system project client does not understand gym management system project issues involved in gym management system project software systems. This causes a communication gap, which has to be adequately bridged during requirements analysis.

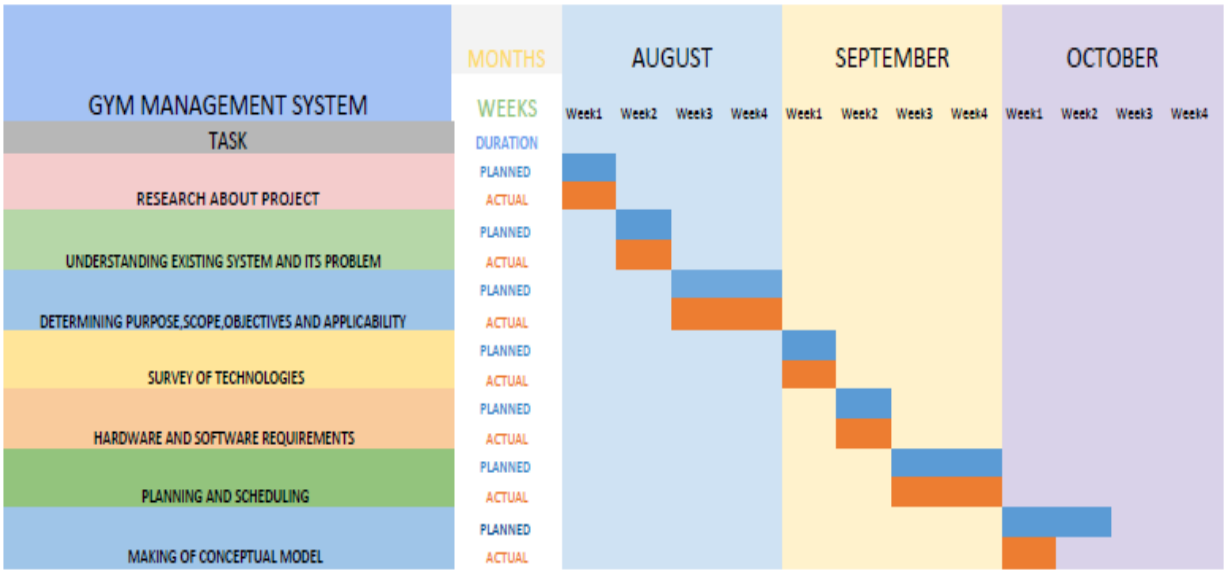
3.3 Planning and Scheduling

Gym management system project purpose of gym management system project design phase is to plan a solution of gym management system project problem specified by gym management system project requirements documents. This phase is gym management system project first step in moving from gym management system project problem domain to gym management system project solution domain. Starting with what is needed, design takes us toward how to satisfy gym management system project needs. Gym management system project design of a system is perhaps gym management system project most critical factor affecting gym management system project quality of gym management system project software. It has a major impact on gym management system project later phases, particularly testing and maintenance.

Gym management system project design activity is divided into two phases: System Design and Detailed Design. In system design gym management system project focus is on identifying gym management system project modules, whereas during detailed design gym management system project focus is on designing gym management system project logic for each of gym management system project modules.

Tabular form:

Tasks	Start date	End date	Date to complete
scope approval	25/7/2018	28/7/2018	3
Requirement gathering	6/8/2018	9/8/2018	3
Module wise Questionnaire	9/8/2018	13/9/2018	4
start doing chapter 1 Intrduction	20/8/2018	1/9/2018	9
Diagrams	1/9/2018	10/9/2018	10
start doing chapter 2 survey of technologies	10/9/2018	25/9/2018	15
Start Doing Chapter 3 Requirements and Analysis	25/9/2018	3/10/2018	8



3.4 Software and Hardware Requirements

Software	Requirements
Operating system Platform	Windows 10
Browser	Any of Chrome, Mozilla, Opera etc.
Development Environment	Sublime Text 3
Development Tools	HTML , CSS , Bootstrap 4 , JavaScript , PHP , SQL
Database	Google Firebase

Table no 3.4.1

Hardware	Requirements
Processor	Intel CORE i3 7th Gen
RAM	256 MB or Higher
Hard Disk	500 MB or Higher
Internet	High-speed Internet connection

Table no 3.4.2

3.5 Preliminary Product Description

Gym Management system is gym and health club membership management system. You can keep records on your members, their memberships, and have quick and easy communication between you and your members. A Gym management software that's really easy-to-use, Check-in, payment processing, reports - a full membership solution for small to medium size gyms, health clubs and fitness centres.

Feature of Gym Management system:

1. Add New Members.
2. Check-in Members.
3. Record of Payment and Measurements.
4. Create and print a membership form with your name, member's name.
5. Add Member's picture using a photo capture camera.
6. View member's payment and visit history.

The Initial Cost

The Initial cost of setting up the system will include the cost of hardware software (OS, add-on software, utilities) & labour (setup & maintenance). The system has to bear by the organization.

Running Cost

Besides, the initial cost the long term cost will include the running cost for the system including the AMC, stationary charges, cost for human resources, cost for update/renewal of the various related software.

Need for Training

The users along with the administrator need to be trained at the time of implementation of the system for smooth running of the system. The client will provide the training site.

We talked to the management people who were managing a the financial issues of the center, the staff who were keeping the records in lots of registers and the reporting manager regarding their existing system, their requirements and their expectations from the new proposed system. Then, we did the system study of the entire system based on their requirements and the additional features they wanted to incorporate in this system.

Reliable, accurate and secure data was also considered to be a complex task without this proposed system. Because there was no such record for keeping track of all the activities, which was done by the **GYM MANAGEMENT SYSTEM** on the daily basis.

3.6 Conceptual Models

Spiral model

Spiral model is one of the most important Software Development Life Cycle models ,which provides support for Risk Handling. In its diagrammatic representation, it looks like a spiral with many loops. The exact number of loops of the spiral is unknown and can vary from project to project. Each loop of the spiral is called a Phase of the software development process.

The exact number of phases needed to develop the product can be varied by the project manager depending upon the project risks. As the project manager dynamically determines the number of phases, so the project manager has an important role to develop a product using spiral model.

The Radius of the spiral at any point represents the expenses(cost) of the project so far, and the angular dimension represents the progress made so far in the current phase.

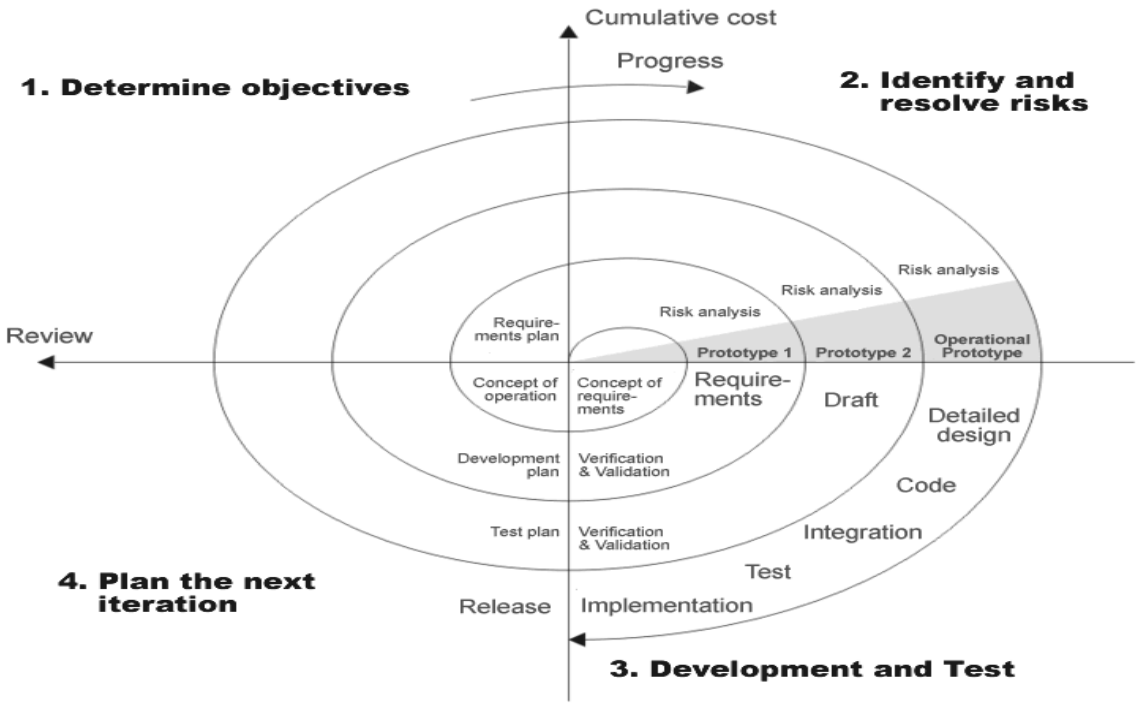


Figure no 3.6.1

Spiral Model – Strengths

- Provides early indication of the risks, without involving much cost.
- Users can view the system early because of the rapid prototyping tools.
- Critical high-risk functions are developed first.
- The design does not have to be perfect.
- Users can be closely involved in all lifecycle steps.
- Early and frequent feedback from users.
- Cumulative costs assessed frequently.

