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1. INTRODUCTION

Our Gym Management Software is a gym membership management system. You can keep records on your members, their memberships, and have quick and easy communication between you and your members. The web based “Gym ManagementSystem” project is an attempt to stimulate the basic concepts of gym management system. This web application provides lots of functions such data entry of customer, keeping records of all the things about customer's fees, plan, and physical fitness which help to provide good quality of services to customer from Gym managers. The system enables the customer to do the things such as search for monthly plans, choose appropriate diet, choose trainer, save and manage workout related data.

The system provides you Quick Search facility that provides you details about gym plans without login. But if user want to buy plans, then it must require login into your account.

The system allows the gym members to schedule their workout time that are suitable for them during the day. The system displays all the plan's details such as plan no, plan name, price and time of workout, plan duration, trainer etc.

Here we provided quick search facility which displays list of available dietplans and system automatically suggests particular diet plan based on member's BMI.

To subscribe to a plan the system asks the customer to enter his details such as name, address, city, state, weight height and contact number. Then it checks the validity of customer data and books the plan and update the gym database and user database.

1.1 Objective

- The main objective of the project is to develop software that facilitates the data storage, data maintenance and its retrieval for the gym in an igneous way
- To store the record of the customers, the staff that has the privileges to access, modify and delete any record and finally the service, gym provides to its customers. Also, only the admin has the privilege to access any database and make the required changes, if necessary.
- To develop easy-to-use software which handles the customer-staff relationship in an effective manner.
- To develop a user-friendly system that requires minimal user training. Most of features and function are similar to those on any windows platform.

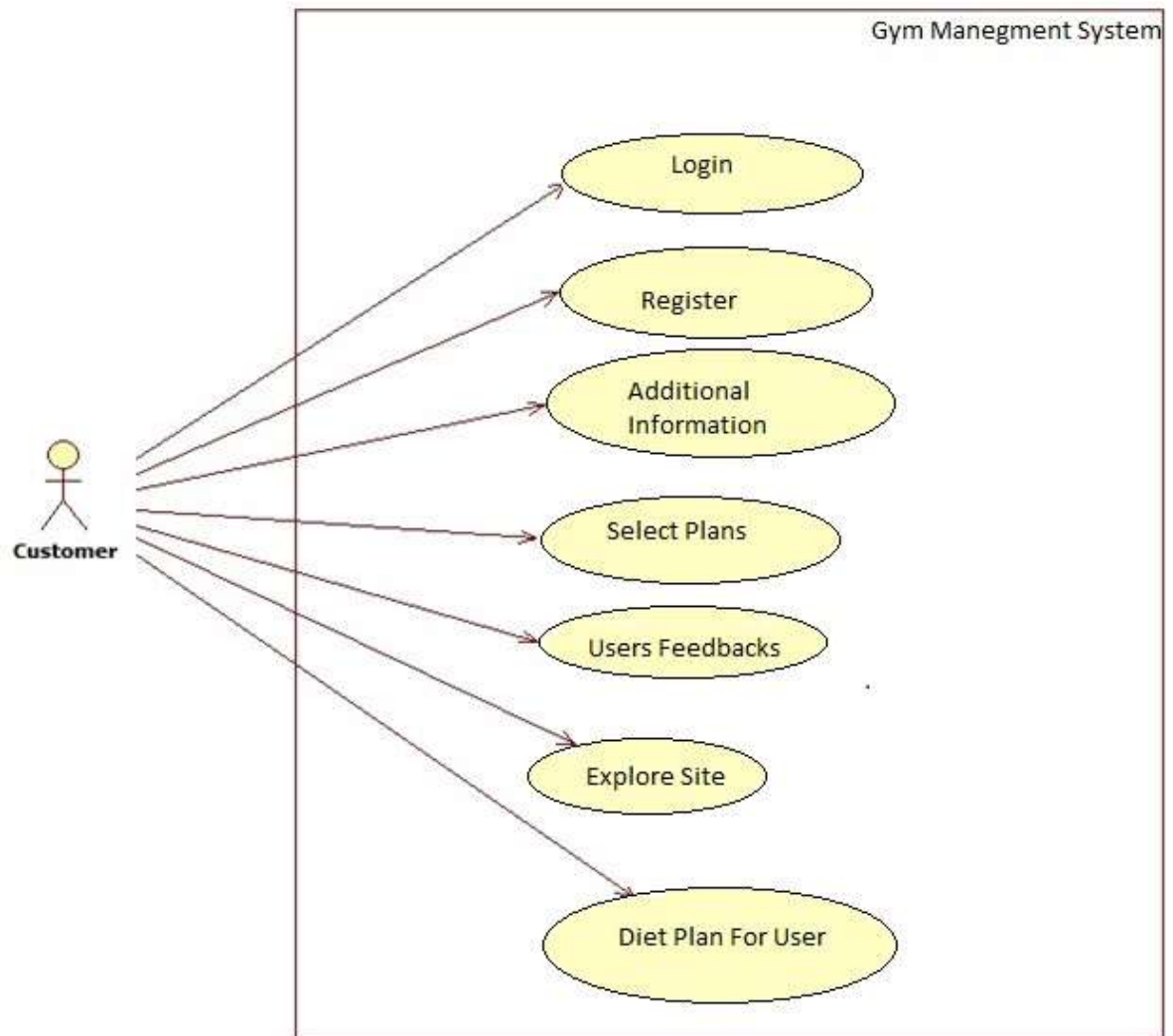
1.2 Limitation of Existing system:

- The existing System such as Gym Master is not as much as user (Customer) friendly as compare to our Proposed System. The communication with members is not well in Existing System
- All the data is handled by Gym manager. Customers don't get full accessibility to Gym center and all permissions are allowed only for Gym manager.
- Today's System cannot take effort out of finances and debt collection. Today's systems are time taking software and cannot be easily install in operating system like Linux, Vista, Mac-OS, and Novel. And also need high configuration of PC. Normal PCs cannot install in it. Lot of memory space is required for installing existing software.

