COMPUTER SCIENCES

Database Management-1

Project report for Gym System

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Section:	BSE-4B
Dated:	17 Jun, 2022
Program:	BSE

Contents

Project Category:

○ **A-**Desktop Application/Information System ●**B-**Web Application/Web Application based Information System ○ **C-** Smartphone Application

Abstract:

This project “Gym Management System” is solution fitness centers to manage the customers in an easier and more convenient way. The administrator can view all the members of fitness center as well as their details. The basic structure of the system as follows. This project is a web-based program and it manages the gym members, and equipment’s . This system also maintains the client details, to provide the valuable reports regarding the progress of the gym member. 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. Introduction

This project is designed to facilitate a gym fitness center to automate its operations of keeping records and store them in the form of a large and user-friendly database. Further facilitating easy access to the personnel. This web is capable enough to allow the concerned person to store and retrieve any type of record with just a single click of mouse. The software allows Interactive, Self-describing Graphic User Interface environment where even standalone users can work very comfortably and easily.

What problem does your software solve?

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 in order to effectively and efficiently cater requirements of the Gym fitness center. The person who generally holds the tasks to manage the center needs to keep records of all the payment. Generally, in order to structure these tasks Separate registers are maintained. Moreover, any data entered mistakenly can brings serious results. Data Redundancy is no more the problem now. The data modified from one data entry form will reflect the modifications at the other related forms too. This has thus reduced the chances of data inconsistency in our data storage.

There is no need to manage bulky registers now as data stored in the backend database can be readily retrieved either from the frontend form itself or directly from the database.

Skills:

This project will help you gain practical knowledge. Following skills can be developed:

- Member Management
- Employee Management
- Financial Management
- Data Management

2. Advantages/Benefits of Proposed System

- New proposed system allows to user to save record in database where as existing system keep records in form of files.
- Fast and ease of use, i.e. user friendly interface.
- Reduces the staff requirements.
- Saves administration time.
- Reliable.
- It is easy to use a click lets you access what you want whereas in existing system it will be difficult view information by reading pages.
- It reduces overheads, i.e. you have employed fewer staff.
- Efficiently manage members(i.e. trainers and users).

3. Scope

A gym management system is a system that can be installed in a computer of a working gym as it assists the gym manager in keeping a track of information of all the people involved in a gym (trainers, members, administrators). Keeping physical records may be a hectic task so the online gym management system provides a quick and easy access to all the information that is required at any time. This system can be used by the administrator to manage the information of trainers and members of the gym. The administer will be able to easily keep track of important information like checking if the member has paid the membership fee or checking if the trainer has been paid his/ her monthly salary. This system can be used by admin to keep all the records about the nutrition products and gym equipment's and view information and edit different workout plans. Admin can generate reports. It can also be used by members of the gym if they want to add/ delete a trainer or add/ delete an exercise. Instead of talking to the administrator, a member can easily modify his information using this system. Trainers may also use it to access and modify their personal details like address, contact number etc. Trainers will also be able to view all the members that they are training at the same time. This system can be used by any Gym across the globe as it works in the universal language, English.

4. Modules

Module 1: Login

In this module, admin, trainer and users can login the system by using their usernames and passwords.

Module 2: Manage trainers

In this module admin can register, edit information and can cancel registration of the trainers and can also view trainers information.

Module 3: Register users

In this module admin can register the new users or users can register themself.

Module 4: Register Trainers

In this module admin can register trainer or trainers can register themself.

Module 5: Manage packages

In this module the admin can add different gym packages and remove gym packages that are available with or without trainer.

Module 6: Manage gym equipment's

In this module, the admin can add, delete the records about the gym machines.

Module 7: Manage records

In this module, admin can view, reset all records or a specific record set.

Module 8: Manage member information

In this module admin can edit information and can cancel registration of the users and can also view users' information.

Module 9: Manage payments

In this module admin can view that is the salary is paid to the trainer's and user pay the fee or not. **(New innovation)**

Module 10: Manage workout plan information

In this module admin can add, view, modify and delete the workout plans and workout plan information.

Module 11: Generate user report

In this module, the admin can generate the user reports about his/her health.**(New innovation)**

5. System Limitations/Constraints

- Errors are high.
- In case of lack of internet system will not respond.

6. Tools and Technologies

To build the gym system we use different tools and technologies that are following

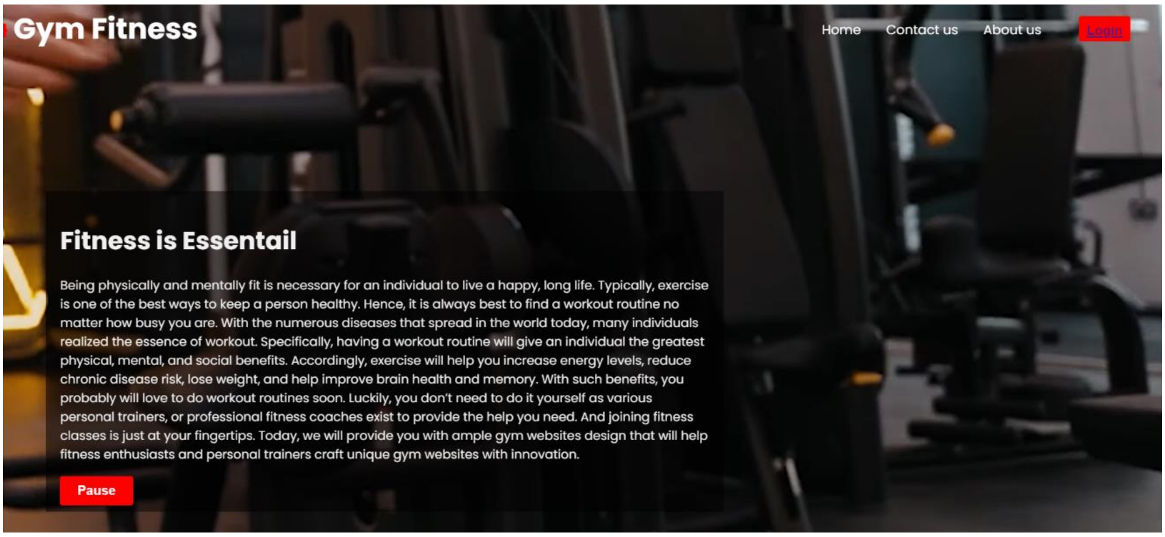
Table 1 Tools and Technologies for Proposed Project

Tools And Technologies	**Tools**	**Version**	**Rationale**
	Visual Studio Code	2022	IDE
	MS SQL Server,Mongo DB	2022	DBMS
	Php	CSC 6	Design Work
	MS Word	2022	Documentation
	Technology	**Version**	**Rationale**
	Php	8.0	Programming language
	My SQL	2022	Query Language
	Html	5	Web Development

7. Interfaces:

7.1. Home interface:

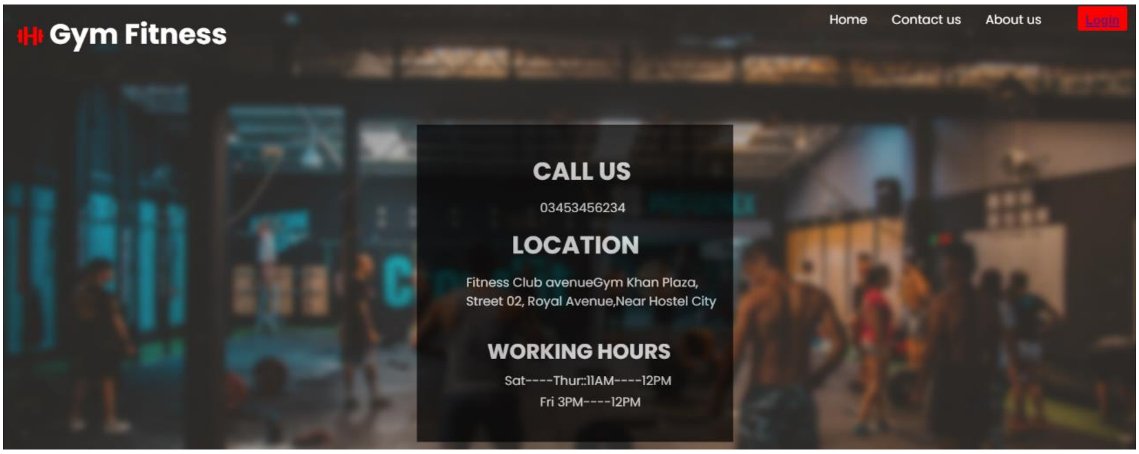
This interface enables provide an info about the gym Fitness. A menu bar that contains the Home button, Contact us and About us. By few clicks the web users can view the details about the gym **Fitness and also how they contact the gym Fitness.**



Fitness is Essentail

Being physically and mentally fit is necessary for an individual to live a happy, long life. Typically, exercise is one of the best ways to keep a person healthy. Hence, it is always best to find a workout routine no matter how busy you are. With the numerous diseases that spread in the world today, many individuals realized the essence of workout. Specifically, having a workout routine will give an individual the greatest physical, mental, and social benefits. Accordingly, exercise will help you increase energy levels, reduce chronic disease risk, lose weight, and help improve brain health and memory. With such benefits, you probably will love to do workout routines soon. Luckily, you don't need to do it yourself as various personal trainers, or professional fitness coaches exist to provide the help you need. And joining fitness classes is just at your fingertips. Today, we will provide you with ample gym websites design that will help fitness enthusiasts and personal trainers craft unique gym websites with innovation.

User view contact info:



CALL US

03453456234

LOCATION

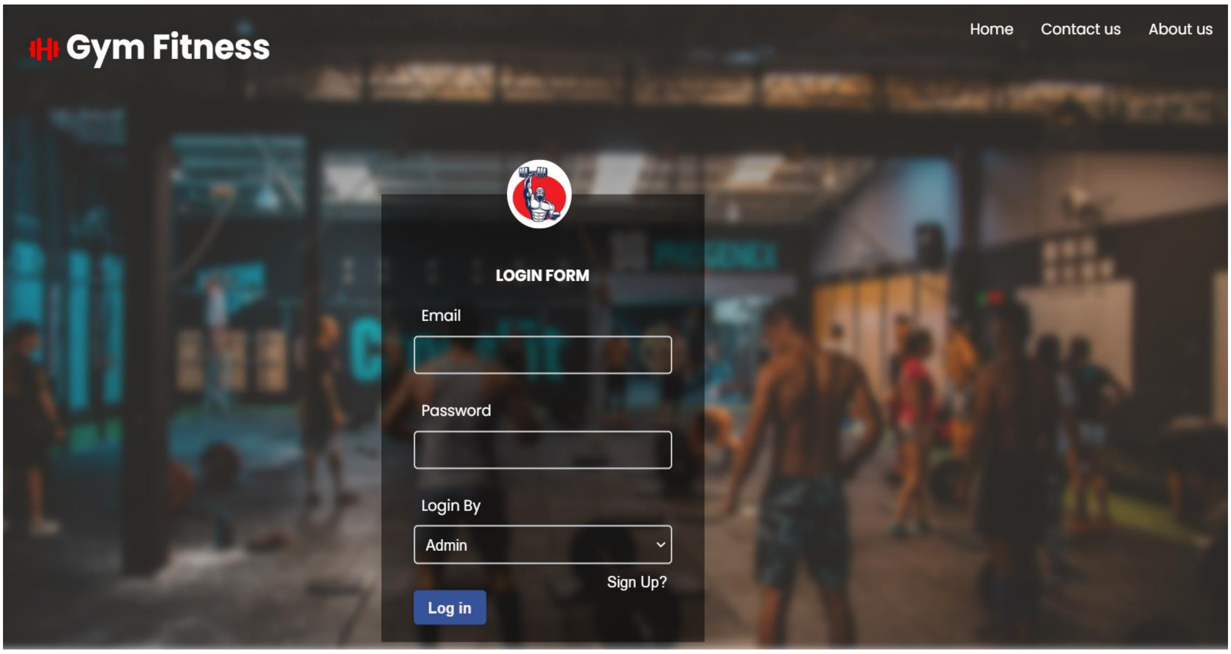
Fitness Club avenueGym Khan Plaza,
Street 02, Royal Avenue,Near Hostel City

WORKING HOURS

Sat----Thur::11AM----12PM
Fri 3PM----12PM

7.2. Login interface:

This interface enables admin, user and trainer to login the gym Fitness by entering email and password. User and trainer can register themselves by signup the gym Fitness.

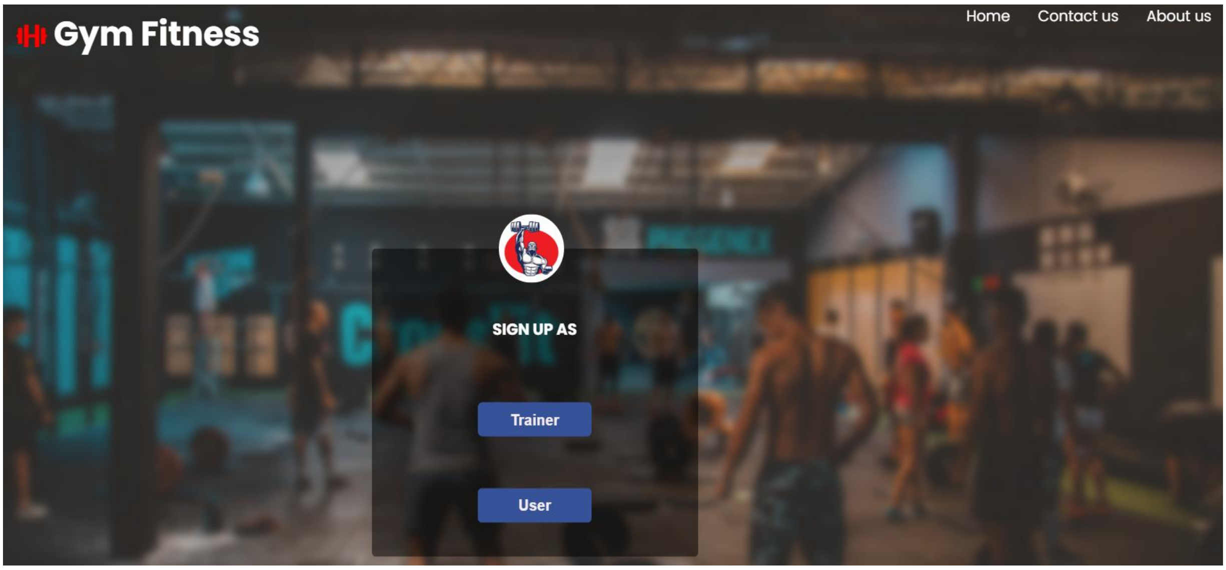


Login By

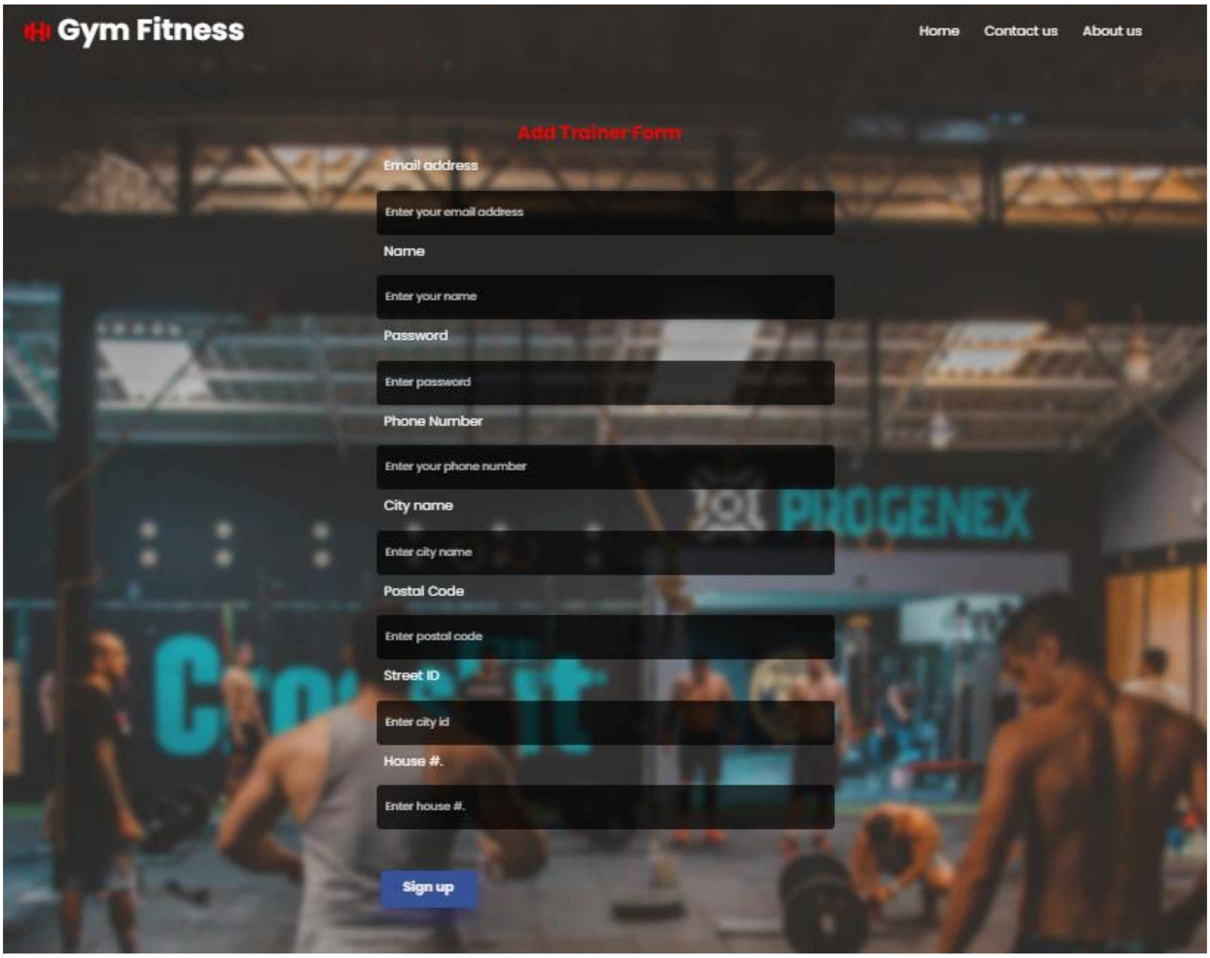
Admin

7.2.1. Signup interface

In this interface user and trainer can register themselves by providing personal information on signup form and then login to Gym Fitness from the login interface by entering email and password.



Trainer signup form



Add Trainer Form

Email address

Enter your email address

Name

Enter your name

Password

Enter password

Phone Number

Enter your phone number

City name

Enter city name

Postal Code

Enter postal code

Street ID

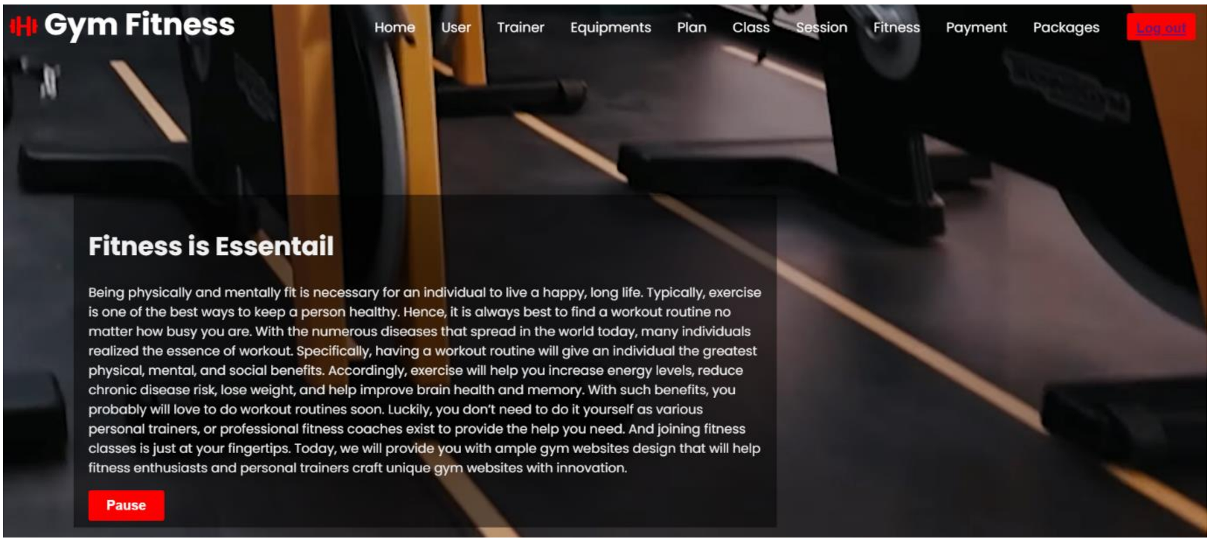
Enter city id

House #.