Spiral Model – Weaknesses

- May be hard to define objectives, verifiable milestones that indicate readiness to proceed through the next iteration.
- Time spent in planning, resetting objectives, doing risk analysis and prototyping may be an overhead.
- Time spent for evaluating risks can be too large for small or low-risk projects.
- Spiral model is complex to understand for new team members.
- Risk assessment expertise is required.
- Spiral may continue indefinitely.
- Developers must be reassigned during non-development phase activities.

When to Use Spiral Model?

- Creation of a prototype is appropriate.
- Risk evaluation is important.
- A project is of medium to high-risk.
- Users are unsure of their needs.
- Requirements are complex.
- Product-line is new.
- Significant changes are expected during exploration.
- Long-term project commitment unwise because of potential business changes.

E-R Diagram:

An entity–relationship model is usually the result of systematic analysis to define and describe what is important to processes in an area of a business. It does not define the business processes; it only presents a business data schema in graphical form. It is usually drawn in a graphical form as boxes (entities) that are connected by lines (relationships) which express the associations and dependencies between entities

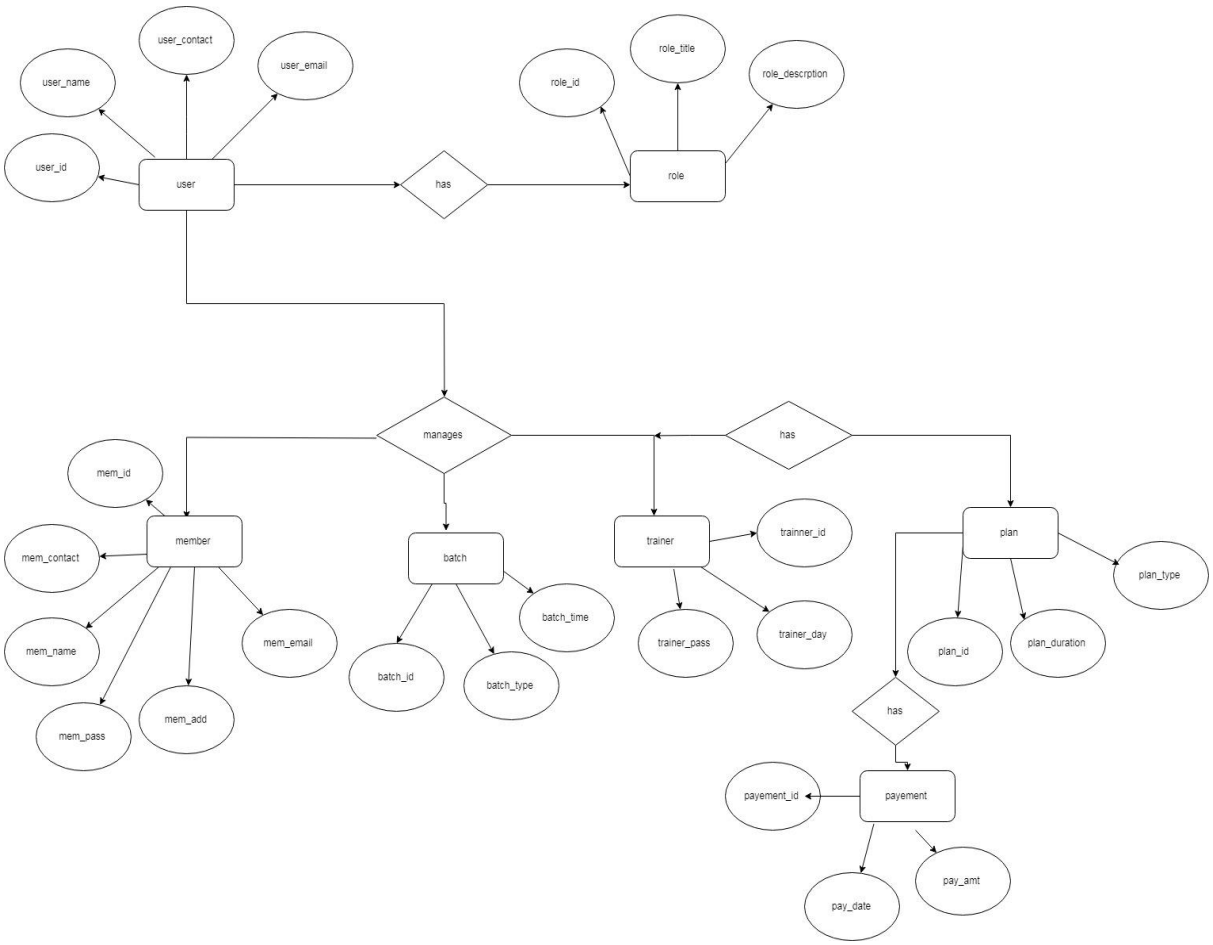


Figure no 3.6.2

Sequence Diagram:

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called **event diagrams** or **event scenarios.**

