

Fit Nation Software Requirements Project

Done by:

Adham Hesham Ali 211006681

Mohamed Emad Abdelghany 211004692

ALI HISHAM MOHAMDY 211006277

MOSTAFA NABIL ALI 211006409

Under supervision of:

Dr. Mohamed Youssef

Eng. Nada Mahmoud

Project Idea:

FitNation is a web app where you can keep track of your workouts and favorite recipes' nutritional info. You can even challenge others to pushup contests using your phone camera, thanks to AI technology! Share your workout successes in a mini-blog with other users. On the admin side, manage users, see pushup challenge scores, and add new gym branches that appear dynamically on the user's about page.

Interview:

Part 1: Establishing Customer profile.

Name: Dr Mohamed Youssef

Company: Fit Nation

Job Title: Founder and CEO of Fit Nation

Q: What are your key responsibilities?

A: Manage every branch of the gym, and calculate the resources needed to operate the branches with full services and with high efficiency of products, tools, and equipment to the customers, users, coaches, and workers.

Q: What outputs do you produce? And for whom?

A: Diet and food Recipes, various training types with equipment suggestions, comfort in workouts. For anyone who wants to gain muscles and lose weight, and good and motivated workout environment.

Q: How is success measured?

A: The customer visits per week, annual income, body fats and weights, the maximum number of kilograms lifted per user.

Q: Which problem interferes with your success?

A: Hard membership management, high complexity of features of branch services.

Q: What, if any, trends make your job easier or more difficult?

A: Market competition and saturation make my job harder because every gym has its competitors with its technologies and solutions to offer high efficiency and produce outputs.

Part 2: Assessing the Problem.

Q: For which web application problems do you lack good solutions?

A: The software development process where you develop an application to publish it to your users for ease of use and solve many problems, including the hardcopy database, and bottleneck of services offered by workers and coaches to guide the users and trainees for good and efficient workout.

Q: Why do these problems exist?

A: lack of knowledge in SW development, limited technology resources to adapt the web app.

Q: How to solve them now?

A: Hiring Software engineers to take responsibilities for the web application and convert requirements into features and take care of user data and handle them

Q: How would you like to solve them?

A: by providing a seamless experience for users, a well-designed application is crucial. By gathering requirements and prioritizing UI design, the application can offer good navigation and personalized features. increase database management to make the storage and accessibility of essential gym data easy, while service optimization techniques help operations and enhance service delivery. Integration of tools and technologies, coupled with stringent security measures, ensures compatibility, privacy, and data protection. Thorough testing and ongoing support.

Q: What are your time and budget constraints?

A: we need the web app to be ready and deployed around one month from now, with a budget in the range of 15K to 20k LE.

Part 3: Understanding the user environment.

Q: Who are the users?

A: In the range of 17 to 45 years males and females that are experienced or non-experienced in workouts and probably they will need help in specifying the workout types and diet plans

Q: What's their educational background? And what's their background in computer usage?

A: Various educations. Pretty much they have a good knowledge of how to use new app and work on it.

Q: Are the users experience with web applications?

A: yes, they are.

Q: Which social media platform they are on?

A: Facebook, Instagram, TikTok.

Q: What is your worker's experience with the usability of web apps?

A: zero experience with zero knowledge of how to use apps.

Q: What is your expectation for training time on the new web app?

A: As much as they will learn. I want them to be able to use the web application like professionals, to be able to handle any issue or error that happens to any user.

Q: Do you need a tech repairman during the deployment?

A: yes, in every branch till a month from deployment to handle any error and exceptions happen to the web app.

Q: What are your expectations for performance?

A: the right logical output with a small latency

Q: What are the security requirements?

A: high security which prevents data leakage.

Q: How will the software be distributed?

A: on every reception table of every branch of the gym

Part 4: Recap for understanding.

So, you have told me:

- Hard management on different branches.
- Increase in the number of customers which creates a bottleneck on the low number of coaches.
- Soft copy of database which makes it hard to query.
- Unavailable of public documentation on how to use an equipment or don't know the instructions for a good workout.
- Unavailable of public documentation on diet plans and food recipes.

