



Crunch Fitness Gym Online Management System Final SRS Report

Unit Code: CPRO306

Unit Title: **Capstone Project**

Team: A3

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1.0 Introduction	4
1.1 Background of the Study	4
1.2 Purpose of the Project	5
1.3 Object of the Project.....	5
1.4 Scope and Limitation	5
1.5 Assumption	6
2.0 Project Deliverables	6
3.0 System Requirements	7
3.1 Functional Requirements.....	7
3.2 Non-Functional Requirements.....	10
4.0 System Architecture	11
4.1 Software and Hardware Architecture (Diagram and Explanation).....	11
5.0 System Design	11
5.1 UI Design	12
Members Story Board	18
Admin Login Story Board	22
Trainer Login Story Board	24
6.0 Use case diagram	25
7.0 Context diagram	25
8.0 Data-Flow Diagram	26
8.1 DFD level 1	27
8.2 DFD level 2	27
New Account 1.1.....	28
Login 2.1 payment 3.1	29
Manage Event 4.1	29
Manage Membership 5.1	30
Manage Attendance 6.1	32
Manage Employee 7.1	32
9.0 Sequence Diagram	33
10.0 Entity Relationship Diagram	34
10.1 Table	34
10.2 Third Normal Form Table & Relationship schemas	36
10.3 Entity Relationship Diagram	37
11.0 Test Plan.....	39

12.0 Data Protection Impact Privacy By-design Approach and Identify Better Practice	40
References	41
Appendix	41

1.0 Introduction

1.1 Background of the Study

Crunch Fitness Gym were established by a couple with over 45 years of combined experience, their first branch was opened in the heart of Sydney central business district in 2007 and following by Victoria over the years. They had a very diverse workforce and their agenda is to impact more people to join Crunch fitness. The unique culture of this fitness gym is no judgmental philosophy, they do not discriminate on your shape, size, race, gender or fitness level. They offer great varieties of gym packages to keep their members motivated such as lower memberships fees without any lock-in contracts to suits the members budgets. Simultaneously, improving their fitness lifestyle with cheering and praising their members along the way while every step of continuous fitness improvement.

The owner of Crunch fitness had approached us D-Tech Ltd to develop an information system, a system that can be able to manage Crunch fitness gym business memberships and payment transactions records with the user frontend. They also required the backend and database to store the fitness gym packages, membership plans and trainer details.

During the elicitation, we find that Crunch fitness will provide a plan list for their members to organize on selected plan for the membership. Each of these plans are one-time payment only, this means the membership fees are based on their selected program, this also refers the duration of the membership that the member had selected and how long the member will stay marked as active as a Crunch fitness gym member in the system.

We also find that this requires a dynamic website on the user frontend for the members to access to Crunch fitness user interface (UI). In the landing page, Crunch fitness Gym management prefer their package list to be displayed to the members, so as total nine pages to be design from low fidelity wireframes based on the system modules requirements before turning them into realistic prototypes. The entire system and UI design also requires to adapt with the functionals and non-functionals requirements for the system user, admin, trainer and member.

1.2 Purpose of the Project

- To manage the fitness gym business memberships and payments records along with the common user frontend.
- To store the fitness gym membership plans, packages, and trainers.
- To create a plan list that should help organize the member's selected plan for his/her membership with the Crunch Fitness Gym.
- To create a package list that should refer to the list of packages that the fitness gym management offers to their members.
- To create a page that allows gym members to buy different gym accessories for examples; sport shirt, gym trousers, water bottles etc.

1.3 Object of the Project

The main objective of the project is to design and develop an online Gym management system. This allows different user like admin, trainer and members to manage the common user frontend and technicality of the gym like: - payment process of the user, data storing, event scheduling, registration through online, recurring invoice, classes booking etc.

The online management system provides advance functionalities to ensure user satisfaction like: - Data security and accuracy, minimal manual data entry and physical paper loads, efficient timing etc.

The online system is module with a layout consisting login page which allows user to enter their detail to success the gym membership. Package page: where user can select the package, they preferred Trainer page: where user can see all the details of trainer and select on their basic Members detail page: Its shows all the members' details, active and previous members.

Gym has a system where members can join themselves, setup their payments procedure, book trainer, book classes. Members can monitor and evaluate their progress and result in the system which motivates them achieves their goals. The main objective is to give members satisfaction in different fields.

1.4 Scope and Limitation

One of the project's goals is to develop an information system to manage Crunch Fitness Gym Business and accept payments from members. The system is made up of three actors who each play a particular role: the main administrator, the admin, and the members. Before using their information to check in, members must first create an account on the website (Sign up).

After registering with their address and contact details, members can now look over the various gym membership options and make a choice which membership is best for them. Both members and administrators can change payment dates.

Crunch Fitness Gym Online Management System must be built upon PHP as a back end, and as a front end, HTML, Java, and CSS.

For the payment gateway, however, we must use Square and PayPal for debit and credit card payments as well as direct debit.

Gym will send an email confirmation to the member's registered email address when the Member's payment is approved, enabling the Administrator to track and record each Member's attendance. An attendance management system will be used for this. The key pass can be scanned by members to track attendance and for their entry.

1.5 Assumption

As we all know, the fitness and gym industry are expanding daily, and with more people joining, we want an efficient online management system. This will make managing user and customer attendance, profiles, and payments easier for the gym owners and admin. To get gym membership, the system requires that you pay in the weekly, monthly or yearly membership payment before coming to gym.

The system will allow both admin and member to change their membership package from weekly, monthly or year payment cycle. Members can also book Personal trainer as per there requirement from the website. The main Administrator will be in charge of all the System for Crunch Fitness Management System. There will be separate admin for member related system and trainers related system. Members shop is already pre-programmed in the system where members can buy supplements and gym apparel and admin will manage the store via the system. These Store is available to the public.

2.0 Project Deliverables

The Crunch Fitness gym will have a system as part of a project that will manage both the front end for common users and the membership and payment records for the fitness gym business. Plans, packages, and trainers for fitness gym memberships will be within the system. The member's chosen set-up for his or her membership with the Crunch Fitness gym will be organized using the plan list. Every plan only needs one payment thus, the membership fees of the members rely on the plan they choose, which specifies how long the member will be considered an active member at the Crunch Fitness Gym.

The system will offer a page where users can enter their login information to access the gym management system data after which they will automatically be redirected to the dashboard. The system will similarly include the plan page, members page, and packages page where the membership plan can be managed and all system users can view all of the packages that crunch fitness has to offer.

The project will also give users access to the member detail modal on the member's page where they can view their personal information and current and past plans. Aside from these pages, the system will also have others such as a trainer's page where trainers are listed and maintained, a membership validity page where all active member lists are managed, and a schedule page where system users can schedule or save the anticipated date of a member's attendance. The system will provide proper security and reduction of manual work. Data belonging to all system users will be secure in the system. Additionally, the project will offer a system that is user-friendly, highly efficient, and provides excellent service in a short amount of time for processing.



3.0 System Requirements

3.1 Functional Requirements

FR NO.	Functional Requirement	Comment
Admin		
FR 1	Electronic Payments	Gym members can make an electronic payment using debit card, credit card etc.
FR 2	Payment Processing	Members payment will be procced and the email will be sent to a customer.
FR 3	Customer Support	There will be a team member provided for a customer service.
FR 4	Billing & Invoicing	Team members will be sent an invoice via email or message.
FR 5	Attendance Tracking	There's a system for tracking and monitoring the attendance of members and staffs.
FR 6	Attendance Management	Admin can manage the attendance.
FR 7	Booking Management	Admin and members can manage the bookings.

FR 8	Class Management	Admin, members and trainers can manage the class
FR 9	Class Scheduling	Admin and trainers can manage the class schedule.
FR 10	Calendar Management	Admin can manage the calendar.
FR 11	Contact Database	Admin and staff can access members data.
FR 12	Customer Accounts	Admin and members can access account.
FR 13	Customer Database	Admin can access customers database.
FR 14	Customer History	Admin can track customers history.
FR 15	Dashboard	Dashboard can be accessed by trainers for monitoring performance.
FR 16	Data Import/Export	Admin has access to import and export data.
FR 17	Customizable Reports	Admin has access to create a customizable report.
FR 18	Data Security	Admin, members and trainer data are protected from unauthorized access.
FR 19	Deferred Billing	Admin can provide a deferred billing system for Gym members.
FR 20	Discount Management	Admin are authorized for discount management.
FR 21	Email Templates	Admin staff should have difference types email templates for responding the members enquires
FR 22	Employee Management	Admin staff and system user should have access for Employee Management for managing employees
FR 23	Employee Scheduling	System user and Admin have the access to manage employee's schedules.
FR 24	Gift Card Management	Admin can access to gift card management platform for managing members loyalty program
FR 25	Event Management	Trainers are able to create event and notify members for the specific occasion
FR 26	Event Scheduling	Trainers are able to schedule the event in a day with time slot, example Group HIIT training on Monday 1pm-2pm
FR 27	Facility Scheduling	Trainers are able to book a facility in a specific room, example conducting a Tabata class in room number 2
FR 28	Group Scheduling	Trainer has access to schedule the members in group, given options to select on the individual members and add in a specific group.
FR 29	Instructor Management	Trainers should have access to Instructor management system for streamline training operation, trainers' KPI and product knowledge.
FR 30	Inventory Management	Admin can access to gym products inventory for stocks update
FR 31	Membership Management	Admin and system user can access to all membership details and edit their information and change or terminate their package
FR 32	Document Storage	Admin are able to CRUD members' document from the storage
FR 33	Inventory Tracking	Admin are able to check the products quantity
FR 34	Invoice Management	Admin are able to generate or retrieve invoices for the members
FR 35	Order Management	Trainers are able to access to order management to check which members had booked them for personal training

FR 36	Registration Management	Admin can access members registration and check the status of the members accounts and details.
FR 37	Reporting/Analytics	Trainer Dashboard can see members report and Analytics
FR 38	Resource Scheduling	Trainer can book the gym equipment in a specific day and time.
FR 39	Retail Inventory Management	Admin are able to manage retails inventory
FR 40	Returns Management	Admin can record what faulty products has been refunded by the members
FR 41	Sales Reports	Admin should have a detail report of sales.
FR 42	Scheduling	Admin should be able to schedule the meetings.
FR 43	Search/Filter	The search feature should guide users to the specific term they are looking for.
FR 44	Social Media Integration	Social media integration must be effective tools that manage data on the user's behalf and are both helpful and discreet.
FR 45	Staff Management	Admin can create rosters, manage staff, and staff leaves.
FR 46	Stock Management	Admin can look for the required stocks, damaged products and order stock when needed.
FR 47	Team Management	Admin can manage team members through effective communication skills.
FR 48	Training Management	Admin can allocate or provide different trainings to staff to create positive outcome.
FR 49	Transaction History	All the transaction details are managed by admin and can provide when needed.
FR 50	Transaction Monitoring	Transitions are timely monitored by admin.
FR 51	Vendor Management	All the vendors are managed by admin.
FR 52	Visitor Management	Visitors that arrive in the facility are managed by Admin.
FR 53	Web-based Deployment	Admin are responsible for deploying changes in website and control the codes and source.
FR 54	Website Integration	Admin integrated the website that gives the team better data to work and aiming to improve.
FR 55	Website Management	The website is managed by Admin, focusing on improvements and flexibility of website.
FR 56	eCommerce Management	Admin manages eCommerce that help users to avoid common inventory challenges.
Customer		
FR 57	Member Accounts	Customers can create, register or login after getting the membership.
FR 58	Member Portal	In member portal customer can see their profile and information.
FR 59	Appointment Scheduling	Customer can book an appointment for trainers, or any meetings.
FR 60	Automated Scheduling	Customers can also automate their scheduling process.
FR 61	Barcode / Ticket Scanning	Member and staff can scan Barcode or Ticket for sign in and sign off in system
FR 62	Barcode Recognition	There are the systems which will recognition the bar code in main entrance

FR 63	Class Registration	Admin will register the classes
FR 64	Credit Card Processing	Members are able to proceed their payment process
FR 65	Customer Surveys	Members are able to complete the survey and can give feedback
FR 66	Debit/Credit Card Processing	Members can input their card details and proceed the payment
FR 67	Electronic Signature	Members have access to sign through the system
FR 68	Event Calendar	It helps member to know about upcoming events
FR 69	Mobile Access	Members can access to gym anytime
FR 70	Mobile Booking	There is easy access for members to make a booking.
FR 71	Mobile Payments	Members are able to choose their payment plan
FR 72	Multi-Period Recurring Billing	It helps member to know about their billing every months
FR 73	Multiple Payment Options	Members have access to choose any payment method i.e. direct debit, credit card, etc.
FR 74	Online Booking	Members have access to book trainer and day gym session through online/website
FR 75	Online Payments	Members have access to complete their payment method through online
FR 76	Online Registration	Members can easily register themselves through online
FR 77	Recurring Invoicing	Members are able to manage the recurring invoice
FR 78	Recurring/Subscription Billing	Members can know about their bills and will upto date

3.2 Non-Functional Requirements

NFR NO.	Non- Functional Requirement	Comment
NFR 1	Security	All the information of a member is secured from an unauthorize access.
NFR 2	Availability	All the data of a member can be accessible and can be used by an authorized person.
NFR 3	Performance	It helps admin to track progress in Crunch Fitness business.
NFR 4	Reliability	It helps gym system to determine the possibility disruption in any operations.
NFR 5	Accessibility	The website system for Crunch Fitness can be accessed by everyone.
NFR 6	Scalability	The database, storage, applications and networking will function properly even the when the size and volume of the user changes.
NFR 7	Usability	It helps all the user to access the website easily and quickly which saves a lot of time for members.