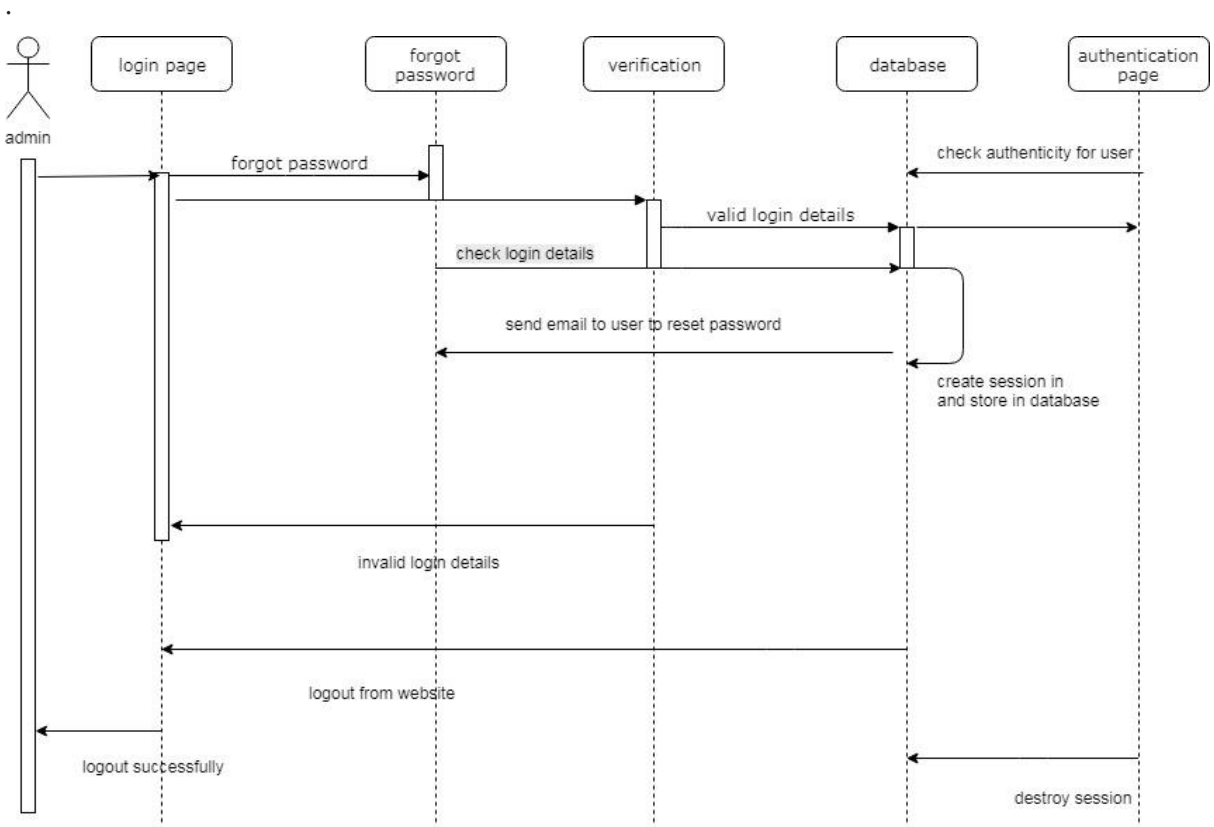
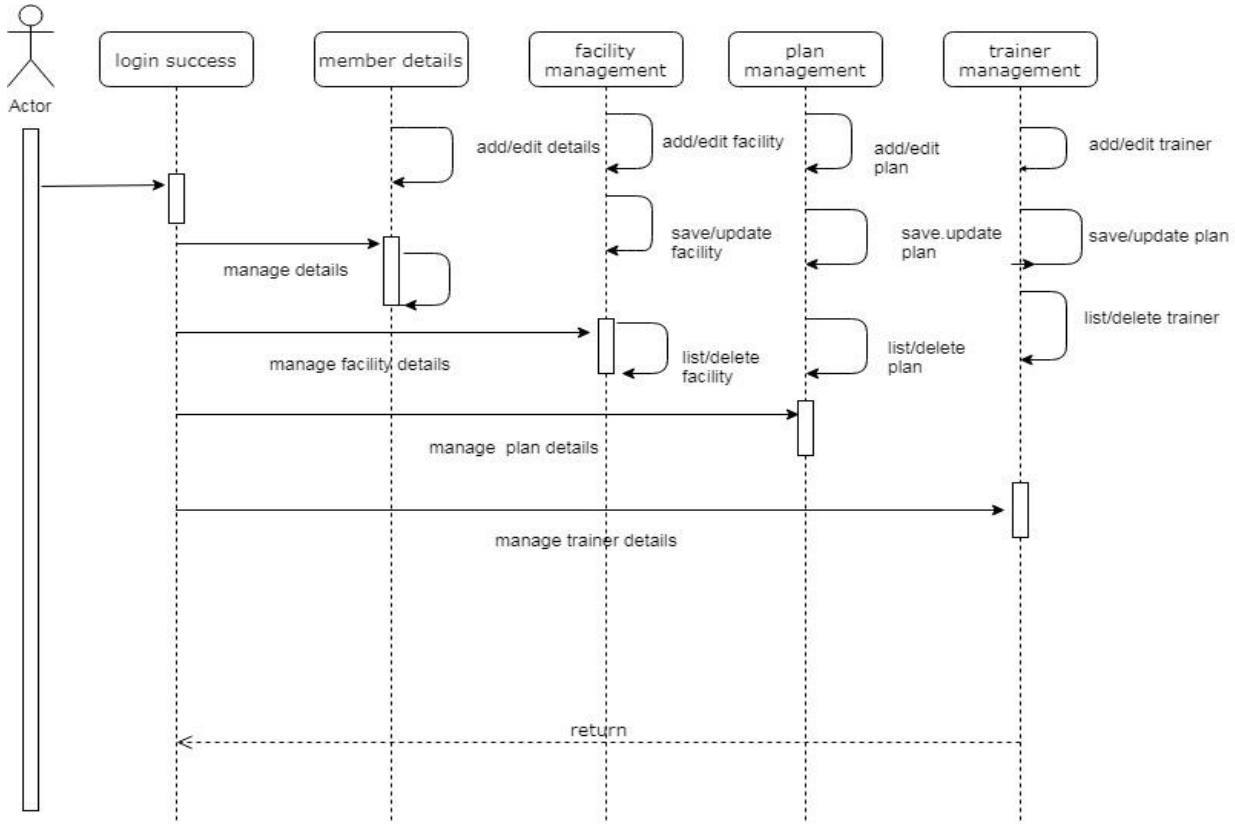


Figure no 3.6.3


Actor
login success
member details
facility management
plan management
trainer management
add/edit details
add/edit facility
add/edit plan
add/edit trainer
save/update facility
save.update plan
save/update plan
manage details
list/delete trainer
manage facility details
list/delete facility
list/delete plan
manage plan details
manage trainer details
return

Activity Diagram:

Activity diagrams are graphical representations of workflows of stepwise activities and actions[1] with support for choice, iteration and concurrency. In the Unified Modelling Language activity diagrams are intended to model both computational and organizational processes (i.e., workflows), as well as the data flows intersecting with the related activities.Although activity diagrams primarily show the overall flow of control, they can also include elements showing the flow of data between activities through one or more data stores

