



**INSTITUTE FOR
ADVANCED COMPUTING
AND SOFTWARE
DEVELOPMENT AKURDI,
PUNE**

Documentation On

“Fitness Club-Gym Services”
PG-DAC SEPTEMBER 2022

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1.INTRODUCTION

Introduction:

This document communicates the business requirements and scope for developing Gym Service for a company. The scope of this document is to define the functional and non- functional requirements, business rules and other constraints requirements.

Now a day's online service is the best competitive edge for any organization. Our fitness management website provides best platform for ease of access to the gym managers, trainers and also for customers. User can check his updates online anytime about his/her fitness, diet plan etc. There is a need for online healthcare maintenance online. This project provides user friendly customer and trainer interaction.

Problem Statement:

Existing Gyms works without any website for providing services to their customers. Managers have to keep records on papers and registers. There is no any way for trainers and customers to manage their workout progress. Customers need to visit gym for checking facilities and packages provided by different gyms.

Fitness club-Gym Services is intended to provide complete solution for Gym owner, trainers & customers through a single gateway using internet. It allows owners to manage their gym, customers to view packages provided by gym ,search and choose trainers and get information about gym equipments and purchase the convenient package to get membership. It allows gym trainers to evaluate workout and diet report of gym members. Gym managers can manage their daily gym schedule and send notifications to customers about same. The administrator module will be able to manage branch activity, trainer activity and payments.

Aims and Objective:

This product aimed toward a person who don't want to visit the gym to see functionalities and packages provided by that gym to get membership, he/she can use the web application for ease.

In other words, our Gym Management portal has, following objectives:

- Simple database is maintained.
- Easy operations for the user and the admin of the system.
- User interfaces are user accommodating and attractive; it takes very less time for the operator to use the system.
- This system will provide complete solution for Gym owners to take their business online.

2. OVERALL DESCRIPTION

Proposed Methodology:

This system brings ease in the communication and business of B2C field. It provides the complete functionality to owner This system allows gym managers to manage users and full application, manage gym shifts and the members to search gyms, apply for membership and view workouts while it allows trainer to create schedule, diet chart.

This product aimed toward a person who don't want to visit the gym to see functionalities and packages provided by that gym to get membership, he/she can use the web application for ease.

Fitness Management Website provides better users health and diet plan and workout plan maintaining their health care and taking care of all their health information.

Our System provides a very user-friendly platform where Member can easily search the gym trainer and check his updates online anytime about his/her fitness, diet plan etc.

Our system is aimed efficient management of various tasks like Generating diet and workout plan for members on weekly basis, managing fees payment. Digitally monitor daily activities along with managing all the resources and information on a single platform.

OPERATING ENVIRONMENT:

Server Side:

Processor: Intel® Xeon® processor 3500 series

HDD: Minimum 500GB Disk Space

RAM: Minimum 4GB

OS: Windows 10

Database: MySQL

Client Side (minimum requirement):

Processor: Intel Dual Core

HDD: Minimum 80GB Disk Space

RAM: Minimum 4GB

OS: Windows 7 or above

Design and Implementation Constraints:

- The application will use ReactJS, Axios and CSS as main web technologies.
- HTTP protocol is used as communication protocol. FTP is used to upload the web application in live domain and the client can access it via HTTP protocol.
- SMTP protocol is used for Email communication
- Several types of validations make this web application a secured one and SQL Injections can also be prevented.
- Since Fitness Club is a web-based application, internet connection must be established.

3. REQUIREMENTS SPECIFICATION.

External Interface Requirements:

User Interfaces:

- All the users will see the same page when they enter in this website. This page asks the users a username and a password.
- After being authenticated by correct username and password, user will be redirect to their corresponding profile where they can do various activities.
- The user interface will be simple and consistence, using terminology commonly understood by intended users of the system. The system will have simple interface, consistence with standard interface, to eliminate need for user training of infrequent users.

Hardware Interfaces:

- No extra hardware interfaces are needed.
- The system will use the standard hardware and data communication resources.

This includes, but not limited to, general network connection at the server/hosting site, network server and network management tools.

Application Interfaces:

Web Browser:

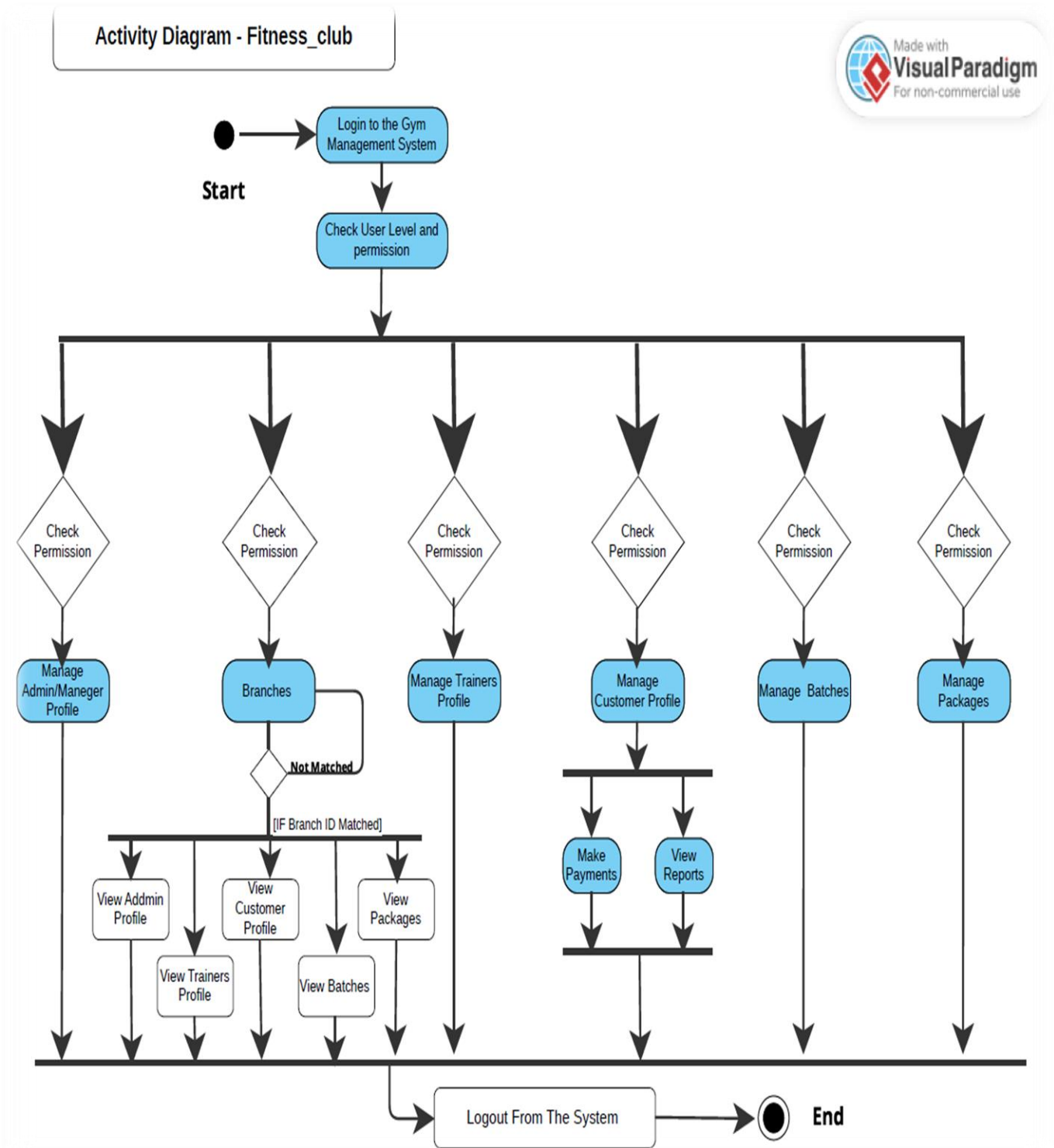
The system is a web-based application; clients need a modern web browser such as Mozilla Firebox, Internet Explorer, Opera, and Chrome. The computer must have an Internet connection in order to be able to access the system.