1.3 Some salient features:

1. Product and Component based
2. Creating & Changing Gyms at ease
3. Query Gym List to any depth
4. Reporting & Charting in more comprehensive way
5. User Accounts to control the access and maintain security
6. Simple Status & Resolutions
7. Multi-level Priorities & Severities.
8. Targets & Milestones for guiding the programmers
9. Attachments & Additional Comments for more information
10. Robust database back-end

2. USER PANEL



2.1 Explore

Here we provided explore facility for any user to search gym schedules without login into account. This will provide user an option for searching various plans and comparing their prices and timings.

In explore new user can see trainer's brief information, gym contact information, and the plans offered by gym and also some recent feedbacks of current existing members.

2.2 User Account

After logging in a user (either a registered user or a guest), the system shall show user their profile along with other options on their dashboard. Immediately after their first login user is supposed to enter additional information such as their height and weight as well as their address etc. This shall be used in determining an appropriate diet plan for them which will be recommended to them by system.

After that user can also upload their picture for their profile and also can explore and buy a plan which is suitable for them. Each plan has a trainer assigned to it. Both plans and trainers have their individual tables in database.

The system has a feedback section on homepage, but user must be logged in to submit the feedback. If tried submitting feedback without logging in then system shows alert window with message asking user to log into his account

The gym member, who will henceforth be called the 'user', will be presented with choice to explore site, login or sign-in as the first step in the interaction on homepage. A user can choose one of these and user's choice would be governed by whether he is a guest or a registered user and whether user wants to explore the gym plans or also buy them. The terms 'registered user' and 'guest' are described below.

A user who has subscribed to a plan earlier would have been given a user

id and a password. This ‘personal information’ would be henceforth referred to as ‘profile’. Such a user with a profile in DB-user shall be called a ‘registered user’. A registered user will be able to check the available plans as well as subscribe to a plan by logging into the system.

A new user, on the other hand, would either have to

- a) register himself with the system by providing personal information or
- b) Log into the system as a guest.

In case of ‘a’, the new user becomes a registered user.

In case of ‘b’, the new user would remain a guest.

A guest can only explore the plans and cannot subscribe to any plan.

But a registered user can also act as a guest if he only wants to explore the site and current workout plans.

Selected plan also comes with a trainer and a recommended diet based on user's current BMI. The system shall present the user with an option to exit from the system at any time during the following processes.

2.3 Registration and creation of user profile

The system shall require a user to register, in order to carry out any transactions with it except for checking the available plans. It will ask the user for the following information at the least – first name, last name, password, address, phone number, email address, gender, age, height and weight. The system will automatically calculate BMI and store it in user's record.

2.4 Subscribing to a Plan:

After user has created an account, user can subscribe to any workout plan. In ‘Browse Plans’ section in user account all the available plans will be visible.

User can select multiple plans as well, but if user tries to buy same plan again an alert window lets user know that he already has a subscription to that plan. Same plan can be subscribed again only when the current plan validity expires.

In 'My Plans' section user can see his plans. Below each subscribed plan component, the expiry date of that plan will be displayed. As soon as the plan expires it will automatically get deleted from user account and user will need to subscribe to same or another plan again from 'Browse Plans' section

2.5 Diet:

There are various diet plans stored in database. The user when creates his account has option to add additional information which includes his height and weight. System