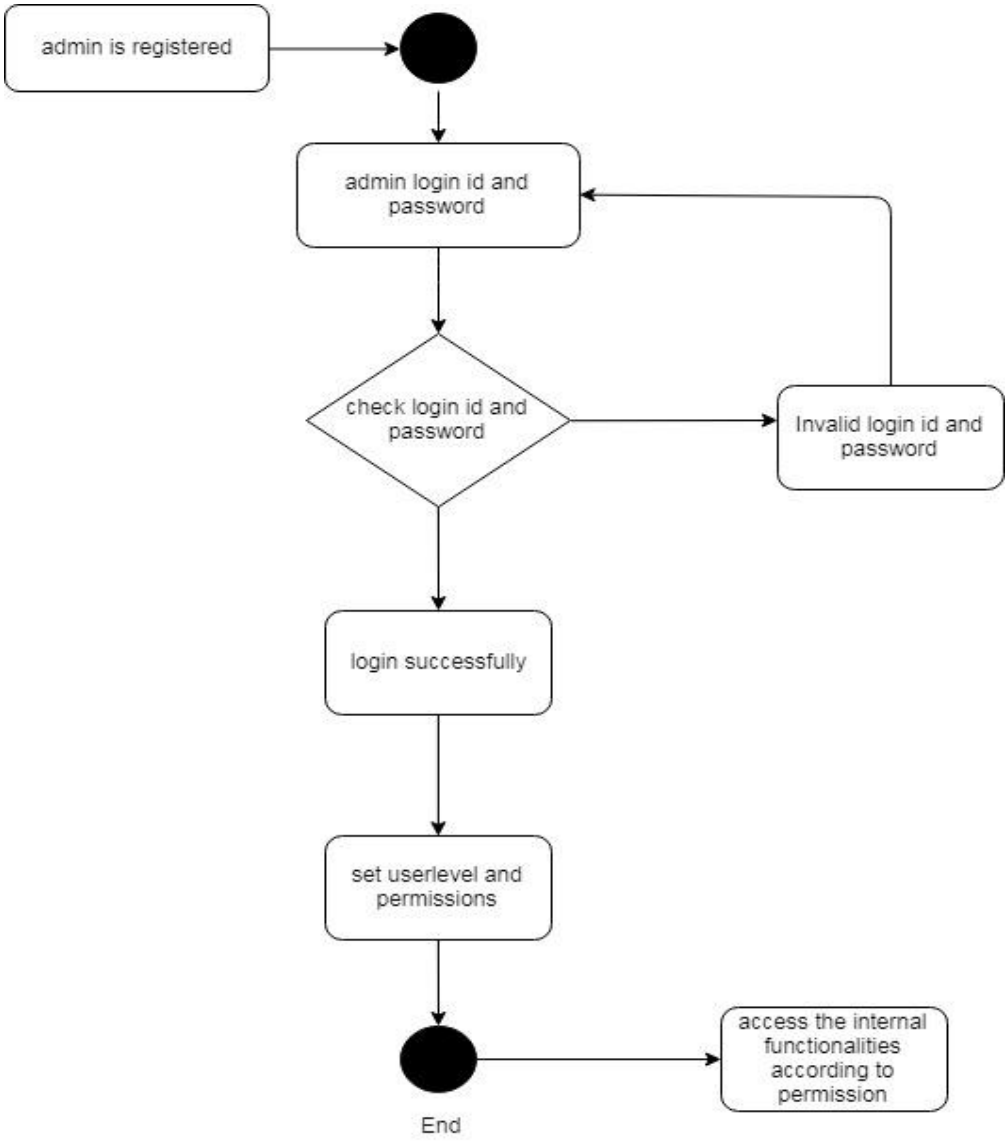
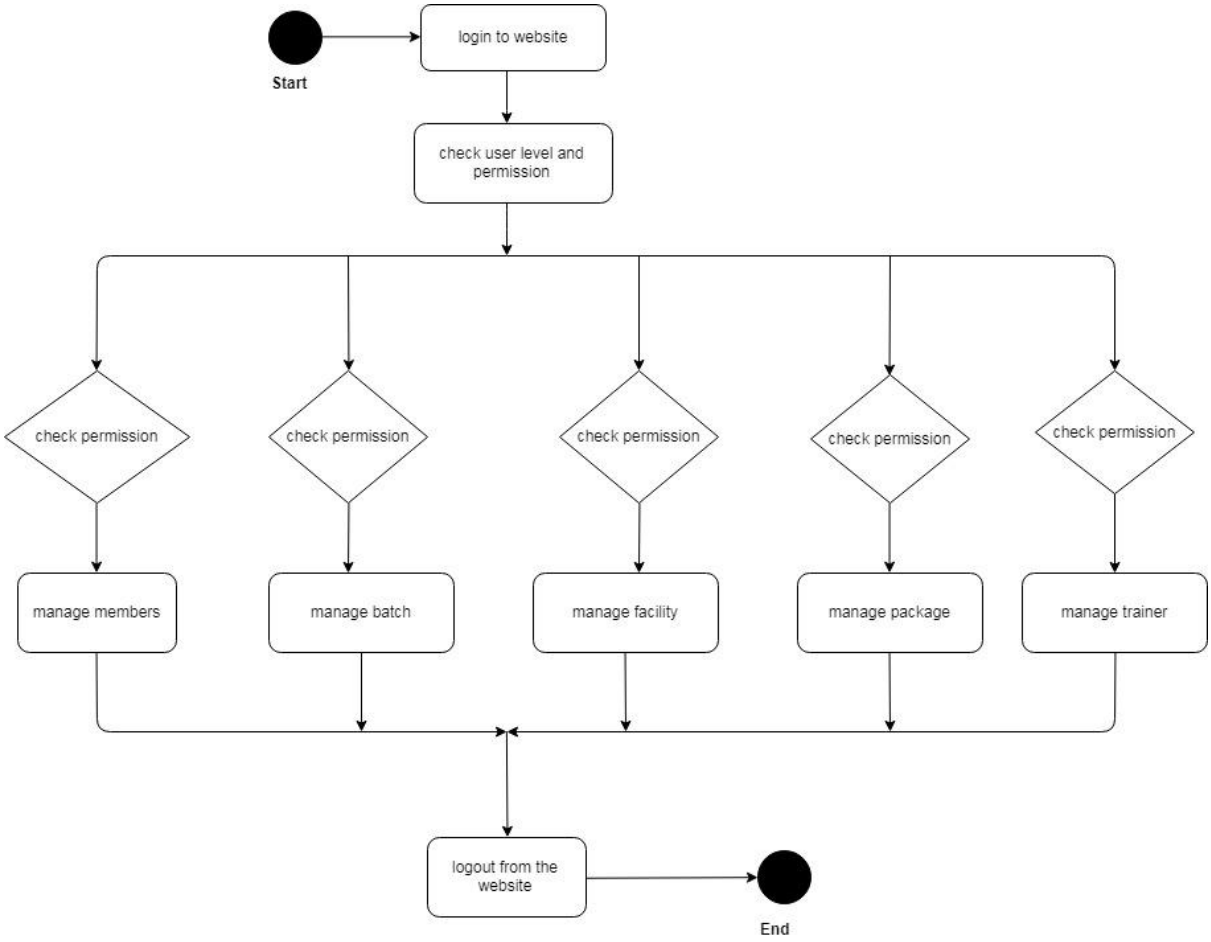


Figure no 3.6.4


Start
login to website
check user level and permission
check permission
check permission
check permission
check permission
check permission
manage members
manage batch
manage facility
manage package
manage trainer
logout from the website
End

Class Diagram:

The class diagram is the main building block of object-oriented modelling. It is used for general conceptual modelling of the systematic of the application, and for detailed modelling translating the models into programming code. Class diagrams can also be used for data modelling. The classes in a class diagram represent both the main elements, interactions in the application, and the classes to be programmed.

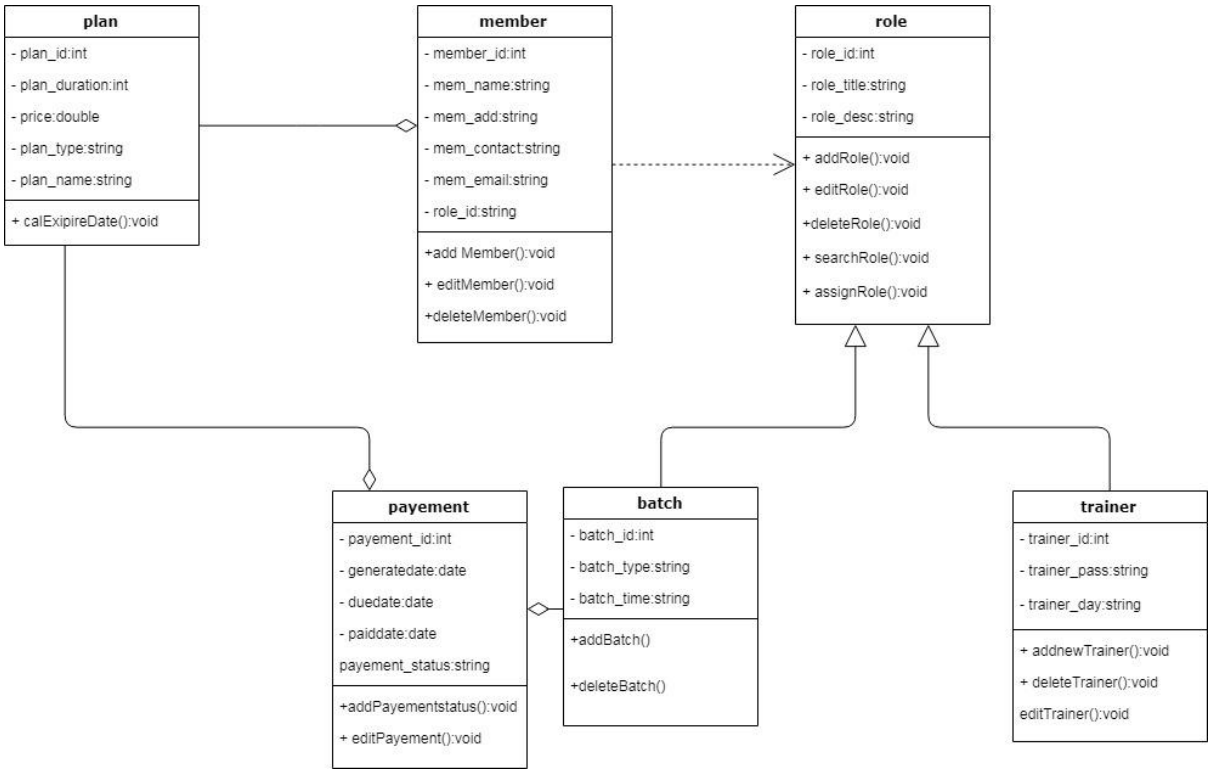


Figure no 3.6.5

DFD Diagram:

A **data flow diagram** (**DFD**) is a graphical representation of the "flow" of data through an information system, modelling its process aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great detail, which can later be elaborated.[1] DFDs can also be used for the visualization of data processing (structured design)

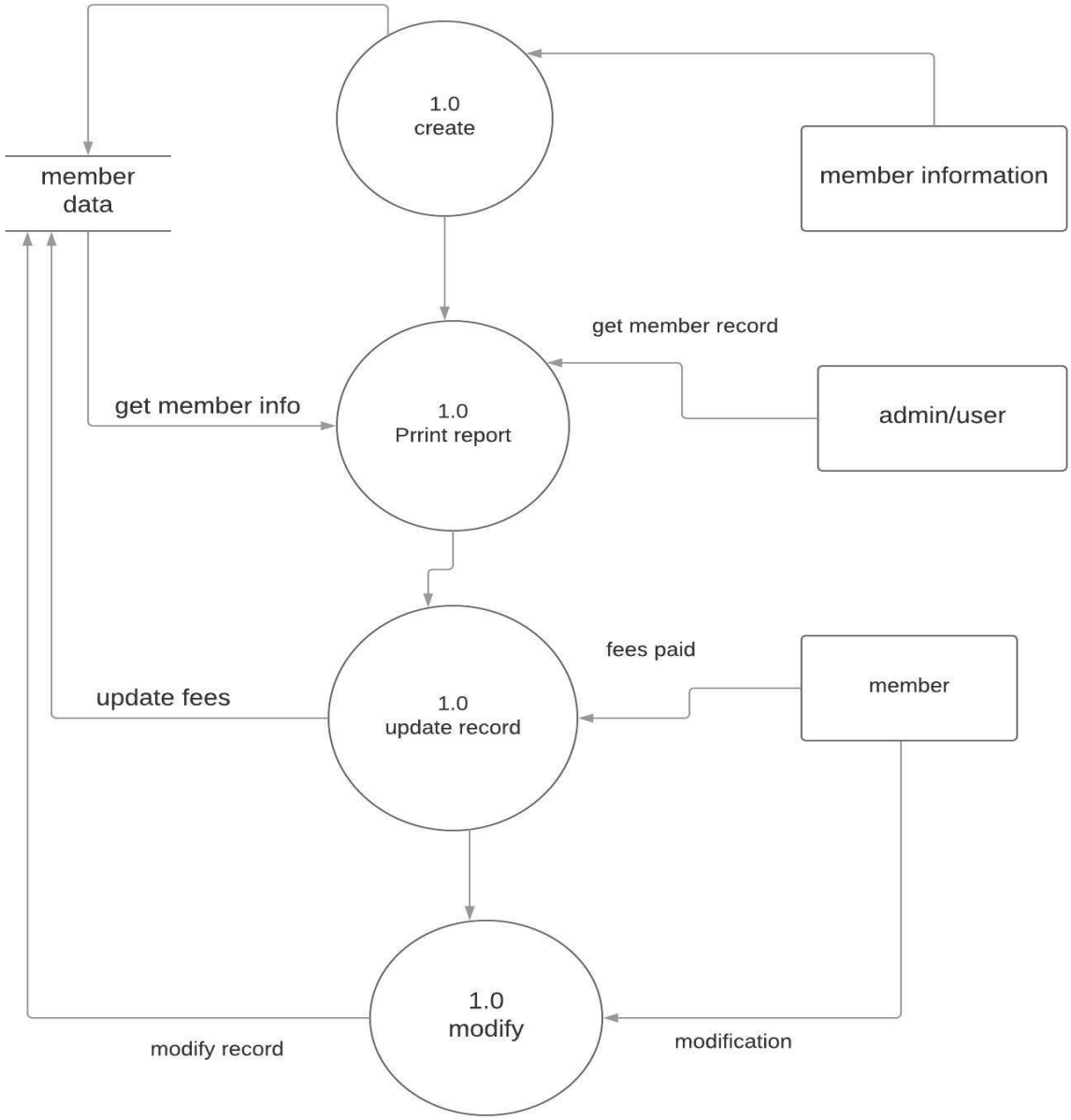


Figure no 3.6.6

CHAPTER 4: SYSTEM DESIGN

4.1Basic Module

There are two basic modules in this system as describe briefly in below

• Administrative module: This user is an admin type who has full rights on the system.

• Member module: This is a normal level of user who will be very few number of functionality of website.

4.1.1. Admin module

- Add new records
- Can see the list of peoples
- Can edit and update peoples records
- Admin will be able to see his details
- Admin will be able to update records
- Admin can manage the payment

4.1.2. Trainer module

- Can delete/edit the payment
- Trainer can see the list of all Trainees
- Trainer can see payment

4.1.3. Attendance module

- Admin can manage the attendance
- Admin can delete/edit the attendance
- Admin can see the list of all attendance
- Trainer can see attendance

4.1.4 Trainee module

- Time of Enter/plan
- Exercise plan
- Diet plan

4.2 Data Design

Data dictionary:

Member table

Key	Column name	Datatype	Allows Nulls
Primary key	ID	Int	N/A
	First name	Varchar	N/A
	Last name	Varchar	N/A
	Phone no	Varchar	N/A
	Email Id	Varchar	N/A
Foreign key	Address	Varchar	N/A
	RoleID	Varchar	N/A

Table no 4.2.1

Role Table

Key	Column name	Datatype	Allows Nulls
Primary key	Role ID	Int	N/A
	Role Name	Varchar	N/A
	Role Description	Varchar	N/A

Table no 4.2.2

Trainer table

Key	Column name	Datatype	Allows Nulls
Primary key	TrainerID	Int	N/A
	Trainer Day	Varchar	N/A
	Trainer Pass	Varchar	N/A

Table no 4.2.3

Batch table

Key	Column name	Datatype	Allows Nulls
Primary key	BatchID	Int	N/A
	Batch Time	Varchar	N/A
	BatchType	Varchar	N/A

Table no 4.2.4

Payment table

Key	Column name	Datatype	Allows Nulls
Primary key	PaymentID	Int	N/A
	GenerateDate	Varchar	N/A
	DueDate	Varchar	N/A
	PaidDate	Varchar	N/A
	Payment Status	Varchar	N/A

Table no 4.2.5

Plan Table

Key	Column name	Datatype	Allows Nulls
Primary key	PlanId	Int	N/A
	PlanDuration	Varchar	N/A
	Price	Double	N/A
	PlanType	Varchar	N/A
	PlanName	Varchar	N/A