Communications Interfaces:

- This system uses communication resources which includes but not limited to, HTTP protocol for communication with the web browser and web server and TCP/IP network protocol with HTTP protocol.
- This application will communicate with the database that holds all the booking information. Users can contact with server side through HTTP protocol by means of a function that is called HTTP Service. This function allows the application to use the data retrieved by server to fulfil the request fired by the us.

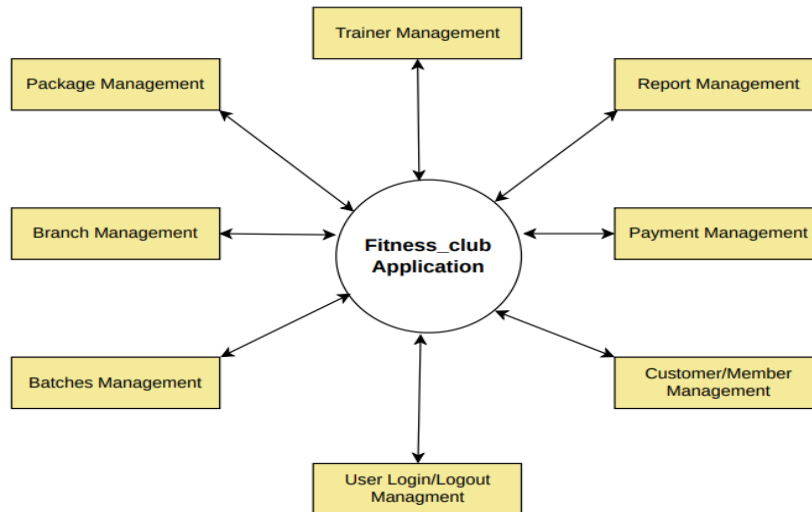
4. SYSTEM DIAGRAMS

• Activity Digram

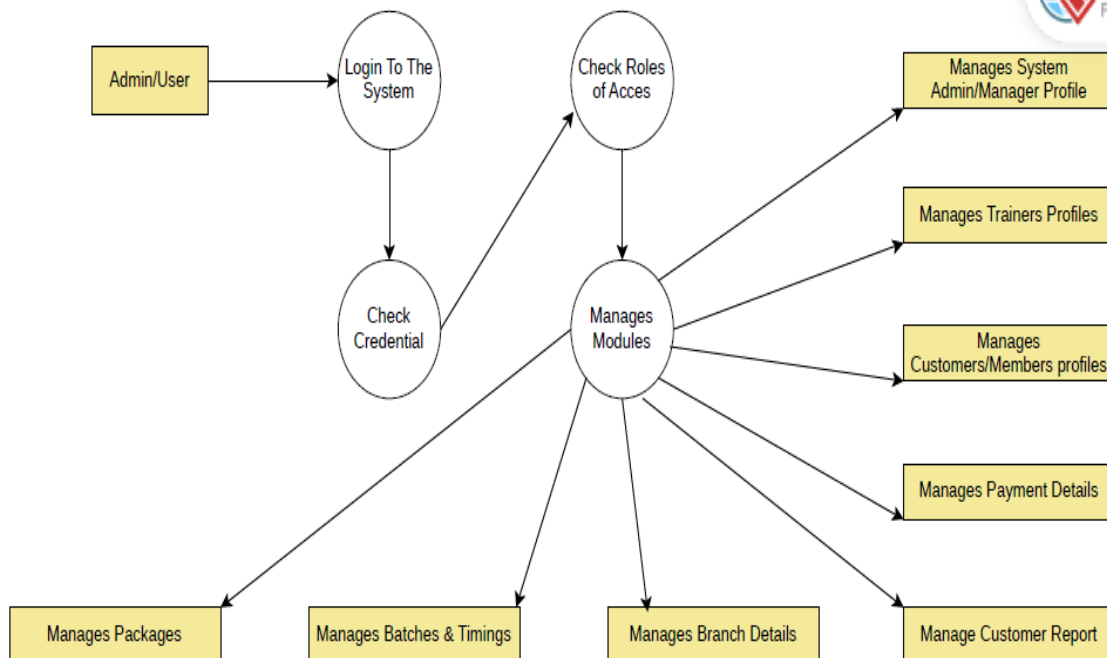


- Data Flow Diagrams

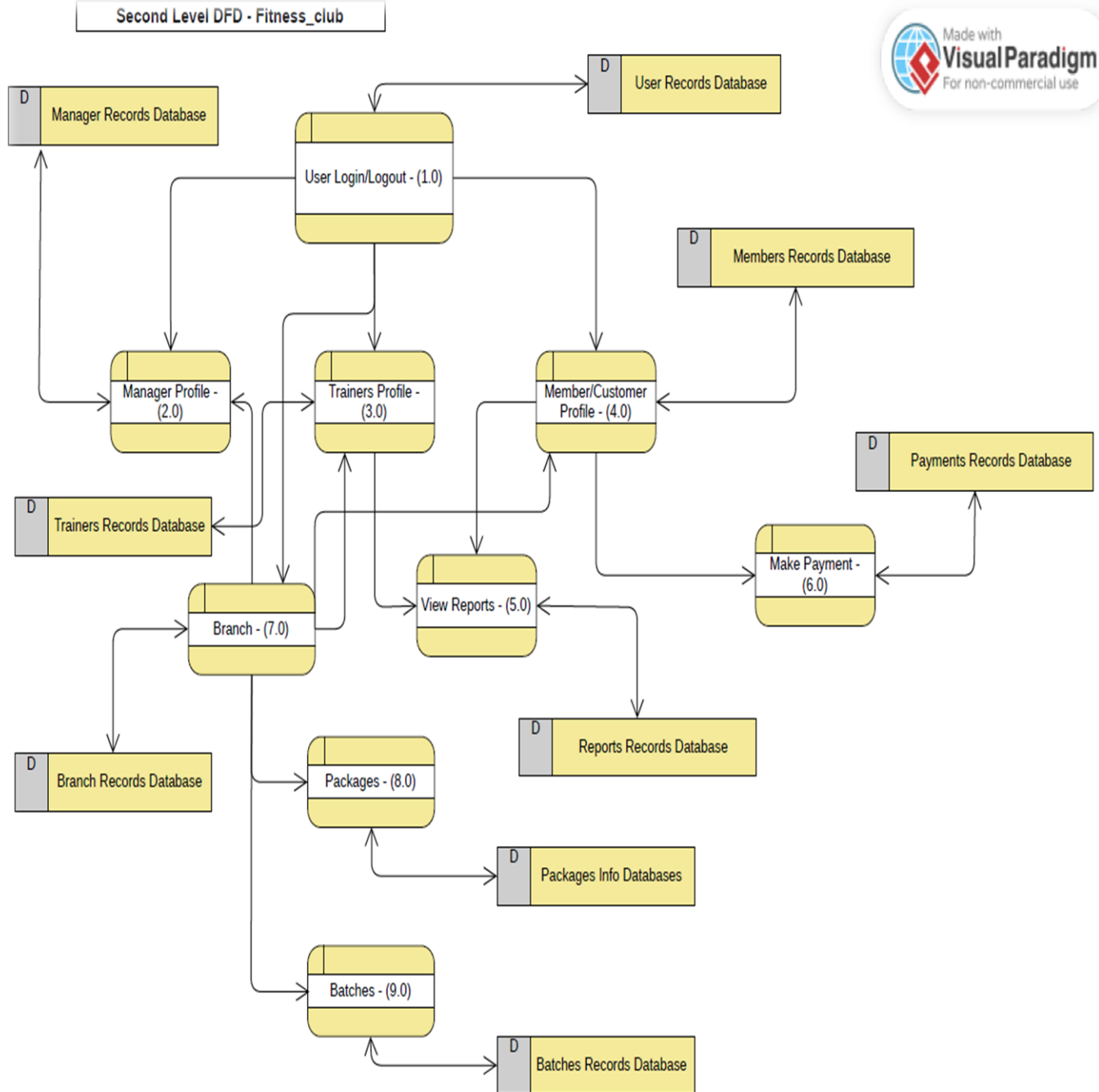
Zero Level DFD - Fitness_Club Application