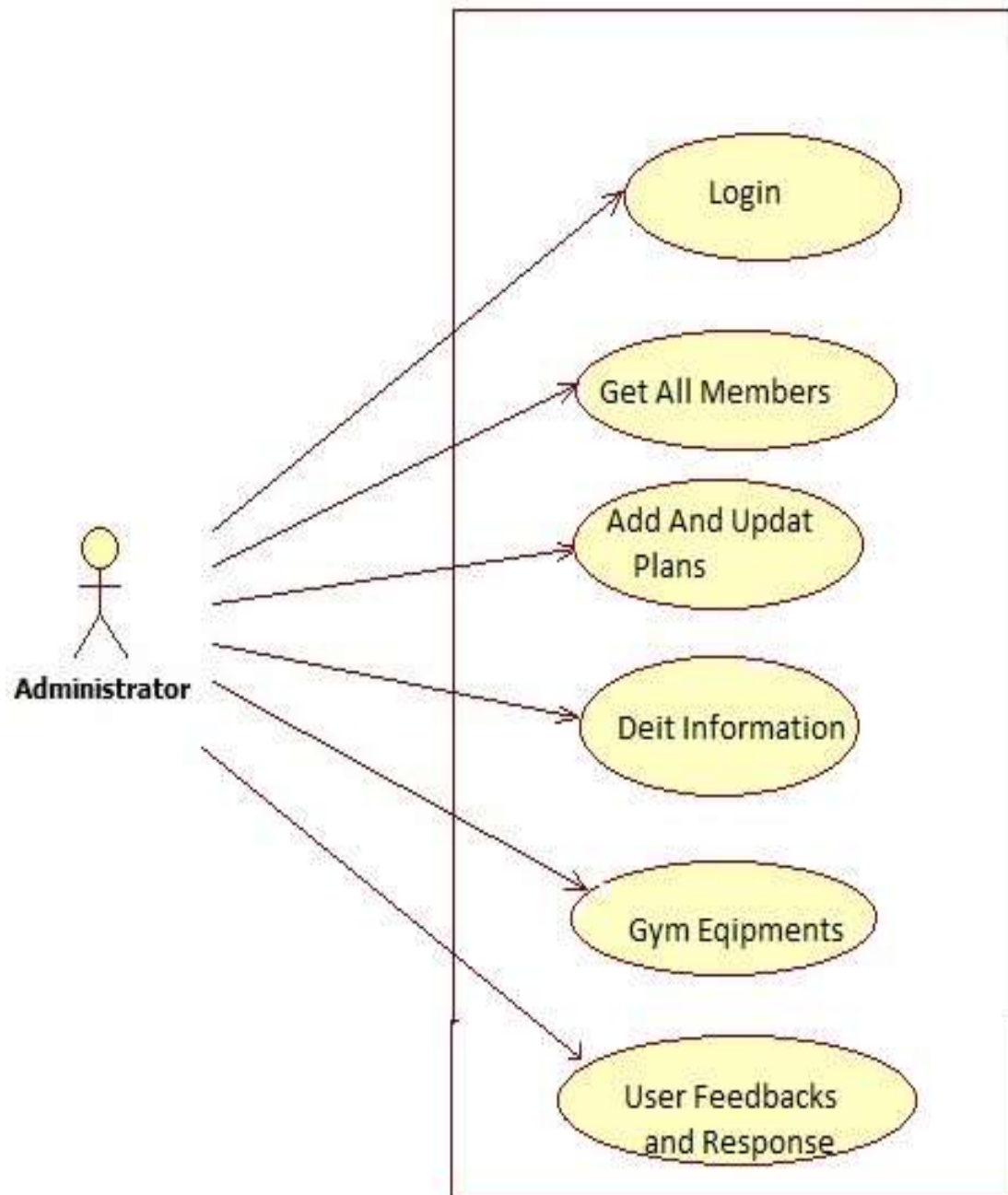
then calculates users' BMI and automatically adds a diet plan appropriate for that user. User can see it in 'Diet Plan' section.

If user explores the Diet section without entering height and weight then a message requesting user to fill additional info is displayed in Diet section.

2.6 Feedback:

A registered user can submit feedback to the system admin about the gym or the application. User has a 'My Feedback' section where he can see all his previous feedbacks. User may also receive a response from admin for his feedback. Thus, establishing communication between admin and user.

3. ADMIN PANEL



Admin is able to login, view and modify his own profile, view and modify all users' information, add and delete or update trainer's information, create new workout plan, update or delete existing plan etc.

- ☐ **Login:** Admin has login to his account. The record in user table in database with 'role' as 'admin' will be automatically has access to admin panel.
- ☐ **Members:** Admin can see information of all registered users. Information suchas basic information in user profile, contact details, user join date etc. Admin hasprivilege to remove a user's account as well.
- ☐ **Workout Plans:** Admin panel has 'Plans' section where admin can updateexisting plans and can create new plan as well.
- ☐ **Trainers:** Trainer's section of admin panel allows admin to handle trainer datamanagement. It has functions such as add new trainer, update or delete existingtrainer details.
- ☐ **Inventory Management:** The equipment data is managed in this section. Admincan keep records of all the purchases of the equipment managed in a separate table in database.
- ☐ **Diet Tables:** In Diet section, admin can add several diet plans and change themas per requirement.
- ☐ **Feedback Management:** User can submit their feedbacks to admin which aremanaged in Feedback management. Admin can view feedbacks and also has functionality available to respond to any particular feedback as well.

4. NON-FUNCTIONAL REQUIREMENTS

4.1 Interface

Go to Appendix B for user interfaces

4.2 Performance

- **Number of Concurrent Users:**

GMS shall be able to handle at least 1000 transactions/inquiries per second

- **Buying a plan:**

The system is susceptible to any temporary server failure since it uses the strong features spring boot and hibernate. Hence the examination will be continued even if the sever gets disconnected in between the examination.

4.3 Constraint

GMS shall be able to handle at least 1000 inquiries per second

5. DESIGN

5.1 Database Design

The following table structures depict the database design.

Table 1: User Table

Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
user_id	Integer	4	0
complete_name	Varchar	255	0
email	Varchar	255	0
adress	Varchar	255	1
age	Integer	4	0
gender	Integer	4	0
joining_date	Date	3	0
end_of_membership_date	Date	3	1
question	Integer	4	0
answer	Varchar	255	1
avatar	Varchar	255	1
height	Double	8	0
weight	Double	8	0
role	Varchar	255	1
password	Varchar2	255	0

Table 2: Trainer Table

Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
trainer_id	Integer	4	0
trainer_name	Varchar	255	1
address	Varchar	255	1
avatar	Varchar	255	1
join_date	Date	3	1
salary	Double	8	0
contact	Varchar	255	1

Table 3: Plan Table

Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
plan_id	Integer	4	0
duration	Integer	4	0
Start_hour	Varchar	255	0
End_hour	Varchar	255	1
planname	Varchar	255	1
Price	double	8	0
Trainer_name	Varchar	255	1