4.0 System Architecture

4.1 Software and Hardware Architecture (Diagram and Explanation)

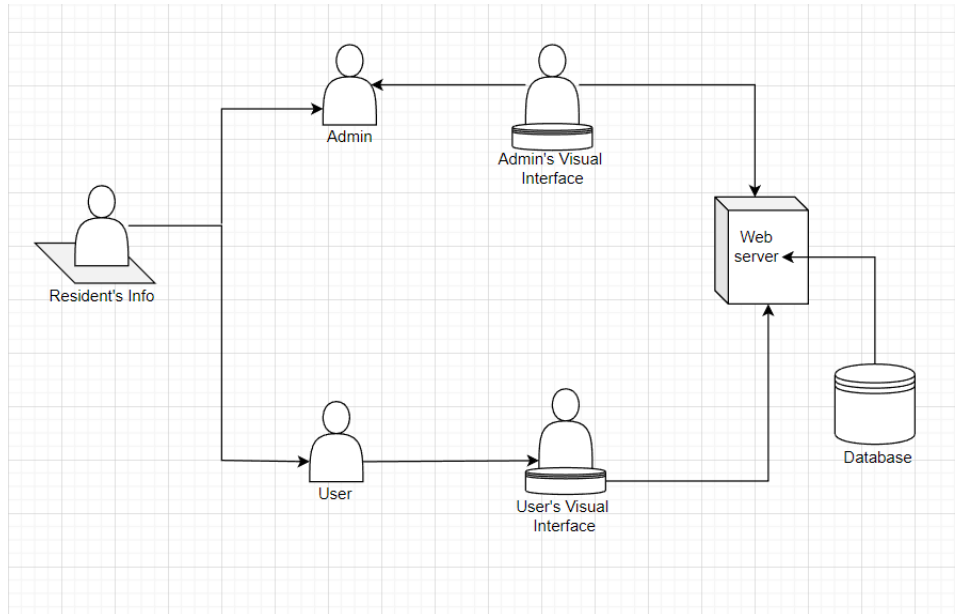


Figure- 1

5.0 System Design

This is the beginning stage of the UI design; the website is first created using a technique called low-fidelity prototyping. Wireframes are created utilizing paper and other "low-fidelity materials at the very early stages" of the design process in order to visualize the design (Abidin & Ashaari 2019).

In order to create low fidelity prototype for Crunch fitness UI, we will be using balsamiq cloud as an online tool to create the wireframes instead of drawing with pen and paper. With Balsamiq Cloud, we found a tool that let us express our ideas without the pressure of having to be perfect, moreover we were also able to design with the same creative intention, but on a very basic and raw level (Faranello 2022).

The UI design requirements is to make sure the system user aware what to do next. This means the UI has to be user friendly and interactive. In order to create such UI to be more contemporary and convenient for users to view change the background, menu, and text colours to reflect the colour identity that the user desires on the website, making the colour composition easier to see and the positioning of the colour composition, is consistency (Pradana, Sabariah & Adrian 2022).

We will also make sure the admin gym management system page allows us to create reusable UI components.

5.1 UI Design



Figure- 2

Members Page

Crunch Fitness

About us

Training

Classes


Blog

FAQ

Contact US

Login

Register



James Wilson

Shared credit

\$

Past Due

\$

Balance

\$

Activities

purchase

Attendance

Client Details

Clone

Edit

Delete

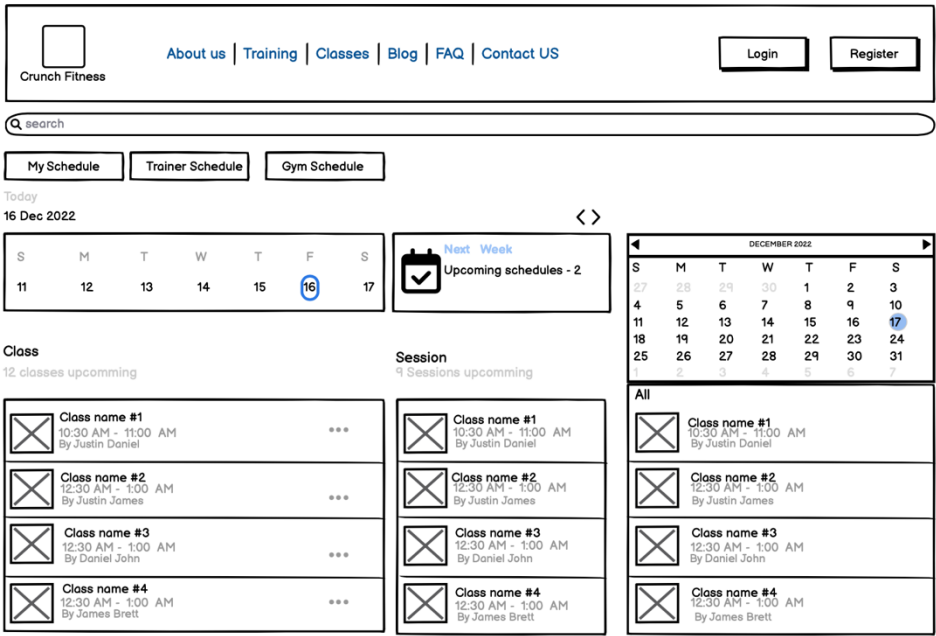
V

General Information

Contact Information

Figure- 3

Schedule page



Dashboard

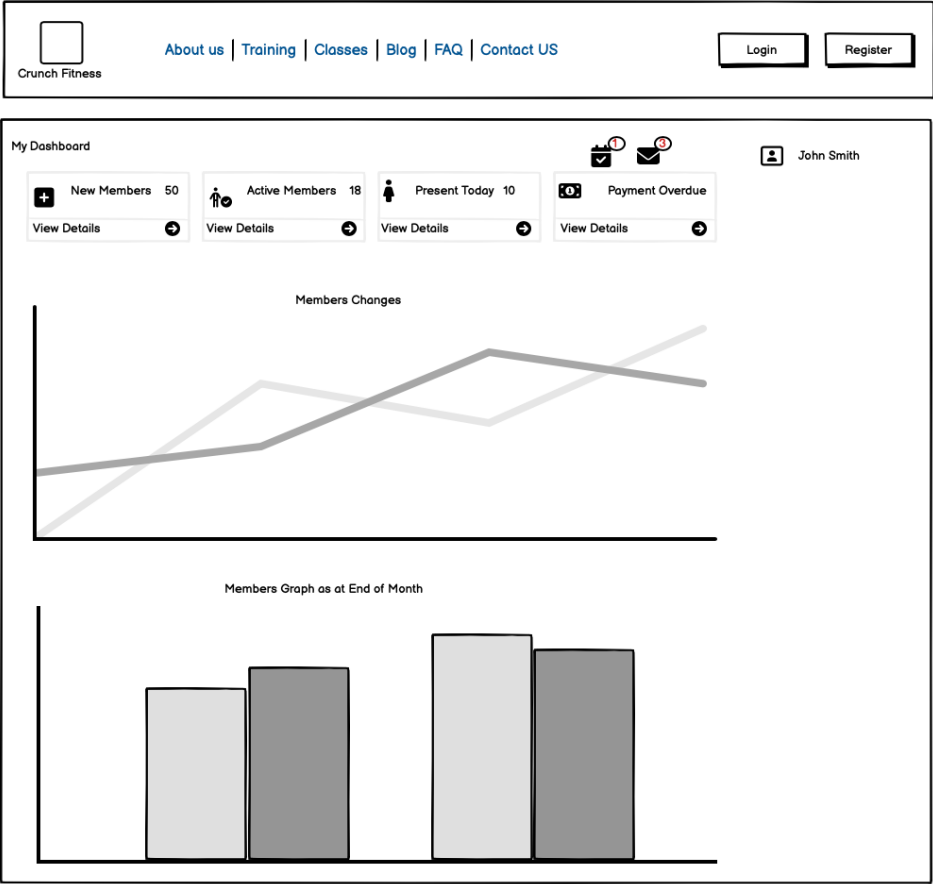


Figure- 5

Member management:

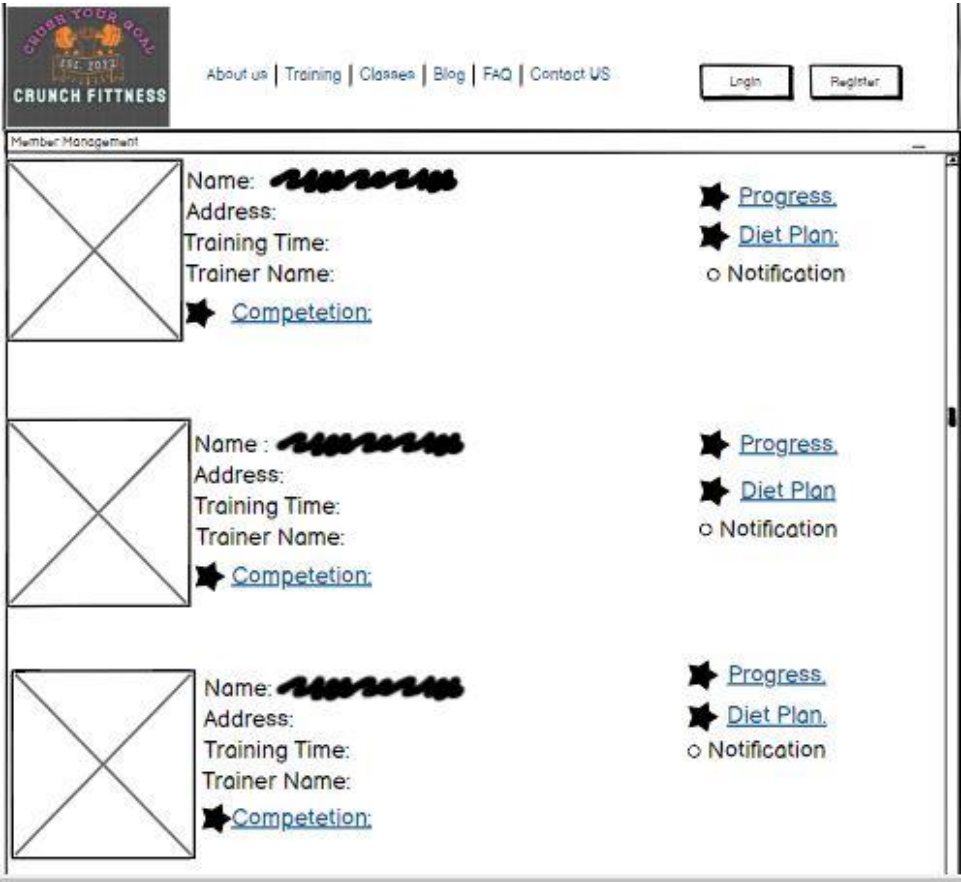




Figure- 6


Online Shopping cart:


[About us](#) | [Training](#) | [Classes](#) | [Blog](#) | [FAQ](#) | [Contact US](#)


[Login](#)


[Register](#)


 [Home](#)


 [Members](#)


 [Membership Validity](#)


 [Schedule](#)


 [Plans](#)


 [Packages](#)


 [Trainers](#)

 [Shopping](#)


 [Giftcard](#)

 [Documents](#)

 [Payment](#)

 [Users](#)

[Shopping](#) → [Category](#) → [Product](#)