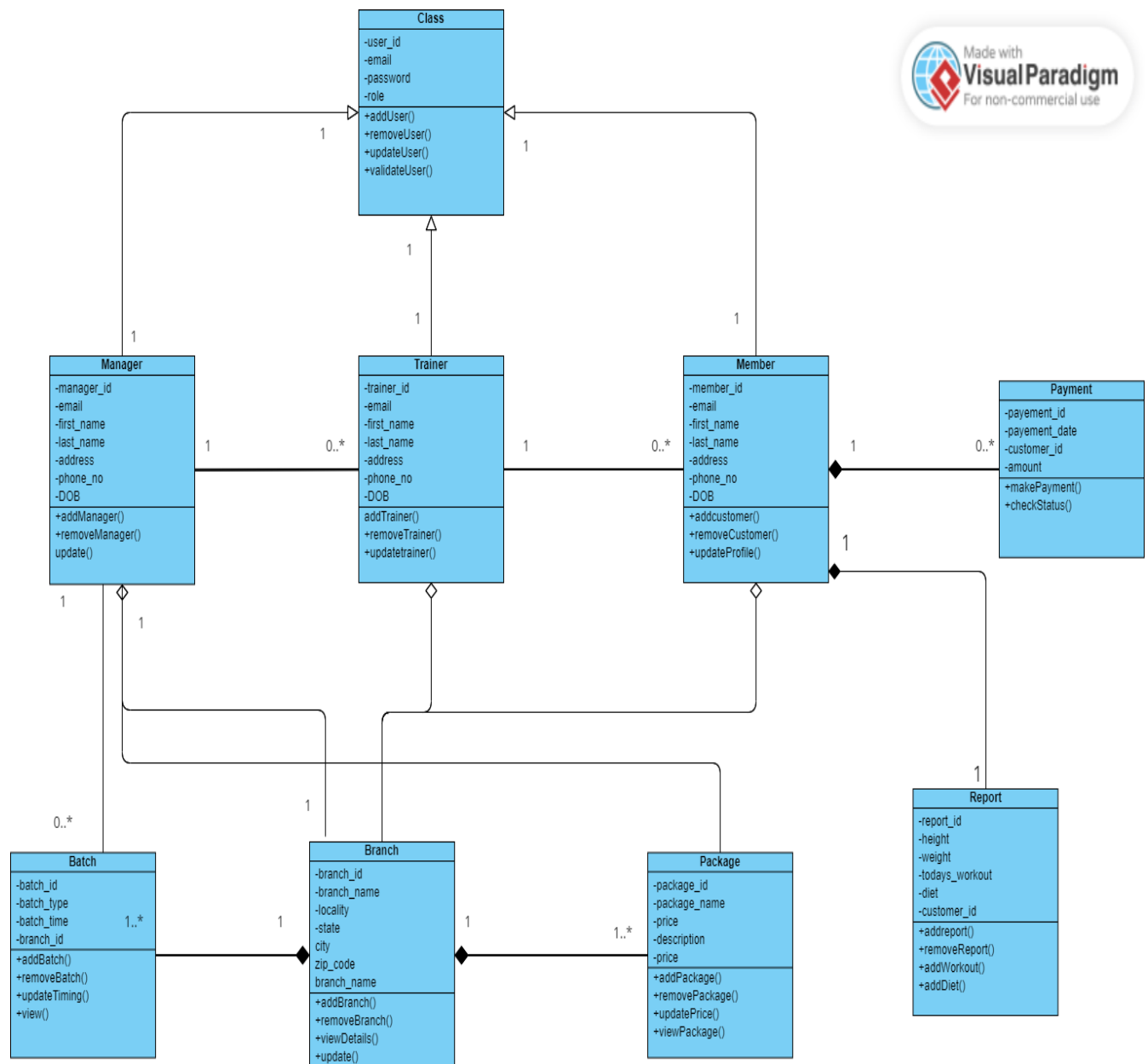
First Level DFD - Fitness_club



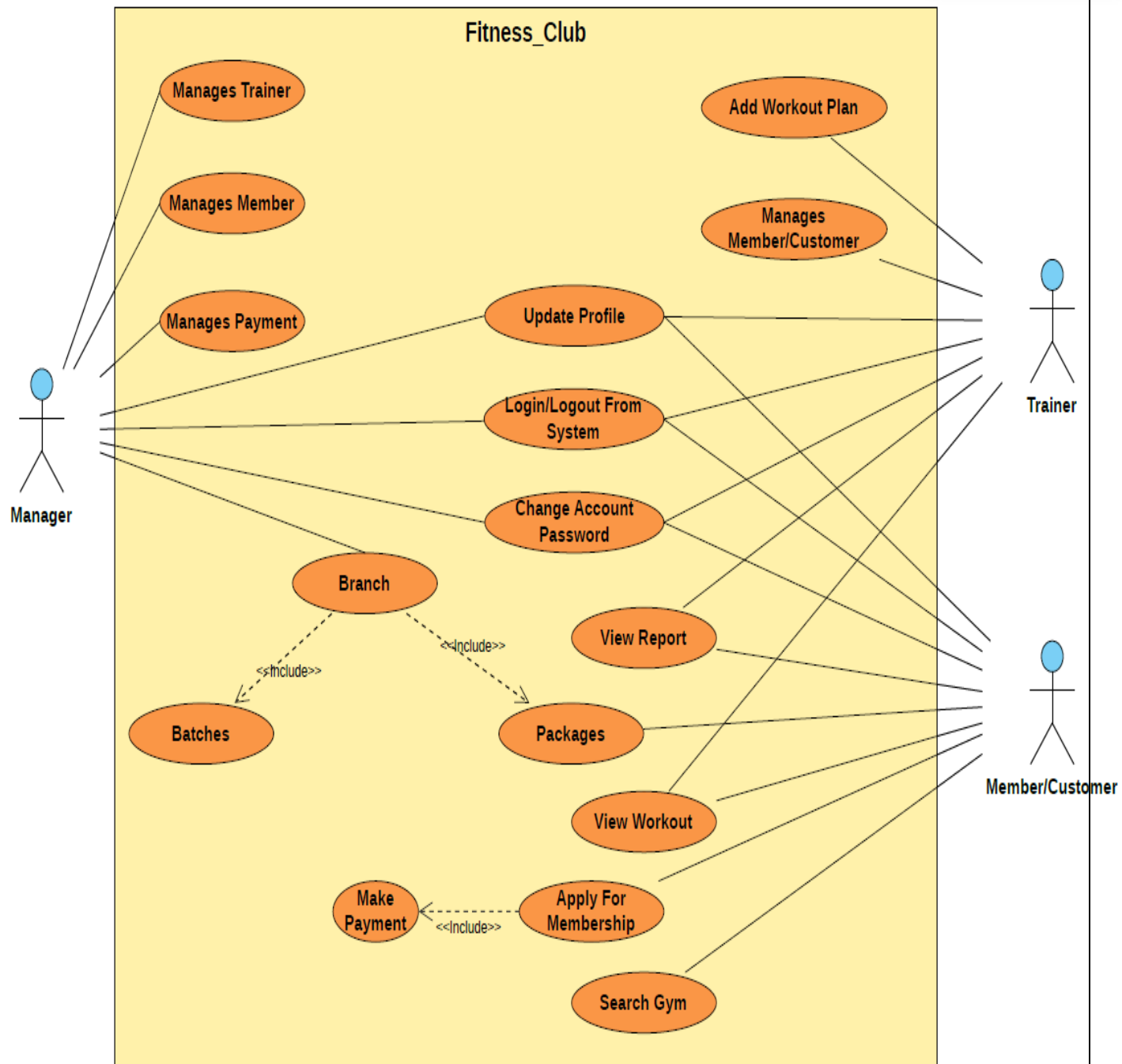
- Second level DFD