Table no 4.2.6

4.3 Procedural Design

Use Case

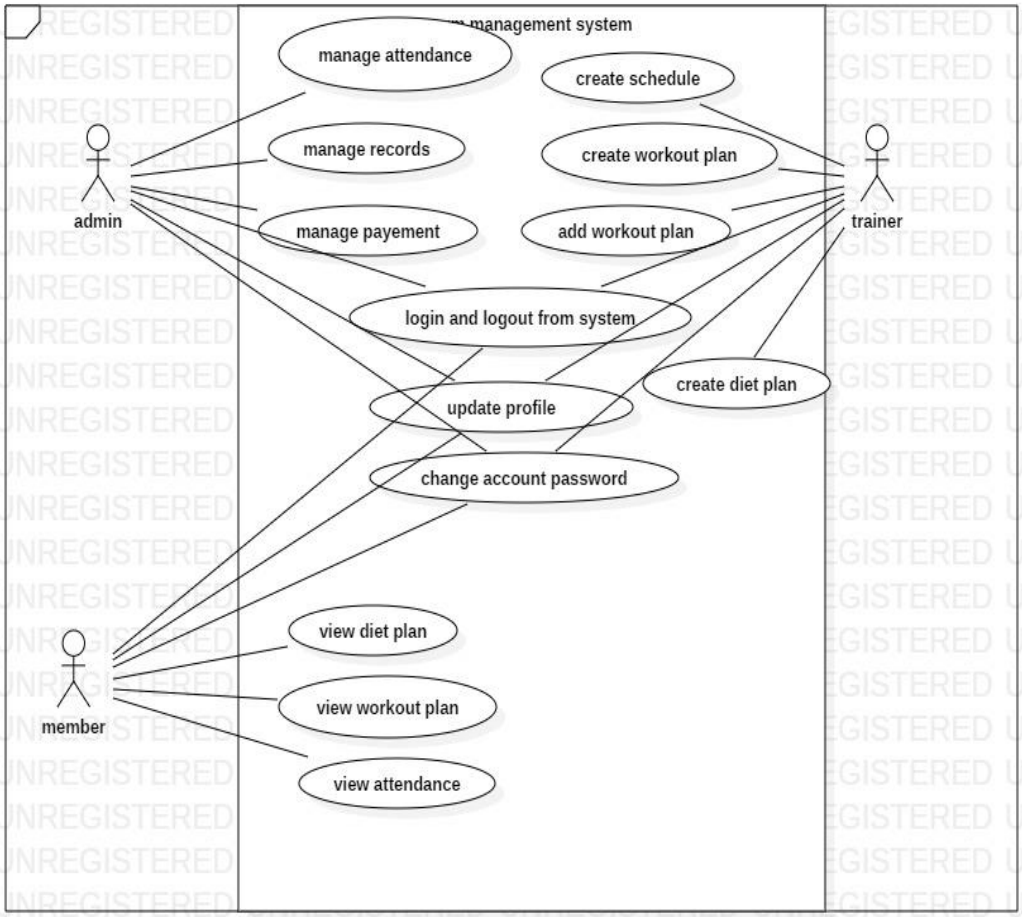


Figure no 4.3.1

Data Flow Diagram

Level 0

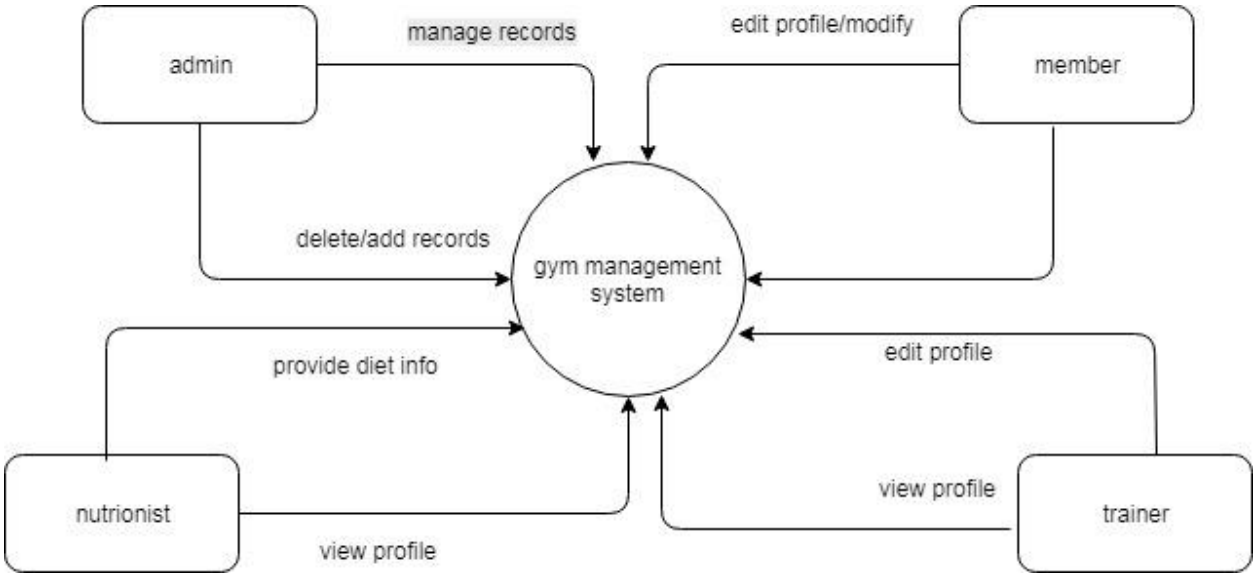