Hydration Bottle **\$12**

Size

1L

2L

3L

Select color ▾

Quantity

1

▾




Add to cart

About this item

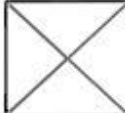


Made from 18/8 stainless steel

Double-walled vacuum insulated

Keeps contents cold and hot up to 24 hours



Related products



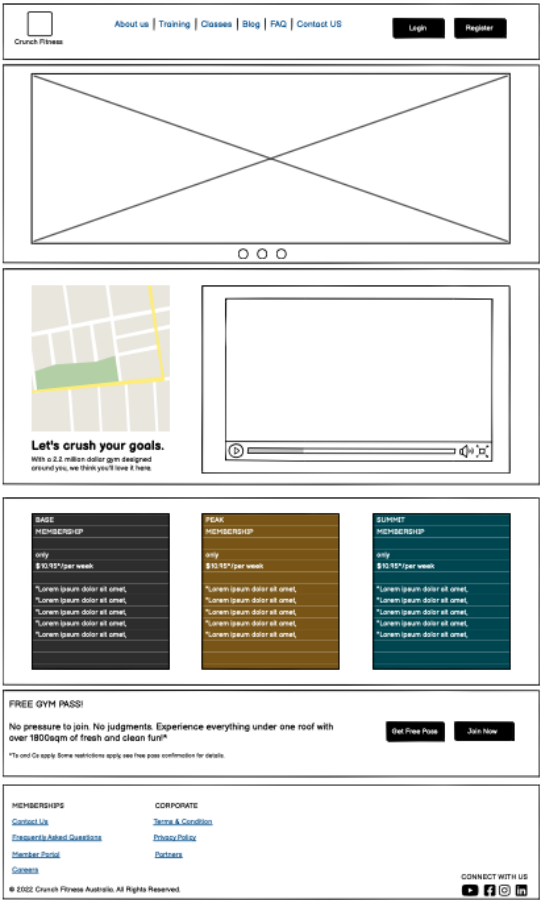
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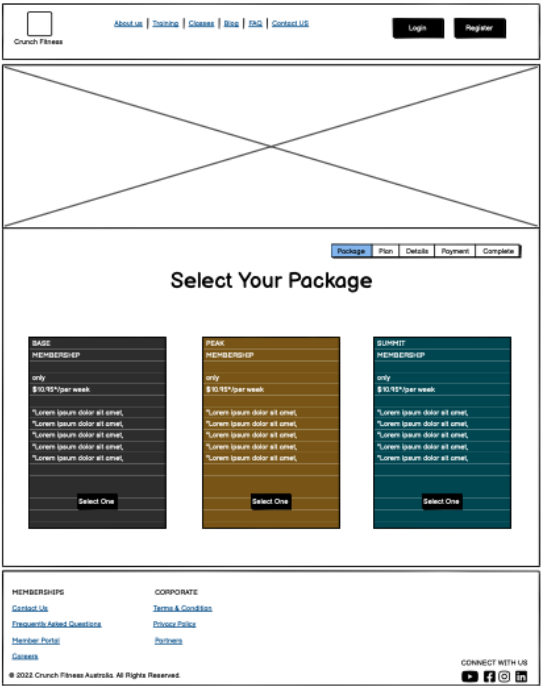
Figure- 7

Members Register Story Board

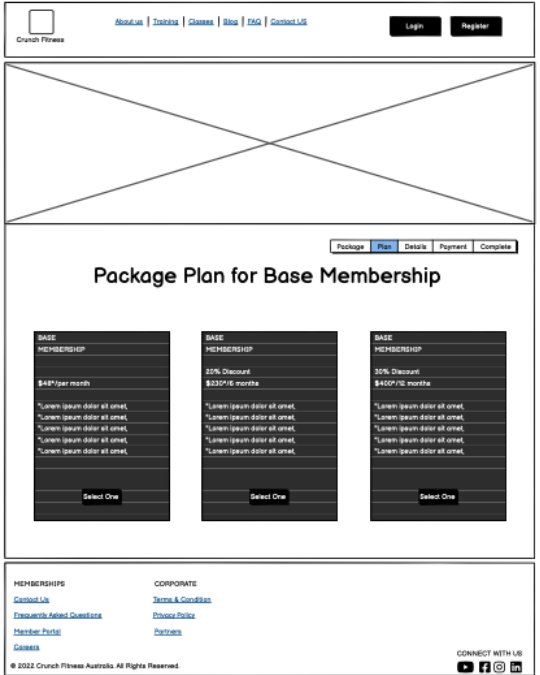
1 Home Page



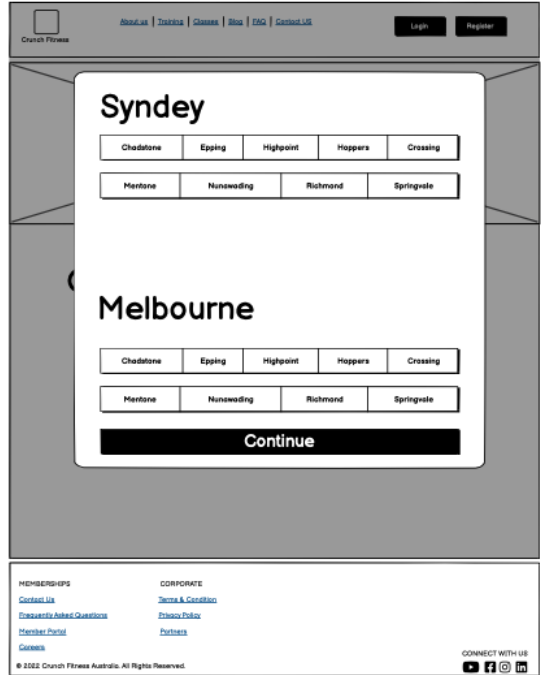
2 Package Page



3 Plan Page



4 Modal Location



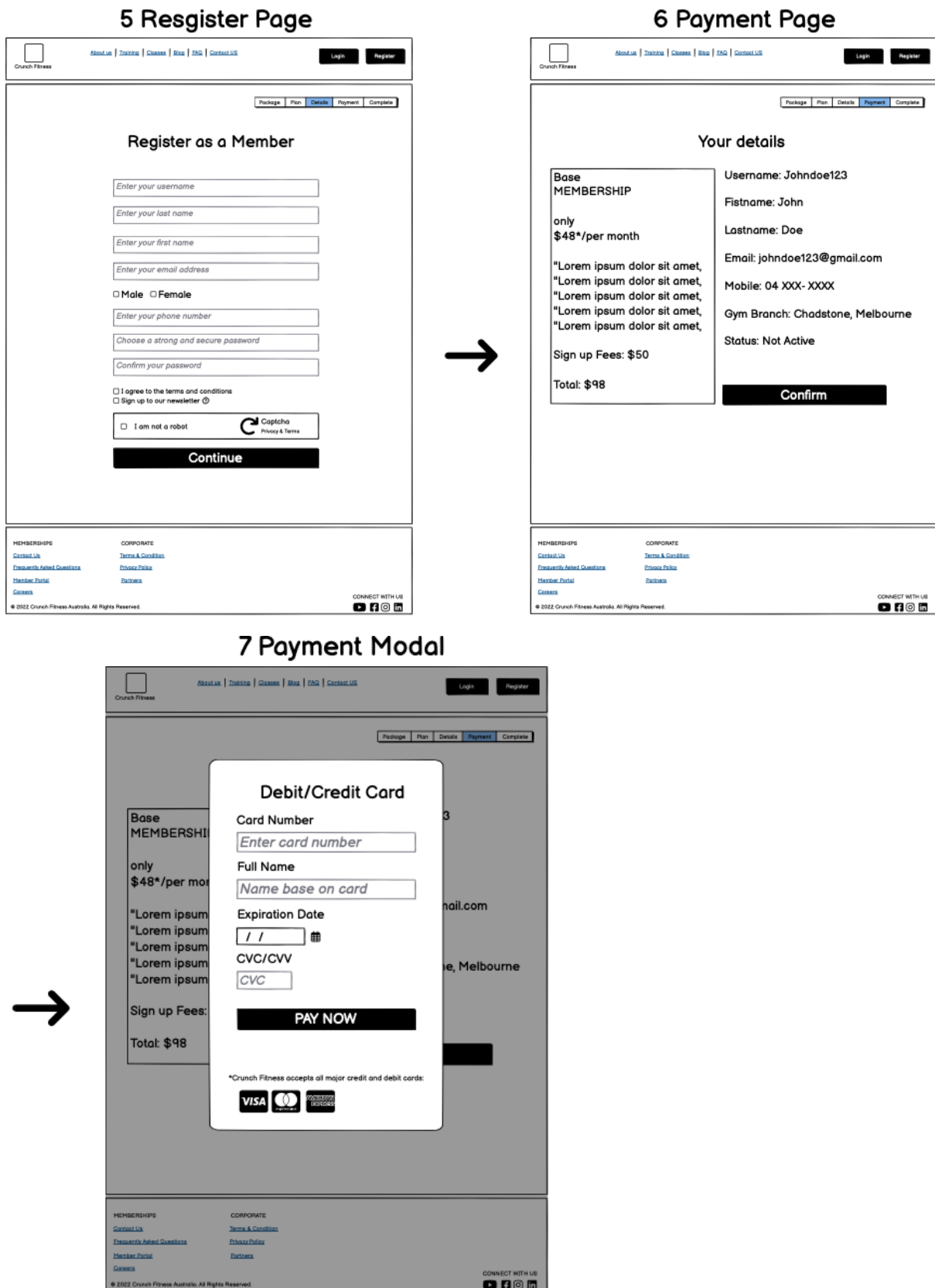



Figure- 8 link to entire storyboard - <https://balsamiq.cloud/soa0xnv/pbqxuhq/r6B5Z>

Members Login Story Board

1 Member Login Page



[About us](#) | [Training](#) | [Classes](#) | [Blog](#) | [FAQ](#) | [Contact Us](#)

LoginRegister

MemberStaff

Welcome to Crunch Fitness

lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Member Sign In

Username:

Password:

☐ Remember Me [Forgot Password?](#)

RegisterLogin

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[Careers](#)

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2 Member Dashboard Page




[About us](#) | [Training](#) | [Classes](#) | [Blog](#) | [FAQ](#) | [Contact Us](#)

James Wilson

LogoutCart

DashboardUser AccountShopping



Hi, James
Let's keep track on your development

Profile

Age: 29
Weight: 90
Height: 186 CM
Gender: Male

Membership Status

Status: Active Start Date: 20/5/2022
Membership Package: Peak End Date: 21/5/2023
Membership Plan: 12 month
Payment: N/A

12 classes upcoming

9 Sessions upcoming

DECEMBER 2022

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

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3 Member Setting Page



[About us](#) | [Training](#) | [Classes](#) | [Blog](#) | [FAQ](#) | [Contact Us](#)

James Wilson

DashboardUser AccountShopping

Edit Profile

Enter your last name

Enter your first name

Age

Weight

Height

Enter your email address

☐ Male ☐ Female

Street name

Suburb

State

Postcode

Enter your phone number

Choose a strong and secure password

Confirm your password

Update

Cancel

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4 Member Shopping Page




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James Wilson

DashboardUser AccountShopping


Crunch Fitness Shopping Online

Bottle



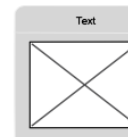
Select

T-Shirt




Select

Text




Select

Text




Select

Text



Select

Text



Select

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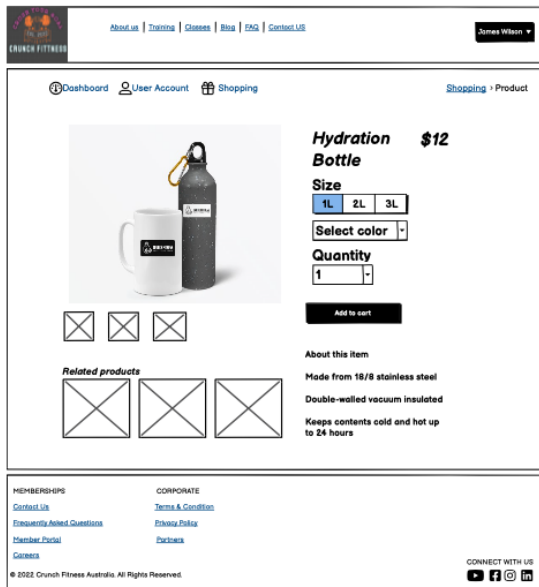
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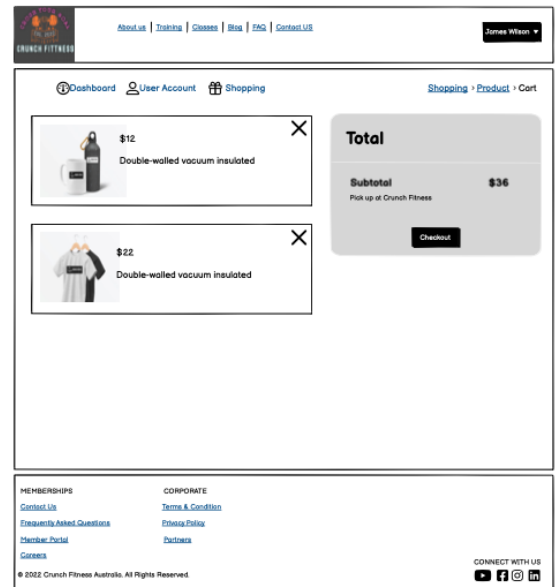
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5 Member Product Page