Enter house #.

7.3. Admin interface

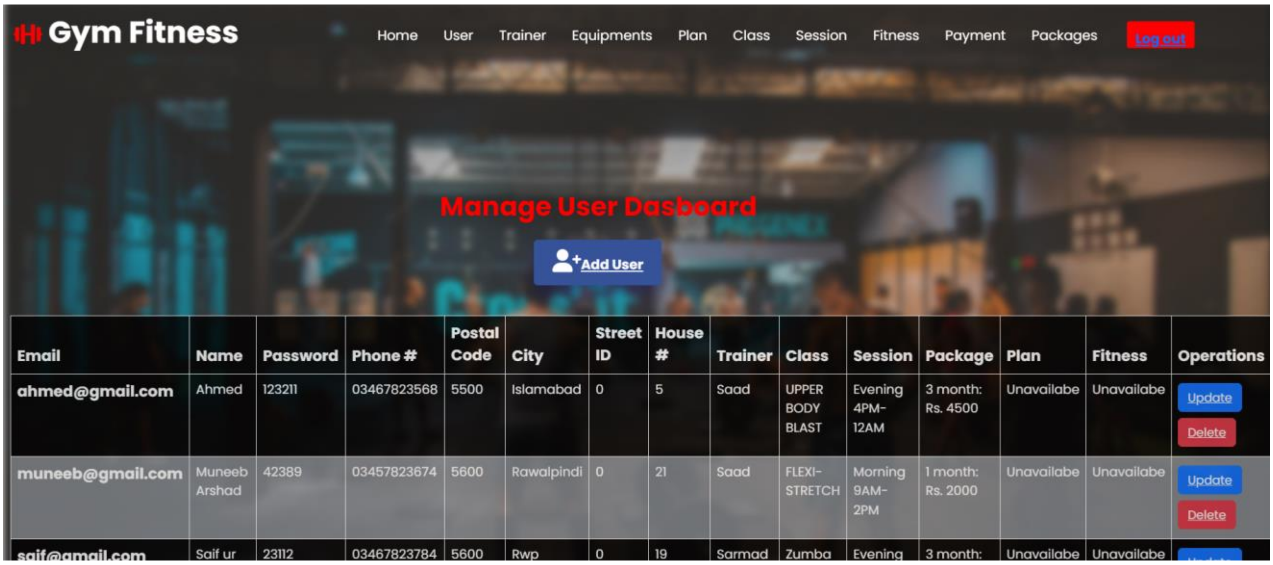
In this interface the admin have a grip on overall the gym Fitness. It provides a menu bar by which admin can go manage all the things i.e. mange users, trainers, equipment's , plans, classes, sessions, fitness, payment, packages along with a logout button.



Fitness is Essentail

Being physically and mentally fit is necessary for an individual to live a happy, long life. Typically, exercise is one of the best ways to keep a person healthy. Hence, it is always best to find a workout routine no matter how busy you are. With the numerous diseases that spread in the world today, many individuals realized the essence of workout. Specifically, having a workout routine will give an individual the greatest physical, mental, and social benefits. Accordingly, exercise will help you increase energy levels, reduce chronic disease risk, lose weight, and help improve brain health and memory. With such benefits, you probably will love to do workout routines soon. Luckily, you don't need to do it yourself as various personal trainers, or professional fitness coaches exist to provide the help you need. And joining fitness classes is just at your fingertips. Today, we will provide you with ample gym websites design that will help fitness enthusiasts and personal trainers craft unique gym websites with innovation.

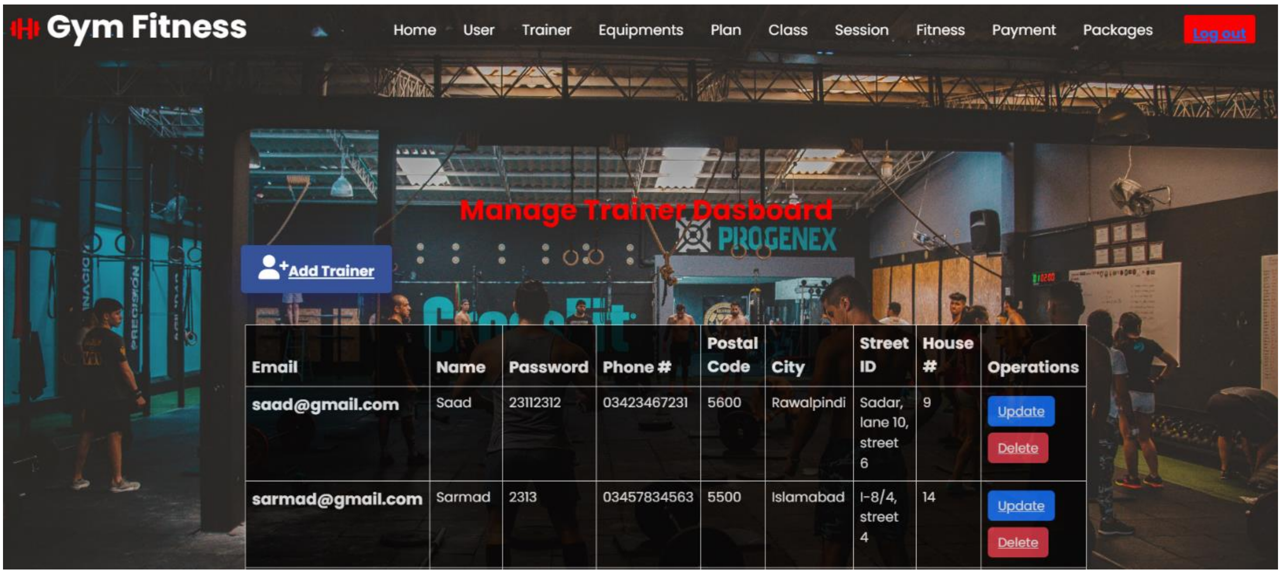
Admin can manage what he/she wants by click on the appropriate button. If he/she click on users then admin can view all the user records along with add, update, delete buttons. By clicking on these buttons admin can add new user and update, delete the specific user.



Manage User Dasboard

Email	Name	Password	Phone #	Postal Code	City	Street ID	House #	Trainer	Class	Session	Package	Plan	Fitness	Operations
ahmed@gmail.com	Ahmed	123211	03467823568	5500	Islamabad	0	5	Saad	UPPER BODY BLAST	Evening 4PM-12AM	3 month: Rs. 4500	Unavailabe	Unavailabe	Update Delete
muneeb@gmail.com	Muneeb Arshad	42389	03457823674	5600	Rawalpindi	0	21	Saad	FLEXI-STRETCH	Morning 9AM-2PM	1 month: Rs. 2000	Unavailabe	Unavailabe	Update Delete
saif@gmail.com	Saif ur	23112	03467823784	5600	Rwp	0	19	Sarmad	Zumba	Evening	3 month:	Unavailabe	Unavailabe	

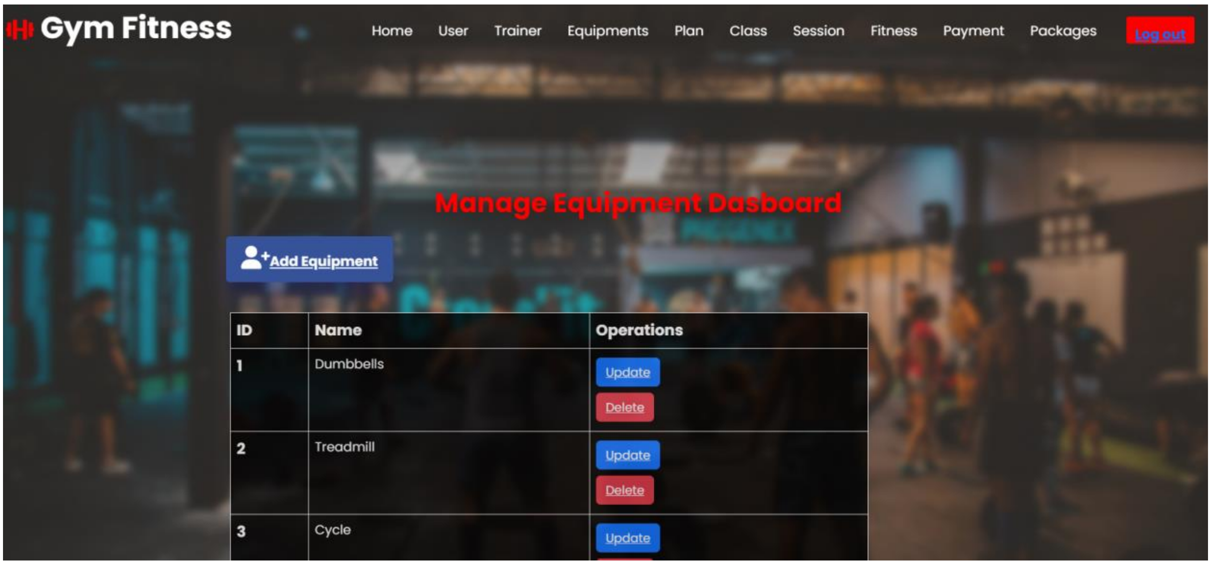
If admin click on trainer then admin can view all the trainer records along with add, update, delete buttons. By clicking on these buttons admin can add new trainer and update, delete the specific trainer.



Manage Trainer Dasboard

Email	Name	Password	Phone #	Postal Code	City	Street ID	House #	Operations
saad@gmail.com	Saad	23112312	03423467231	5600	Rawalpindi	Sadar, lane 10, street 6	9	Update Delete
sarmad@gmail.com	Sarmad	2313	03457834563	5500	Islamabad	I-8/4, street 4	14	Update Delete

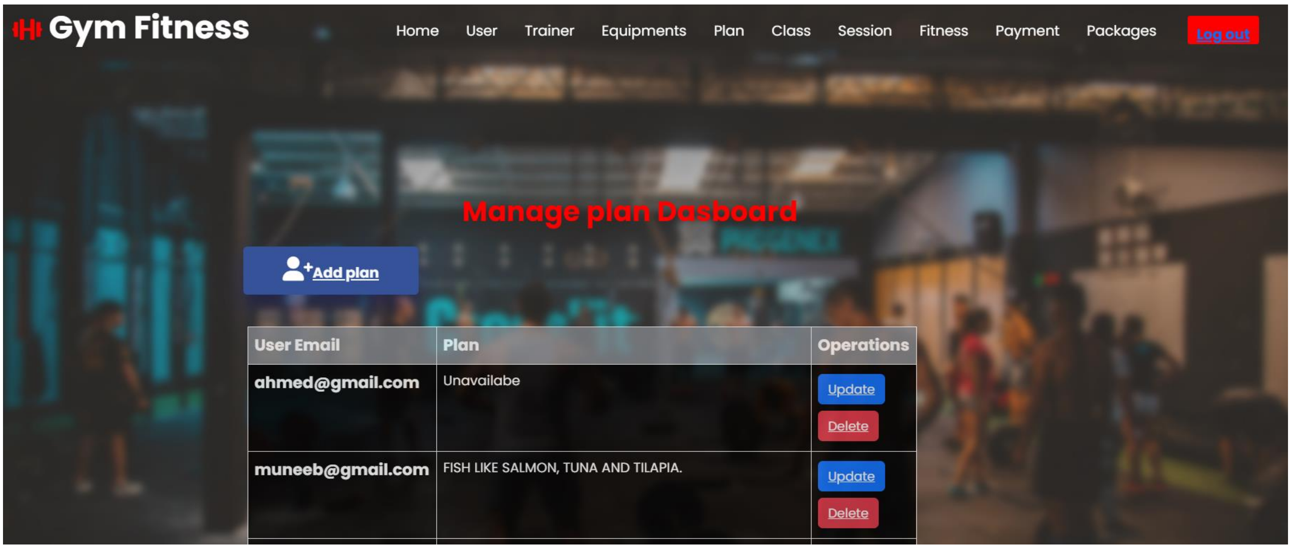
If admin click on equipment's then admin can view all the equipment's records along with add, update, delete buttons. By clicking on these buttons admin can add new equipment and update, delete the specific equipment.



Manage Equipment Dasboard

ID	Name	Operations
1	Dumbbells	Update Delete
2	Treadmill	Update Delete
3	Cycle	Update

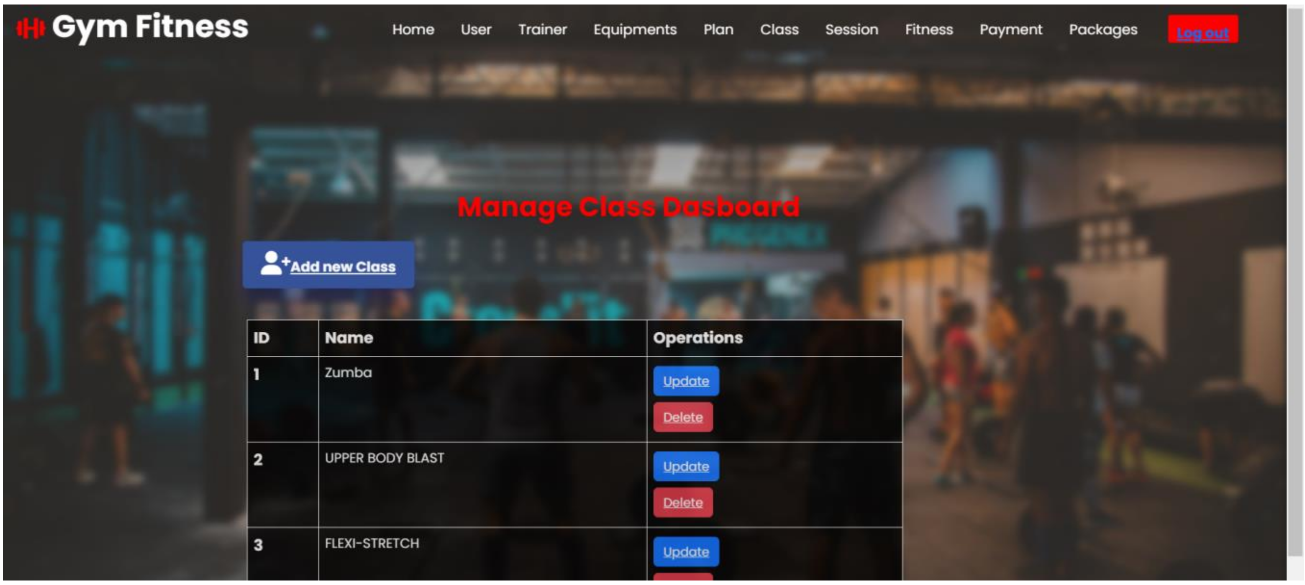
If admin click on plan then admin can view all the plan records along with add, update, delete buttons. By clicking on these buttons admin can add new plan and update, delete the specific plan.



Manage plan Dasboard

User Email	Plan	Operations
ahmed@gmail.com	Unavailabe	Update Delete
muneeb@gmail.com	FISH LIKE SALMON, TUNA AND TILAPIA.	Update Delete

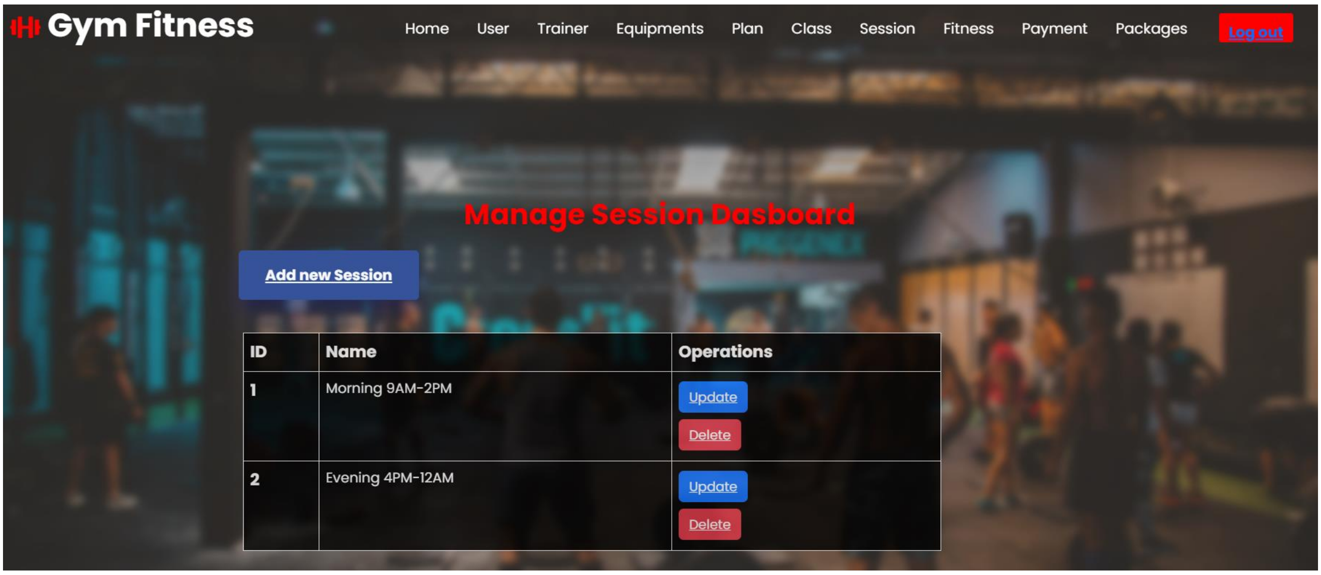
If admin click on class then admin can view all the class records along with add, update, delete buttons. By clicking on these buttons admin can add new class and update, delete the specific class.



Manage Class Dasboard

ID	Name	Operations
1	Zumba	Update Delete
2	UPPER BODY BLAST	Update Delete
3	FLEXI-STRETCH	Update

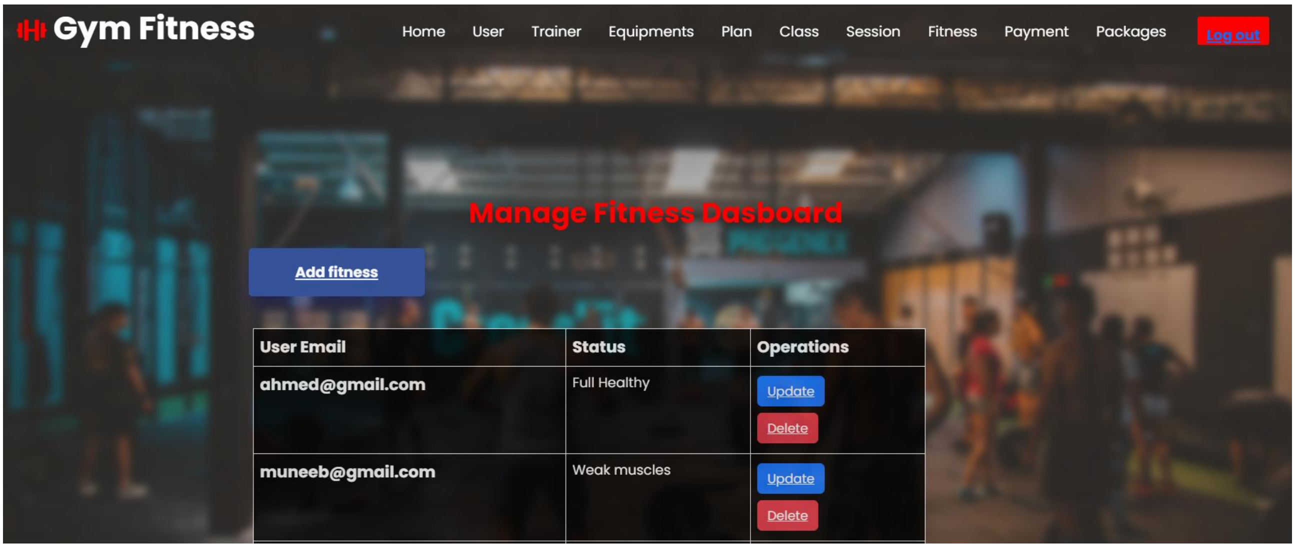
If admin click on session then admin can view all the session records along with add, update, delete buttons. By clicking on these buttons admin can add new session and update, delete the specific session.