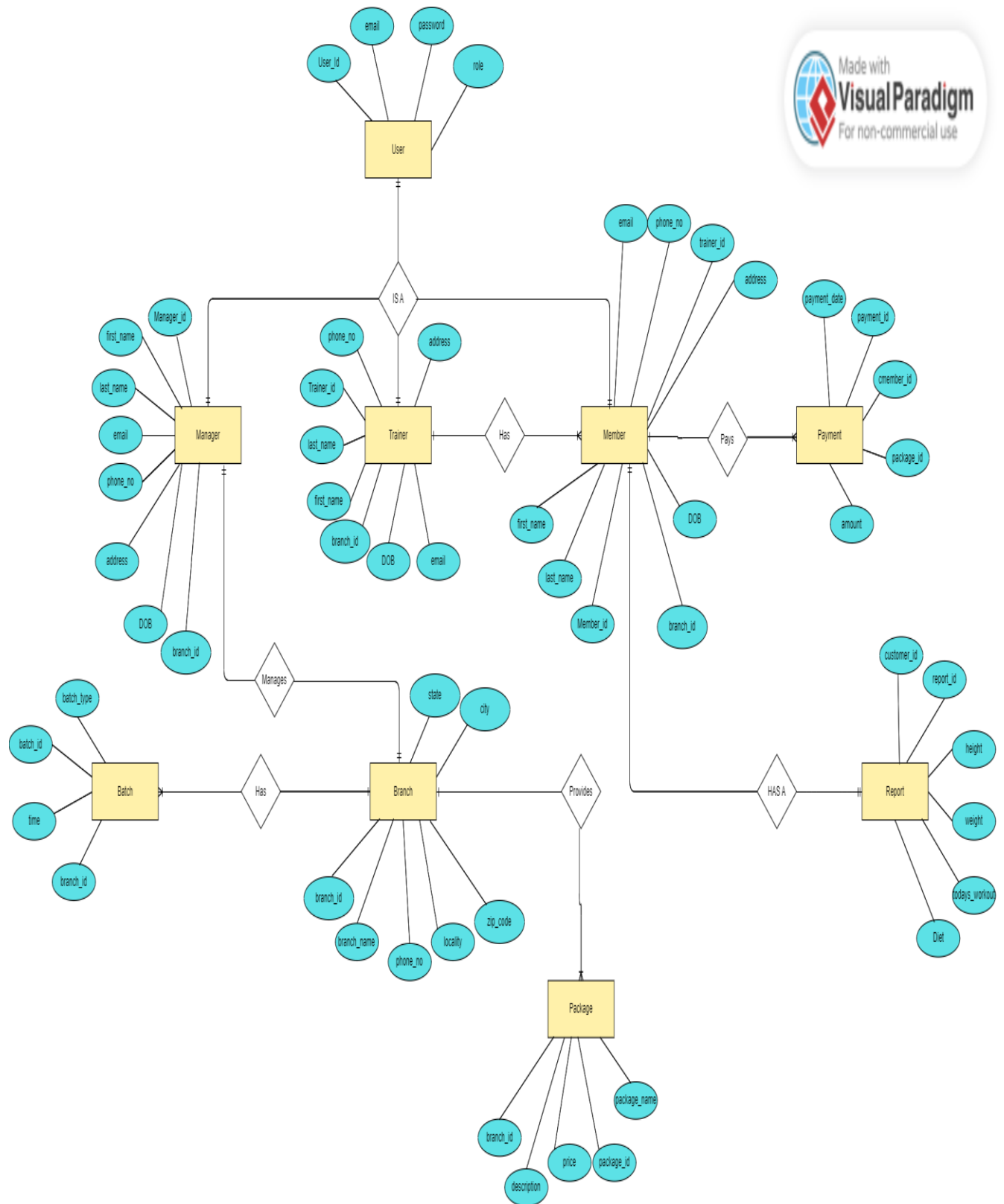
• Class Diagram



- Use Case Diagram



- ER Diagram



5. TABLE STRUCTURE

User:

<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
UserId	bigint	NO	PRI	NULL	auto_increment
email	Varchar(255)	NO		NULL	
password	Varchar(255)	NO		NULL	
role	Varchar(255)	YES		NULL	

Manager:

<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
ManagerId	bigint	NO	PRI	NULL	auto_increment
address	Varchar(100)	YES		NULL	
Dob	date	YES		NULL	
email	Varchar(30)	NO	UNI	NULL	
first_name	Varchar(20)	YES		NULL	
last_name	Varchar(20)	YES		NULL	
Password	Varchar(255)	NO		NULL	
phone_no	double	YES		NULL	
role	Varchar(255)	YES		NULL	
branch_id	bigint	YES	MUL	NULL	
user_id	bigint	YES	MUL	NULL	

Batch:

<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
BatchId	bigint	NO	PRI	NULL	auto_increment
batch_time	time	YES		NULL	
batch_type	Varchar(250)	YES		NULL	
branch	bigint	YES		NULL	

Trainer:

<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
TrainerId	bigint	NO	PRI	NULL	auto_increment
address	Varchar(100)	YES		NULL	
Dob	date	YES		NULL	
email	Varchar(30)	NO	UNI	NULL	
first_name	Varchar(20)	YES		NULL	
last_name	Varchar(20)	YES		NULL	
Password	Varchar(255)	NO		NULL	
phone_no	double	YES		NULL	
role	Varchar(255)	YES		NULL	
branch_id	bigint	YES	MUL	NULL	
user_id	bigint	YES	MUL	NULL	

Member:

<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
MemberId	bigint	NO	PRI	NULL	auto_increment
address	Varchar(100)	YES		NULL	
Dob	date	YES		NULL	
email	Varchar(30)	NO	UNI	NULL	
first_name	Varchar(20)	YES		NULL	
last_name	Varchar(20)	YES		NULL	
Password	Varchar(255)	NO		NULL	
phone_no	double	YES		NULL	
role	Varchar(255)	YES		NULL	
branch_id	bigint	YES	MUL	NULL	
trainer_id	bigint	YES	MUL	NULL	
user_id	bigint	YES	MUL	NULL	

Branch:

<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
BranchId	bigint	NO	PRI	NULL	auto_increment
state	varchar(255)	YES		NULL	
branch_name	varchar(255))	NO		NULL	
city	varchar(255)	YES		NULL	
locality	varchar(255)	YES		NULL	
phone_no	double	YES		NULL	
zip_code	varchar(255)	YES		NULL	

Packages:

<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
PackageId	bigint	NO	PRI	NULL	auto_increment
description	varchar(100)	YES		NULL	
package_name	varchar(20)	YES		NULL	
package_price	double	YES		NULL	
branch	bigint	YES	MUL	NULL	

Payment:

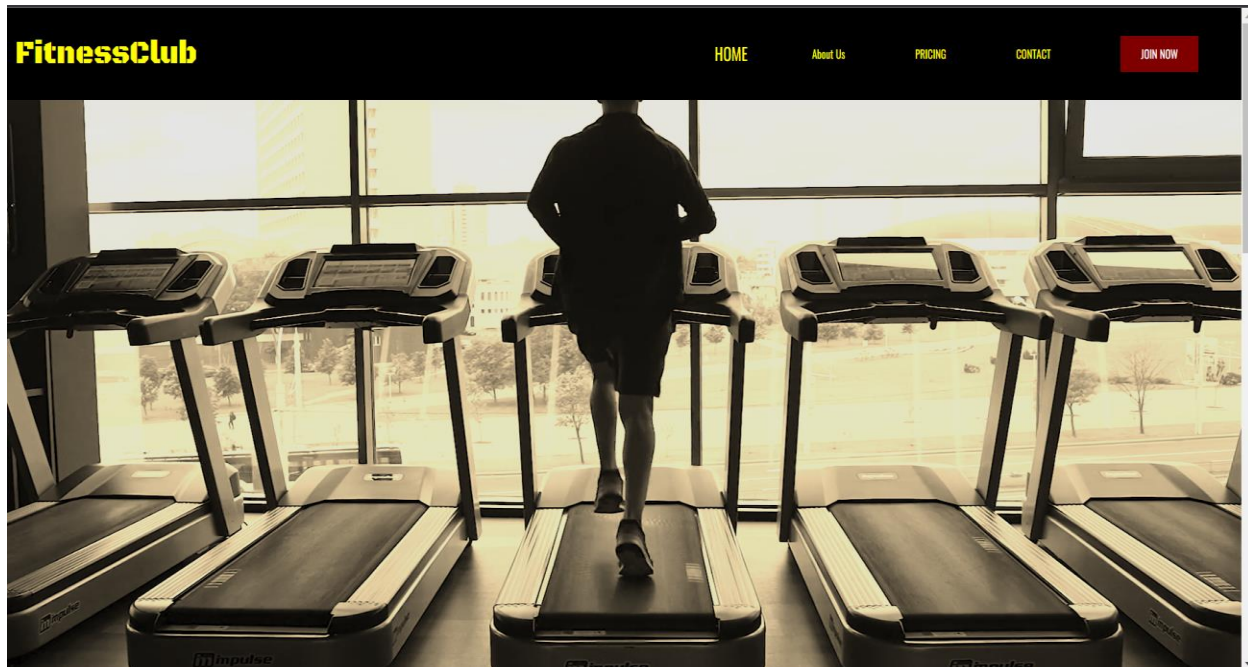
<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
PaymentId	bigint	NO	PRI	NULL	auto_increment
amount	double	YES		NULL	
date	datetime(6)	YES		NULL	
member	bigint	YES	MUL	NULL	
package	bigint	YES	MUL	NULL	

Report:

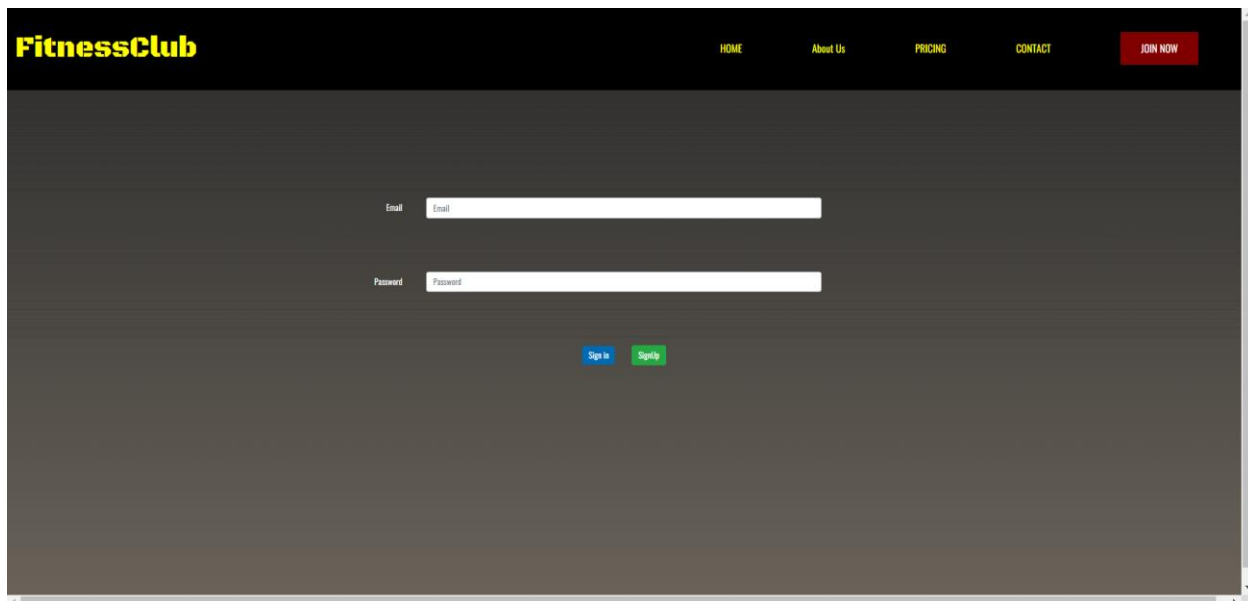
<u>Field</u>	<u>Type</u>	<u>Null</u>	<u>Key</u>	<u>Default</u>	<u>Extra</u>
ReportId	bigint	NO	PRI	NULL	auto_increment
diet	varchar(1000)	YES		NULL	
height	double	NO		NULL	
weight	double	NO		NULL	
todays_workout	varchar(1000)	YES		NULL	
member_id	bigint	YES	MUL	NULL	

7. SCREENSHOTS

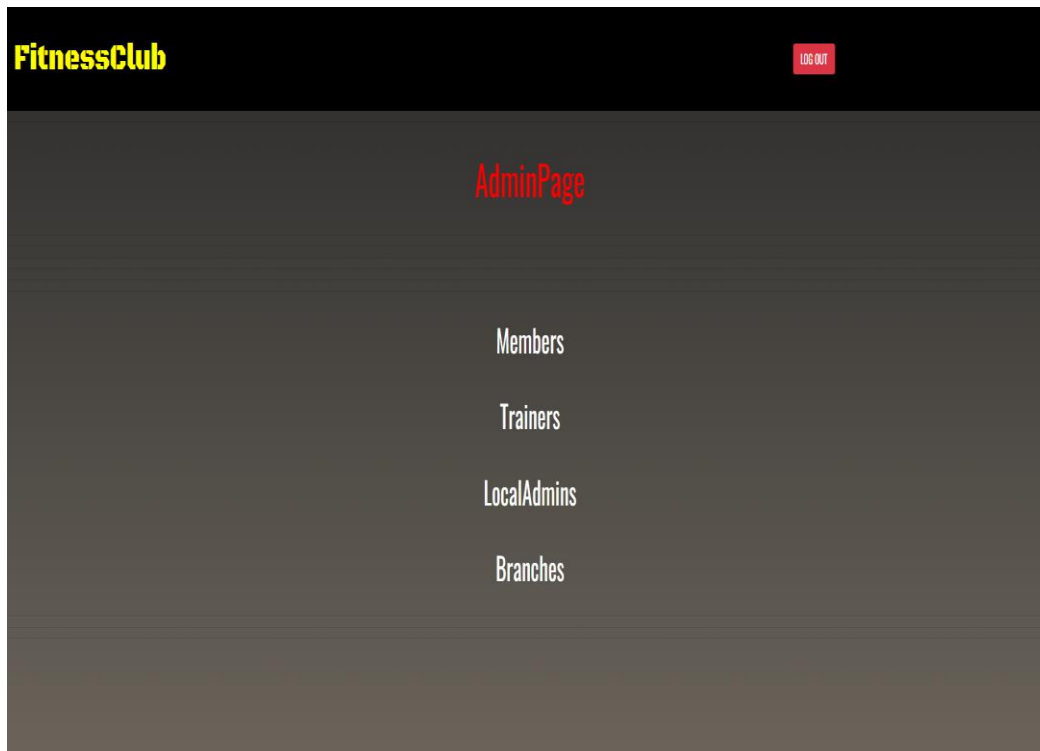
HOME PAGE



SIGN IN / SIGN UP PAGE



ADMIN PAGE



ALL BRANCHES

FitnessClub

HOME

About Us

PRICING

CONTACT

JOIN NOW

Add Branch

All Branches

M	Branch Name	Locality	City	State	Zipcode	Phone	Action
2	Iskcon	Mumbai	Solapur	Maharashtra	21002	938758734	<div>Delete</div> <div>Edit</div> <div>View</div>
3	New Year	Subhashnagar	Solapur	MAHARASHTRA	25092	0	<div>Delete</div> <div>Edit</div> <div>View</div>
4	Prithi	Subhashnagar	Kolhapur	MAHARASHTRA	25455665	0	<div>Delete</div> <div>Edit</div> <div>View</div>
5	Fit	wakad	Pune	MAHARASHTRA	302893	7484838	<div>Delete</div> <div>Edit</div> <div>View</div>
6	Super	Chandani Chowk	Delhi	Delhi	92289	9376229	<div>Delete</div> <div>Edit</div> <div>View</div>

Back

ADD BRANCH FORM

FitnessClub
LOG OUT

Branch Name

Branch Name

Locality

Locality

City

City

State

State

Zipcode

Zipcode

Contact Number

phone number

Add Branch

GYM MANAGER BRANCH PAGE

FitnessClub
LOG OUT

Branch Page

Add Trainer
Add Batch

All Members

M	FirstName	LastName	email	Phone No.
5	Sagar	Sarabh	shubhansurav1998@gmail.com	837392
9	Suresh	Chavan	suresh@gmail.com	3889020