Table 4: Plan Table

Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
memberplan_id	Integer	4	0
plan_id	Integer	4	0
user_id	Integer	4	0

Table 5: Diet Table

Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
diet_id	Integer	4	0
diet_name	Varchar	255	1
Morning	Varchar	255	1
Afternoon	Varchar	255	1
Evening	Varchar	255	1
night	Varchar	255	1

Table 6: Inventory Table

Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
item_id	Integer	4	0
equip_name	Varchar	255	1
Item_price	Double	8	0
model	Varchar	255	1
Purchase_date	Date	3	1
units	Integer	4	0

Table 7: Feedback Table

Column Name	Data Type	Length	Allow Null (1=Yes;0=No)
feed_id	Integer	4	0
Created_timestamp	Datetime	6	1
feedback	Varchar	255	1
User_id	Integer	4	1

6. CODING STANDARDS IMPLEMENTED

Naming and Capitalization

Below summarizes the naming recommendations for identifiers in Pascal casing is used mainly (i.e., capitalize first letter of each word) with camel casing (capitalize each word except for the first one) being used in certain circumstances.

Identifier	Case	Examples	Additional Notes
Class	Pascal	Person, BankVault, SMSMessage, Dept	Class names should be based on "objects" or "real things" and should generally be nouns . No ‘_’ signs allowed. Do not use type prefixes like ‘C’ for class.
Method	Camel	getDetails, updateStore	Methods should use verbs or verb phrases.
Parameter	Camel	personName, bankCode	Use descriptive parameter names. Parameter names should be descriptive enough that the name of the parameter and its type can be used to determine its meaning in most scenarios.
Interface	Pascal with "I" prefix	Disposable	Do not use the ‘_’ sign
Property	Pascal	ForeColor, BackColor	Use a noun or noun phrase to name properties.
Associated private member variable	_camelCase	_foreColor, _backColor	Use underscore camel casing for the private member variables
Exception Class	Pascal with "Exception" suffix	WebException,	

Comments

- ☐ Comment each type, each non-public type member, and each region declaration.
- ☐ Use end-line comments only on variable declaration lines. End-line comments are comments that follow code on a single line.
- ☐ Separate comments from comment delimiters (apostrophe) or // with one space.
- ☐ Begin the comment text with an uppercase letter.
- ☐ End the comment with a period.
- ☐ Explain the code; do not repeat it.

7. TEST REPORT

Another group called Linux did the testing and the report of the testing is given hereunder.

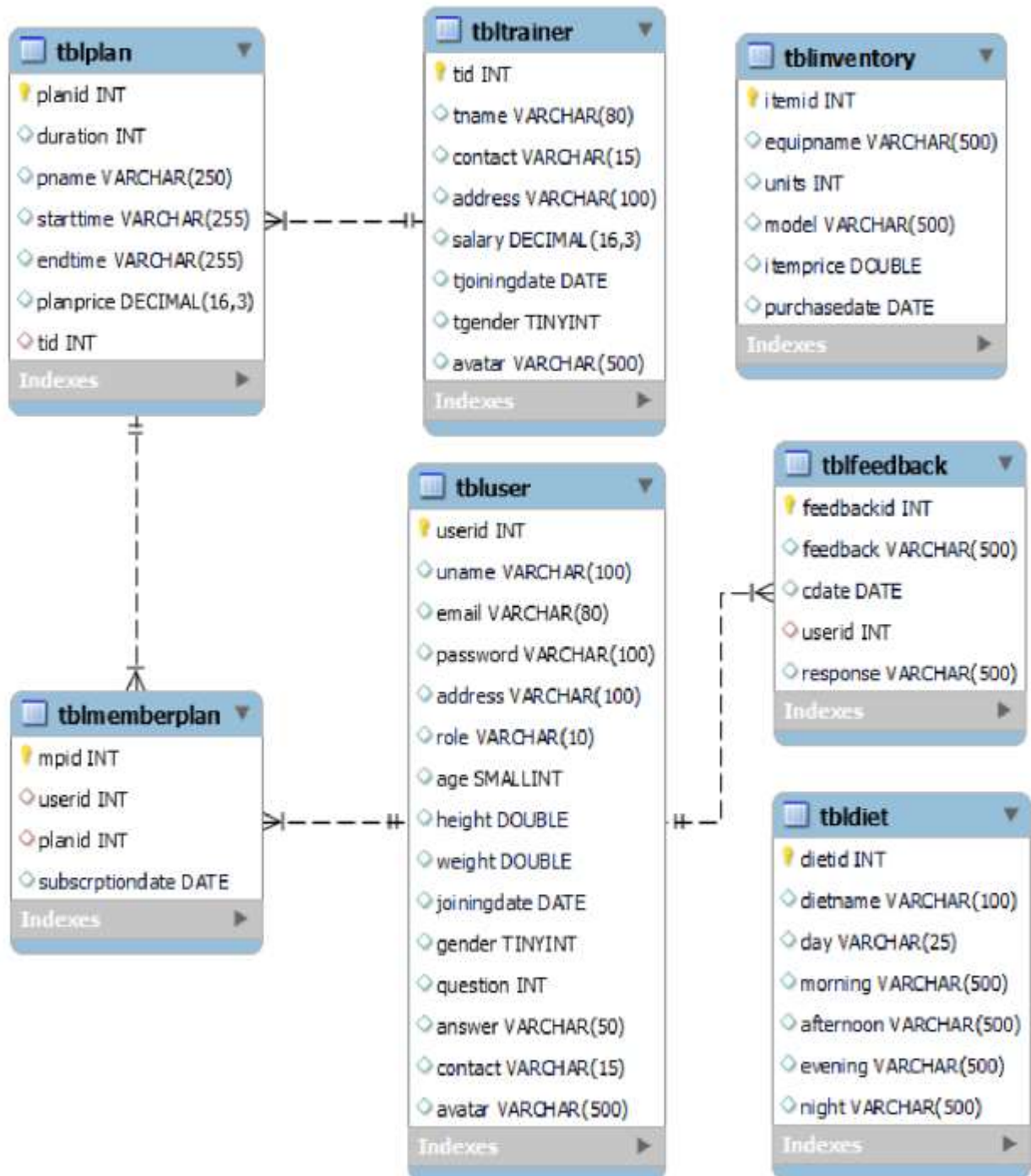
GENERAL TESTING:

SR - N O	TEST CASE	EXPECTED RESULT	ACTUAL RESULT	ERROR MESSAGE
1	Signup Page	Redirected to Login page	OK	Please Fill all fields.
2	Login Page	Redirect to Dashboard	Ok	Please enter username and password again.
3	Forgot Password	Only user's password will be reset	Ok	Please enter correct email, security question and answer.
4	Browse Plans	Gives all Plan details	Ok	Nothing
5	Buying Plan	Selected Plan should be added to users acc.	Ok	You've already bought this plan.
6	Checking login or not	User is logged in or not	Ok	Nothing
7	Update person details	Additional information should be updated.	Ok	Nothing
8	Go to Diet Table page	Show appropriate diet table based on user's BMI	Ok	Please enter additional information.
9	Feedback	Save user's feedback into database	Ok	Nothing
10	Add Trainer	Should create Trainer record in database.	Ok	Nothing

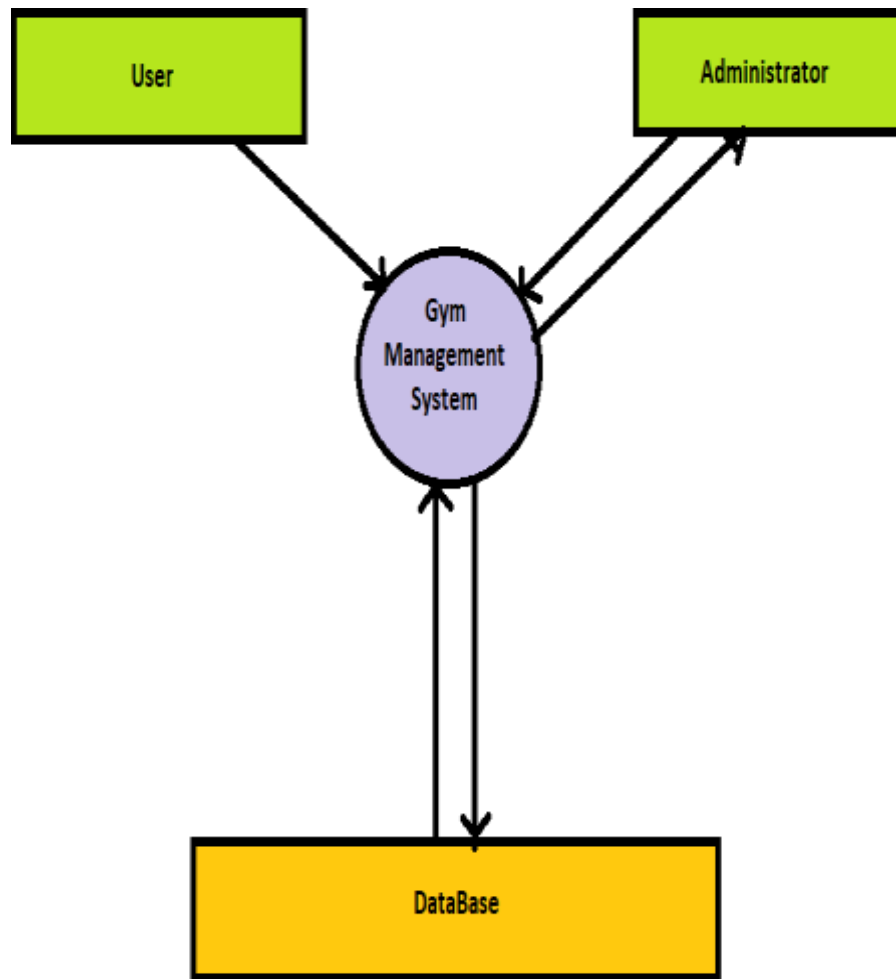
11	Respond to feedback	User should receive response sent by admin.	Ok	Nothing
12	Logout	It will logout from user and adminprofile.	Ok	Nothing
	STATIC TESTING			
SR - NO	Deviation	Program		
1	Commenting not followed	All Web Application		

8. Appendix A

8.1 Entity Relationship Diagram



8.2 Data Flow Diagram:



FitWay

Welcome

Programs

About US

SignUp

Login


GET MEMBERSHIP

GET **FIT**

BUILD **STRENGTH**

IN **FITWAY**

We strive to keep you fit & healthy through a range of holistic offerings that include fitness and yoga, healthy meals, mental wellbeing and primary care. Now anyone can now stay healthy from the safety of their homes with just a single app that helps you to



FITWAY

FITWAY is a environment which helps to achieve goals with varieties of **PROGRAMS**

Body Building Course

Everybody wanna be a bodybuilder, but don't nobody wanna lift heavy weights!! Being defeated is often a temporary condition. Giving up is what makes it permanent.