Manage Session Dasboard

ID	Name	Operations
1	Morning 9AM-2PM	Update Delete
2	Evening 4PM-12AM	Update Delete

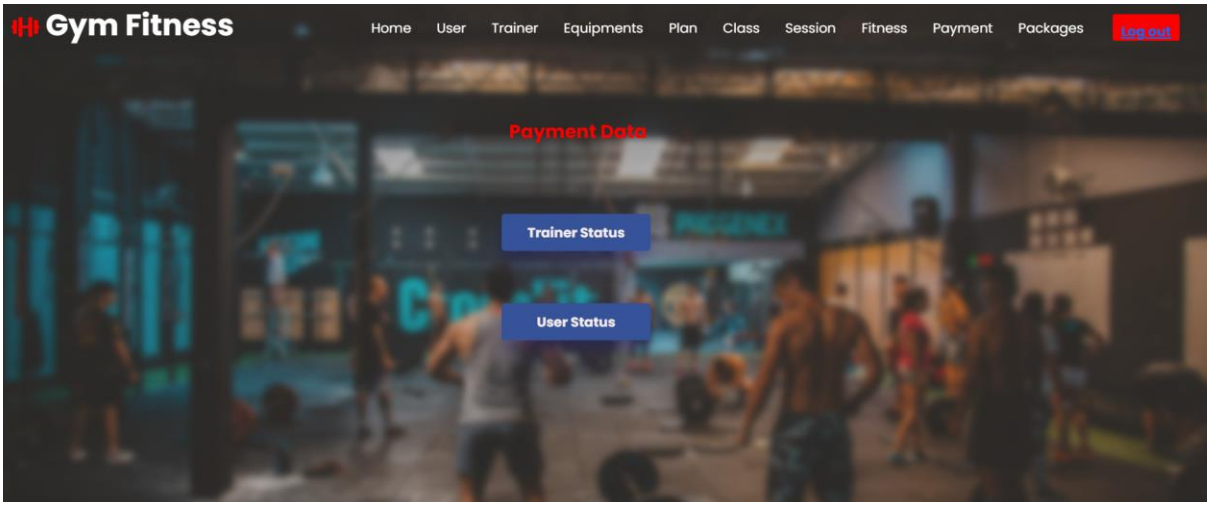
If admin click on fitness then admin can view all the fitness records along with add, update, delete buttons. By clicking on these buttons admin can add new fitness and update, delete the specific fitness.



Manage Fitness Dasboard

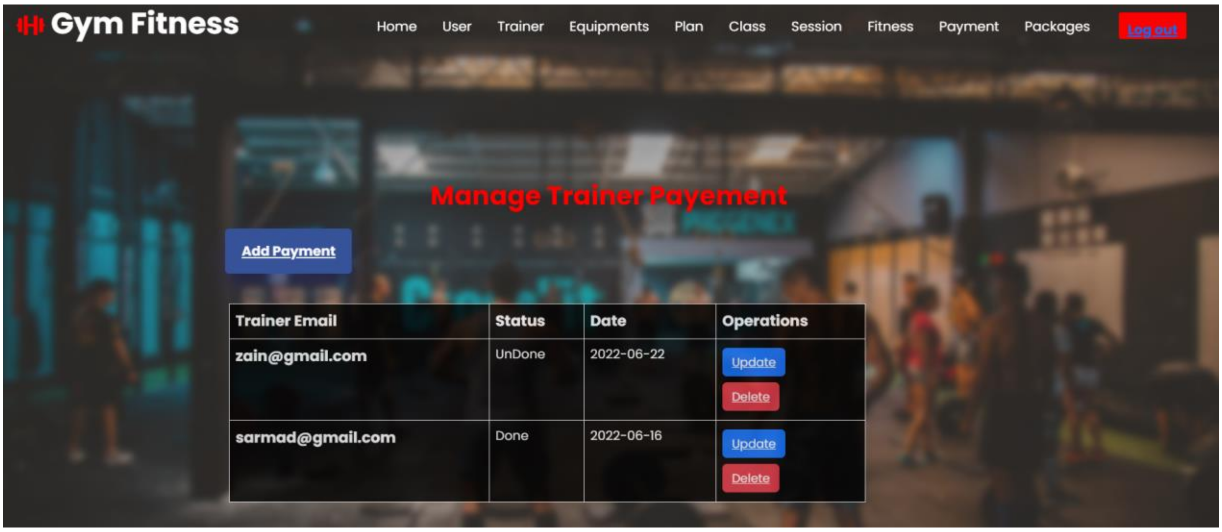
User Email	Status	Operations
ahmed@gmail.com	Full Healthy	Update Delete
muneeb@gmail.com	Weak muscles	Update Delete

If admin click on payment then admin can view two buttons trainer and user payment.



Payment Data

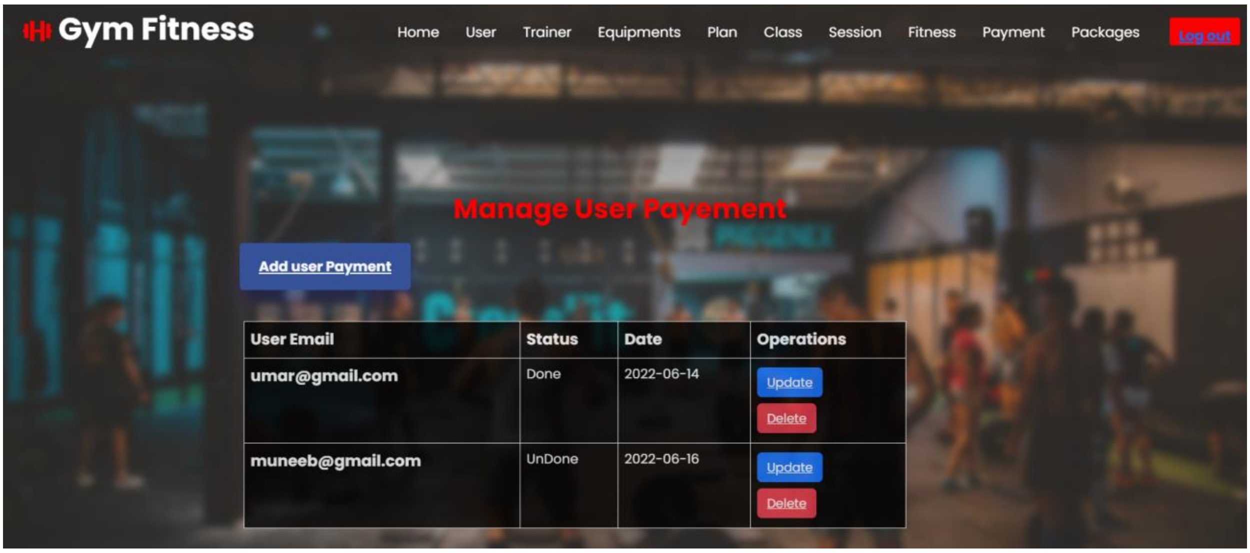
If admin click on trainer then admin can view payment and also payment add, update, delete buttons. By clicking on these buttons admin can update, delete the specific trainer payment.



Manage Trainer Payement

Trainer Email	Status	Date	Operations
zain@gmail.com	UnDone	2022-06-22	Update Delete
sarmad@gmail.com	Done	2022-06-16	Update Delete

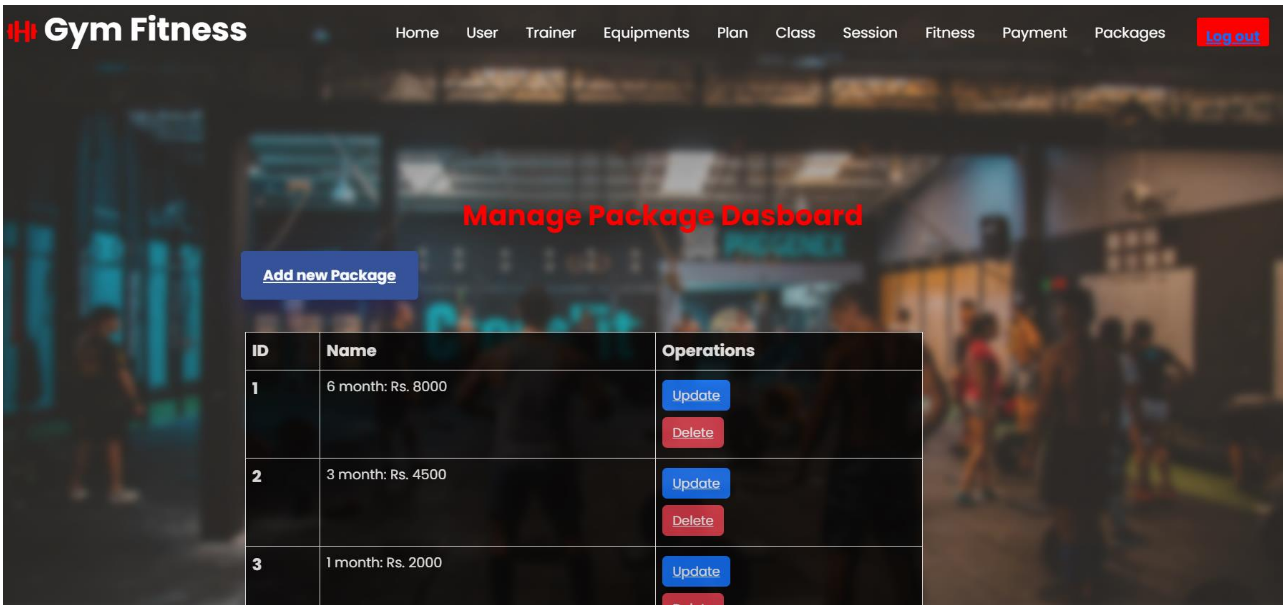
If admin click on user then admin can view payment and also payment add, update, delete buttons. By clicking on these buttons admin can update, delete the specific user payment.



Manage User Payement

User Email	Status	Date	Operations
umar@gmail.com	Done	2022-06-14	Update Delete
muneeb@gmail.com	UnDone	2022-06-16	Update Delete

If admin click on package then admin can view all the package records along with add, update, delete buttons. By clicking on these buttons admin can add new package and update, delete the specific package.

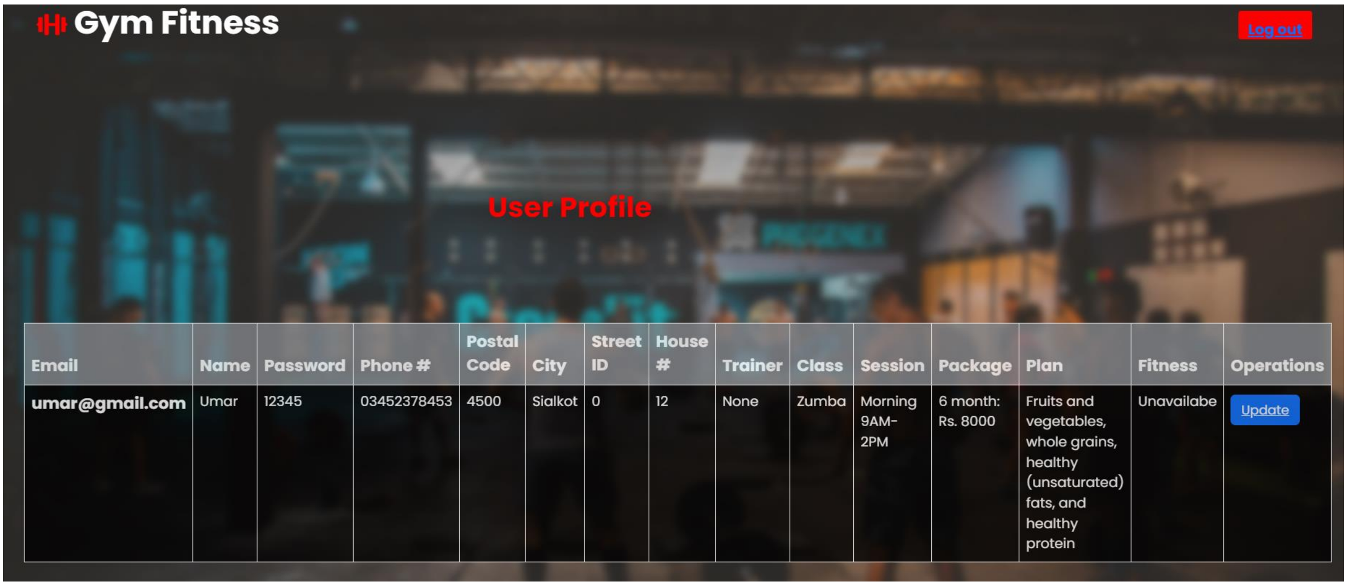


Manage Package Dasboard

ID	Name	Operations
1	6 month: Rs. 8000	Update Delete
2	3 month: Rs. 4500	Update Delete
3	1 month: Rs. 2000	Update

7.4. User interface

When user login he/she view the home interface where is his/her data is shown and user can update his/her own profile only by click on update button.

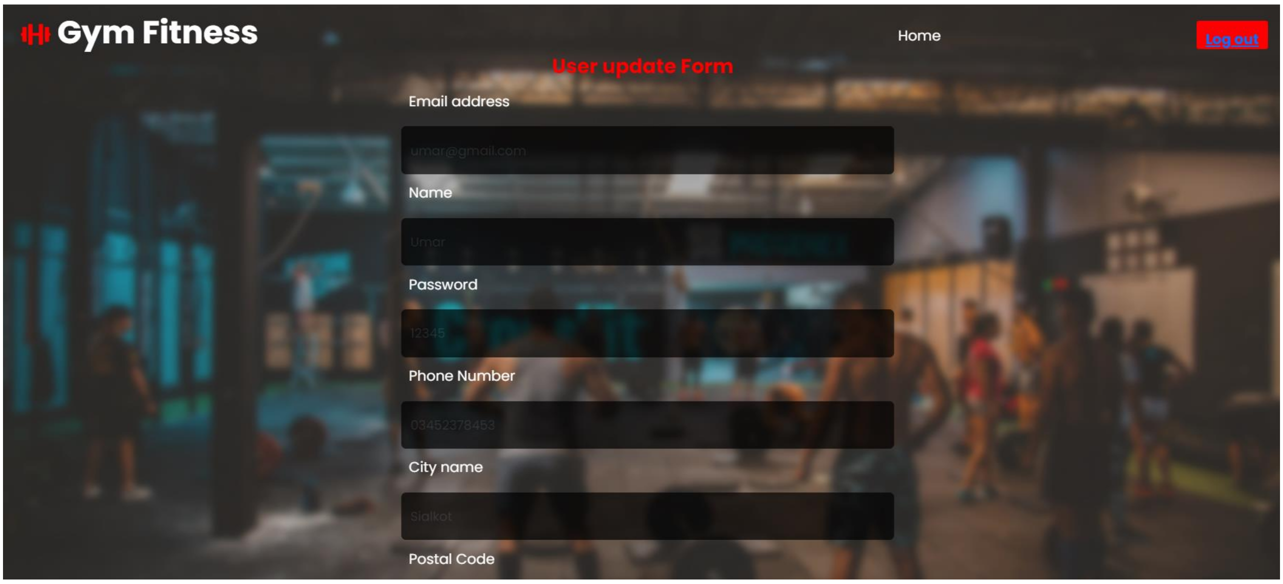


User Profile

Email	Name	Password	Phone #	Postal Code	City	Street ID	House #	Trainer	Class	Session	Package	Plan	Fitness	Operations
umar@gmail.com	Umar	12345	03452378453	4500	Sialkot	0	12	None	Zumba	Morning 9AM-2PM	6 month: Rs. 8000	Fruits and vegetables, whole grains, healthy (unsaturated) fats, and healthy protein	Unavailabe	Update

7.4.1. User update form:

By entering the all info into required fields user update his/her own profile.



User update Form

Email address

umar@gmail.com

Name

Umar

Password

12345

Phone Number

03452378453

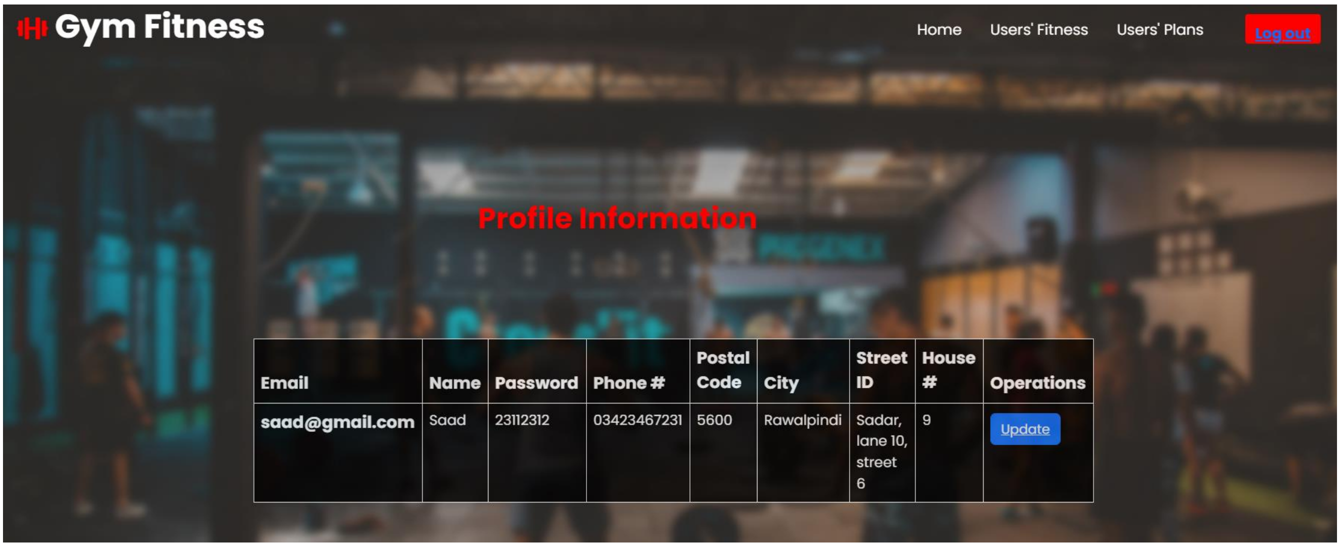
City name

Sialkot

Postal Code

7.5. Trainer interface

When user login he/she view the home interface where is his/her data is shown and trainer can update his/her own profile only by click on update button. And also a menu bar having options of user's fitness and plan along with a trainer home button and a logout button. By clicking on logout button trainer can logout.

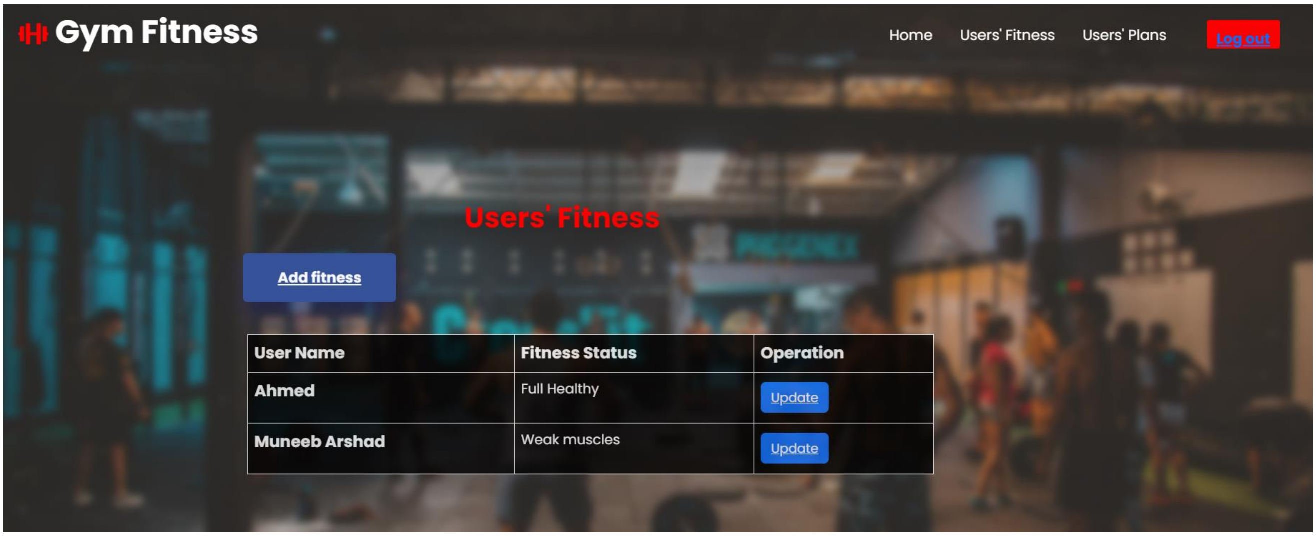


Profile Information

Email	Name	Password	Phone #	Postal Code	City	Street ID	House #	Operations
saad@gmail.com	Saad	23112312	03423467231	5600	Rawalpindi	Sadar, lane 10, street 6	9	Update

7.5.1. User’s Fitness interface:

Trainer can view, add and update only those users fitness status which users get training from that trainer.