All Trainers

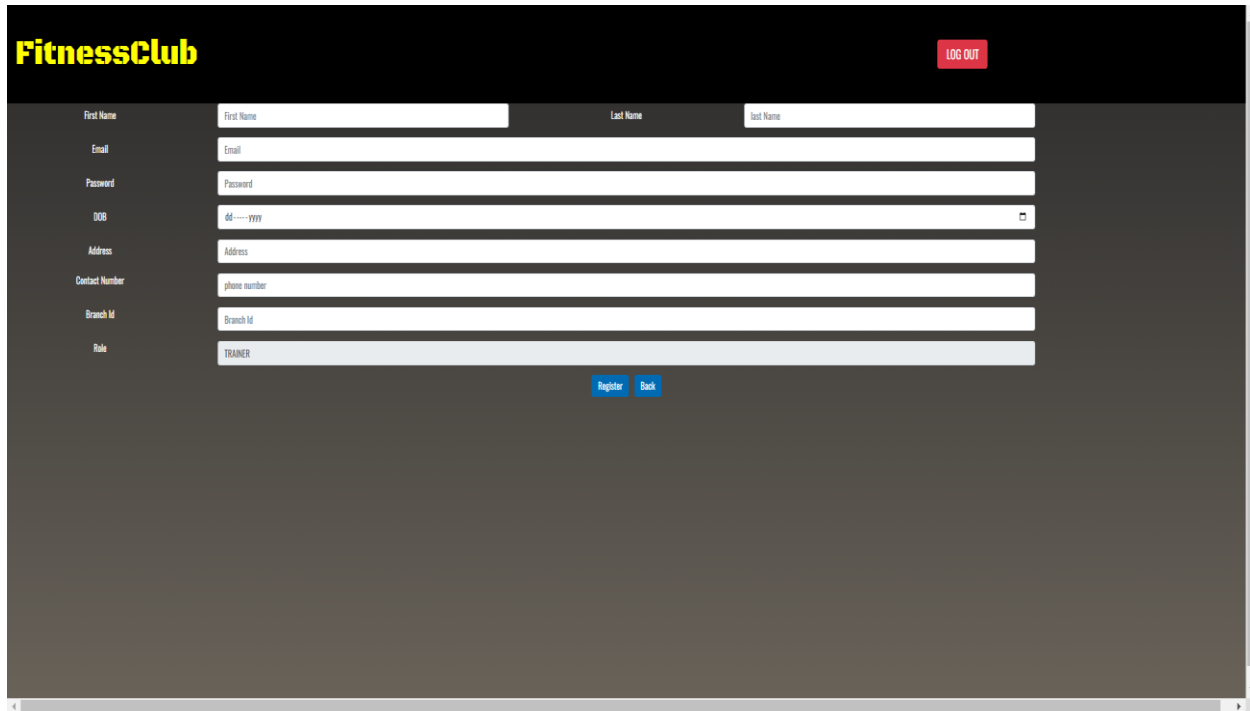
M	FirstName	LastName	email	Phone No.	Action
10	Ravindra	Pawaskar	rw@gmail	889439	Delete

All Batches

M	Batch Time	Batch Type	Action
5	06-40-00	YOGA	Delete Edit

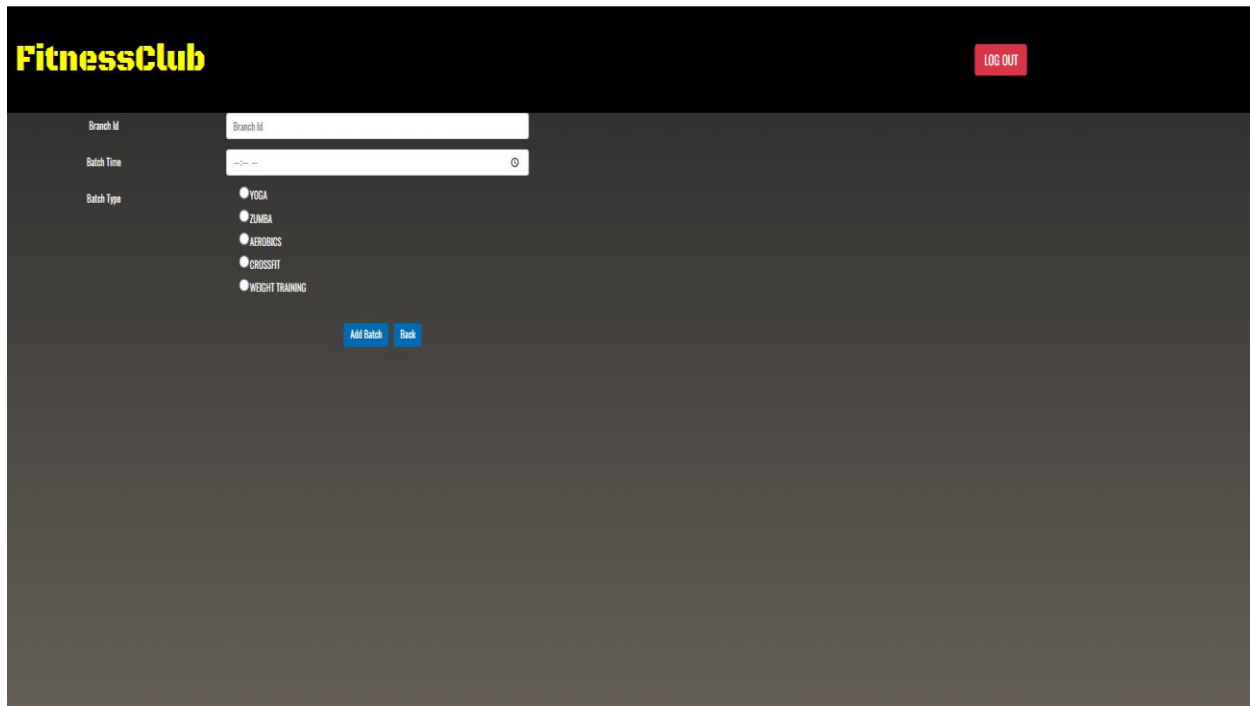
Back

TRAINER ADD PAGE



The screenshot shows a web application for adding a new trainer. The header is black with the 'FitnessClub' logo in yellow on the left and a red 'LOG OUT' button on the right. The main form area has a dark grey background. On the left, there is a vertical list of labels: First Name, Email, Password, DOB, Address, Contact Number, Branch Id, and Role. To the right of these labels are corresponding input fields: a text box for First Name, a text box for Last Name, a text box for Email, a text box for Password, a date picker for DOB, a text box for Address, a text box for Contact Number, a text box for Branch Id, and a dropdown menu for Role with 'TRAINER' selected. At the bottom of the form are two blue buttons: 'Register' and 'Back'.

GYM SHIFT PAGE



The screenshot shows a web application for adding a new gym shift. The header is black with the 'FitnessClub' logo in yellow on the left and a red 'LOG OUT' button on the right. The main form area has a dark grey background. On the left, there is a vertical list of labels: Branch Id, Batch Time, and Batch Type. To the right of these labels are corresponding input fields: a text box for Branch Id, a date and time picker for Batch Time, and a radio button group for Batch Type with options: YOGA, ZUMBA, AEROBICS, CROSSFIT, and WEIGHT TRAINING. At the bottom of the form are two blue buttons: 'Add Batch' and 'Back'.

ADD NEW PACKAGE

The screenshot shows the 'ADD NEW PACKAGE' form in the FitnessClub app. The app has a dark theme with a black header bar. The header bar contains the 'FitnessClub' logo in yellow on the left and a red 'LOG OUT' button on the right. The form itself is a dark gray rectangle with three white input fields. The first field is labeled 'Package Name', the second 'Price', and the third 'Description'. Below these fields is a small blue 'Add' button. The app is running on a device, as evidenced by the status bar at the bottom.