6 Member Cart Page



6.1 Member Payment Modal

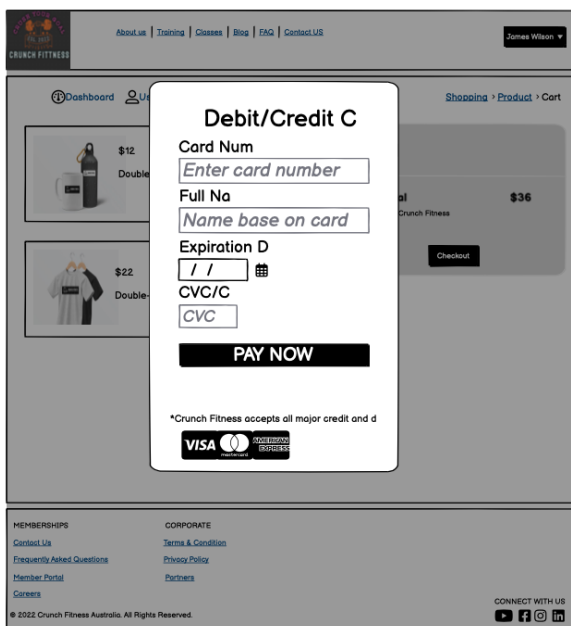


Figure- 9 link to entire storyboard - <https://balsamiq.cloud/soa0xnv/pbqxuhq/r94A2>

Admin Login Story Board

1 Admin Login Page

CRUNCH FITNESS

CRUNCH FITNESS

Crunch Fitness Management System

double-click to edit

Admin

Login

Register

Member

Staff

Welcome to Crunch Fitness Management System

Username:

Password:

Login

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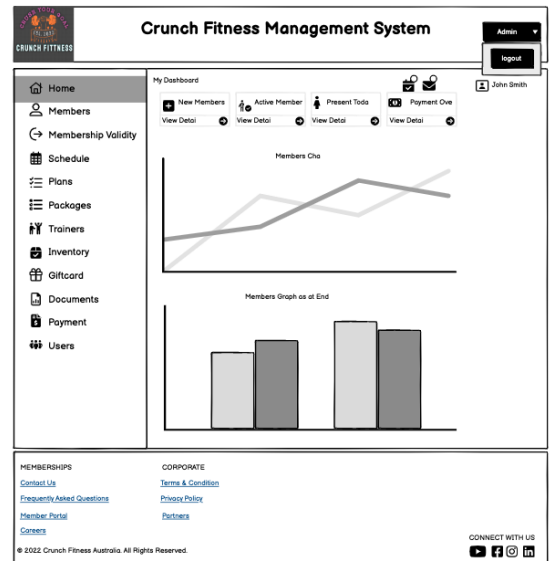
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2 Admin Dashboard



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3 Members Management Page

CRUNCH FITNESS

CRUNCH FITNESS

Crunch Fitness Management System

Admin

double-click to edit

Home

Members

Membership Validity

Schedule

Plans

Packages

Trainers

Inventory

Giftcard

Documents

Payment

Users

ID	Name	Email	Mobile	Action
1	James Wilson	james123@gmail.com	+61422123412	View Edit Delete
2	Sarah Wilson	james123@gmail.com	+61422123412	View Edit Delete
3	Jane Wilson	james123@gmail.com	+61422123412	View Edit Delete
4	Coral Wilson	james123@gmail.com	+61422123412	View Edit Delete
5	Peter Wilson	james123@gmail.com	+61422123412	View Edit Delete
6	John Wilson	james123@gmail.com	+61422123412	View Edit Delete

Showing 1 to 6 of 6 entries

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4 Membership Validation page

CRUNCH FITNESS

CRUNCH FITNESS

Crunch Fitness Management System

Admin

Wilson

Home

Members

Membership Validity

Schedule

Plans

Packages

Trainers

Inventory

Giftcard

Documents

Payment

Users

ID	Name	Plan	Package	Status	Action
1	James Wilson	12 Month	Base	Active	View / Delete
2	Sarah Wilson	6 Month	Base	Active	View / Delete
3	Jane Wilson	1 Month	Submit	Active	View / Delete
4	Coral Wilson	12 Month	Peak	Active	View / Delete
5	Peter Wilson	12 Month	Base	Active	View / Delete
6	John Wilson	12 Month	Base	Active	View / Delete

Showing 1 to 6 of 6 entries

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4.1 Membership Modal page

Crunch Fitness Management System

Admin

Home

Members

Membership Validity

Schedule

Plans

Packages

Trainers

Inventory

Giftcard

Documents

Payment

Users

James Wilson

Member Plan Details

ID: 1

Name: James Wilson

Plan: 12 Month

Active Date: 1/5/2022

End Date: 1/5/2023

Package: Base

Trainer: N/A

Plan Membership Fee: \$20 (One time Amount)

Package Amount : \$400 (One time Amount)

Trainer Fee: N/A

Monthly Payable: N/A

End Plan

Payment

Close

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5 Schedule Page

Crunch Fitness Management System

Admin

Home

Members

Membership Validity

Schedule

Plans

Packages

Trainers

Inventory

Giftcard

Documents

Payment

Users

Search

10 Dec 2

S

M

T

W

T

10

11

12

13

14

Upcoming sched

10 Dec 2

S

M

T

W

T

10

11

12

13

14

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Class nom

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Class nom

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6 Plan Page

Crunch Fitness Management System

Admin

Home

Members

Membership Validity

Schedule

Plans

Packages

Trainers

Inventory

Giftcard

Documents

Payment

Users

Search

#

Plan

Amount

Action

1

12 month

400

Edit Delete

2

6 month

230

Edit Delete

3

1 month

48

Edit Delete

4

12 month

400

Edit Delete

5

6 month

230

Edit Delete

6

1 month

48

Edit Delete

7

12 month

400

Edit Delete

8

6 month

230

Edit Delete

9

1 month

48

Edit Delete

Showing 1 to 9 of 9 entries

Plan Form

Plan (month)

12

Amount

12

Save

Cancel

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7 Package Page

Crunch Fitness Management System

Admin

Home

Members

Membership Validity

Schedule

Plans

Packages

Trainers

Inventory

Giftcard

Documents

Payment

Users

Search

#

Package

Amount

Description

Action

1

Base

400

lorem ipsum dolor sit amet

Edit Delete

2

Peak

500

lorem ipsum dolor sit amet

Edit Delete

3

Submit

600

lorem ipsum dolor sit amet

Edit Delete

Showing 1 to 3 of 3 entries

Package Form

Package Name

12

Amount

12

Description

12

Save

Cancel

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8 Trainer Management Page

Crunch Fitness Management System Admin

Home Members Membership Validity Schedule Plans Packages **Trainers** Inventory Giftcard Documents Payment Users

Search

#	Traine	Username	Mobile	Email	Rate	Action
1	John	john123	0450102013	123@gmail.com	50	Edit Delete
2	Amit	amitmit12	0450102013	123@gmail.com	55	Edit Delete
3	Rohan	rohan333	0450102013	123@gmail.com	60	Edit Delete

Showing 1 to 3 of 3 entries

Trainer Form

Username

Trainer Name

Email

Mobile

Hourly Rate

Save Cancel

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9 Inventory Management Page

Crunch Fitness Management System Admin

Home Members Membership Validity Schedule Plans Packages Trainers **Inventory** Giftcard Documents Payment Users

Search

#	Picture Name	Size	Price	Description	Action
1	bottle.jpeg	10MB	50	Crunch Bottle	Edit Delete

Showing 1 to 3 of 3 entries

Inventory Form

Price

Description

Upload Save Cancel

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Figure- 10 link to entire storyboard - <https://balsamiq.cloud/soa0xnv/pbqxuhq/r67E1>

Trainer Login Story Board

1 Trainer Login Page

Crunch Fitness Management System Trainer

Home Schedule

Welcome to Crunch Fitness Management System

Username:

Password:

Login

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2 Tranier Dashboard



5 Schedule Page

Crunch Fitness Management System Trainer

Home **Schedule**

10 Oct 22

Time	Location	Class Name	Trainer
6:00 AM	Crunch Gym	Crunch Gym	John
7:00 AM	Crunch Gym	Crunch Gym	John
8:00 AM	Crunch Gym	Crunch Gym	John
9:00 AM	Crunch Gym	Crunch Gym	John
10:00 AM	Crunch Gym	Crunch Gym	John
11:00 AM	Crunch Gym	Crunch Gym	John
12:00 PM	Crunch Gym	Crunch Gym	John
1:00 PM	Crunch Gym	Crunch Gym	John
2:00 PM	Crunch Gym	Crunch Gym	John
3:00 PM	Crunch Gym	Crunch Gym	John
4:00 PM	Crunch Gym	Crunch Gym	John
5:00 PM	Crunch Gym	Crunch Gym	John
6:00 PM	Crunch Gym	Crunch Gym	John
7:00 PM	Crunch Gym	Crunch Gym	John
8:00 PM	Crunch Gym	Crunch Gym	John
9:00 PM	Crunch Gym	Crunch Gym	John
10:00 PM	Crunch Gym	Crunch Gym	John
11:00 PM	Crunch Gym	Crunch Gym	John
12:00 AM	Crunch Gym	Crunch Gym	John

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Figure- 11 link to entire storyboard - <https://balsamiq.cloud/soa0xnv/pbqxuhq/rB6F5>