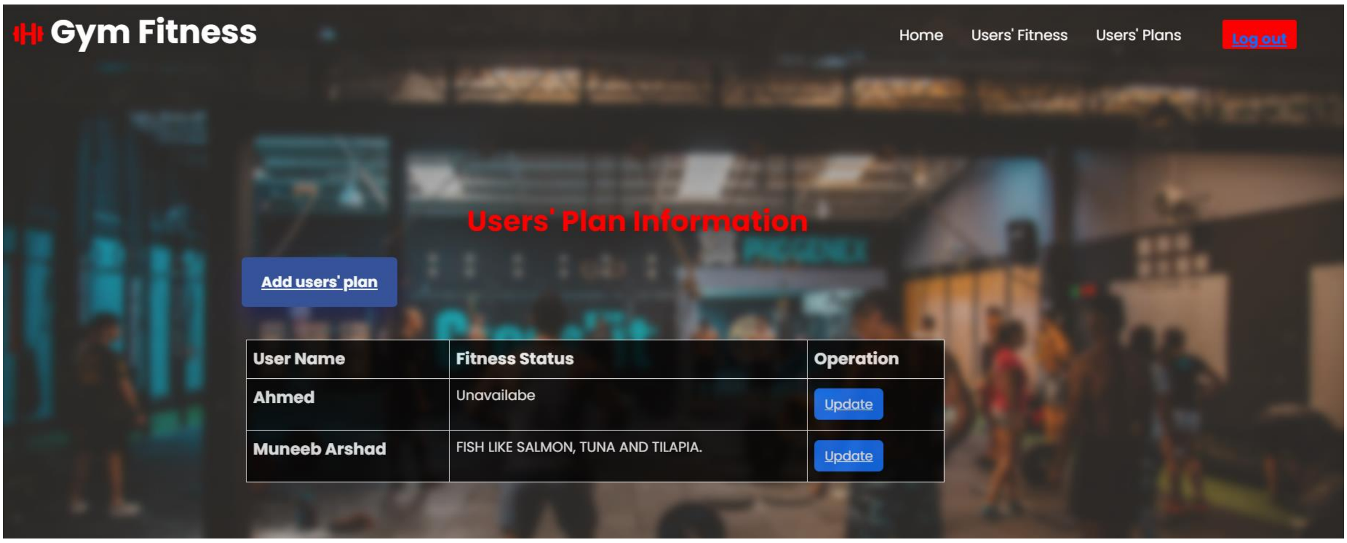


Users' Fitness

User Name	Fitness Status	Operation
Ahmed	Full Healthy	Update
Muneeb Arshad	Weak muscles	Update

7.5.2. User’s Plan interface:

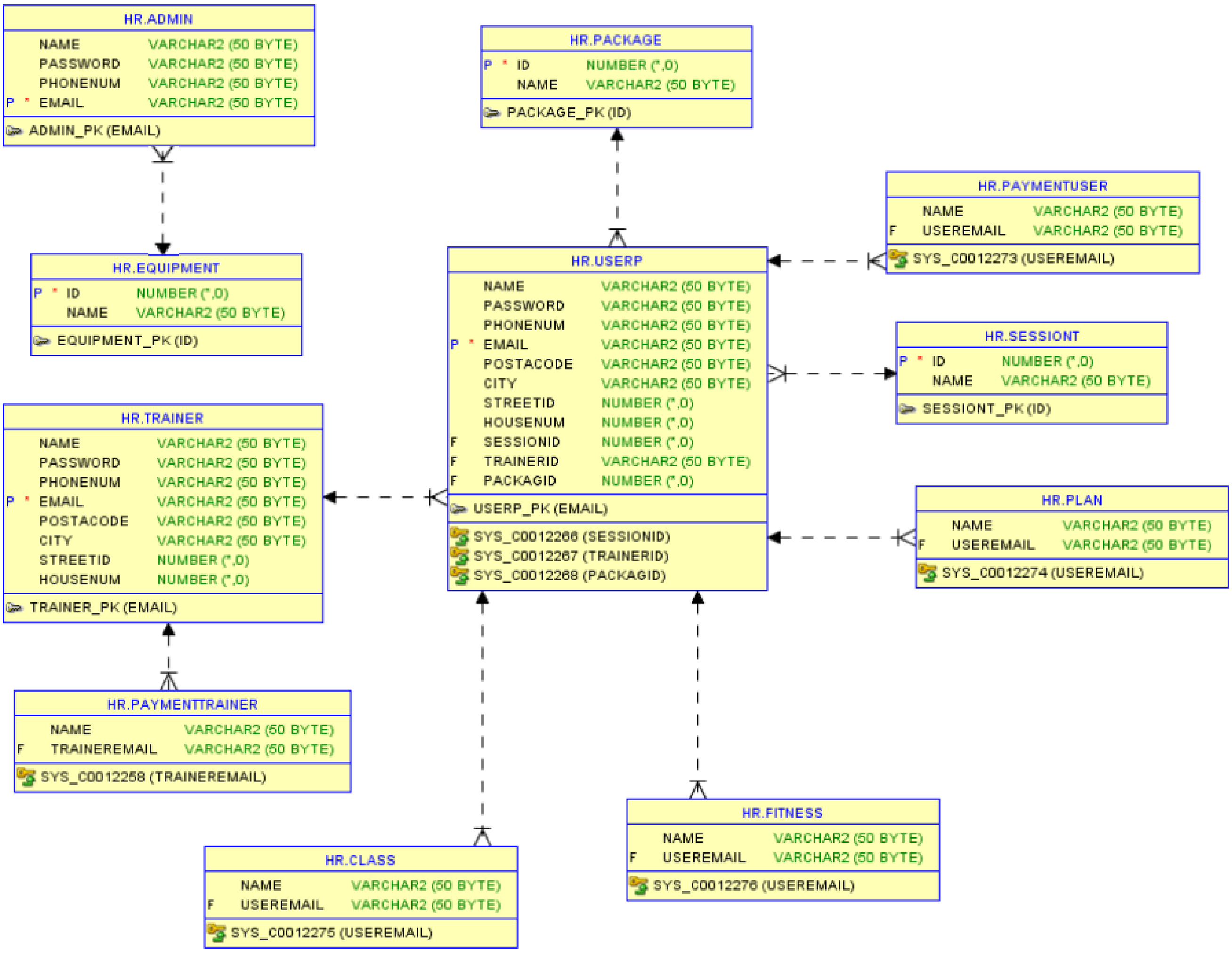
Trainer can view, add and update only those users diet plan which users get training from that trainer.



Users' Plan Information

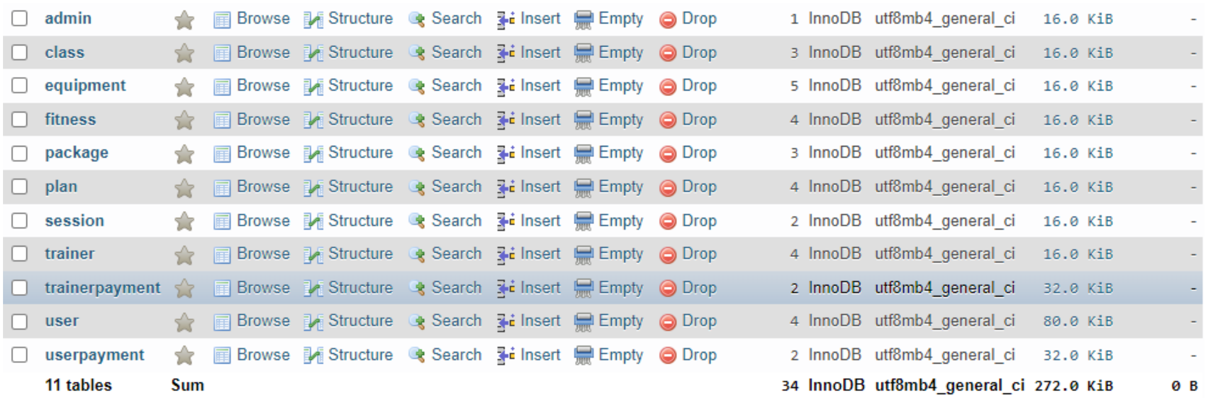
User Name	Fitness Status	Operation
Ahmed	Unavailabe	Update
Muneeb Arshad	FISH LIKE SALMON, TUNA AND TILAPIA.	Update

8. ERD Diagram



9. Relation part:

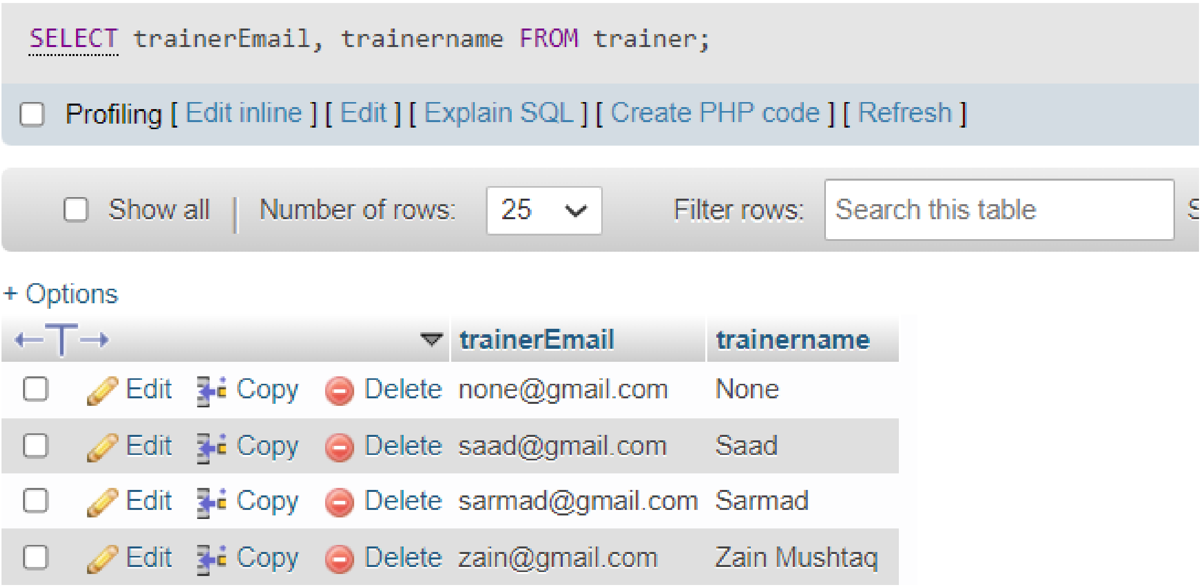
9.1. Tables:



□	admin	★	Browse	Structure	Search	Insert	Empty	Drop	1	InnoDB	utf8mb4_general_ci	16.0 KiB	-
□	class	★	Browse	Structure	Search	Insert	Empty	Drop	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
□	equipment	★	Browse	Structure	Search	Insert	Empty	Drop	5	InnoDB	utf8mb4_general_ci	16.0 KiB	-
□	fitness	★	Browse	Structure	Search	Insert	Empty	Drop	4	InnoDB	utf8mb4_general_ci	16.0 KiB	-
□	package	★	Browse	Structure	Search	Insert	Empty	Drop	3	InnoDB	utf8mb4_general_ci	16.0 KiB	-
□	plan	★	Browse	Structure	Search	Insert	Empty	Drop	4	InnoDB	utf8mb4_general_ci	16.0 KiB	-
□	session	★	Browse	Structure	Search	Insert	Empty	Drop	2	InnoDB	utf8mb4_general_ci	16.0 KiB	-
□	trainer	★	Browse	Structure	Search	Insert	Empty	Drop	4	InnoDB	utf8mb4_general_ci	16.0 KiB	-
□	trainerpayment	★	Browse	Structure	Search	Insert	Empty	Drop	2	InnoDB	utf8mb4_general_ci	32.0 KiB	-
□	user	★	Browse	Structure	Search	Insert	Empty	Drop	4	InnoDB	utf8mb4_general_ci	80.0 KiB	-
□	userpayment	★	Browse	Structure	Search	Insert	Empty	Drop	2	InnoDB	utf8mb4_general_ci	32.0 KiB	-
	11 tables	Sum							34	InnoDB	utf8mb4_general_ci	272.0 KiB	0 B

9.2. SQL Queries:

1. Get trainers using select:



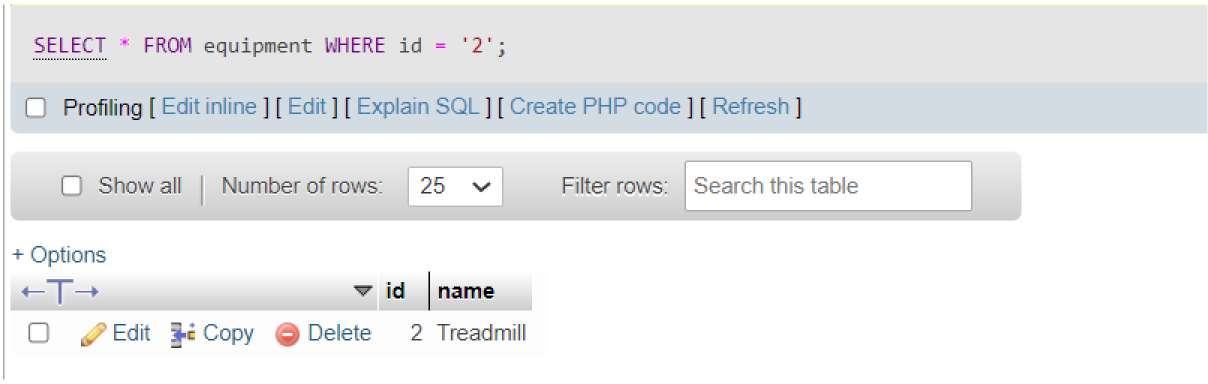
```
SELECT trainerEmail, trainername FROM trainer;
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

□ Show all | Number of rows: 25 Filter rows: Search this table
+ Options

				trainerEmail	trainername
□	Edit	Copy	Delete	none@gmail.com	None
□	Edit	Copy	Delete	saad@gmail.com	Saad
□	Edit	Copy	Delete	sarmad@gmail.com	Sarmad
□	Edit	Copy	Delete	zain@gmail.com	Zain Mushtaq

2. Get equipment using where:



```
SELECT * FROM equipment WHERE id = '2';
```

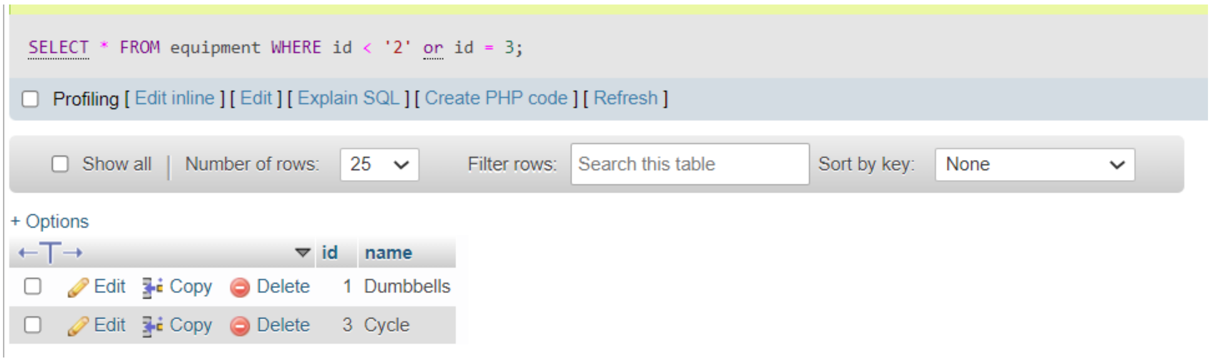
□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

□ Show all | Number of rows: 25 Filter rows: Search this table

+ Options

	id	name
□ Edit Copy Delete	2	Treadmill

3. Get equipment's using or clause:



```
SELECT * FROM equipment WHERE id < '2' or id = 3;
```

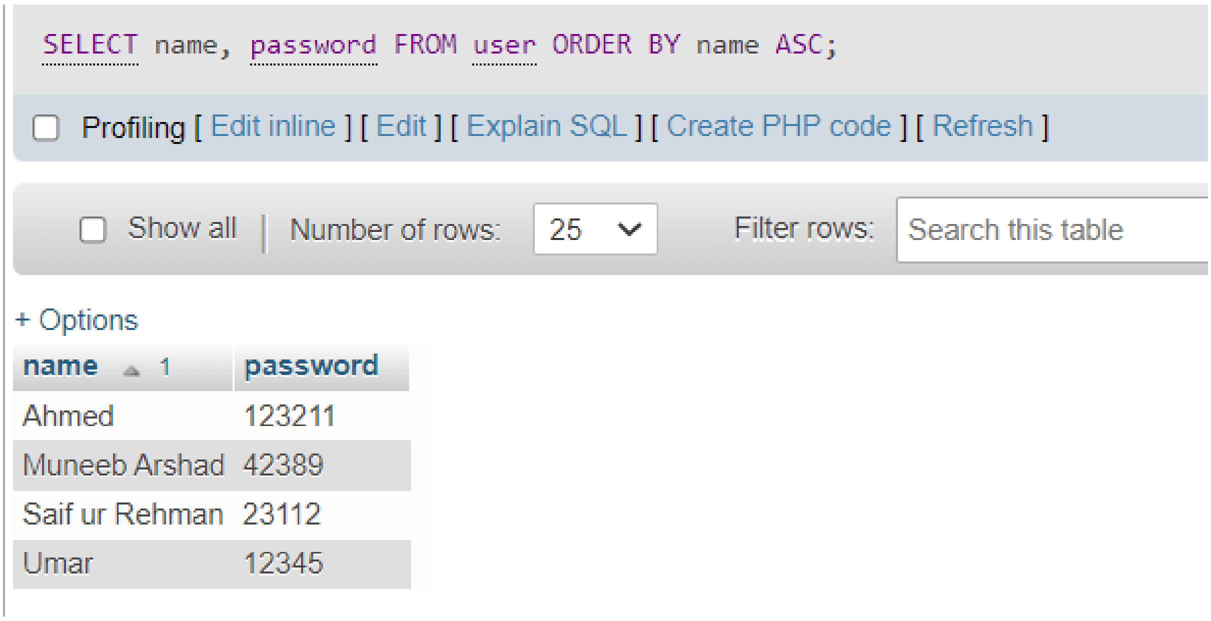
□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

□ Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None

+ Options

	id	name
□ Edit Copy Delete	1	Dumbbells
□ Edit Copy Delete	3	Cycle

4. Get name and password of all users from user Using ASC/DESC:



```
SELECT name, password FROM user ORDER BY name ASC;
```

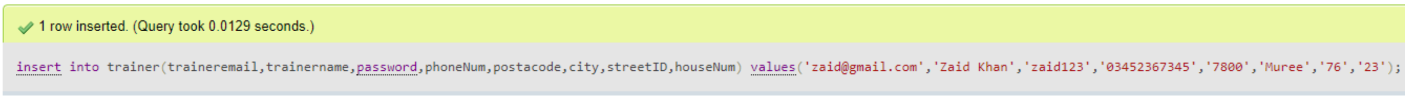
□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]

□ Show all | Number of rows: 25 Filter rows: Search this table

+ Options

name ▲ 1	password
Ahmed	123211
Muneeb Arshad	42389
Saif ur Rehman	23112
Umar	12345

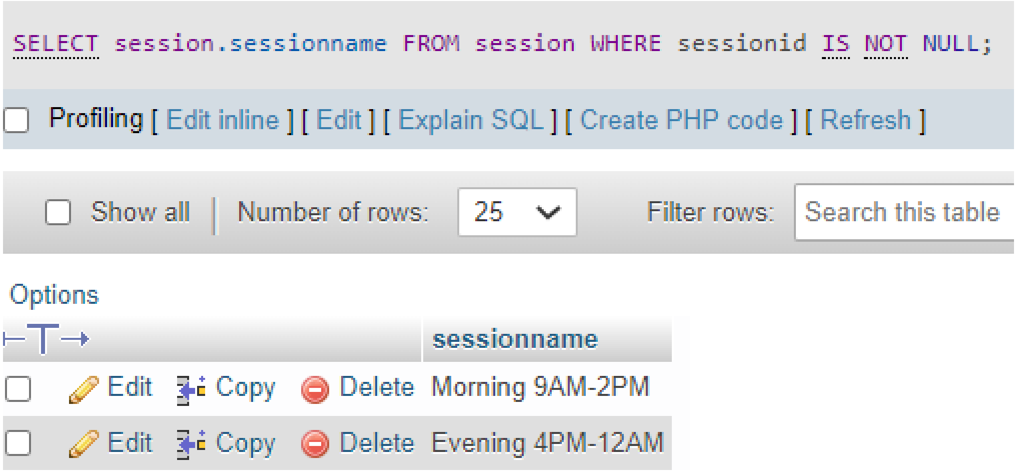
5. Insert data in trainer:



✓ 1 row inserted. (Query took 0.0129 seconds.)