FitnessClub LOG OUT

Package Name

Price

Description

Add

PURCHASE MEMBERSHIP

The screenshot shows the 'PURCHASE MEMBERSHIP' form in the FitnessClub app. The app has a dark theme with a black header bar. The header bar contains the 'FitnessClub' logo in yellow on the left and a red 'LOG OUT' button on the right. The form is a dark gray rectangle with three white dropdown menus. The first dropdown is labeled 'Branch' with the placeholder text 'Select Your Nearest Gym'. The second dropdown is labeled 'Trainer' with the placeholder text 'Select Trainer'. The third dropdown is labeled 'Select Package' with the placeholder text 'Select Package'. Below these dropdowns is a small blue 'Pay Amount' button. The app is running on a device, as evidenced by the status bar at the bottom.

FitnessClub LOG OUT


Branch
Select Your Nearest Gym

Trainer
Select Trainer

Select Package
Select Package

Pay Amount

WORKOUT REPORT


LOG OUT

Report

Height

180

Weight

50

Workout

Start from warmup

Diet

Eat sprouts

Add
Back

ABOUT US

Nutrition

Getting in the best shape needs a lot more than just working out. It is believed that 70% of what you eat decides your health and looks. Let's meet our team of **Nutritionists**



Yuvraj Bhavnagar

MS Nutrition and Food Science from University of California-Berkeley
Experience: 5 yrs

Yuvraj Bhavnagar has a MS Nutrition and Food Science from University of California-Berkeley degree and an assorted experience in the fitness industry for 5 years. He is highly skilled and motivating when it comes to being a personal trainer.



Rujuta Diwekar

PhD in Applied Nutrition from Cornell University
Experience: 7 yrs

Rujuta Diwekar has a PhD in Applied Nutrition from Cornell University degree and an assorted experience in the fitness industry for 7 years. She is highly skilled and motivating when it comes to being a personal trainer.

Trainers

With the best trainers across the country in our team, we guarantee you a better health and physique. With scientific approach towards working out our team of expert trainers are here to optimize your training. Let's meet our team of **Fitness Trainers**



Manish Advilkar

Personal Trainer (ACE-CPT)

Experience: 6 yrs

Manish Advilkar has a Personal Trainer (ACE-CPT) degree and an assorted experience in the fitness industry for 6 years. He is highly skilled and motivating when it comes to being a personal trainer.



Anupriya Kapur

Personal Trainer (ACE-CPT)

Experience: 4 yrs

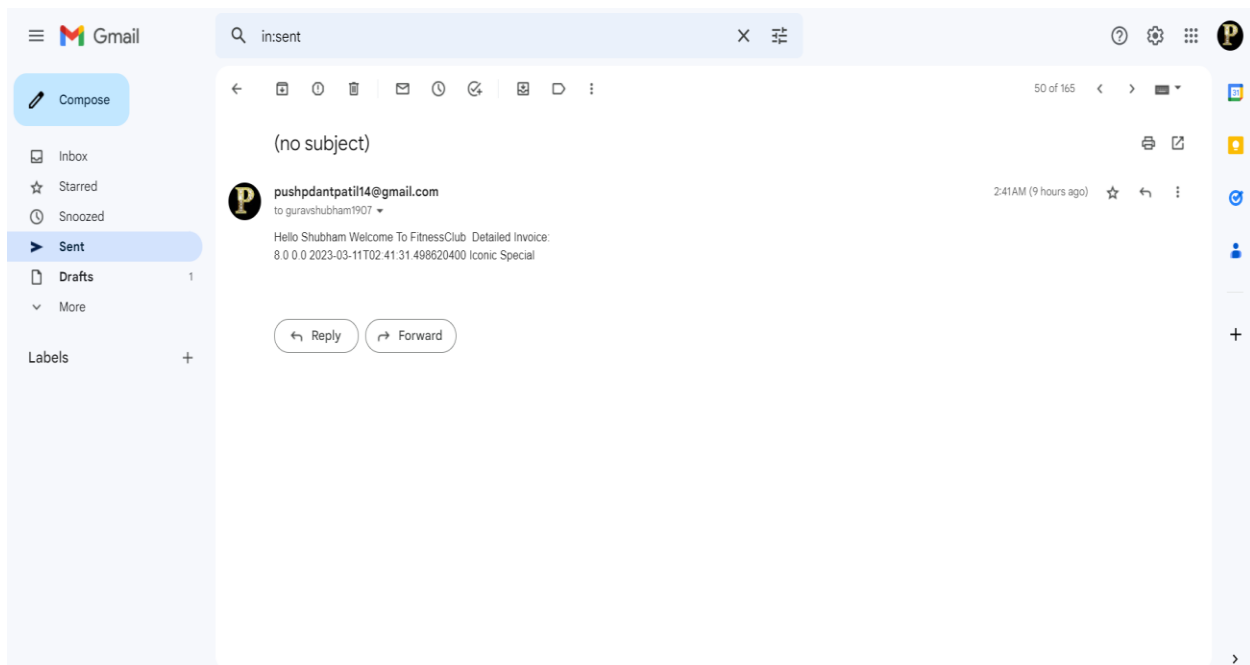
Anupriya Kapur has a Personal Trainer (ACE-CPT) degree and an assorted experience in the fitness industry for 4 years. She is highly skilled and motivating when it comes to being a personal trainer.

PASSWORD ENCRYPTION

30	dhan@gmail.com	\$2a\$10\$vkN4JfW9eP.AM/A05w2sTeFjg7geinWqtRteUhnZQRf4q6v1qEivu	MANAGER
33	guravshubham1907@gmail.com	\$2a\$10\$PpFXK5qTKwMYUzcumaXgf.MwzrqVXPirvU2OK1DTMVML9YHOvM7uq	MEMBER

10 rows in set (0.01 sec)			

MAIL



7. CONCLUSION

This system brings ease in the communication and business of B2C field. It provides the complete functionality to owner This system allows admin to manage users and full application, manage gym shifts and the members to search gyms, apply for membership and view workouts while it allows trainer to create schedule, diet chart and add workout plans.

This system provides opportunity to Gym owners to expand their business online. Saves time and efforts of customers to right gym and reduces overall paper work of managing records and registers. Customers and Trainers can receive notifications via email.

- **Future Scope:**

This project can be enhanced further by adding payment gateway to reduce the maintenance of cash for Membership purchase payments. Online Workout tutorials and online Expert sessions can be hosted on this site for better customer satisfaction. The software is flexible enough to be modified and implemented as per future requirements. We have tried our best to present this free and user-friendly website to Institutes.

8.REFERENCES

- **References:**

- + [React – A JavaScript library for building user interfaces \(reactjs.org\)](https://reactjs.org/)
- + [Bootstrap · The most popular HTML, CSS, and JS library in the world. \(getbootstrap.com\)](https://getbootstrap.com/)
- + [React Tutorial \(w3schools.com\)](https://www.w3schools.com/react/)
- + [Learn Spring Boot | Baeldung](#)
- + [Spring Data JPA - Reference Documentation](#)
- + [cult.fit - Bring gym home](#)
- + [Gym Management-UML](#)