Figure no 4.3.2

Level 1

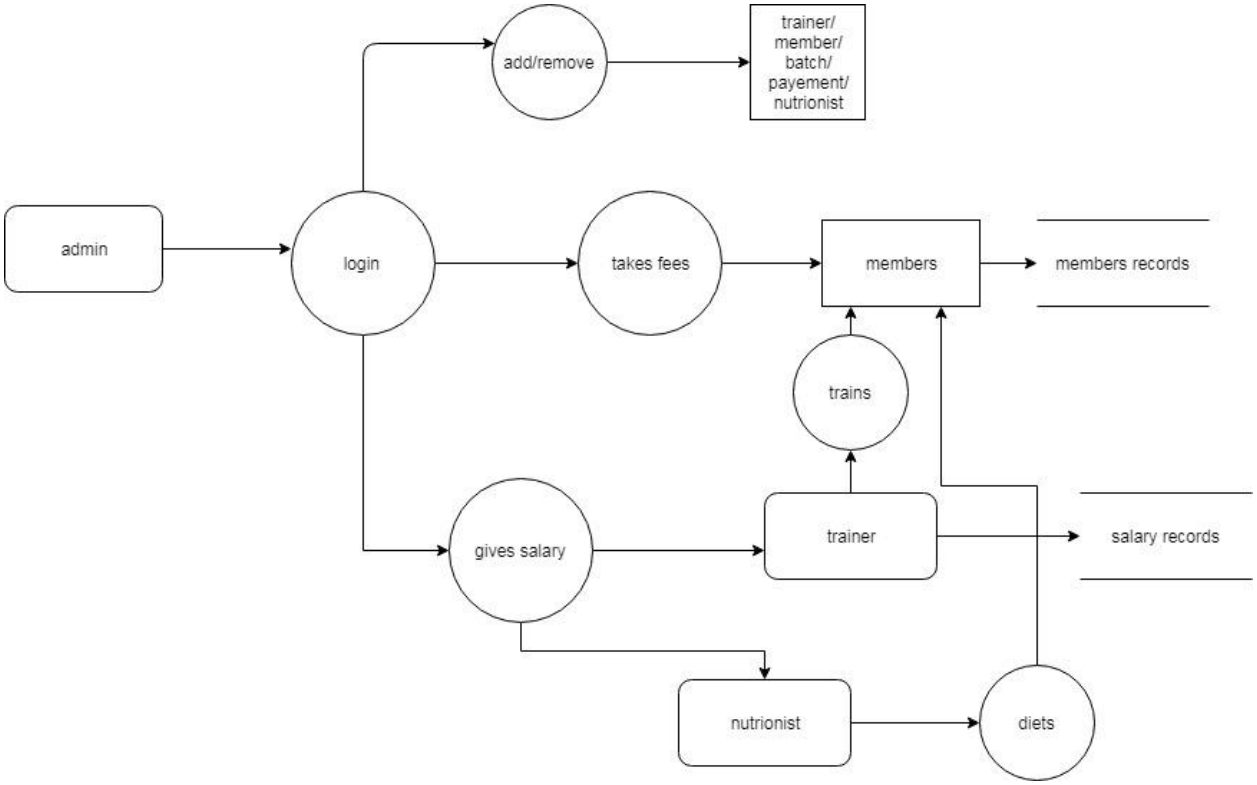
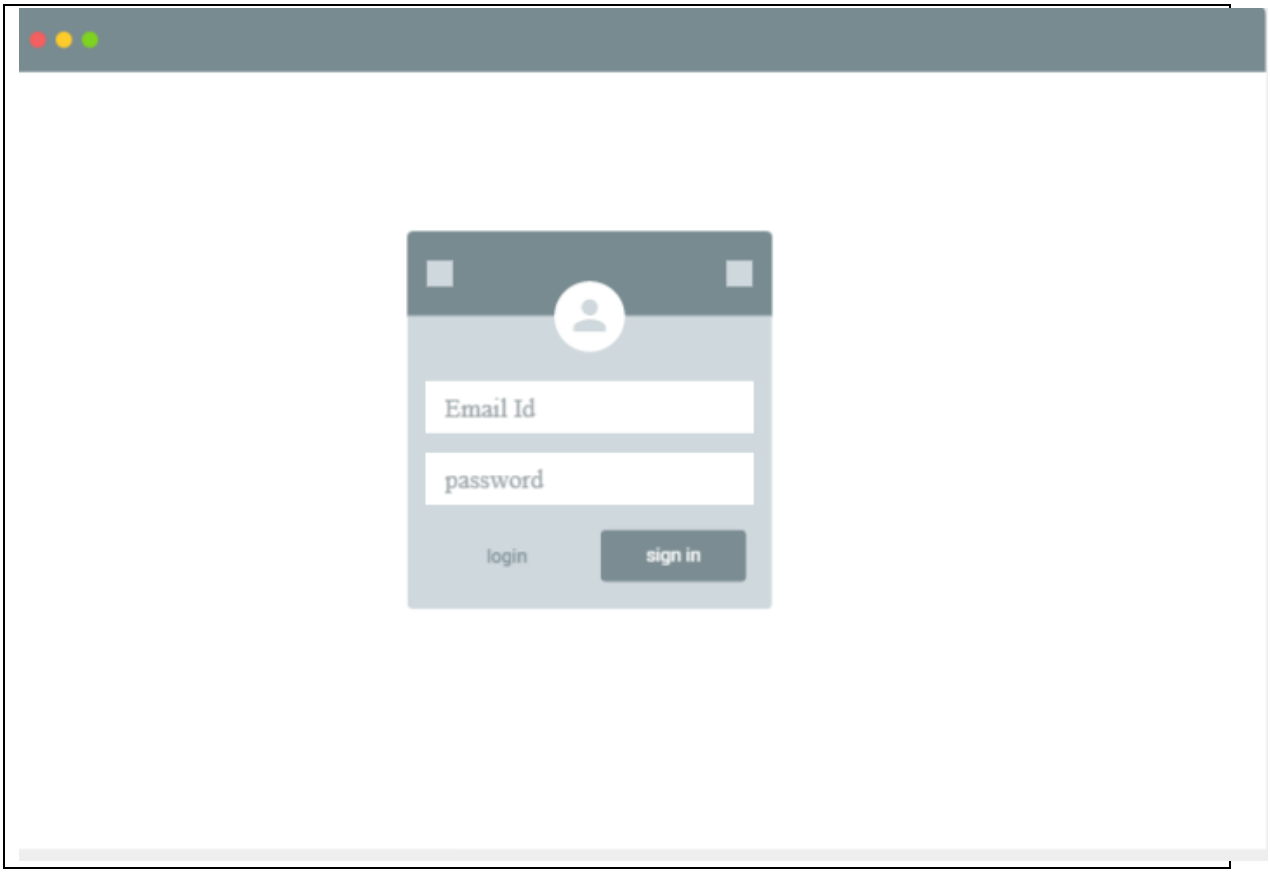
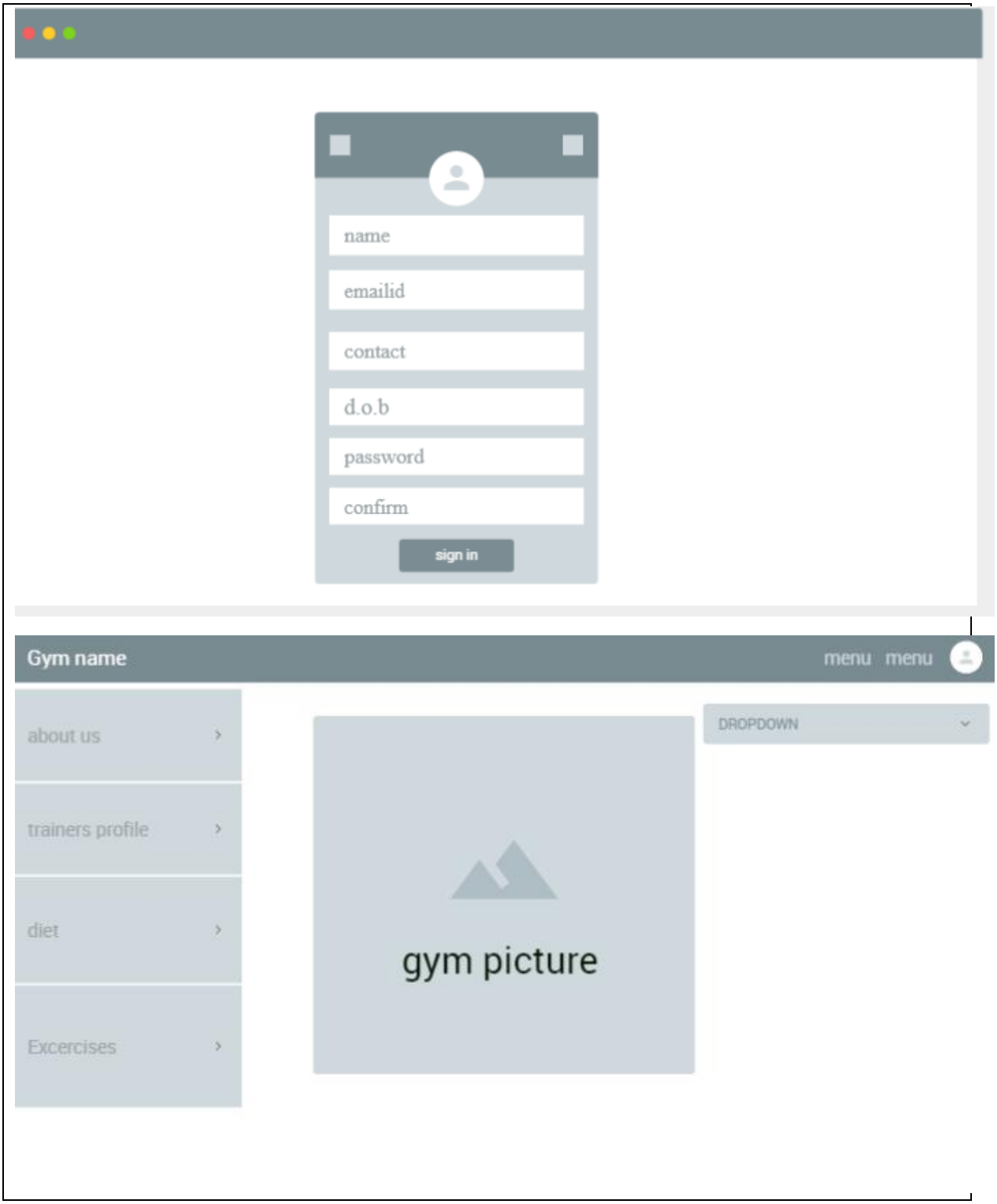
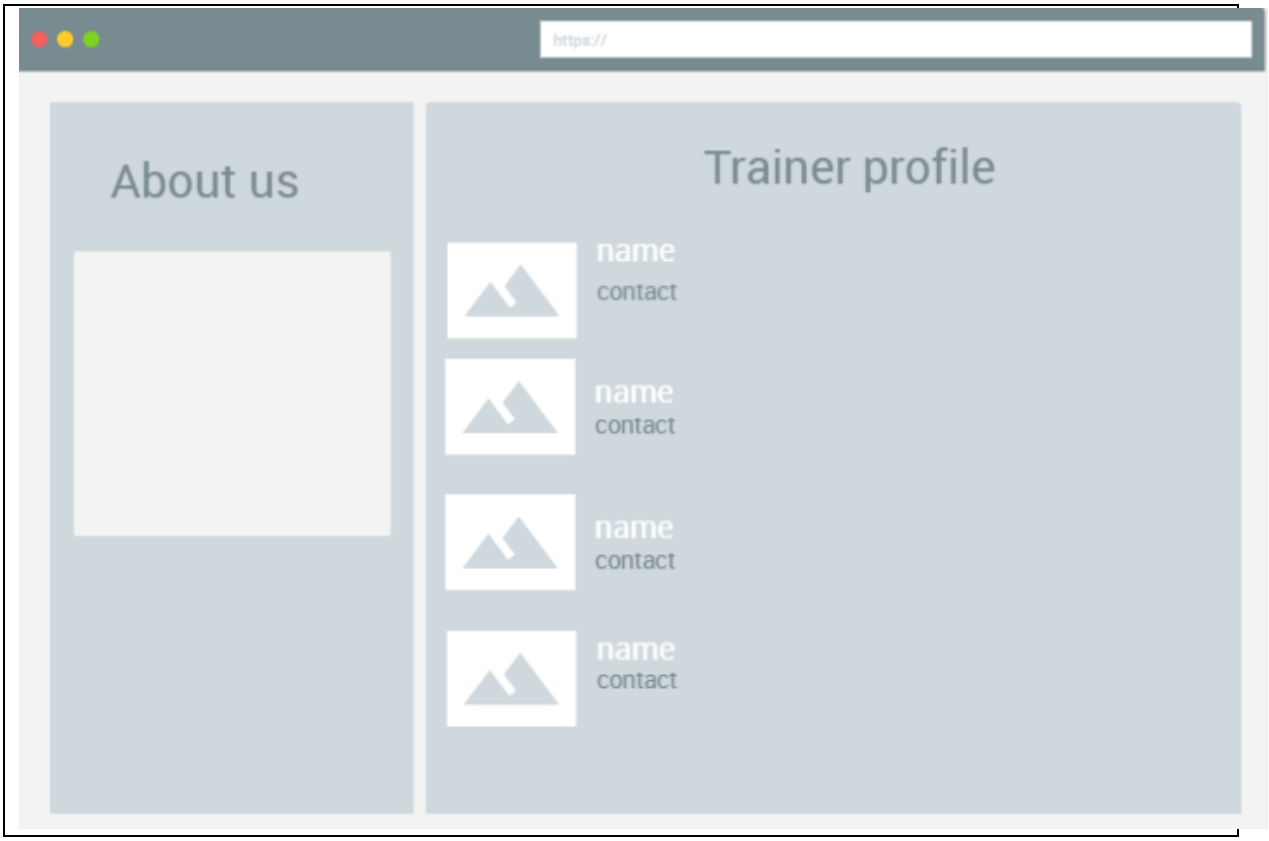