```
insert into trainer(traineremail,trainername,password,phoneNum,postacode,city,streetID,houseNum) values('zaid@gmail.com','Zaid Khan','zaid123','03452367345','7800','Muree','76','23');
```

6. Get payment where column is not null:

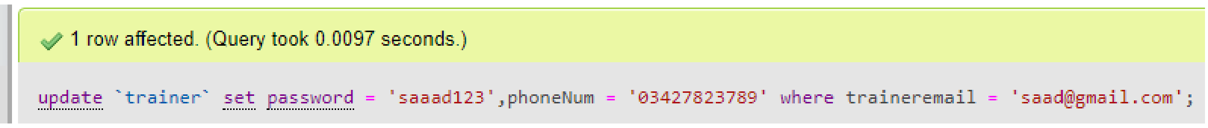


```
SELECT session.sessionname FROM session WHERE sessionid IS NOT NULL;
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all | Number of rows: 25 Filter rows: Search this table
Options
←T→

	sessionname
□ Edit Copy Delete	Morning 9AM-2PM
□ Edit Copy Delete	Evening 4PM-12AM

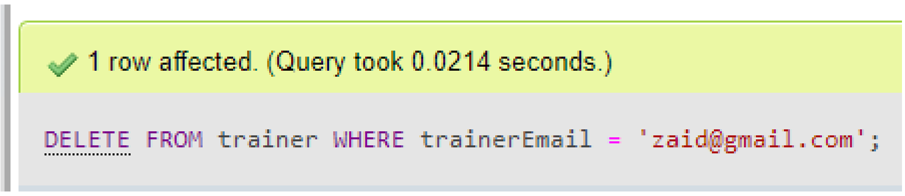
7. Update trainer Saad password and phone number:



✓ 1 row affected. (Query took 0.0097 seconds.)

```
update `trainer` set password = 'saaad123',phoneNum = '03427823789' where traineremail = 'saad@gmail.com';
```

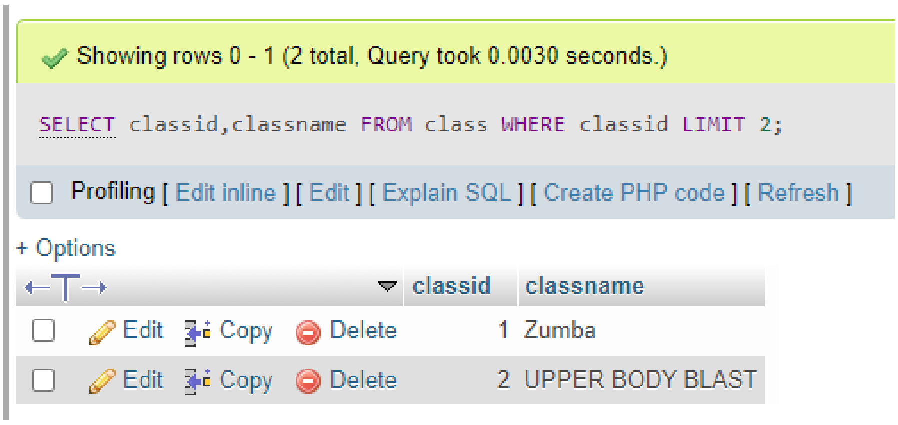
8. Delete trainer whose email is zaid@gmail.com from trainer table:



✓ 1 row affected. (Query took 0.0214 seconds.)

```
DELETE FROM trainer WHERE trainerEmail = 'zaid@gmail.com';
```

9. **Get class id and class name from class table upto id 2 using LIMIT:**



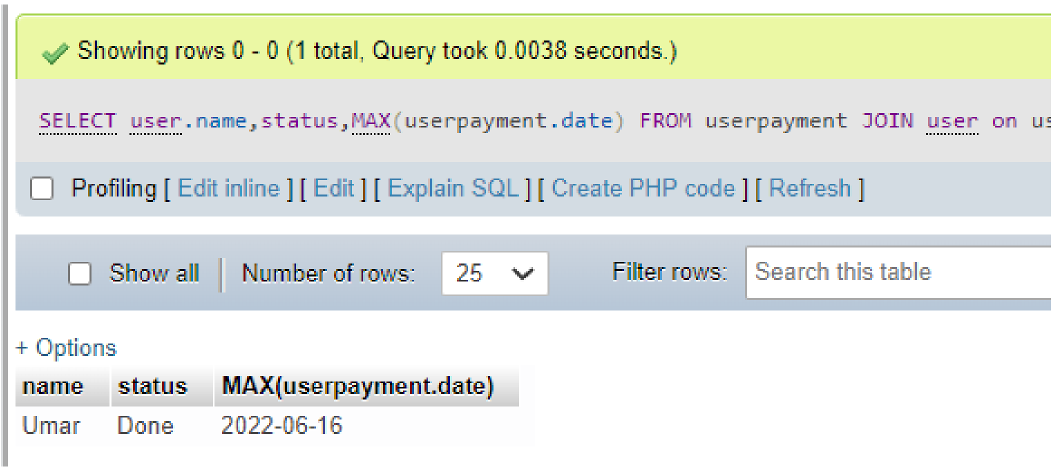
✓ Showing rows 0 - 1 (2 total, Query took 0.0030 seconds.)

```
SELECT classid,classname FROM class WHERE classid LIMIT 2;
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
+ Options
←T→

	classid	classname
□ Edit Copy Delete	1	Zumba
□ Edit Copy Delete	2	UPPER BODY BLAST

10. **Find username, payment status and payment date who pay fee late then all other user using MAX:**



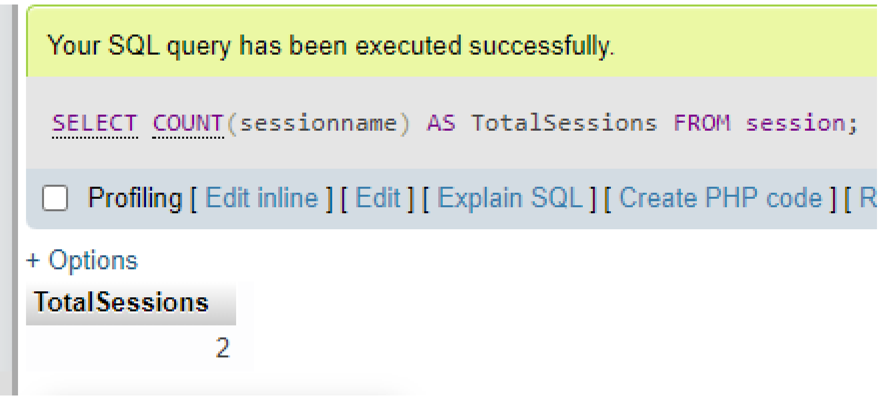
✓ Showing rows 0 - 0 (1 total, Query took 0.0038 seconds.)

```
SELECT user.name,status,MAX(userpayment.date) FROM userpayment JOIN user on us
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all
Number of rows: 25
Filter rows: Search this table
+ Options

name	status	MAX(userpayment.date)
Umar	Done	2022-06-16

11. **Using COUNT AND AS get total sessions from session table:**



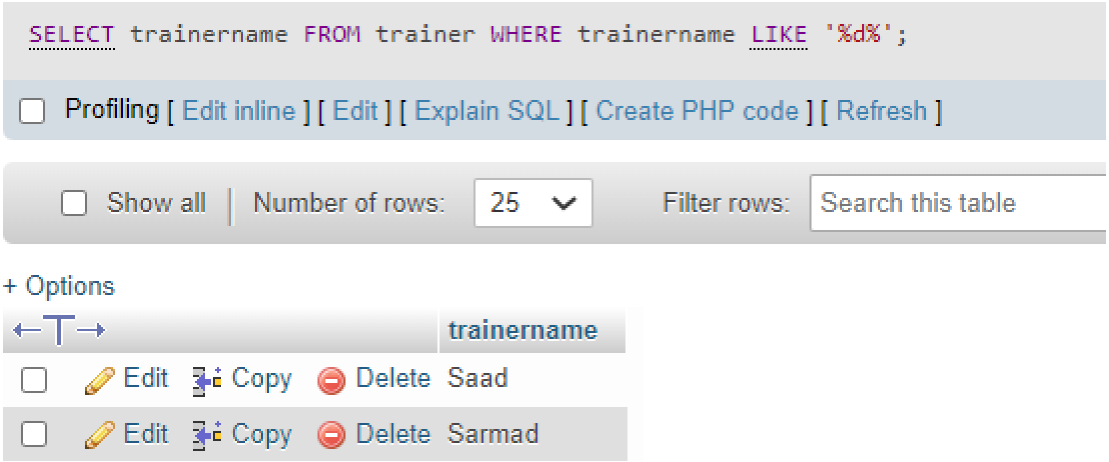
Your SQL query has been executed successfully.

```
SELECT COUNT(sessionname) AS TotalSessions FROM session;
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [R
+ Options

TotalSessions
2

12. Get trainer names who contain ‘d’ character in their names from trainer table using LIKE:

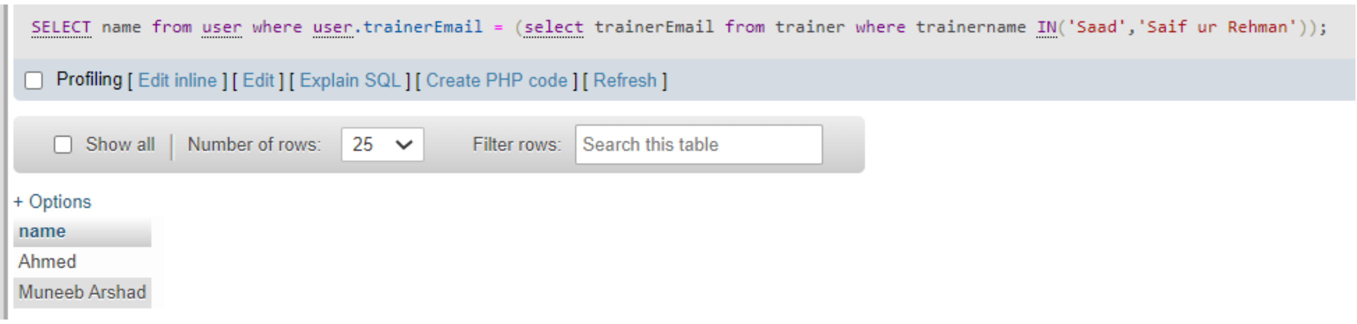


```
SELECT trainername FROM trainer WHERE trainername LIKE '%d%';
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all | Number of rows: 25
Filter rows: Search this table
+ Options
←T→
□ Edit Copy Delete
□ Edit Copy Delete

trainername
Saad
Sarmad

13. Using IN find saif ur rehman and muneeb are in table user.

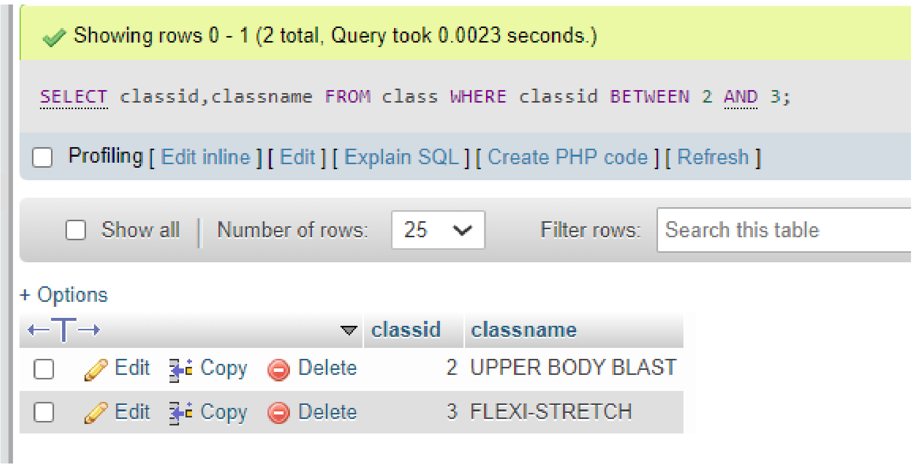


```
SELECT name from user where user.trainerEmail = (select trainerEmail from trainer where trainername IN('Saad','Saif ur Rehman'));
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all | Number of rows: 25
Filter rows: Search this table
+ Options

name
Ahmed
Muneeb Arshad

14. Using BETWEEN 2 and 3 class id find class id and class name :



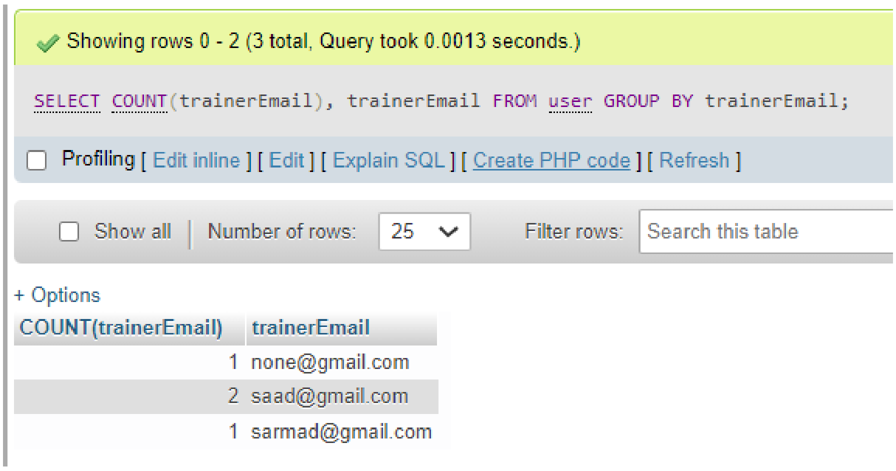
✓ Showing rows 0 - 1 (2 total, Query took 0.0023 seconds.)

```
SELECT classid,classname FROM class WHERE classid BETWEEN 2 AND 3;
```

□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all | Number of rows: 25
Filter rows: Search this table
+ Options
←T→
□ Edit Copy Delete
□ Edit Copy Delete

classid	classname
2	UPPER BODY BLAST
3	FLEXI-STRETCH

15. Using GROUP BY ORDER BY find which trainerEmail appears in user and times of appearence :



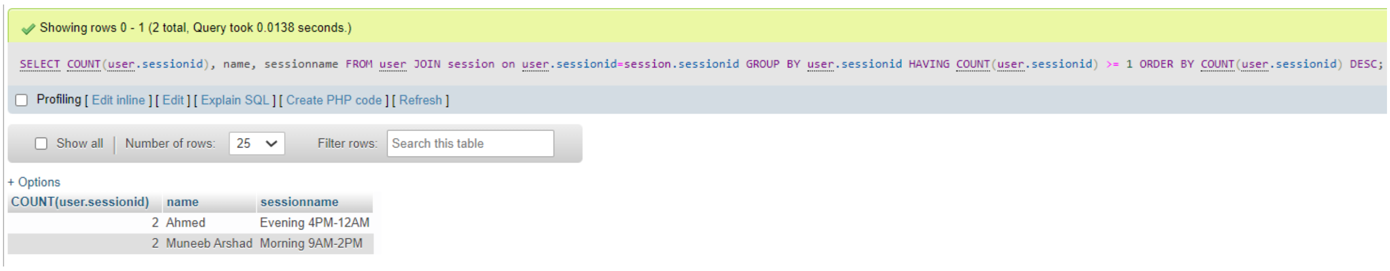
✓ Showing rows 0 - 2 (3 total, Query took 0.0013 seconds.)

```
SELECT COUNT(trainerEmail), trainerEmail FROM user GROUP BY trainerEmail;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
☐ Show all | Number of rows: 25 Filter rows: Search this table
+ Options

COUNT(trainerEmail)	trainerEmail
1	none@gmail.com
2	saad@gmail.com
1	sarmad@gmail.com

16. Using AGGREGATION and get total counts of session id ..:



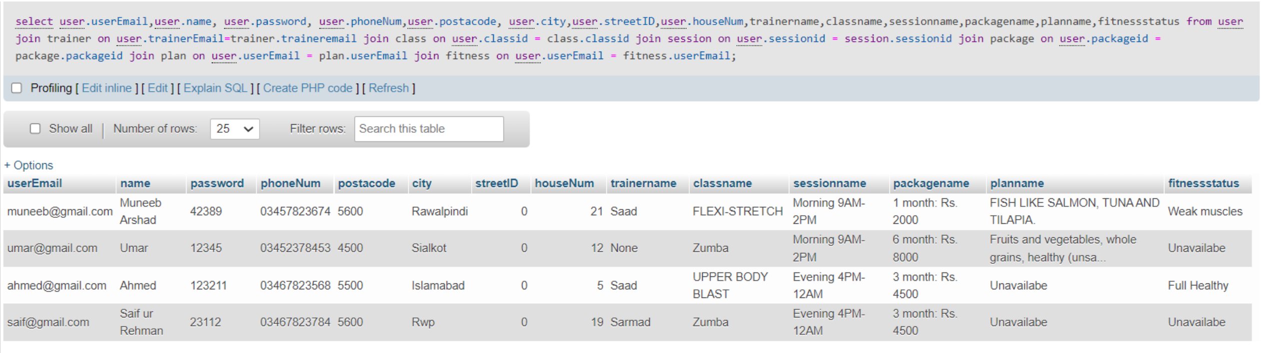
✓ Showing rows 0 - 1 (2 total, Query took 0.0138 seconds.)

```
SELECT COUNT(user.sessionid), name, sessionname FROM user JOIN session on user.sessionid=session.sessionid GROUP BY user.sessionid HAVING COUNT(user.sessionid) >= 1 ORDER BY COUNT(user.sessionid) DESC;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
☐ Show all | Number of rows: 25 Filter rows: Search this table
+ Options

COUNT(user.sessionid)	name	sessionname
2	Ahmed	Evening 4PM-12AM
2	Muneeb Arshad	Morning 9AM-2PM

17. Get all user data using JOIN:

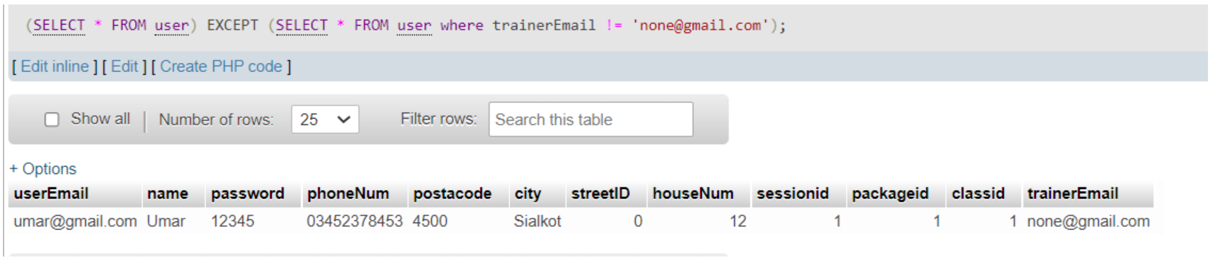