6.0 Use case diagram

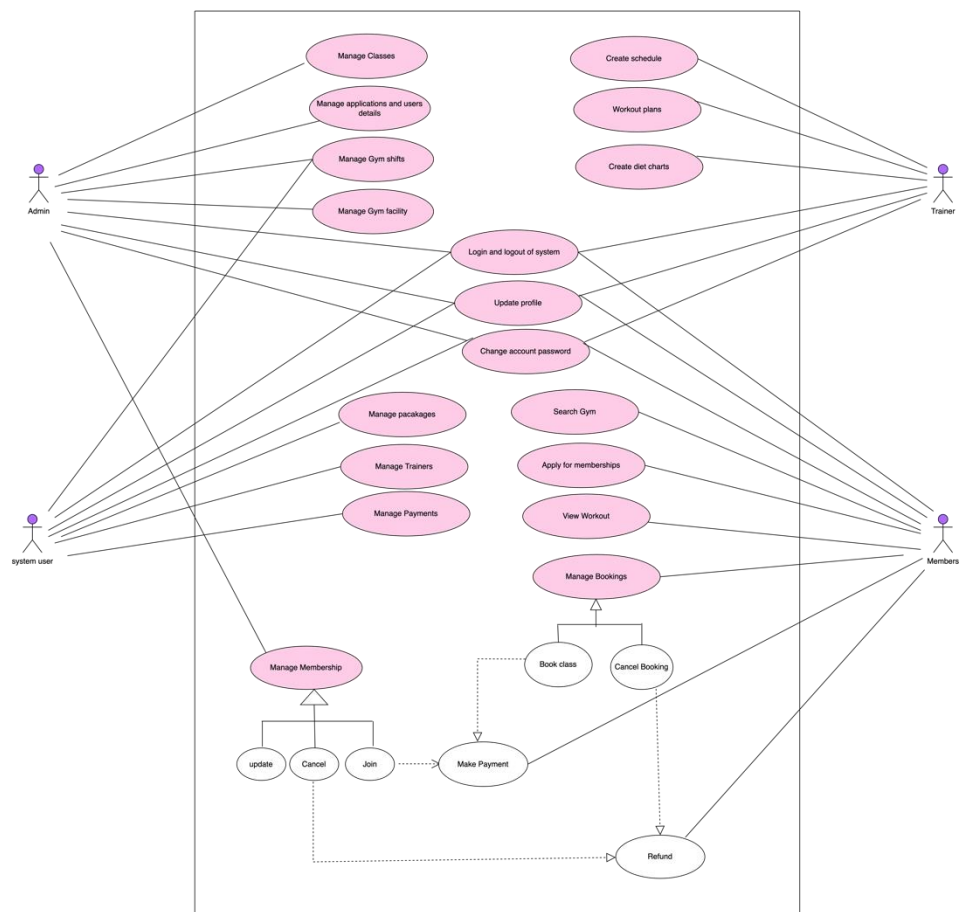


Figure- 12

7.0 Context diagram

Base of the things you identify from use case

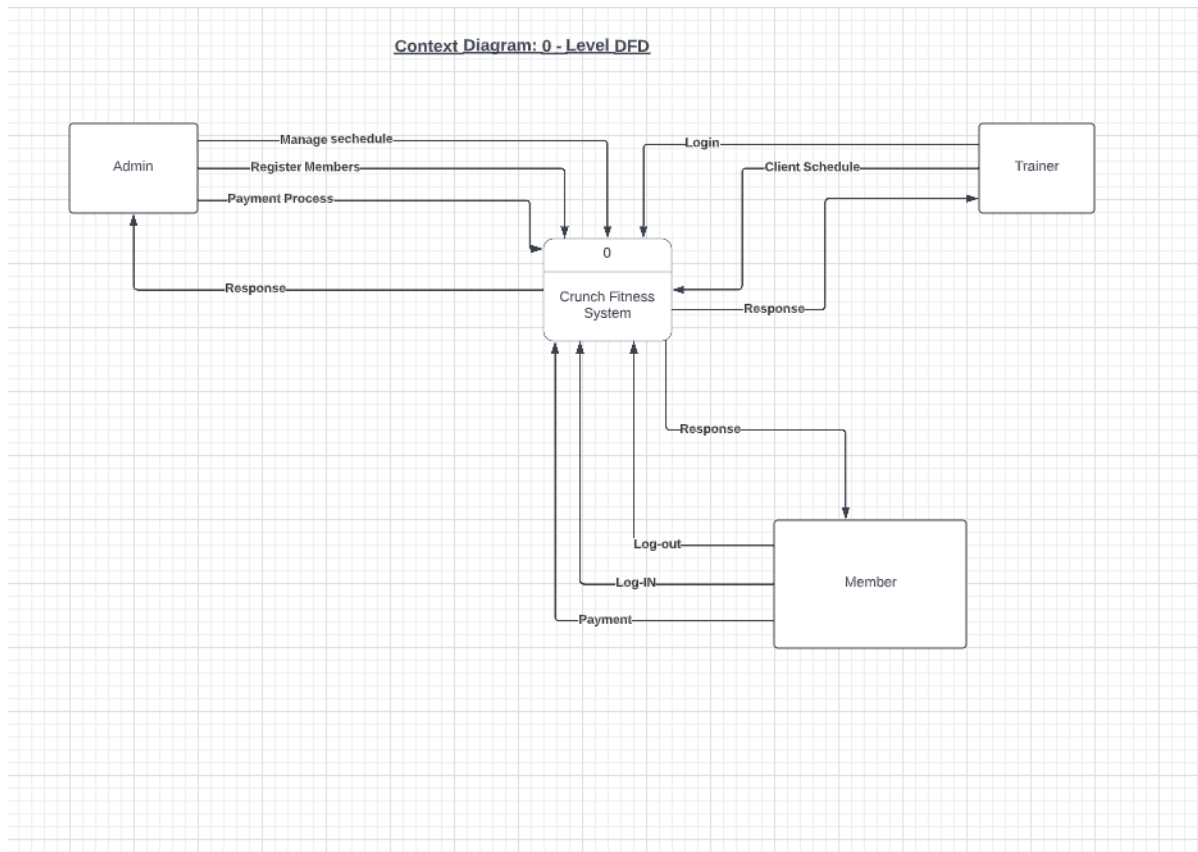


Figure- 13

8.0 Data-Flow Diagram

8.1 DFD level 1

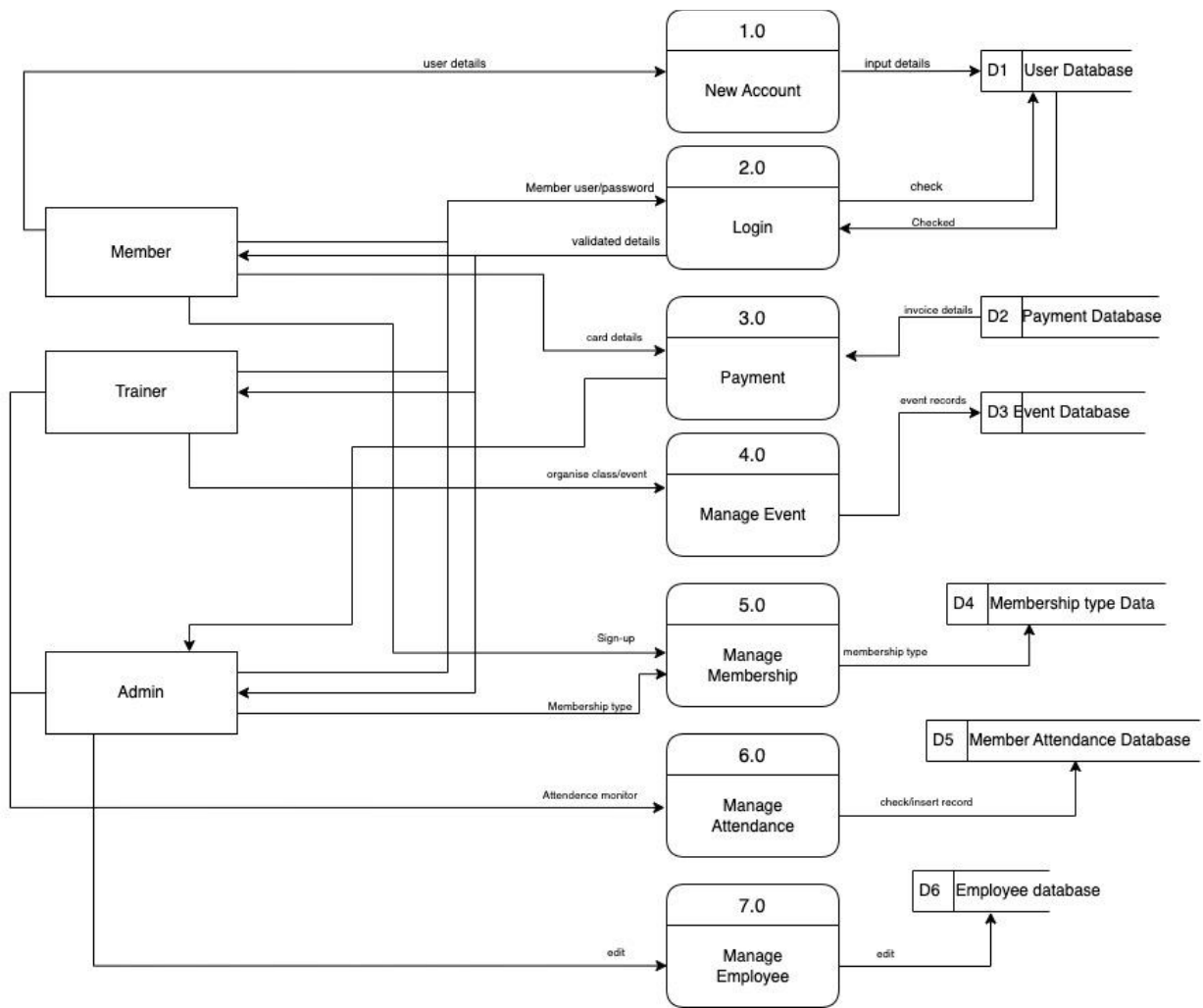


Figure- 14

8.2 DFD level 2

New Account 1.1

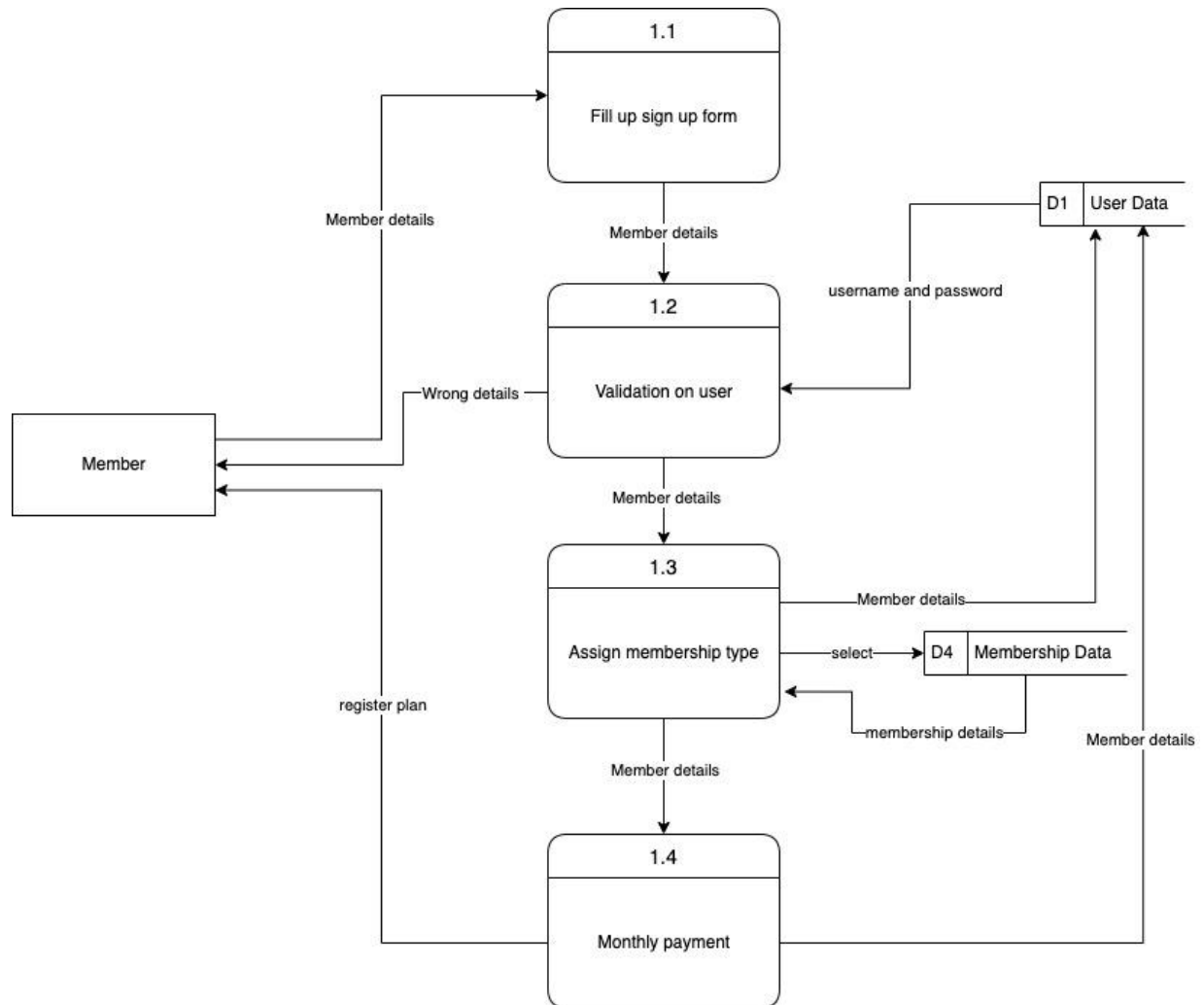


Figure- 15

Login 2.1

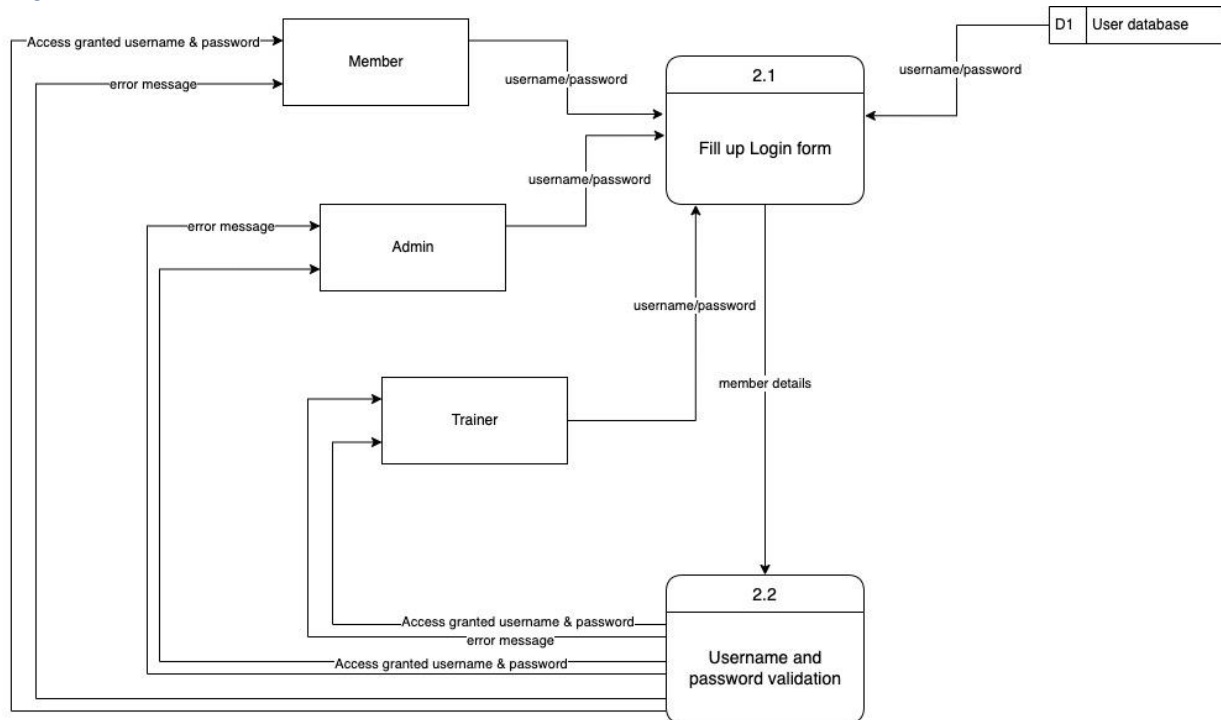


Figure- 16

payment 3.1

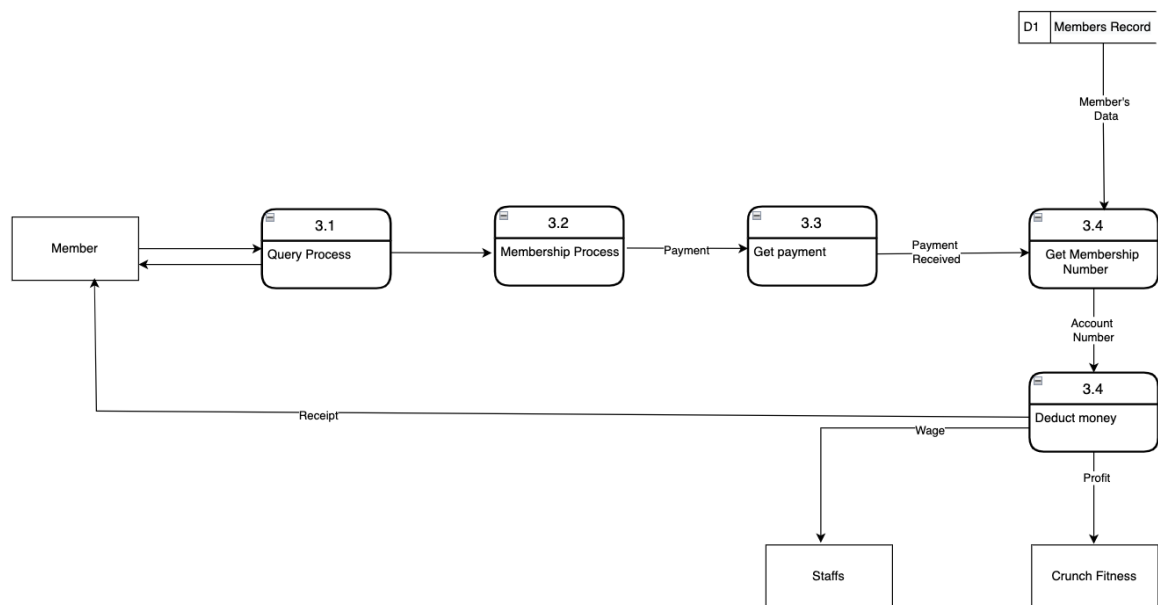


Figure- 17

Manage Event 4.1

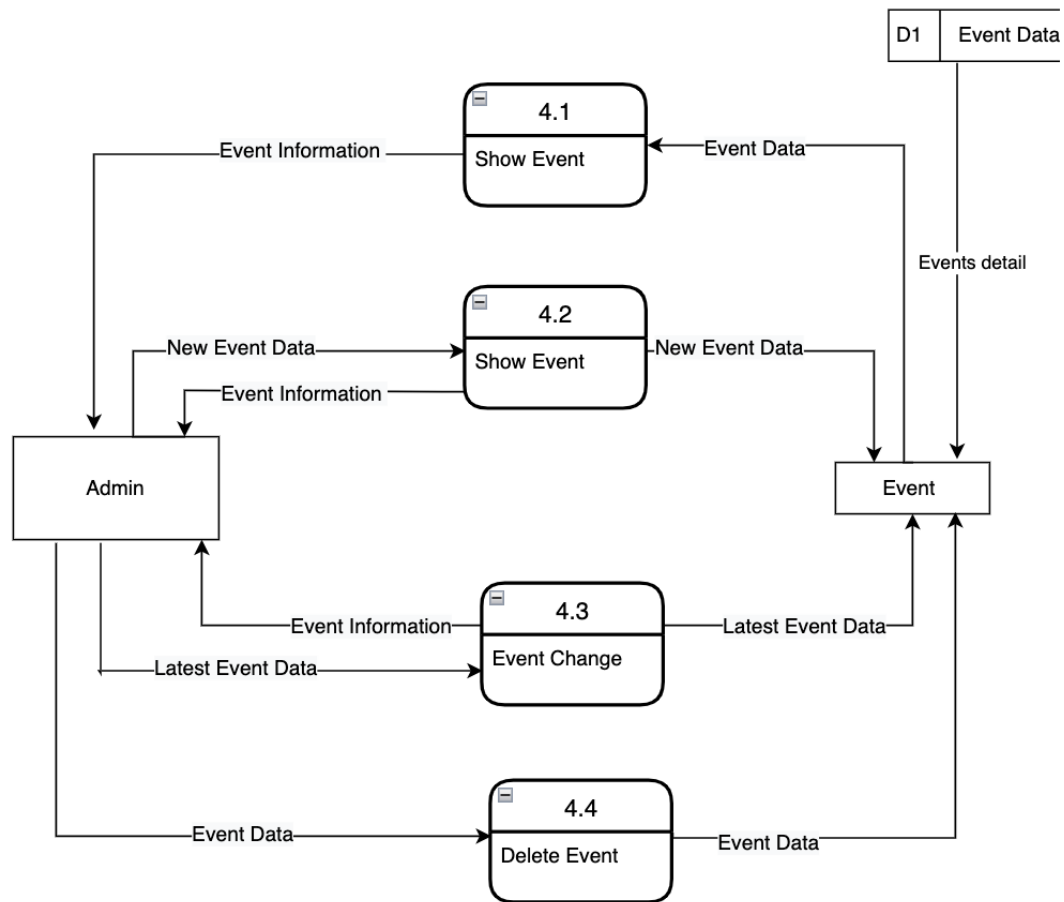


Figure- 18

Manage Membership 5.1

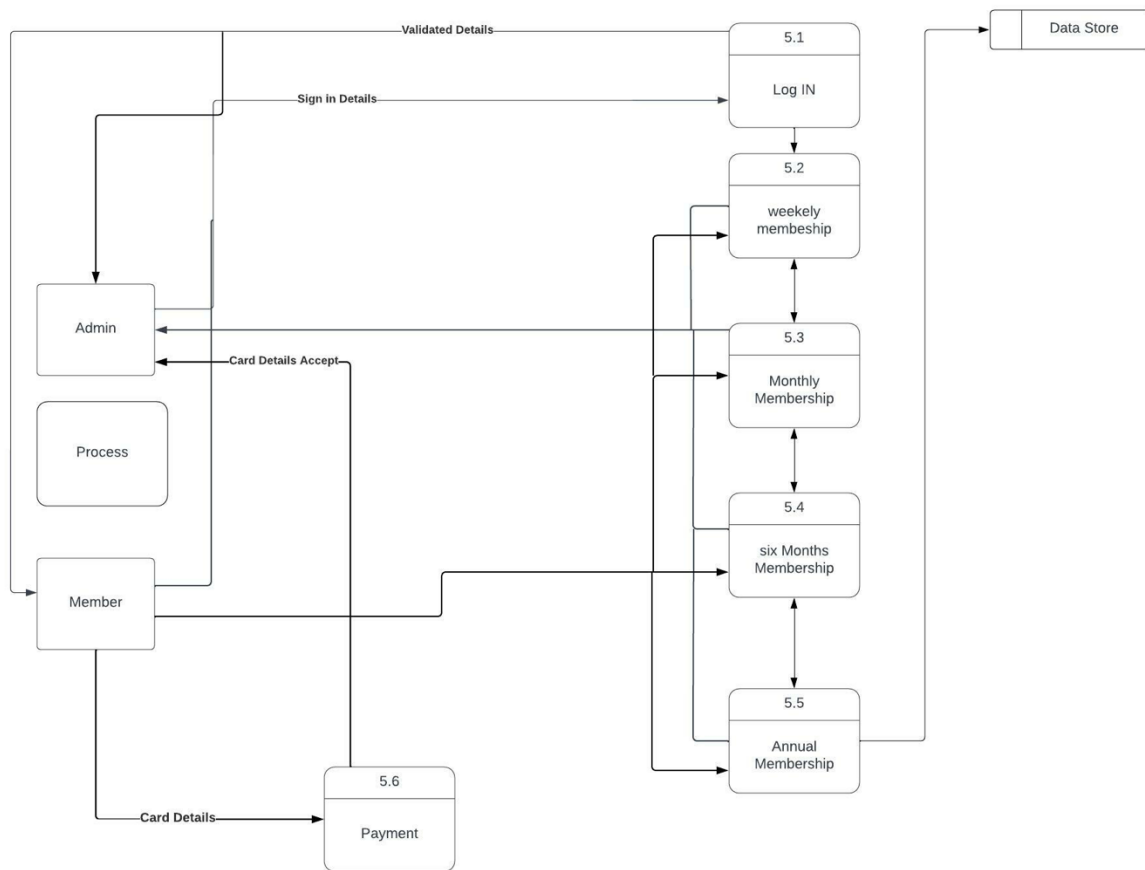


Diagram: DFD Level 2 : 5.0 Manage Membership

Figure- 19

Manage Attendance 6.1

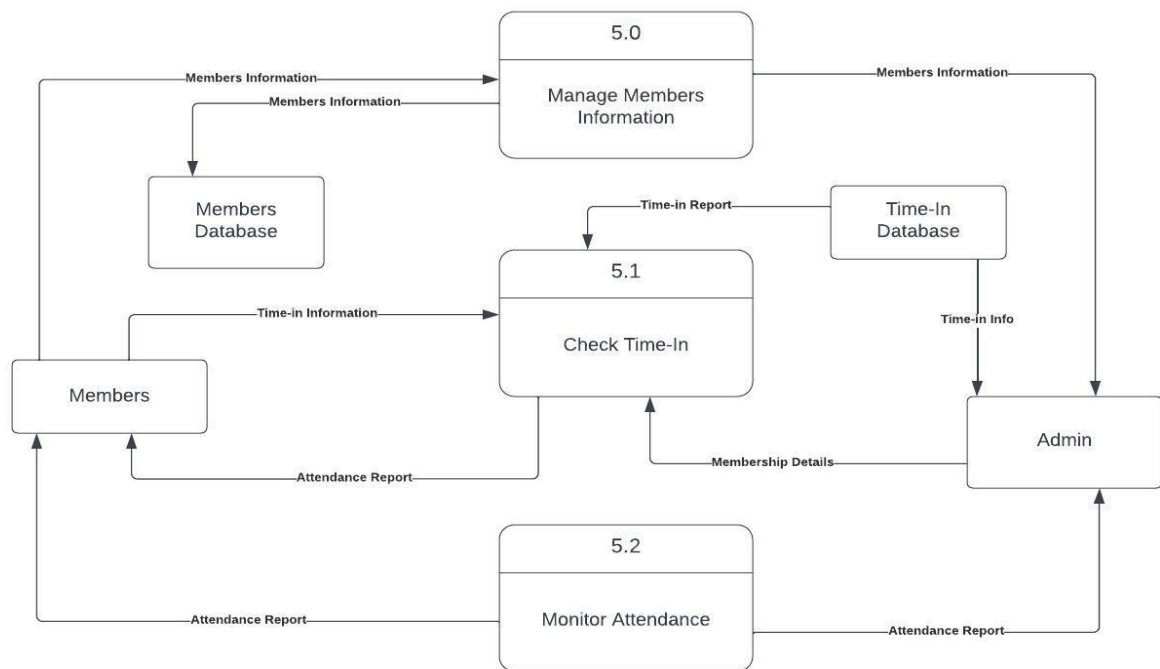


Figure- 20

Manage Employee 7.1

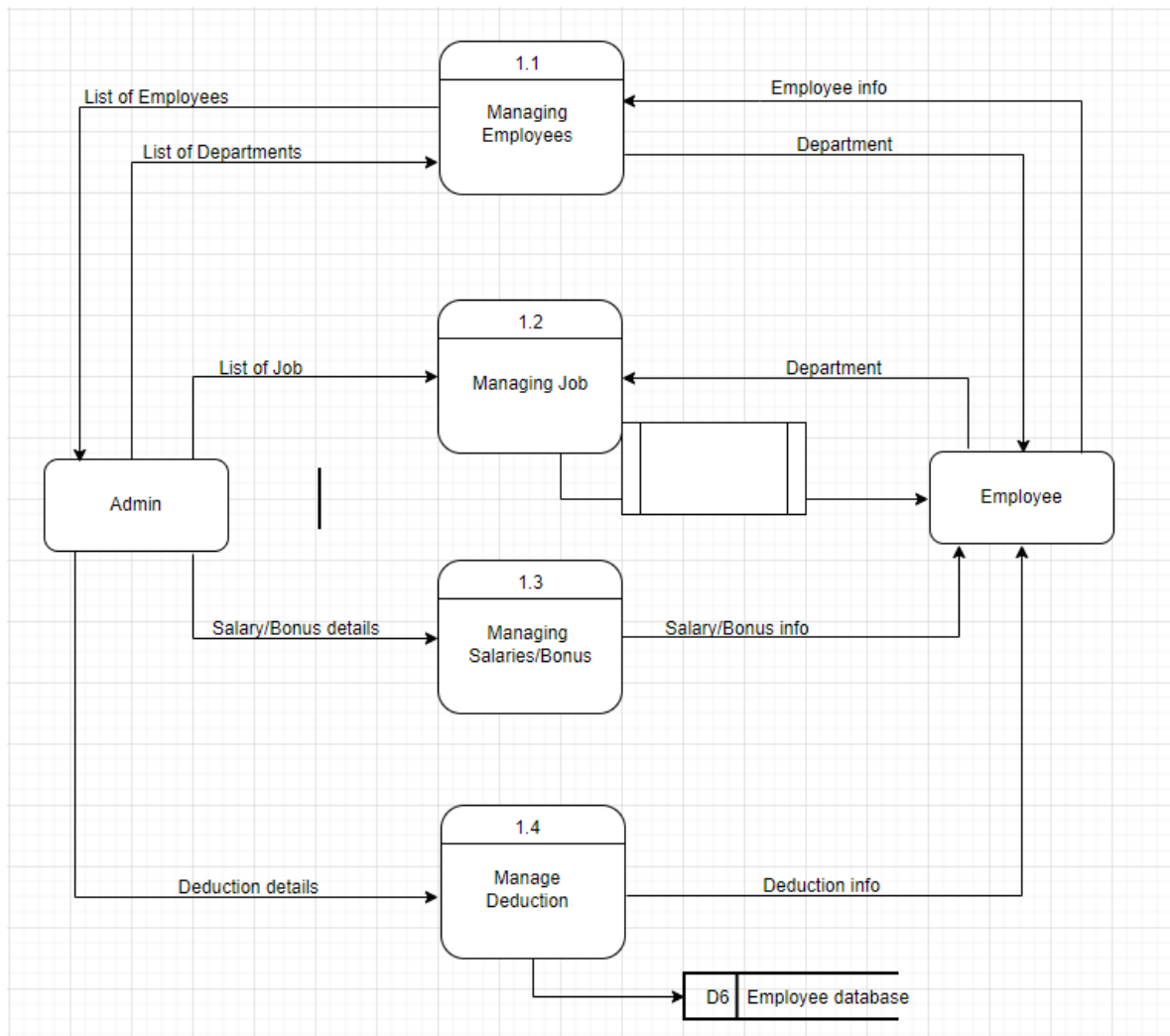


Figure- 21

9.0 Sequence Diagram

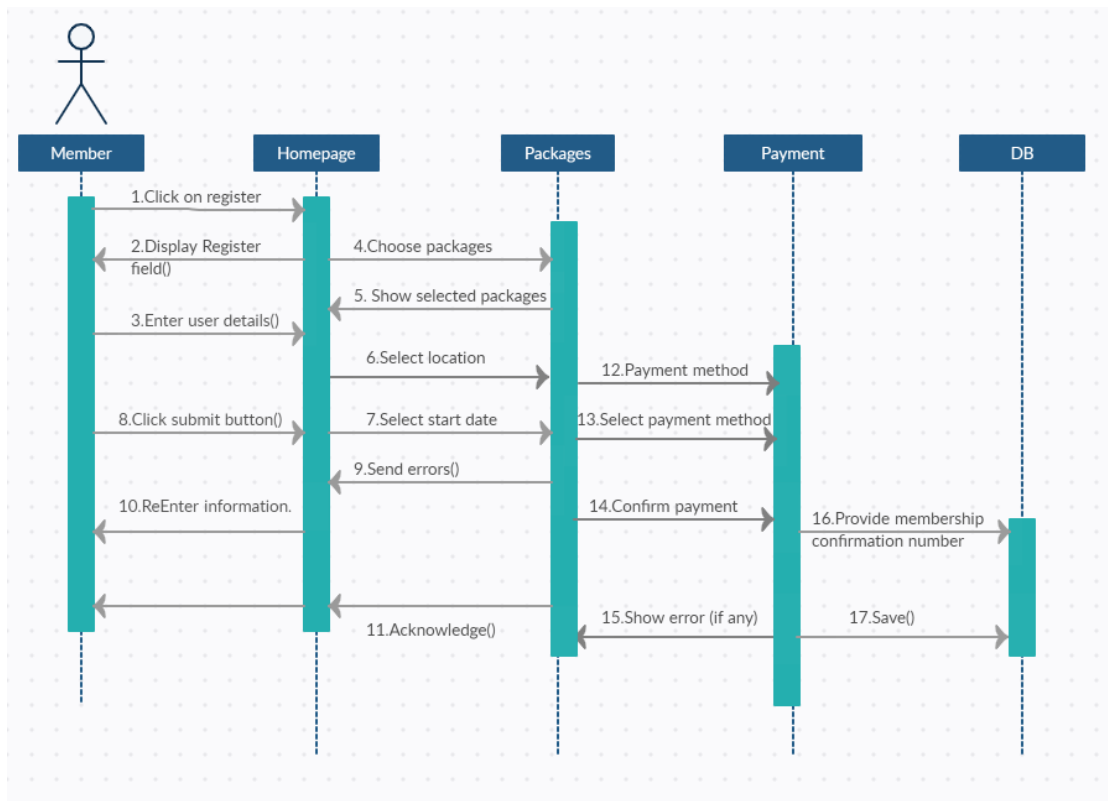


Figure- 22

10.0 Entity Relationship Diagram

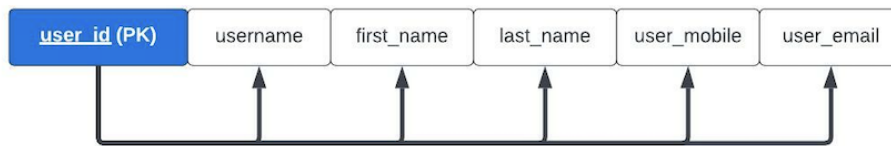
10.1 Table

Member											
member_id	first_name	last_name	email	active_date	end_date	phone	gender	password			
1	Siddesh	Sarathy	admin@treiner.co	12-Dec-22	12-Dec-23	1697351183	male	\$2y\$10\$8W9NGMFvE			
2	Gregg	Corwin	raynor.stephanja@example.com	12-Dec-22	12-Dec-23	61671648555	male	\$2y\$10\$5W9N5chm			
3	Freddy	Renner	nya.weimann@example.net	12-Dec-22	12-Dec-23	64976972692	female	\$2y\$10\$5P9CKLx			
4	Esperanza	Treutel	brandy.jakubowski@example.org	12-Dec-22	12-Dec-23	65383280495	male	\$2y\$10\$yLPHfWn			
5	Kamille	Cummings	lowe.dessie@example.com	12-Dec-22	12-Dec-23	65892728706	male	\$2y\$10\$5fQjHsp			