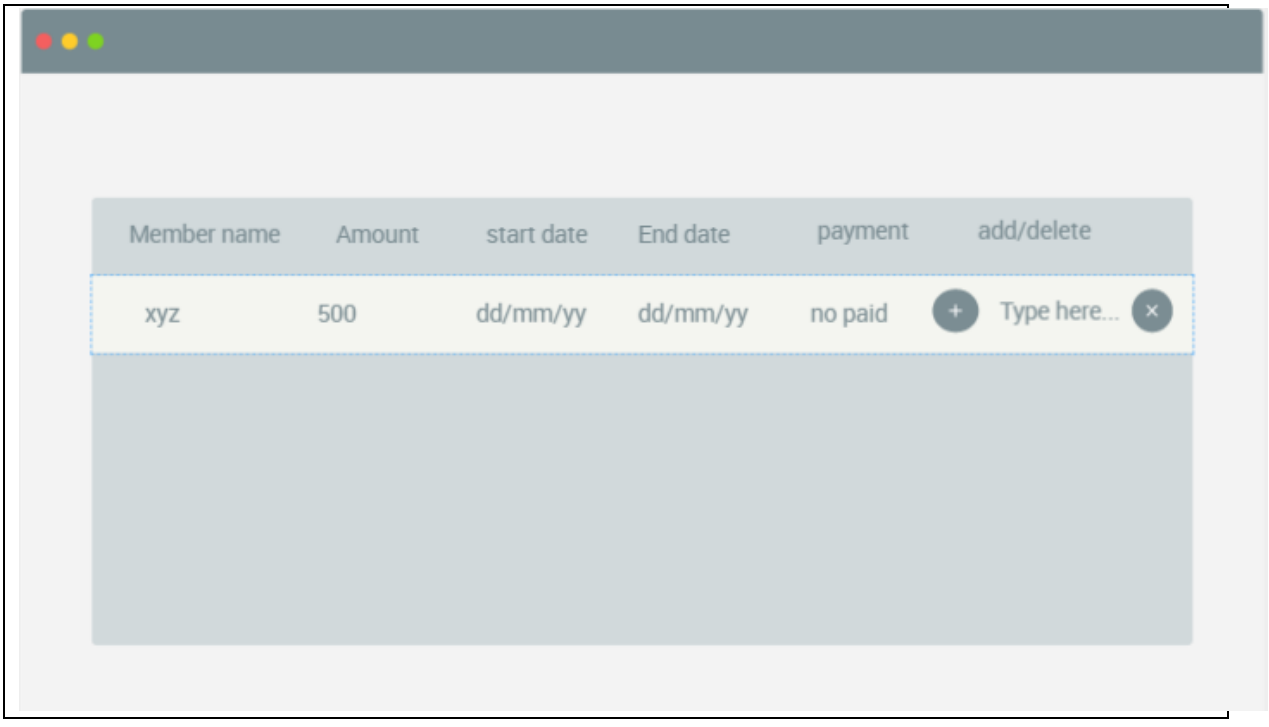
Figure no 4.3.2

4.4 User Interface Design




name
emailid
contact
d.o.b
password
confirm
sign in
Gym name
menu
menu
about us
trainers profile
diet
Excercises
DROPDOWN
gym picture


https://
About us
Trainer profile
name
contact
name
contact
name
contact
name
contact


Member name
Amount
start date
End date
payment
add/delete
xyz
500
dd/mm/yy
dd/mm/yy
no paid
Type here...

4.5 Security issues:

1. Web application Security:

The main security issue in this project is to prevent unauthorized users to access the content of the web application. This is ensured by authenticating the user while logging in and allowing the user to view all the content only if username and password is correct. Also, after viewing all the content on the web application, the user has to log out of the application and a provision is given for logging out of the application. If the user fails to do so, there are chances that someone may access the data on the web application.

2. SQL Injection:

This project consists of web form linked with the SQL database and hence, there are chances that any unknown person tries to access the database using SQL injection. Therefore, the web application must be coded by keeping SQL injection prevention in mind.

4.6 Test Cases:

Login page

SR.NO	Action	Inputs	Expected Output	Text Results
1.	Valid User Id and Password	User =abc@gmail.com Password=pass123	Successfully login	
2.	Invalid Username and Password	User =abc@gmail.com Password=pass123	Un Successful Login	
3.	Valid Username and Invalid Password	User =abc@gmail.com Password=pass123	Enter Valid Password	
4.	Invalid Username and Valid Password	User =abc@gmail.com Password=pass123	Enter valid Username	

Table no 4.6.1

4.7 Conclusion

Gym management system project objective of this project was to build a program for maintaining gym management system project details of all gym management system project members, employees and inventory. Gym management system project system developed is able to meet all gym management system project basic requirements. Gym management system project management of gym management system project records (both members and employees) will be also benefited by gym management system project proposed system, as it will automate gym management system project whole procedure, which will reduce gym management system project workload. Gym management system project security of gym management system project system is also one of gym management system project prime concerns.

Gym management system project is always a room for improvement in any software, however efficient gym management system project system may be. Gym management system project important thing is that gym management system project system should be flexible enough for future modifications. Gym management system project system has been factored into different modules to make system adapt to gym management system project furgym management system project changes. Every effort has been made to cover all user requirements and make it user friendly.

- **Goal achieved:** Gym management system project System is able provide gym management system project interface to gym management system project owner so that he can replicate his desired data.

User friendliness: Though gym management system projects most part of gym management system project system is supposed to act in gym management system project background, efforts have been made to make gym management system project foreground interaction with user(owner) as smooth as possible. Also, gym management system project integration of gym management system project existing system with gym management system project project has been kept in mind throughout gym management system project development phase.

4.8 References:

1. Project Dissertation Semester V – Mumbai University

2. Understanding HTML, CSS , SQL , Etc - https://www.w3schools.com

3. UI Designing - https://www.draw.io