```
select user.userEmail,user.name, user.password, user.phoneNum,user.postacode, user.city,user.streetID,user.houseNum,trainername,classname,sessionname,packagename,planname,fitnessstatus from user
join trainer on user.trainerEmail=trainer.traineremail join class on user.classid = class.classid join session on user.sessionid = session.sessionid join package on user.packageid =
package.packageid join plan on user.userEmail = plan.userEmail join fitness on user.userEmail = fitness.userEmail;
```

☐ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
☐ Show all | Number of rows: 25 Filter rows: Search this table
+ Options

userEmail	name	password	phoneNum	postacode	city	streetID	houseNum	trainername	classname	sessionname	packagename	planname	fitnessstatus
muneeb@gmail.com	Muneeb Arshad	42389	03457823674	5600	Rawalpindi	0	21	Saad	FLEXI-STRETCH	Morning 9AM-2PM	1 month: Rs. 2000	FISH LIKE SALMON, TUNA AND TILAPIA.	Weak muscles
umar@gmail.com	Umar	12345	03452378453	4500	Sialkot	0	12	None	Zumba	Morning 9AM-2PM	6 month: Rs. 8000	Fruits and vegetables, whole grains, healthy (unsa...	Unavailabe
ahmed@gmail.com	Ahmed	123211	03467823568	5500	Islamabad	0	5	Saad	UPPER BODY BLAST	Evening 4PM-12AM	3 month: Rs. 4500	Unavailabe	Full Healthy
saif@gmail.com	Saif ur Rehman	23112	03467823784	5600	Rwp	0	19	Sarmad	Zumba	Evening 4PM-12AM	3 month: Rs. 4500	Unavailabe	Unavailabe

18. Users that have no trainer using set operator EXCEPT:

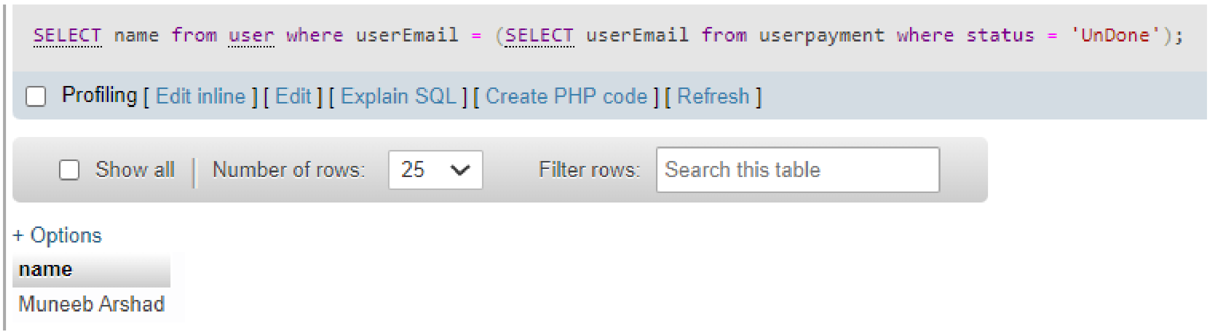


```
(SELECT * FROM user) EXCEPT (SELECT * FROM user where trainerEmail != 'none@gmail.com');
```

[Edit inline] [Edit] [Create PHP code]
□ Show all | Number of rows: 25 Filter rows: Search this table
+ Options

userEmail	name	password	phoneNum	postacode	city	streetID	houseNum	sessionid	packageid	classid	trainerEmail
umar@gmail.com	Umar	12345	03452378453	4500	Sialkot	0	12	1	1	1	none@gmail.com

19. Users that do not pay the fee:



```
SELECT name from user where userEmail = (SELECT userEmail from userpayment where status = 'UnDone');
```

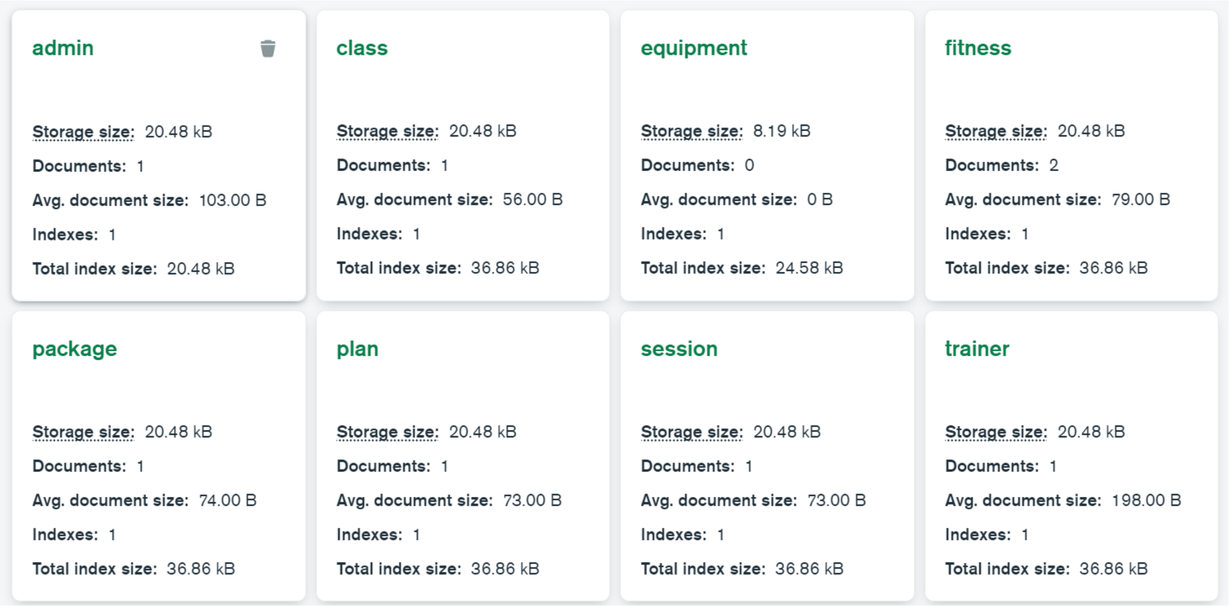
□ Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
□ Show all | Number of rows: 25 Filter rows: Search this table
+ Options

name
Muneeb Arshad

10. Non-Relational part:

1.1. Collections:

All collections are shown below:



admin

Storage size: 20.48 kB
Documents: 1
Avg. document size: 103.00 B
Indexes: 1
Total index size: 20.48 kB

class

Storage size: 20.48 kB
Documents: 1
Avg. document size: 56.00 B
Indexes: 1
Total index size: 36.86 kB

equipment

Storage size: 8.19 kB
Documents: 0
Avg. document size: 0 B
Indexes: 1
Total index size: 24.58 kB

fitness

Storage size: 20.48 kB
Documents: 2
Avg. document size: 79.00 B
Indexes: 1
Total index size: 36.86 kB

package

Storage size: 20.48 kB
Documents: 1
Avg. document size: 74.00 B
Indexes: 1
Total index size: 36.86 kB

plan

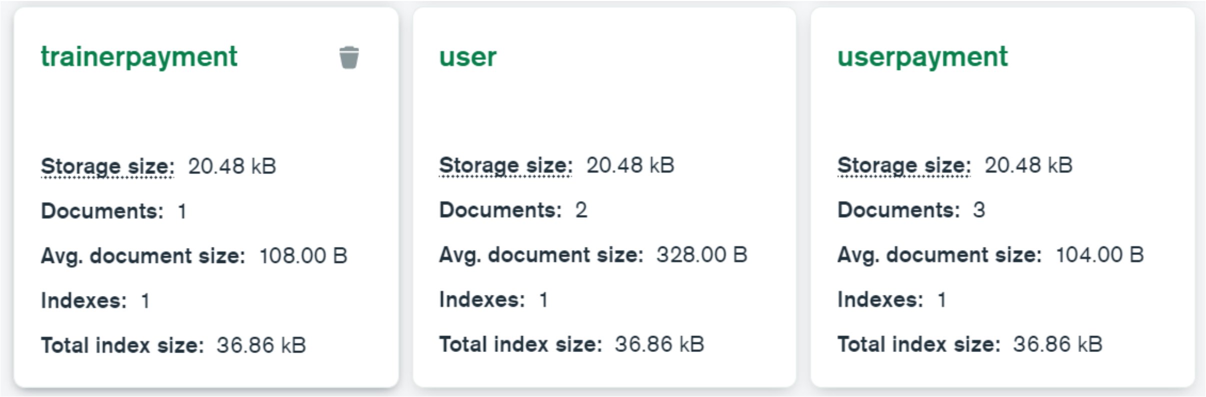
Storage size: 20.48 kB
Documents: 1
Avg. document size: 73.00 B
Indexes: 1
Total index size: 36.86 kB

session

Storage size: 20.48 kB
Documents: 1
Avg. document size: 73.00 B
Indexes: 1
Total index size: 36.86 kB

trainer

Storage size: 20.48 kB
Documents: 1
Avg. document size: 198.00 B
Indexes: 1
Total index size: 36.86 kB



trainerpayment

Storage size: 20.48 kB

Documents: 1

Avg. document size: 108.00 B

Indexes: 1

Total index size: 36.86 kB

user

Storage size: 20.48 kB

Documents: 2

Avg. document size: 328.00 B

Indexes: 1

Total index size: 36.86 kB

userpayment

Storage size: 20.48 kB

Documents: 3

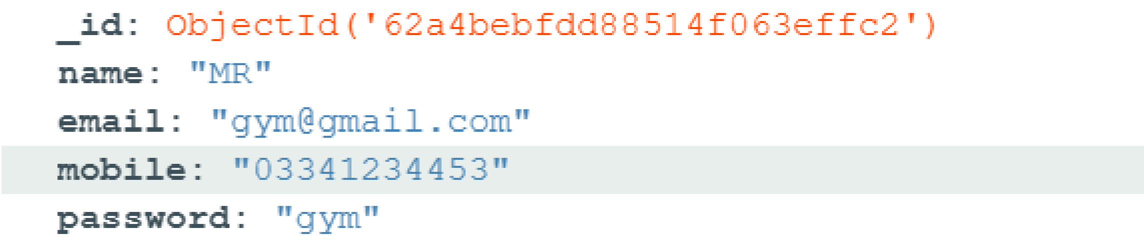
Avg. document size: 104.00 B

Indexes: 1

Total index size: 36.86 kB

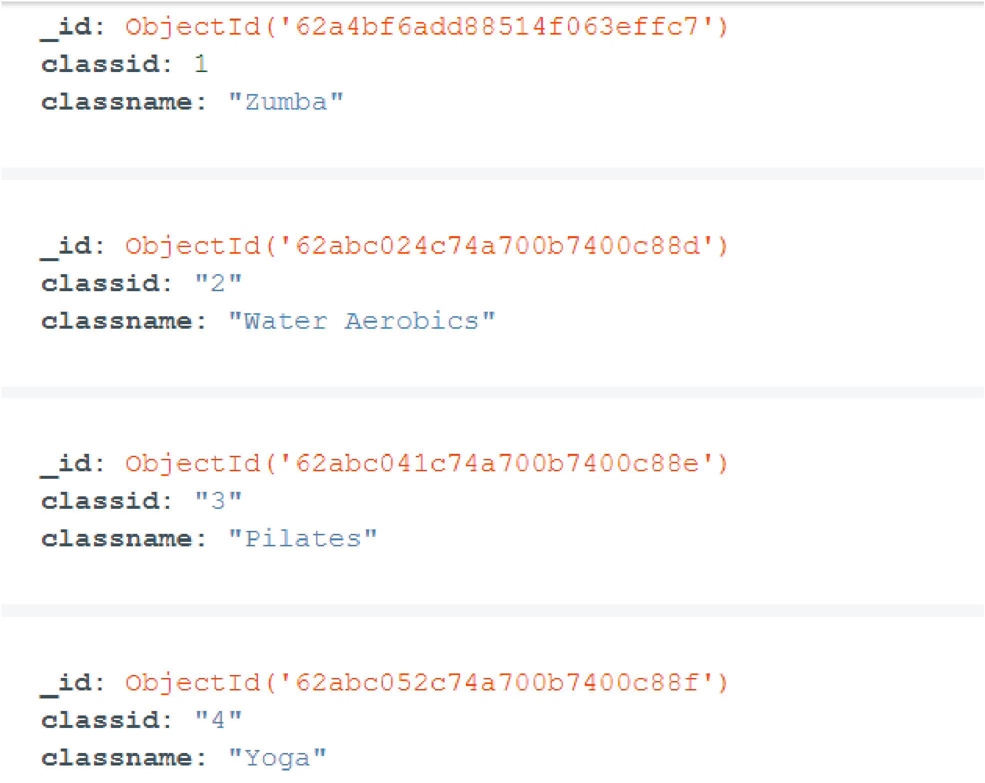
1.2. Collection Data:

Admin:



```
_id: ObjectId('62a4bebfdd88514f063effc2')
name: "MR"
email: "gym@gmail.com"
mobile: "03341234453"
password: "gym"
```

Class:



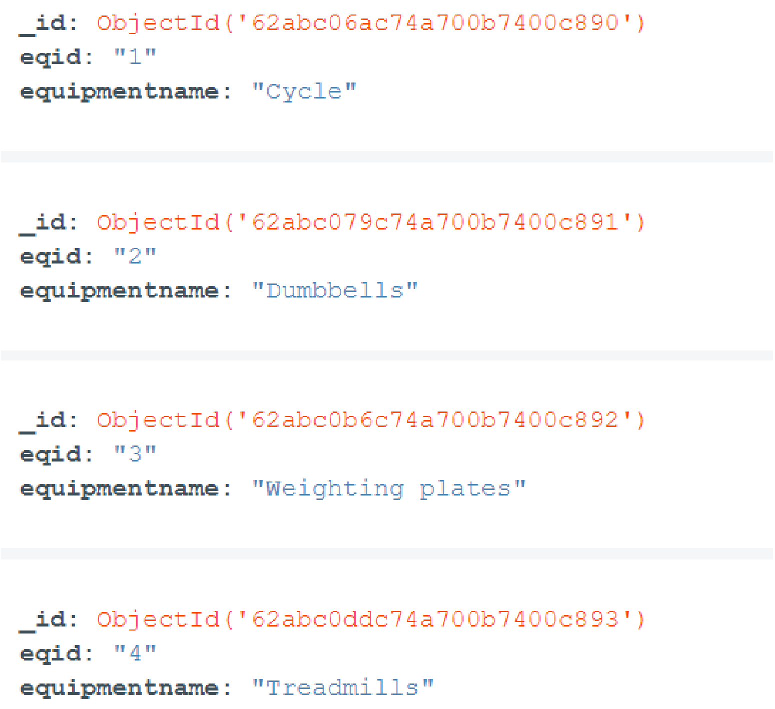
```
_id: ObjectId('62a4bf6add88514f063effc7')
classid: 1
classname: "Zumba"
```

```
_id: ObjectId('62abc024c74a700b7400c88d')
classid: "2"
classname: "Water Aerobics"
```

```
_id: ObjectId('62abc041c74a700b7400c88e')
classid: "3"
classname: "Pilates"
```

```
_id: ObjectId('62abc052c74a700b7400c88f')
classid: "4"
classname: "Yoga"
```

Equipment:



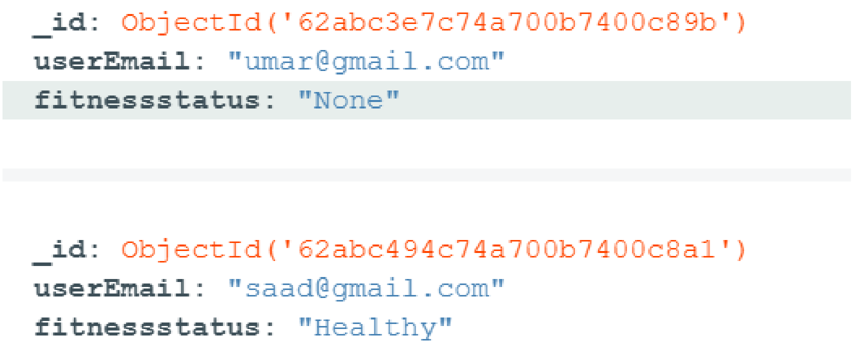
```
_id: ObjectId('62abc06ac74a700b7400c890')
eqid: "1"
equipmentname: "Cycle"
```

```
_id: ObjectId('62abc079c74a700b7400c891')
eqid: "2"
equipmentname: "Dumbbells"
```

```
_id: ObjectId('62abc0b6c74a700b7400c892')
eqid: "3"
equipmentname: "Weighting plates"
```

```
_id: ObjectId('62abc0ddc74a700b7400c893')
eqid: "4"
equipmentname: "Treadmills"
```

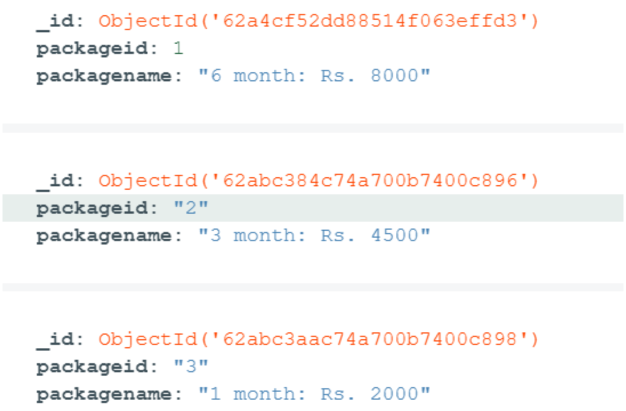
Fitness:



```
_id: ObjectId('62abc3e7c74a700b7400c89b')
userEmail: "umar@gmail.com"
fitnessstatus: "None"
```

```
_id: ObjectId('62abc494c74a700b7400c8a1')
userEmail: "saad@gmail.com"
fitnessstatus: "Healthy"
```

Package:

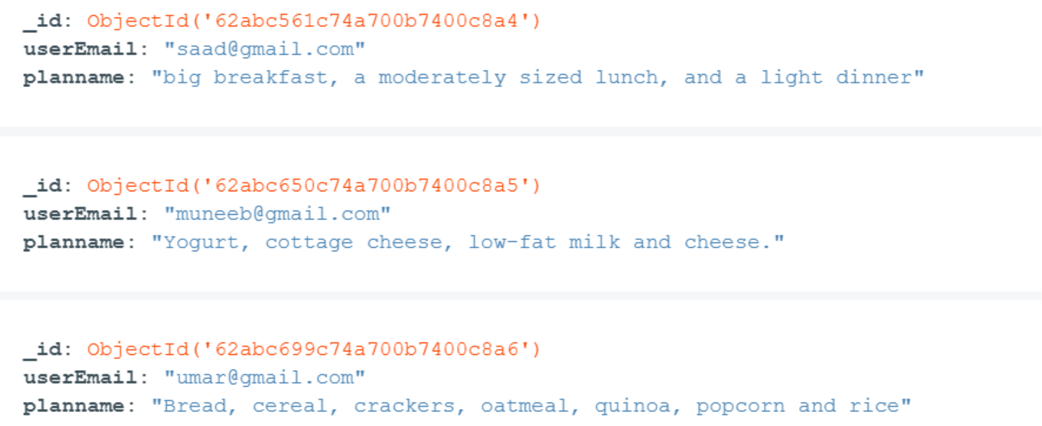


```
_id: ObjectId('62a4cf52dd88514f063effd3')
packageid: 1
packagename: "6 month: Rs. 8000"
```

```
_id: ObjectId('62abc384c74a700b7400c896')
packageid: "2"
packagename: "3 month: Rs. 4500"
```