6	Vernice	O'Reilly	rmann@example.org	12-Dec-22	12-Dec-23	8.52108E+11	female	\$2y\$10\$9/Hx			
7	Arielle	Lubowitz	darwin.lagros@example.com	12-Dec-22	12-Dec-23	1817218487	male	\$2y\$10\$5/3rIX			
8	Samson	Wisoky	everardo.wuckert@example.com	12-Dec-22	12-Dec-23	1239312153	male	\$2y\$10\$5Qx			
9	Ayden	Will	bergstrom.okey@example.org	12-Dec-22	12-Dec-23	85237039612	female	\$2y\$10\$5DaGZ			
10	Talon	Pagac	sadie36@example.com	12-Dec-22	12-Dec-23	64865687955	female	\$2y\$10\$59pQ			
11	Jakob	Marks	owalsh@example.org	12-Dec-22	12-Dec-23	1697351183	female	n7hnaX2Ds18m			
12	Ayden	Will	bergstrom.okey@example.org	12-Dec-22	12-Dec-23	85237039612	female	\$2y\$10\$51a5ZTV			
13	Talon	Pagac	sadie36@example.com	12-Dec-22	12-Dec-23	64865687955	female	\$2y\$10\$59pQU.JE3			
14	Jakob	Marks	owalsh@example.org	12-Dec-22	12-Dec-23	1697351183	female	\$2y\$10\$5Xpz84n7h			
Member Details											
street_name	suburbs	state	postcode	profile_id	age	height	weight	membership_plan	package_price	period	signup_fees
Suite 478 82 Moen Pocket	Toorak	VIC	3000	101	21	150	45	peak	400	1 year	20
5A Naomi Junction	Toorak	VIC	3000	102	22	151	46	submit	450	1 year	20
71B Flo Quad	Toorak	VIC	3000	103	23	152	47	base	350	1 year	0
Suite 710 5 Gerhold Gully	Toorak	VIC	3000	104	24	153	48	peak	400	1 year	20
Flat 81 462 Santina Parkway	Toorak	VIC	3000	105	25	154	49	submit	450	1 year	20
5 Henriette Boulevard	Toorak	VIC	3000	106	26	155	50	base	350	1 year	20
165D McDermott Glen	Toorak	VIC	3000	107	27	156	51	peak	400	1 year	0
2 / 076 Robel Round	Toorak	VIC	3000	108	28	157	52	submit	450	1 year	20
Suite 506 185 Johann Edge	Toorak	VIC	3000	109	29	158	53	base	350	1 year	20
18 Ward Range	Toorak	VIC	3000	110	30	159	54	peak	400	1 year	20