SignUp

User Name

Please enter your full name.

Contact No.

Please enter your contact number.

Email

Please enter your email.

Password

Please enter password.

Question

Answer



Members Feedback

Services

Basic training
Body Building
Yoga

About

Company
Team
Careers

FITWAY

If we could give every individual the right amount of nourishment and exercise, not too little and not too much, we would have found the safest way to health



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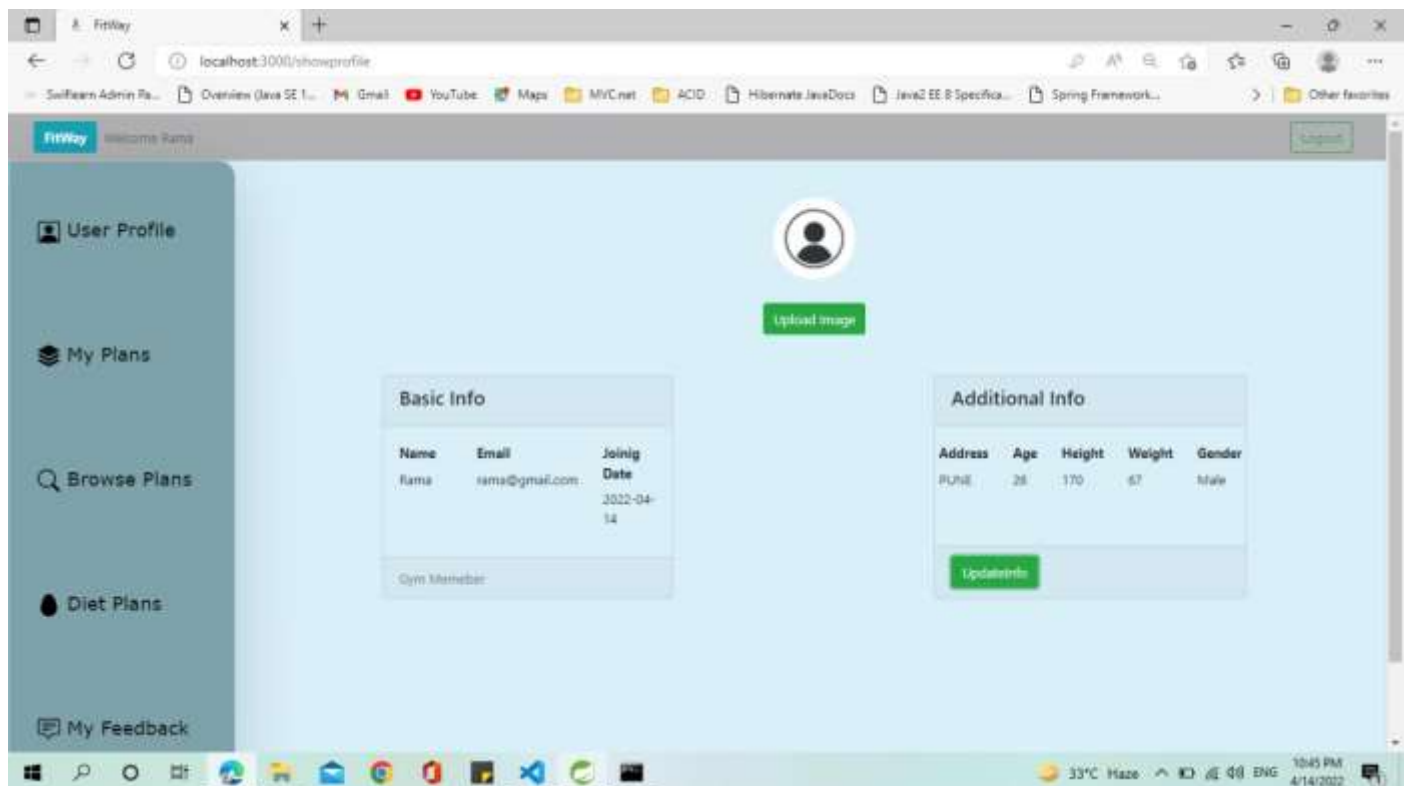
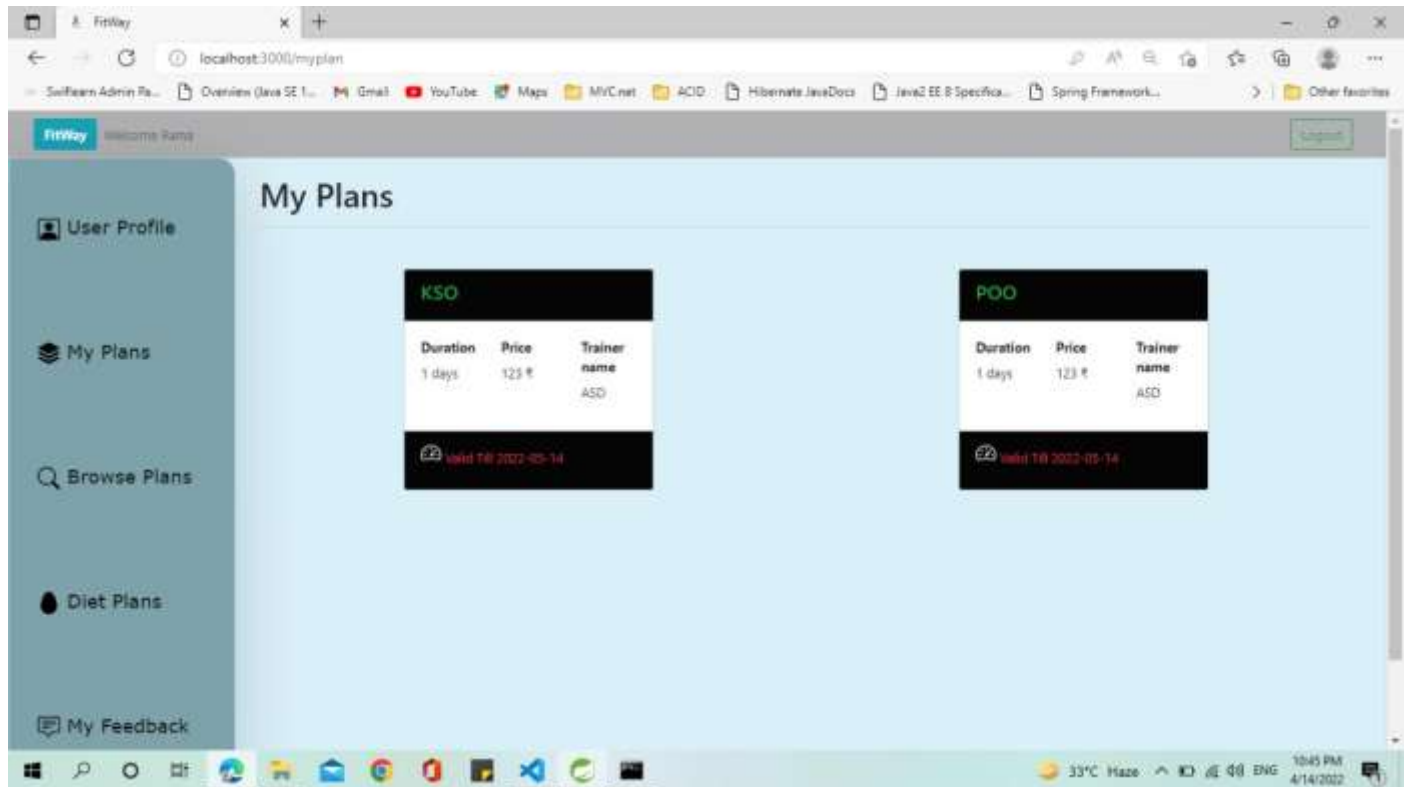
Your All Feedback