```
_id: ObjectId('62abc3aac74a700b7400c898')
packageid: "3"
packagename: "1 month: Rs. 2000"
```

Plan:

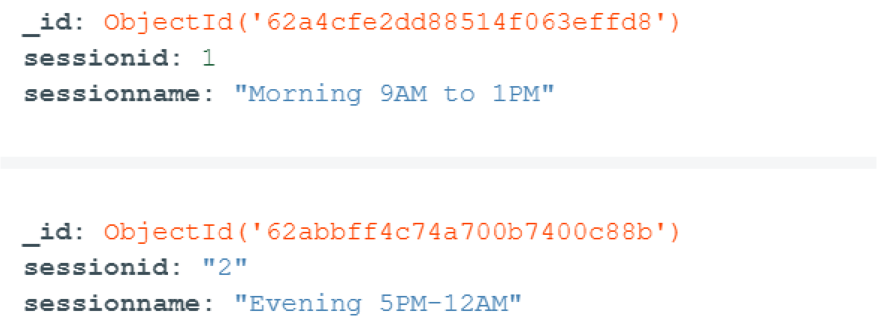


```
_id: ObjectId('62abc561c74a700b7400c8a4')
userEmail: "saad@gmail.com"
planname: "big breakfast, a moderately sized lunch, and a light dinner"
```

```
_id: ObjectId('62abc650c74a700b7400c8a5')
userEmail: "muneeb@gmail.com"
planname: "Yogurt, cottage cheese, low-fat milk and cheese."
```

```
_id: ObjectId('62abc699c74a700b7400c8a6')
userEmail: "umar@gmail.com"
planname: "Bread, cereal, crackers, oatmeal, quinoa, popcorn and rice"
```

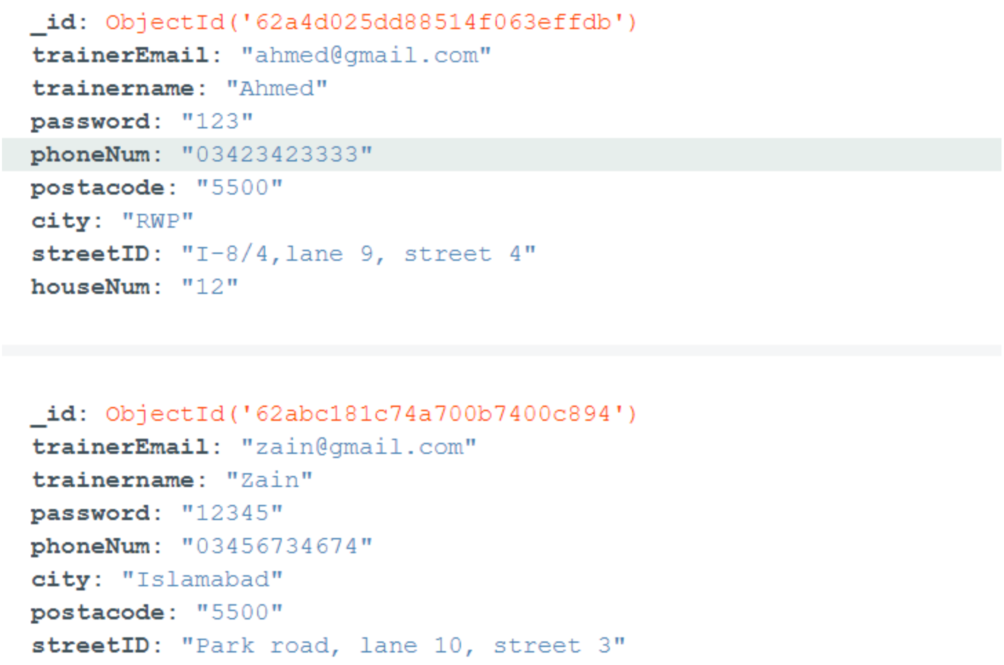
Session:



```
_id: ObjectId('62a4cfe2dd88514f063effd8')
sessionid: 1
sessionname: "Morning 9AM to 1PM"
```

```
_id: ObjectId('62abbff4c74a700b7400c88b')
sessionid: "2"
sessionname: "Evening 5PM-12AM"
```

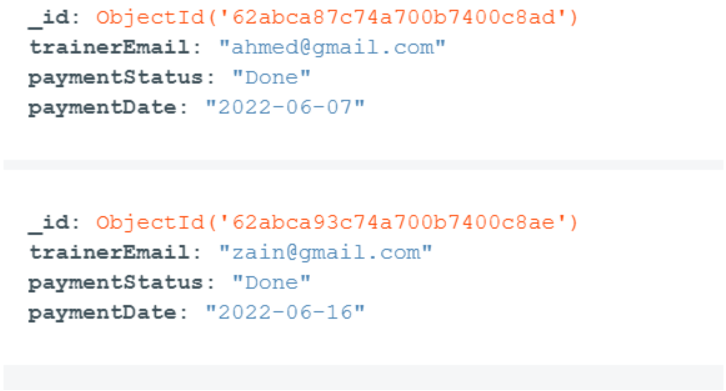
Trainer:



```
_id: ObjectId('62a4d025dd88514f063effdb')
trainerEmail: "ahmed@gmail.com"
trainername: "Ahmed"
password: "123"
phoneNum: "03423423333"
postacode: "5500"
city: "RWP"
streetID: "I-8/4,lane 9, street 4"
houseNum: "12"
```

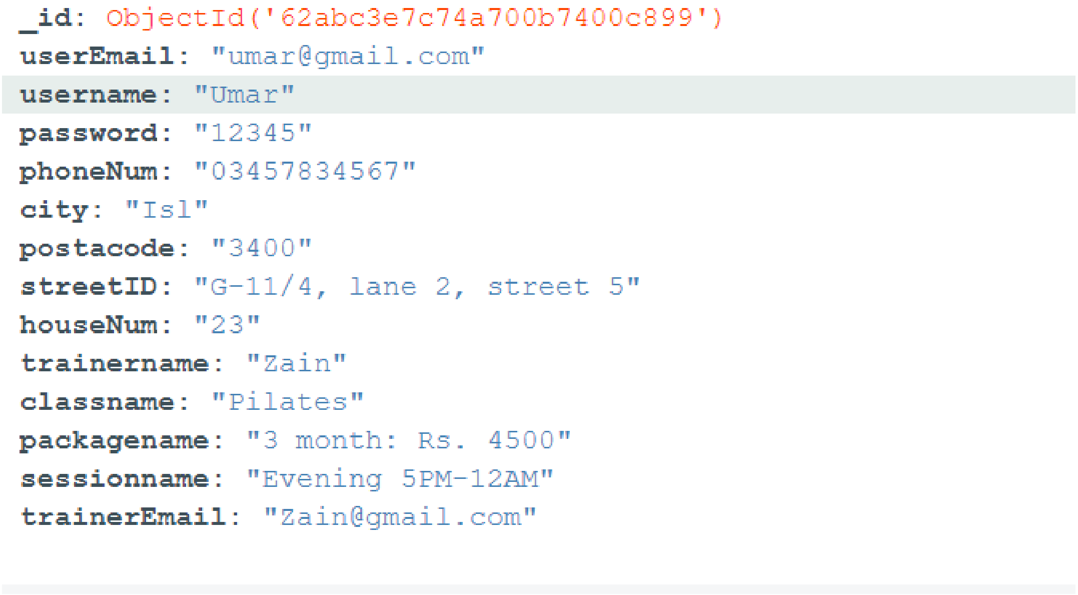
```
_id: ObjectId('62abc181c74a700b7400c894')
trainerEmail: "zain@gmail.com"
trainername: "Zain"
password: "12345"
phoneNum: "03456734674"
city: "Islamabad"
postacode: "5500"
streetID: "Park road, lane 10, street 3"
```

Trainerpayment:



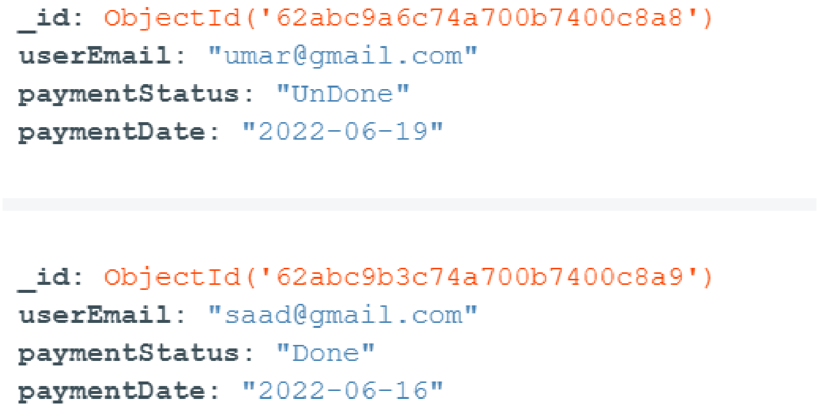
```
_id: ObjectId('62abca87c74a700b7400c8ad')
trainerEmail: "ahmed@gmail.com"
paymentStatus: "Done"
paymentDate: "2022-06-07"

_id: ObjectId('62abca93c74a700b7400c8ae')
trainerEmail: "zain@gmail.com"
paymentStatus: "Done"
paymentDate: "2022-06-16"
```

User:



```
_id: ObjectId('62abc3e7c74a700b7400c899')
userEmail: "umar@gmail.com"
username: "Umar"
password: "12345"
phoneNum: "03457834567"
city: "Isl"
postacode: "3400"
streetID: "G-11/4, lane 2, street 5"
houseNum: "23"
trainername: "Zain"
classname: "Pilates"
packagename: "3 month: Rs. 4500"
sessionname: "Evening 5PM-12AM"
trainerEmail: "Zain@gmail.com"
```

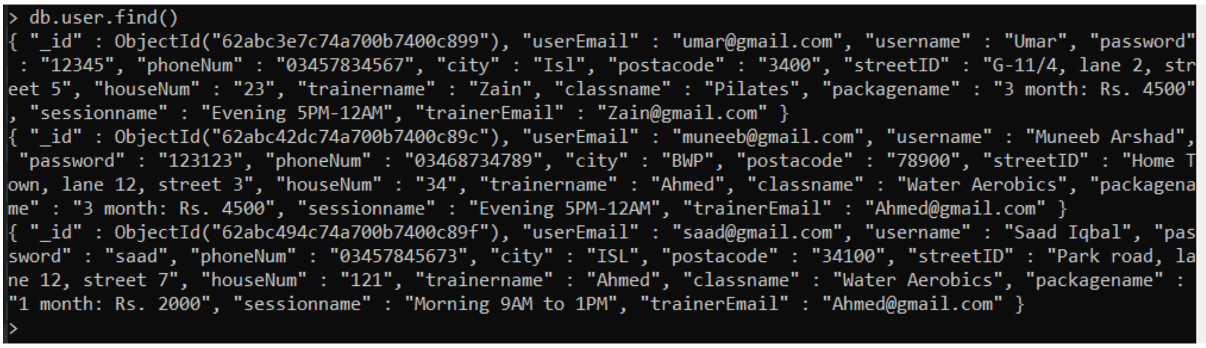
Userpayment:



```
_id: ObjectId('62abc9a6c74a700b7400c8a8')
userEmail: "umar@gmail.com"
paymentStatus: "UnDone"
paymentDate: "2022-06-19"