Level 4 771 Kling Plateau	Toorak	VIC	3000	111	31	160	55	submit	450	1 year	20
Flat 30 206 Gaetano Approach	Toorak	VIC	3000	112	32	161	56	base	350	1 year	20
72 Felipe Footway	Toorak	VIC	3000	113	33	162	57	peak	400	1 year	20
1708 Herman Landing	Toorak	VIC	3000	114	34	163	58	submit	450	1 year	20
Payment and workout details											
payment	payment_date	workoutplan_date	workout_type	description	class_name	event_name	time				
50	1-Jul-22	2-Dec-22	HIIT	lorem	class 1	Xmas	1pm				
50	2-Jul-22	3-Dec-22	LIIT	lorem	class 2	superHiit	2pm				
50	3-Jul-22	4-Dec-22	Weight training	lorem	class 3	boxingday	10am				
50	4-Jul-22	5-Dec-22	tabata	lorem	class 4	Xmas	1pm				
50	5-Jul-22	6-Dec-22	yoga	lorem	class 5	superHiit	2pm				
50	6-Jul-22	7-Dec-22	cardio	lorem	class 6	boxingday	10am				
50	7-Jul-22	8-Dec-22	HIIT	lorem	class 1	Xmas	1pm				
50	8-Jul-22	9-Dec-22	LIIT	lorem	class 2	superHiit	2pm				
50	9-Jul-22	10-Dec-22	Weight training	lorem	class 3	boxingday	10am				
50	10-Jul-22	11-Dec-22	tabata	lorem	class 4	Xmas	1pm				
50	11-Jul-22	12-Dec-22	yoga	lorem	class 5	superHiit	2pm				
50	12-Jul-22	13-Dec-22	cardio	lorem	class 1	boxingday	10am				
50	13-Jul-22	14-Dec-22	HIIT	lorem	class 2	Xmas	1pm				
50	14-Jul-22	15-Dec-22	LIIT	lorem	class 3	superHiit	2pm				
Trainer											
trainer_id	first_name	last_name	mobile	email	workout_date	time	type	description			
5000	John	Smith	1697351183	admin@treiner.co	1pm	HIIT	high intensive workout				
5001	Learance	Kennedy	61671648555	raynor.stephanja@example.com	2pm	LIIT	low intensive workout				
5002	Jess	Iverson	64976972692	nya.weimann@example.net	10pm	Weight_training	full body training				