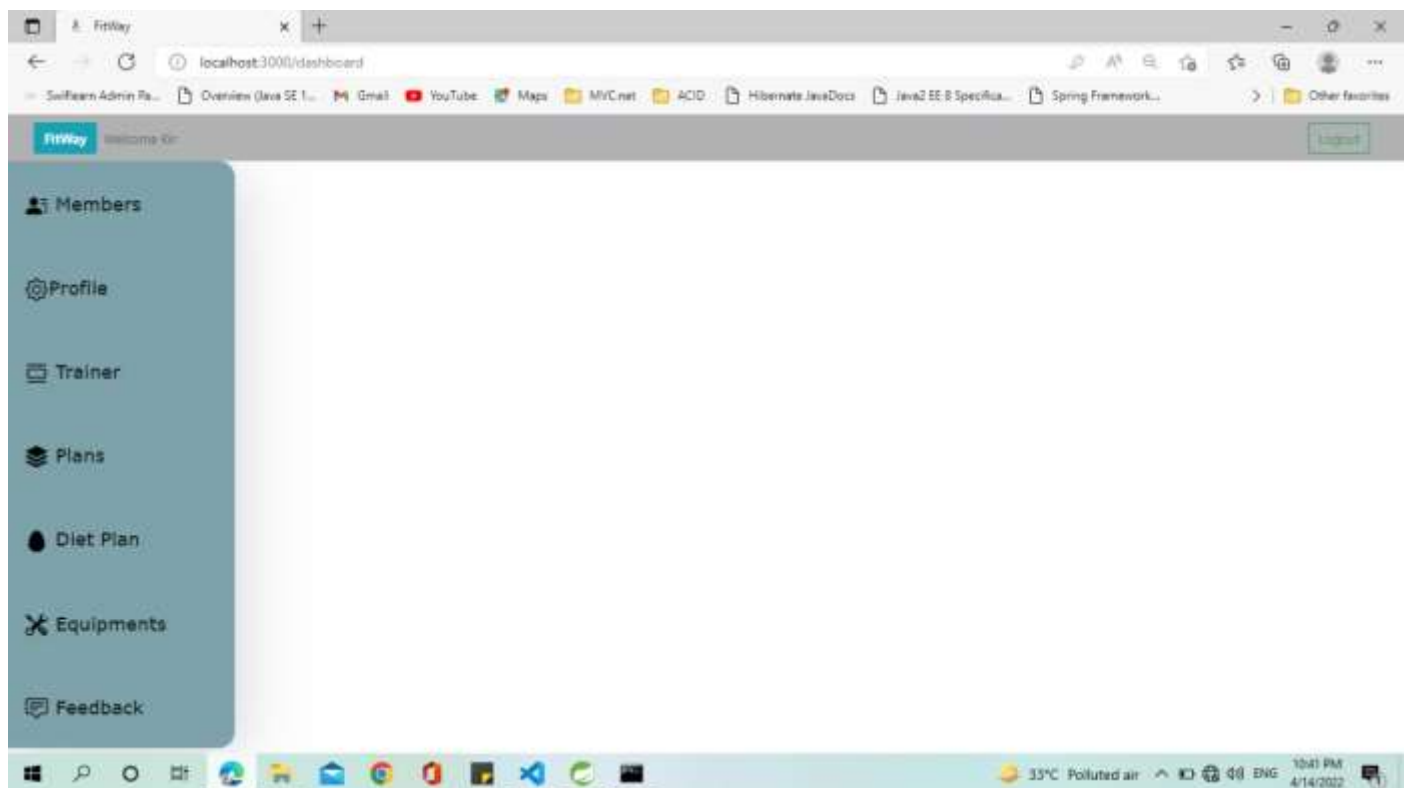
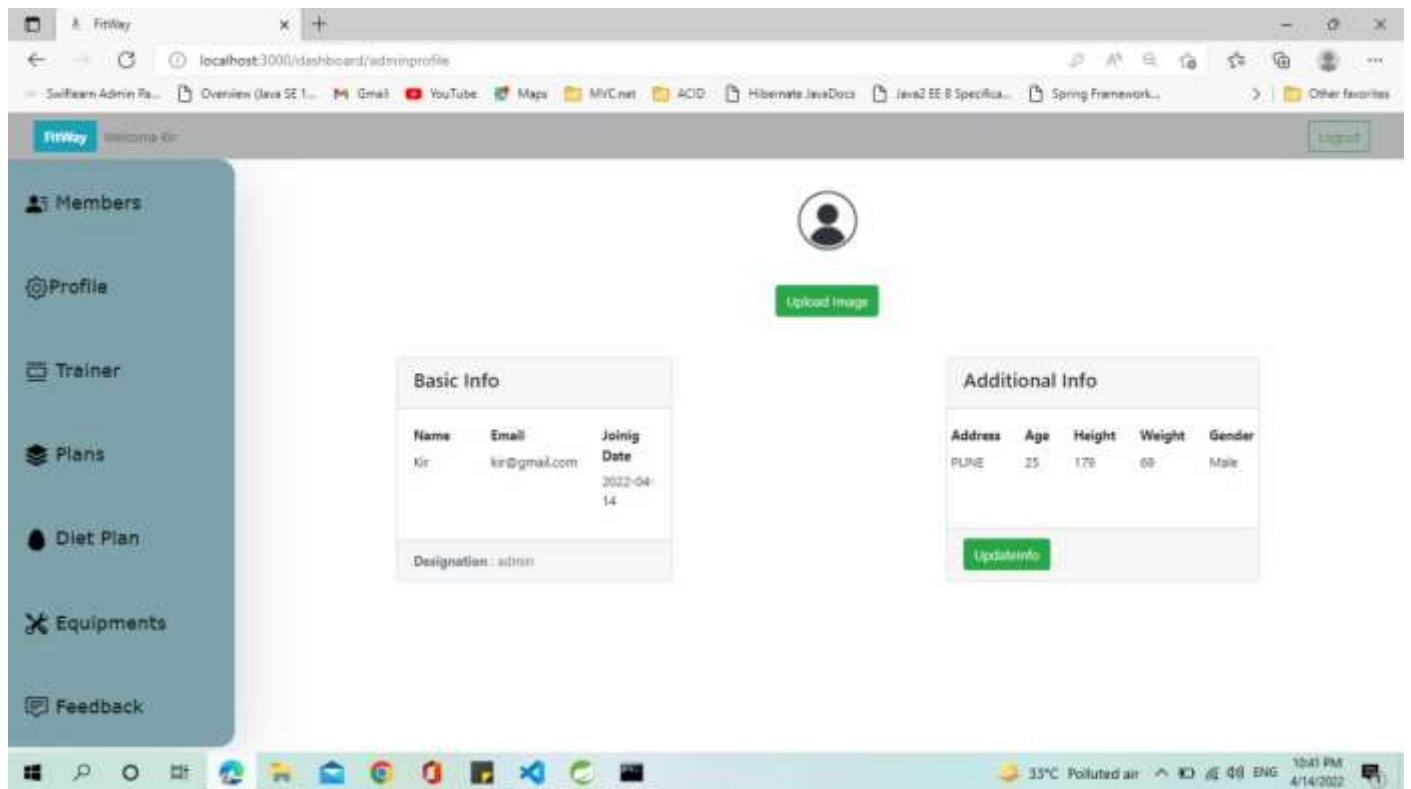
[Add New Feedback](#)

FeedID	Name	Feedback	Time	Response	Delete
3	Rama	Service	2022-04-14	Thank you for your feedback, admin will respond you soon !!	

Browse Plans

Plan Name	Duration	Start	End	Price	Trainer Name	Buy Plan
KSO	1	11	12	123	ASD	
PGO	1	13	14	123	ASD	





FitWay Welcome Kir Logout

Members Management

Total Member : 2

Userid	UserName	Email	Contact	Role	Registration Date	Age	Height	Weight	Plans Subscribed	Action
1	Kir	kir@gmail.com	1234567890	admin	2022-04-14	25	179	69	No Plan Subscribed	Delete Promot As Admin
2	Rama	rama@gmail.com	1234567890	user	2022-04-14	20	0	0	<ul style="list-style-type: none"> KSO POO 	Delete Promot As Admin

Navigation Menu: Members, Profile, Trainer, Plans, Diet Plan, Equipments, Feedback

System Status: 33°C, Polluted air, 10:41 PM, 4/14/2022

9. REFERENCES:

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