_id: ObjectId('62abc9b3c74a700b7400c8a9')
userEmail: "saad@gmail.com"
paymentStatus: "Done"
paymentDate: "2022-06-16"
```

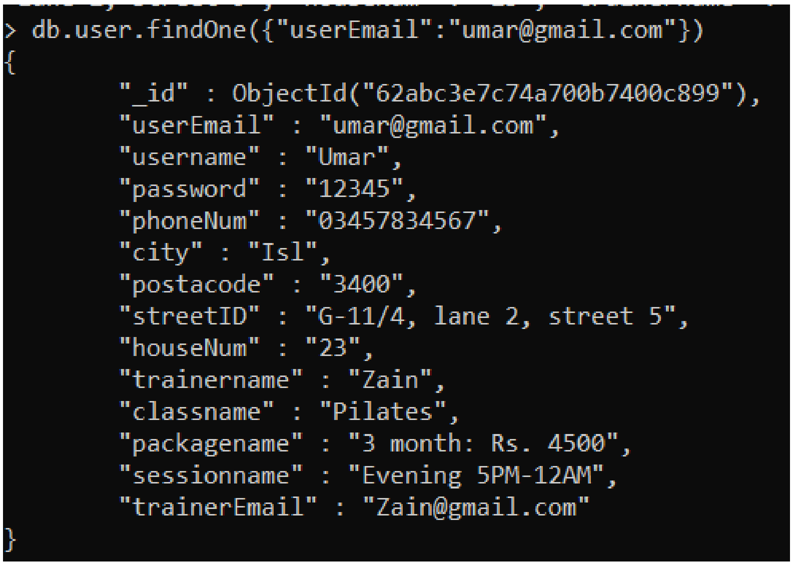
1.3. Commands:

1. View all data from user collection :



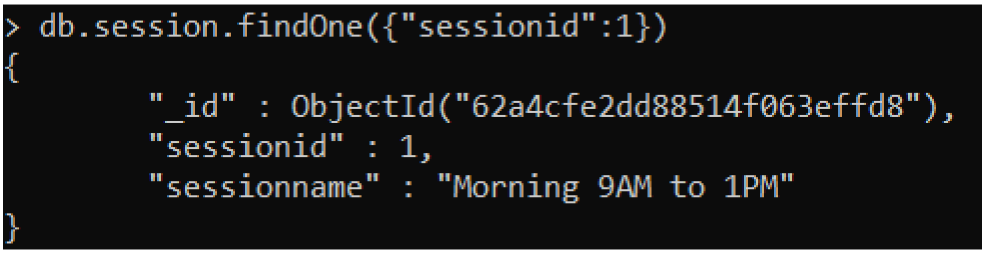
```
> db.user.find()
{ "_id" : ObjectId("62abc3e7c74a700b7400c899"), "userEmail" : "umar@gmail.com", "username" : "Umar", "password"
 : "12345", "phoneNum" : "03457834567", "city" : "Isl", "postacode" : "3400", "streetID" : "G-11/4, lane 2, str
eet 5", "houseNum" : "23", "trainername" : "Zain", "classname" : "Pilates", "packagename" : "3 month: Rs. 4500"
, "sessionname" : "Evening 5PM-12AM", "trainerEmail" : "Zain@gmail.com" }
{ "_id" : ObjectId("62abc42dc74a700b7400c89c"), "userEmail" : "muneeb@gmail.com", "username" : "Muneeb Arshad",
 "password" : "123123", "phoneNum" : "03468734789", "city" : "BWP", "postacode" : "78900", "streetID" : "Home T
own, lane 12, street 3", "houseNum" : "34", "trainername" : "Ahmed", "classname" : "Water Aerobics", "packagena
me" : "3 month: Rs. 4500", "sessionname" : "Evening 5PM-12AM", "trainerEmail" : "Ahmed@gmail.com" }
{ "_id" : ObjectId("62abc494c74a700b7400c89f"), "userEmail" : "saad@gmail.com", "username" : "Saad Iqbal", "pas
sword" : "saad", "phoneNum" : "03457845673", "city" : "ISL", "postacode" : "34100", "streetID" : "Park road, la
ne 12, street 7", "houseNum" : "121", "trainername" : "Ahmed", "classname" : "Water Aerobics", "packagename" :
"1 month: Rs. 2000", "sessionname" : "Morning 9AM to 1PM", "trainerEmail" : "Ahmed@gmail.com" }
>
```

2. Find umar@gmail.com data from user collection:



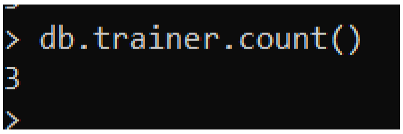
```
> db.user.findOne({"userEmail":"umar@gmail.com"})
{
        "_id" : ObjectId("62abc3e7c74a700b7400c899"),
        "userEmail" : "umar@gmail.com",
        "username" : "Umar",
        "password" : "12345",
        "phoneNum" : "03457834567",
        "city" : "Isl",
        "postacode" : "3400",
        "streetID" : "G-11/4, lane 2, street 5",
        "houseNum" : "23",
        "trainername" : "Zain",
        "classname" : "Pilates",
        "packagename" : "3 month: Rs. 4500",
        "sessionname" : "Evening 5PM-12AM",
        "trainerEmail" : "Zain@gmail.com"
}
```

3. Find session whose id is 1:



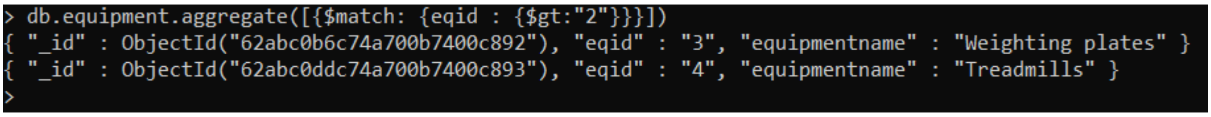
```
> db.session.findOne({"sessionid":1})
{
        "_id" : ObjectId("62a4cfe2dd88514f063effd8"),
        "sessionid" : 1,
        "sessionname" : "Morning 9AM to 1PM"
}
```

4. **Find total objects in trainer collection:**



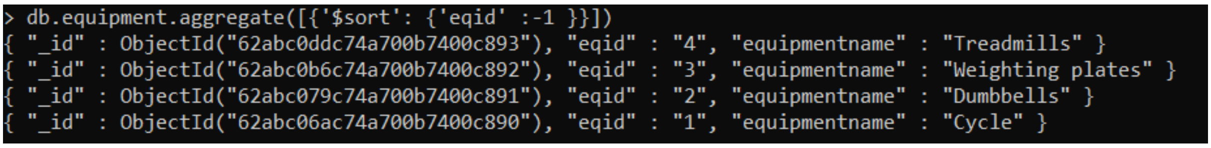
```
> db.trainer.count()
3
>
```

5. **Using aggregate to find equipment's whose id greater the 2:**



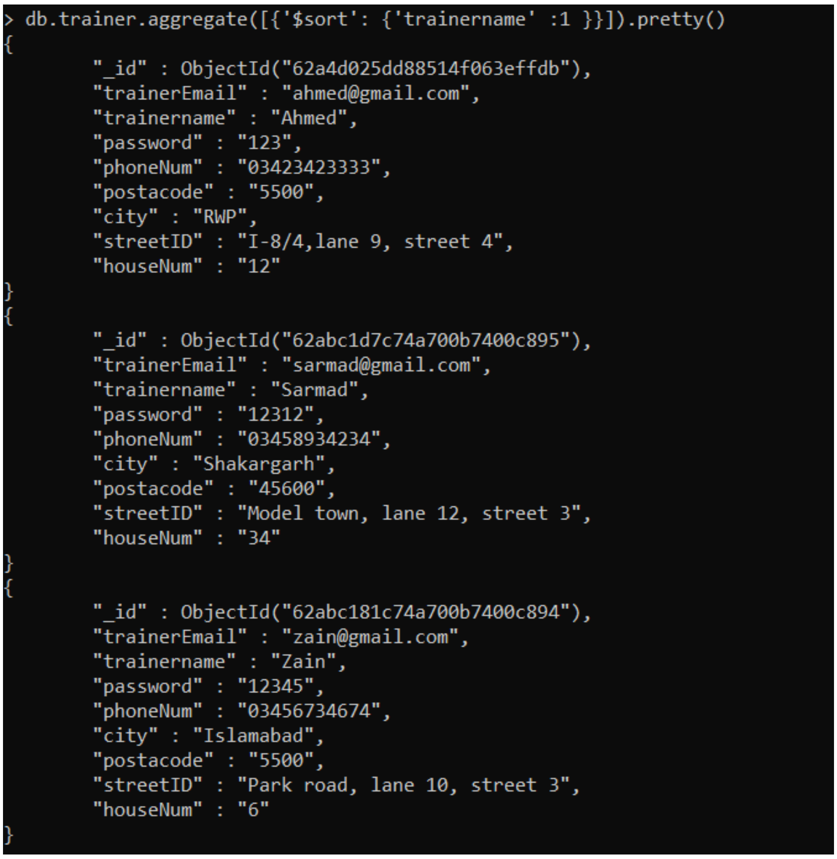
```
> db.equipment.aggregate([{$match: {eqid : {$gt:"2"}}}])
{ "_id" : ObjectId("62abc0b6c74a700b7400c892"), "eqid" : "3", "equipmentname" : "Weighting plates" }
{ "_id" : ObjectId("62abc0ddc74a700b7400c893"), "eqid" : "4", "equipmentname" : "Treadmills" }
>
```

6. **Show equipment's data in descending by ids order:**



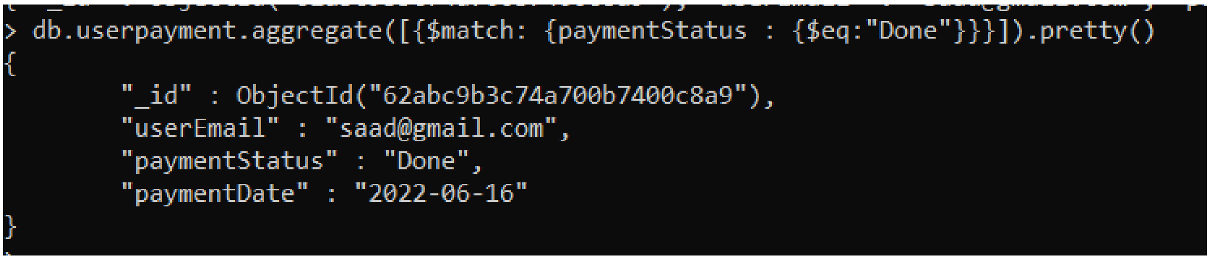
```
> db.equipment.aggregate([{'$sort': {'eqid' :-1 }}])
{ "_id" : ObjectId("62abc0ddc74a700b7400c893"), "eqid" : "4", "equipmentname" : "Treadmills" }
{ "_id" : ObjectId("62abc0b6c74a700b7400c892"), "eqid" : "3", "equipmentname" : "Weighting plates" }
{ "_id" : ObjectId("62abc079c74a700b7400c891"), "eqid" : "2", "equipmentname" : "Dumbbells" }
{ "_id" : ObjectId("62abc06ac74a700b7400c890"), "eqid" : "1", "equipmentname" : "Cycle" }
```

7. **Show trainer in ascending order by their names:**



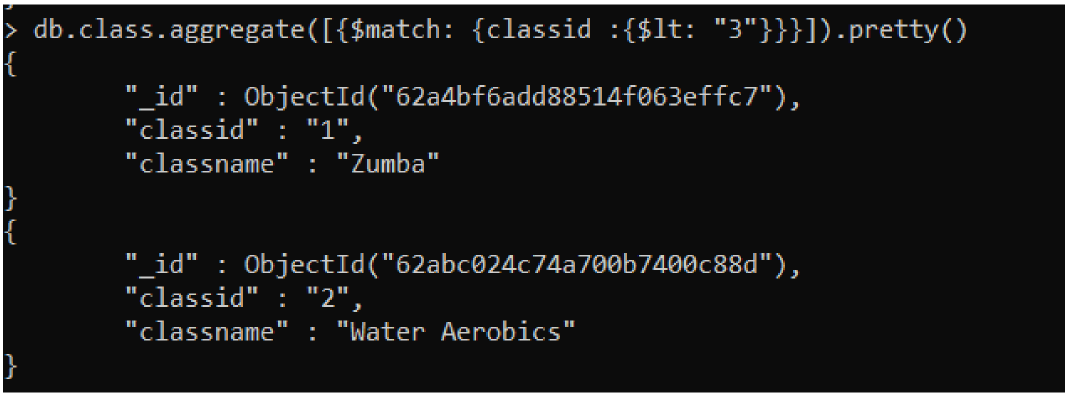
```
> db.trainer.aggregate([{'$sort': {'trainername' :1 }}]).pretty()
{
        "_id" : ObjectId("62a4d025dd88514f063effdb"),
        "trainerEmail" : "ahmed@gmail.com",
        "trainername" : "Ahmed",
        "password" : "123",
        "phoneNum" : "03423423333",
        "postacode" : "5500",
        "city" : "RWP",
        "streetID" : "I-8/4,lane 9, street 4",
        "houseNum" : "12"
}
{
        "_id" : ObjectId("62abc1d7c74a700b7400c895"),
        "trainerEmail" : "sarmad@gmail.com",
        "trainername" : "Sarmad",
        "password" : "12312",
        "phoneNum" : "03458934234",
        "city" : "Shakargarh",
        "postacode" : "45600",
        "streetID" : "Model town, lane 12, street 3",
        "houseNum" : "34"
}
{
        "_id" : ObjectId("62abc181c74a700b7400c894"),
        "trainerEmail" : "zain@gmail.com",
        "trainername" : "Zain",
        "password" : "12345",
        "phoneNum" : "03456734674",
        "city" : "Islamabad",
        "postacode" : "5500",
        "streetID" : "Park road, lane 10, street 3",
        "houseNum" : "6"
}
```

8. **Find users who pay there fee**



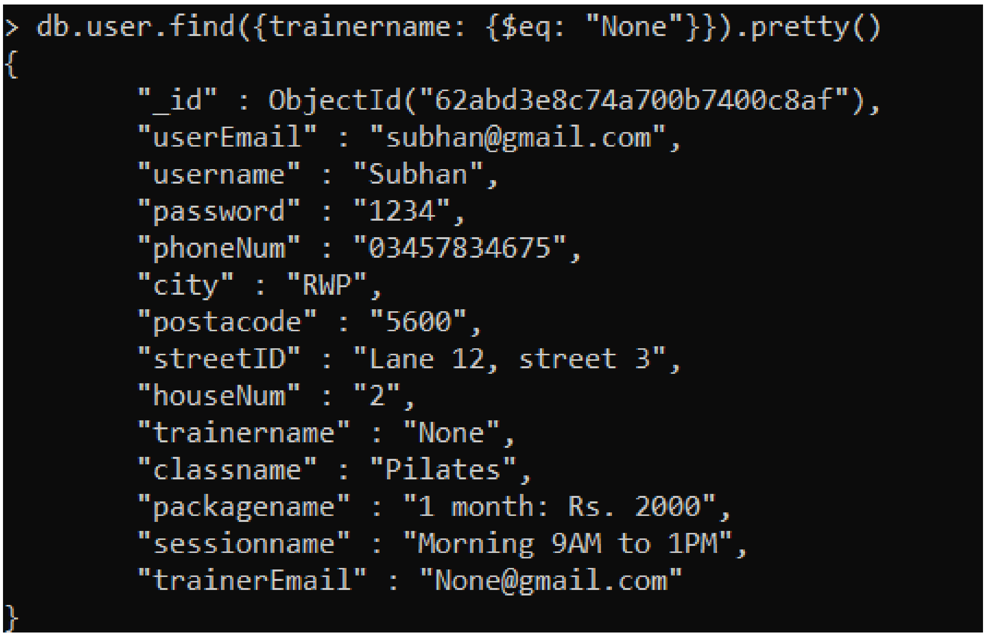
```
> db.userpayment.aggregate([{$match: {paymentStatus : {$eq:"Done"}}}]).pretty()
{
        "_id" : ObjectId("62abc9b3c74a700b7400c8a9"),
        "userEmail" : "saad@gmail.com",
        "paymentStatus" : "Done",
        "paymentDate" : "2022-06-16"
}
```

9. **Find classes whose id less than 3:**



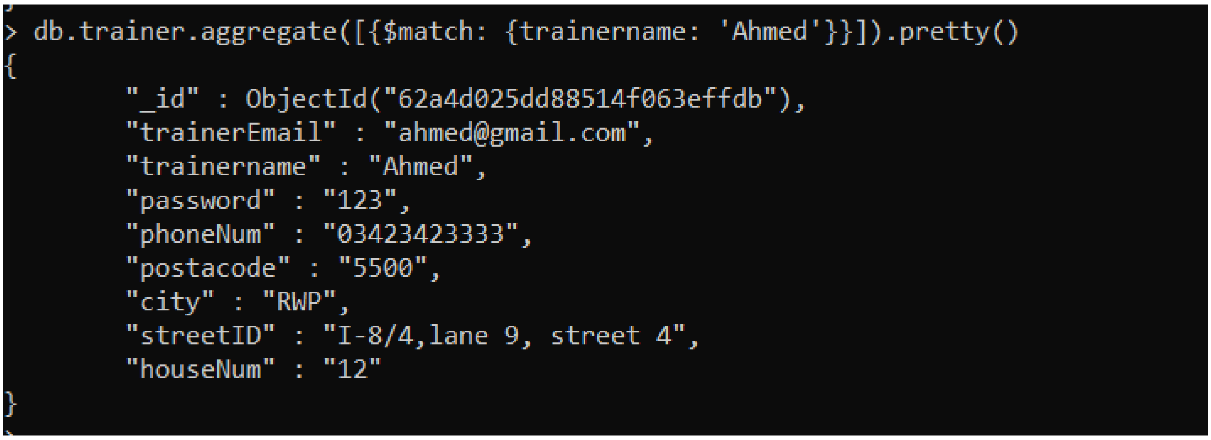
```
> db.class.aggregate([{$match: {classid :{$lt: "3"}}}]).pretty()
{
        "_id" : ObjectId("62a4bf6add88514f063effc7"),
        "classid" : "1",
        "classname" : "Zumba"
}
{
        "_id" : ObjectId("62abc024c74a700b7400c88d"),
        "classid" : "2",
        "classname" : "Water Aerobics"
}
```

10. **Find user who do not have any trainer:**



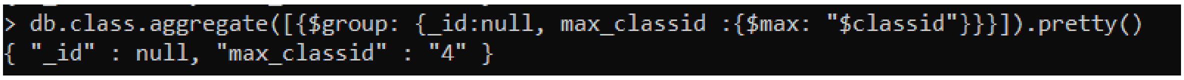
```
> db.user.find({trainername: {$eq: "None"}}).pretty()
{
        "_id" : ObjectId("62abd3e8c74a700b7400c8af"),
        "userEmail" : "subhan@gmail.com",
        "username" : "Subhan",
        "password" : "1234",
        "phoneNum" : "03457834675",
        "city" : "RWP",
        "postacode" : "5600",
        "streetID" : "Lane 12, street 3",
        "houseNum" : "2",
        "trainername" : "None",
        "classname" : "Pilates",
        "packagename" : "1 month: Rs. 2000",
        "sessionname" : "Morning 9AM to 1PM",
        "trainerEmail" : "None@gmail.com"
}
```

11. Find trainer Ahmed details using Aggregation:



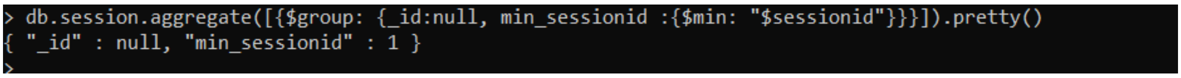
```
> db.trainer.aggregate([{$match: {trainername: 'Ahmed'}}]).pretty()
{
        "_id" : ObjectId("62a4d025dd88514f063effdb"),
        "trainerEmail" : "ahmed@gmail.com",
        "trainername" : "Ahmed",
        "password" : "123",
        "phoneNum" : "03423423333",
        "postacode" : "5500",
        "city" : "RWP",
        "streetID" : "I-8/4,lane 9, street 4",
        "houseNum" : "12"
}
```

12. Find max class id and rename it to max_class id with object id null:



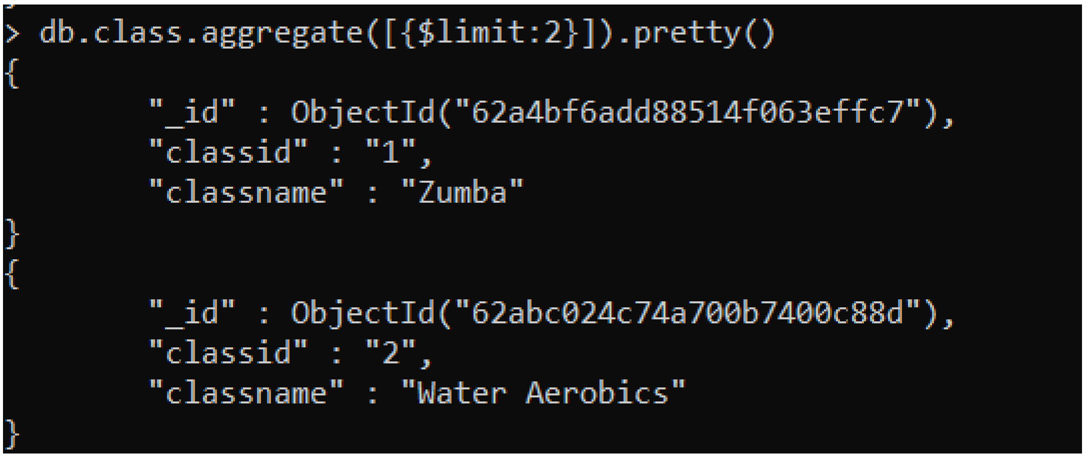
```
> db.class.aggregate([{$group: {_id:null, max_classid :{$max: "$classid"}}}]).pretty()
{ "_id" : null, "max_classid" : "4" }
```

13. Find min session id and rename it to min_sessionid with object id null:



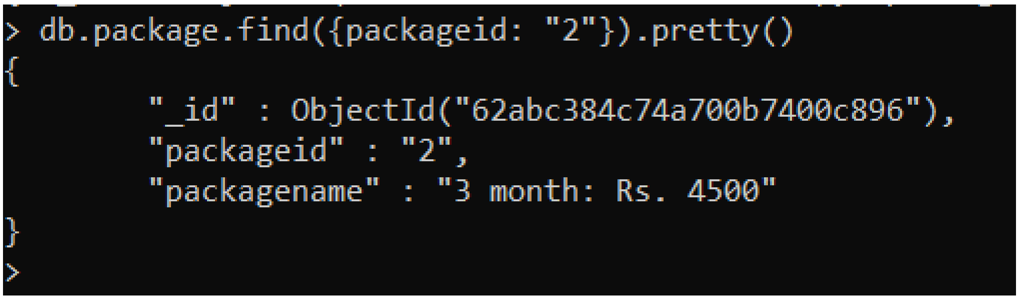
```
> db.session.aggregate([{$group: {_id:null, min_sessionid :{$min: "$sessionid"}}}]).pretty()
{ "_id" : null, "min_sessionid" : 1 }
>
```

14. Show first 2 objects in class collection:



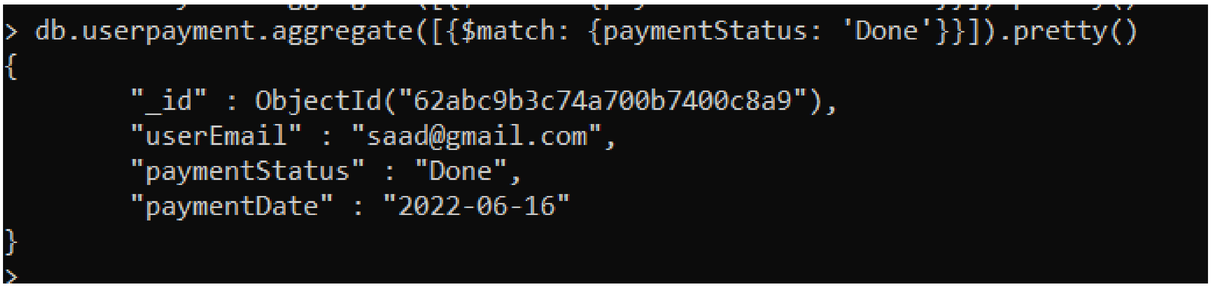
```
> db.class.aggregate([{$limit:2}]).pretty()
{
        "_id" : ObjectId("62a4bf6add88514f063effc7"),
        "classid" : "1",
        "classname" : "Zumba"
}
{
        "_id" : ObjectId("62abc024c74a700b7400c88d"),
        "classid" : "2",
        "classname" : "Water Aerobics"
}
```

15. Find package info whose id is 2:



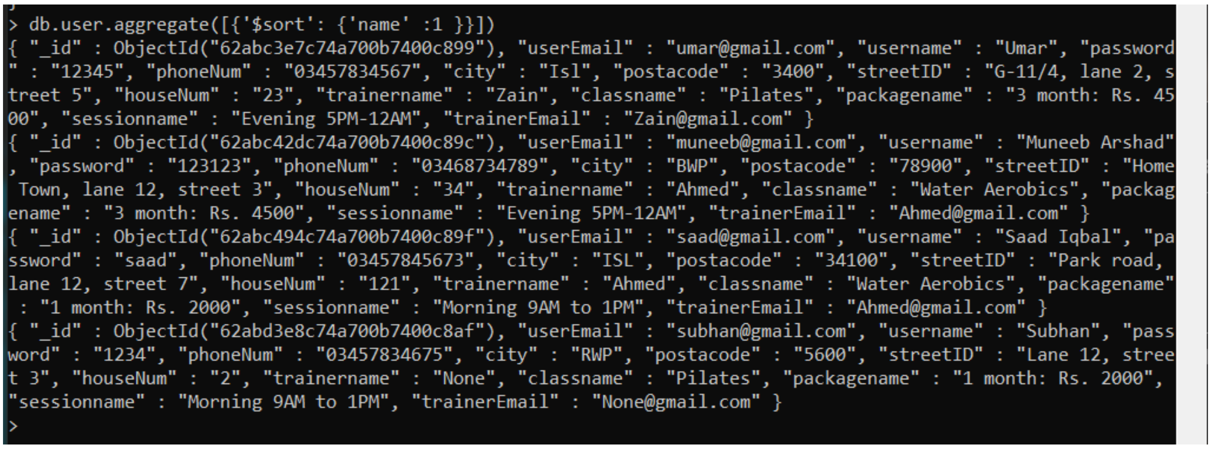
```
> db.package.find({packageid: "2"}).pretty()
{
        "_id" : ObjectId("62abc384c74a700b7400c896"),
        "packageid" : "2",
        "packagename" : "3 month: Rs. 4500"
}
>
```

16. Find users who pay the fee:



```
> db.userpayment.aggregate([{$match: {paymentStatus: 'Done'}}]).pretty()
{
        "_id" : ObjectId("62abc9b3c74a700b7400c8a9"),
        "userEmail" : "saad@gmail.com",
        "paymentStatus" : "Done",
        "paymentDate" : "2022-06-16"
}
>
```

17. Show users in ascending order by their names:



```
> db.user.aggregate([{'$sort': {'name' :1 }}])
{ "_id" : ObjectId("62abc3e7c74a700b7400c899"), "userEmail" : "umar@gmail.com", "username" : "Umar", "password
" : "12345", "phoneNum" : "03457834567", "city" : "Isl", "postacode" : "3400", "streetID" : "G-11/4, lane 2, s
treet 5", "houseNum" : "23", "trainername" : "Zain", "classname" : "Pilates", "packagename" : "3 month: Rs. 45
00", "sessionname" : "Evening 5PM-12AM", "trainerEmail" : "Zain@gmail.com" }
{ "_id" : ObjectId("62abc42dc74a700b7400c89c"), "userEmail" : "muneeb@gmail.com", "username" : "Muneeb Arshad"
, "password" : "123123", "phoneNum" : "03468734789", "city" : "BWP", "postacode" : "78900", "streetID" : "Home
 Town, lane 12, street 3", "houseNum" : "34", "trainername" : "Ahmed", "classname" : "Water Aerobics", "packag
ename" : "3 month: Rs. 4500", "sessionname" : "Evening 5PM-12AM", "trainerEmail" : "Ahmed@gmail.com" }
{ "_id" : ObjectId("62abc494c74a700b7400c89f"), "userEmail" : "saad@gmail.com", "username" : "Saad Iqbal", "pa
ssword" : "saad", "phoneNum" : "03457845673", "city" : "ISL", "postacode" : "34100", "streetID" : "Park road,
lane 12, street 7", "houseNum" : "121", "trainername" : "Ahmed", "classname" : "Water Aerobics", "packagename"
 : "1 month: Rs. 2000", "sessionname" : "Morning 9AM to 1PM", "trainerEmail" : "Ahmed@gmail.com" }
{ "_id" : ObjectId("62abd3e8c74a700b7400c8af"), "userEmail" : "subhan@gmail.com", "username" : "Subhan", "pass
word" : "1234", "phoneNum" : "03457834675", "city" : "RWP", "postacode" : "5600", "streetID" : "Lane 12, stree
t 3", "houseNum" : "2", "trainername" : "None", "classname" : "Pilates", "packagename" : "1 month: Rs. 2000",
"sessionname" : "Morning 9AM to 1PM", "trainerEmail" : "None@gmail.com" }
>
```

11. Conclusion

Gym system provides a good experience to the both the administrator and users. Users can easily get information from web in some clicks only by sitting at home. And it also provide a user friendly interface. It also provide an opportunity to admin of a gym to manage different type of records that are related to users and trainers.

12. References

No references.