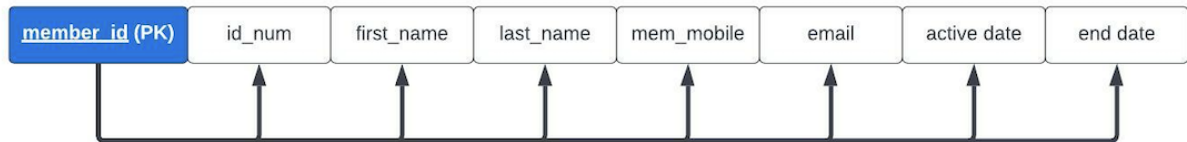
Figure- 23

10.2 Third Normal Form Table & Relationship schemas

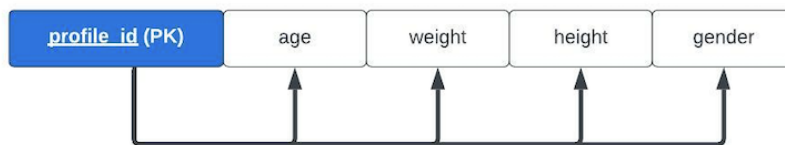
User Table



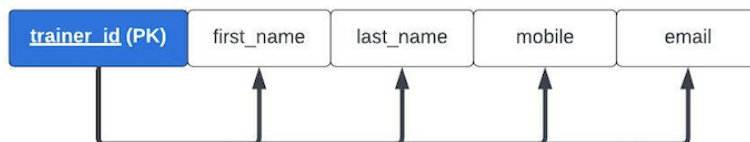
Member Table



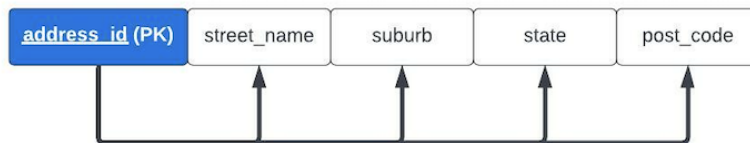
Member Profile Table



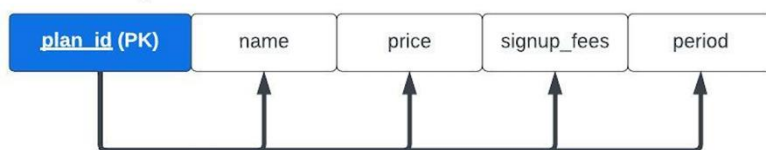
Trainer Table



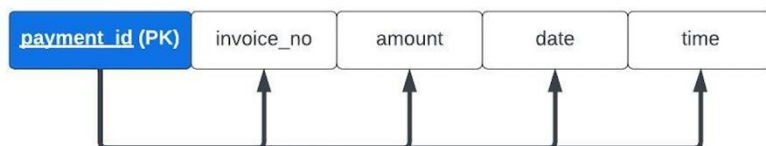
Address Table



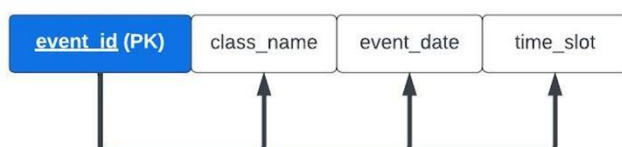
Membership Plan Table



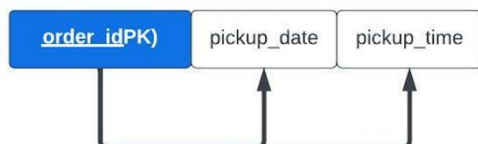
Payment



Workout Event



Order



Gym Product

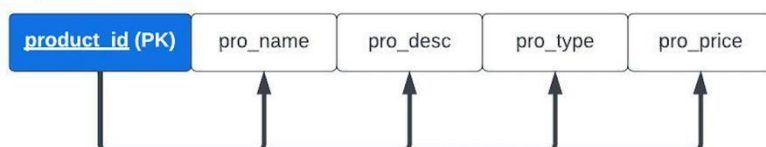


Figure- 24

10.3 Entity Relationship Diagram

Entity	Relationship		Entity
Admin	manages	1-1:1-M	Membership Plan
Member	Sign up	1-1:1-1	Membership Plan
Member	makes	1-1:1-M	Payment
Member	place	1-1:0-M	Order
Order	has	0-1:1-M	Gym Product
Member	has	1-1:1-1	Address
Trainer	organise	1-1:1-M	Workout Event
User	has	1-1:1-1	Address
Trainer	has	1-1:1-1	Address
Member	join	0-1:1-1	Workout Event

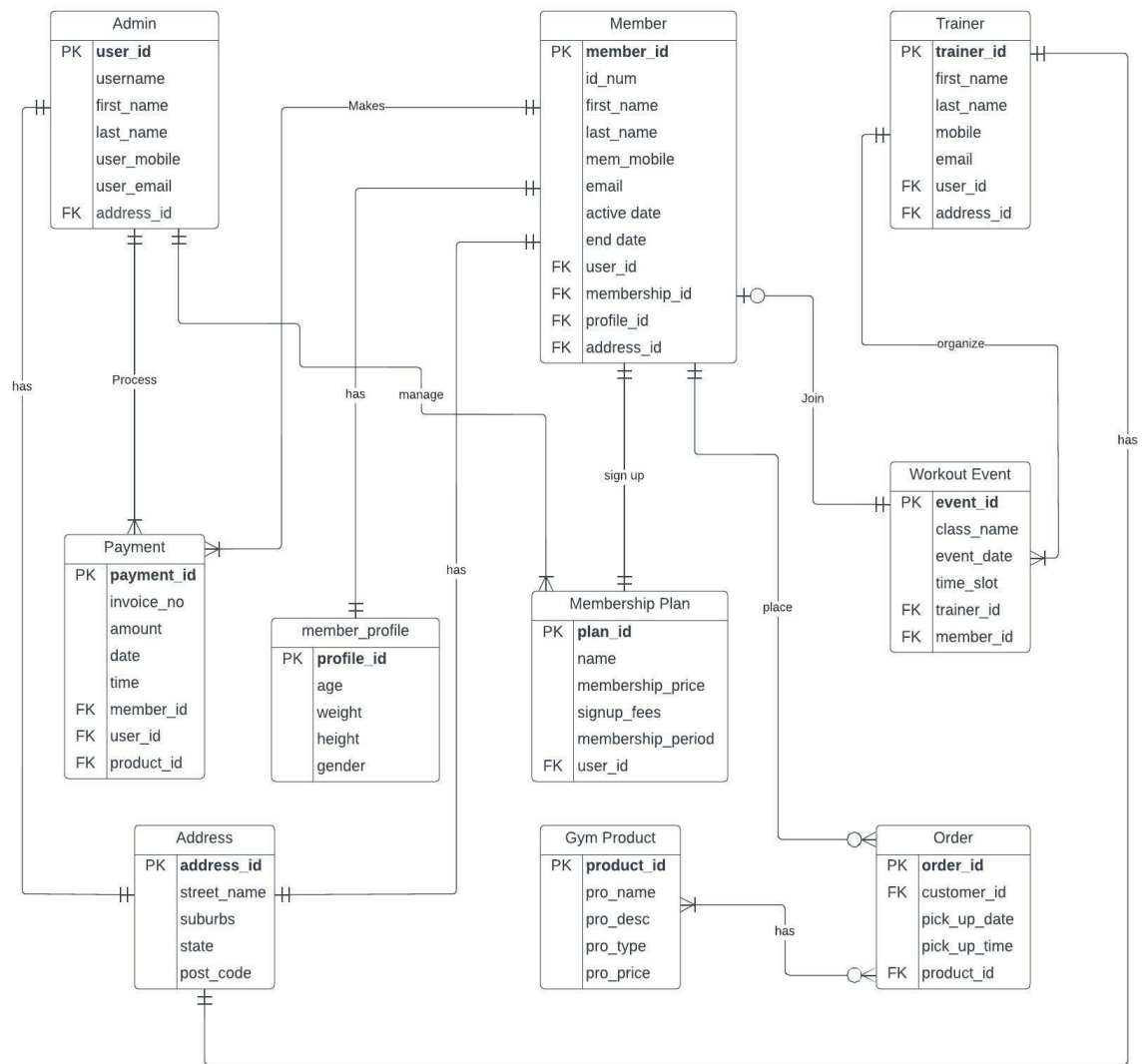


Figure- 25

11.0 Test Plan

In these Project, we have tested software this is the process where developer test the system to find any type of error. The two types of testing plan we used is White box testing and black box testing.

Firstly, we did test with Black box testing method here we performed the test and we didn't knew any internal functions, structure, design and products. Black box testing is tested when programming is not necessary and black box testing is normally done by software tester. This method is less time consuming.

Later, we did test with White box testing method here with consideration of all internal functions and white box testing is done by software developer and takes a lot of time. This was a code-based testing and structural testing.

Here is an example of Both White box testing and Black box testing:

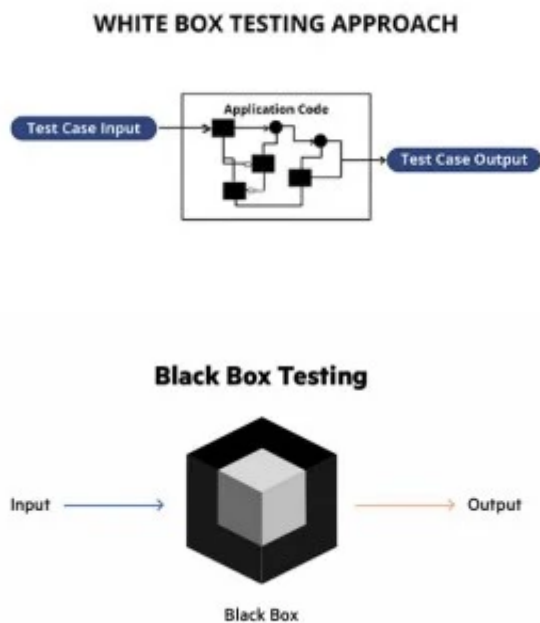


Fig 26 White box and black box testing

TEST PLAN

Test Plan	Created	Tested	Expected Result	Actual Result	Status
	Yes/No	Yes/No			

Design Specification	Yes	Yes	Design to be more visual		Passed
Project Plan	Yes	Yes	To make online management system		Passed
Requirement Specification	Yes	Yes	To fulfil all the specific requirement		Passed
System Testing	Yes	No	To test all managing system	To be done after confirmation	In Work

12.0 Data Protection Impact Privacy By-design Approach and Identify Better Practice

In this project, we attempted to develop an effective and simple online system for Crunch Fitness Gym Which will help Gym Owners, Admins and Members. This system will be accessible to anyone in Australia. The DFD that displays the system's data flow follows the aid of ERD, which makes it simple to create an online management system, we have also demonstrated the relationships between the entities.

Most of the online management's features are included in this Gym Management System. Online chat with the website administrator and customer support will be implemented in the future. For Crunch Gym Fitness System in future, All the team will establish continuous practice by communicating, measuring, identifying, researching and asking with Organization.

References

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Faranello, S., 2022. Balsamiq wireframes quickstart guide. Packt Publishing.

Miraz, M.H., Ali, M. and Excell, P.S., 2021. Adaptive user interfaces and universal usability through plasticity of user interface design. *Computer Science Review*, 40, p.100363

. Gym-Suite An extensible platform for gyms management (Doctoral dissertation).

Fig 1 White box and black box testing

<https://www.invensis.net/blog/difference-between-white-box-testing-black-box-testing>

Pradana, F.A.A., Sabariah, M.K. and Adrian, M., 2022. User Interface Design Improvement and Usability Evaluation for Evolution Web Application of Telkom Indonesia Using User-centered Design. *Journal of Computer System and Informatics (JoSYC)*, 3(4), pp.191-198.

Appendix

Figure 1

Figure 12 –22

Figure 26

Design Tools – Draw.io <https://app.diagrams.net/>

Figure 2

Drawing Tools – Loox <https://loox.app/>

Figure 3-11

Diagram tools – Balsamiq Cloud <https://balsamiq.cloud/>

Figure 24-25

Diagram tools – Lucid Chart <https://lucid.app/>