The above two problems are due to the small number of coaches,

Q: Does this represent the problems you have?

A: yes, they do.

Q: Are there any other problems?

A: The users became too unmotivated, and I wanted to increase their enthusiasm. So, I was thinking about making a weekly push-up challenge and the top trainee that has the most scores win a prize, so this became boring to do at the gym.

Part 6: Assessing Your Solution.

What if you could:

- 1.** Have an admin page that has a softcopy database that you could handle and make edits and queries and manage the database of all the branches.
- 2.** Have a blog page where everyone could ask questions and share thoughts related to the gym and workouts
- 3.** List of all the workouts with there animated instructions on how it works, and the body parts affected and equipment used
- 4.** List of all the food recipes with there calories, fats, carbs, proteins
- 5.** Make an ai computer vision to detect pose estimation in push-up challenge.

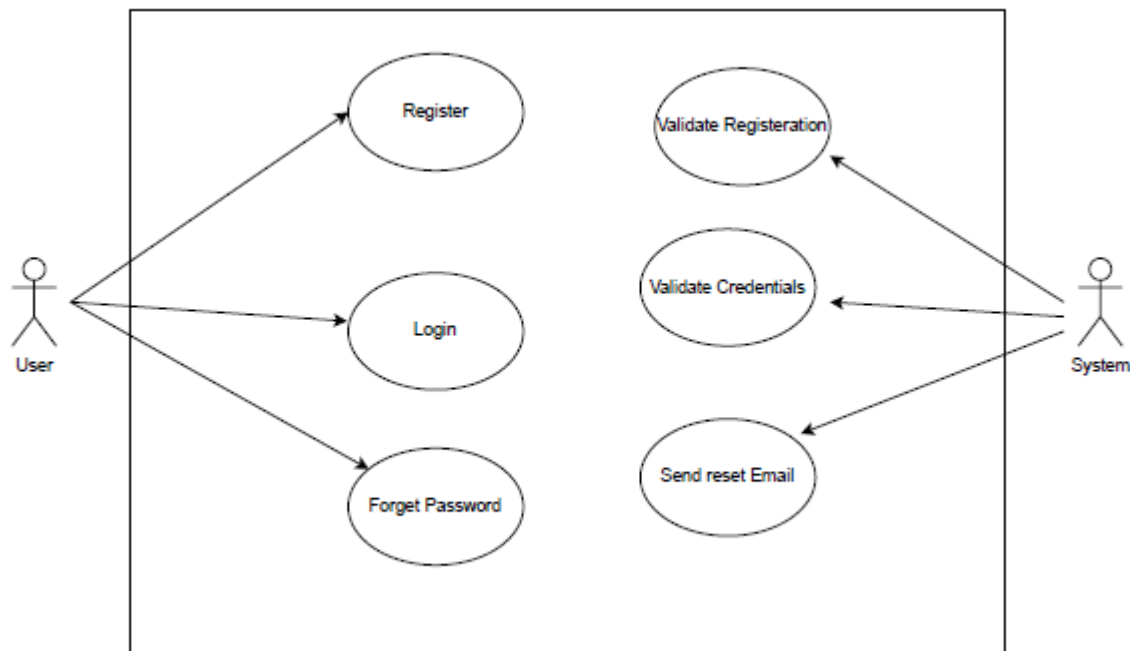
Q: What would you rank the importance of these solutions out of 10

A: solution number 1: 9/10
solution number 2: 9.5/10
solution number 3: 9/10
solution number 4: 8/10
solution number 5: 8/10

Questionnaire:

1. Name:
2. Company (if applicable):
3. Email:
4. Phone Number:
5. Address:
6. Age:
7. Gender:
8. Fitness Goals:
9. How long have you been using a gym and fitness app?
10. What features of the app do you use most often?
11. Are there any features or functionalities that you find particularly useful or enjoyable?
12. Do you currently track your calorie intake? (Yes/No)
13. If yes, what features would make calorie/macro tracking easier for you?
(Multiple Choice)
 - a. Integration with popular calorie-tracking apps.
 - b. Access to a database of healthy recipes with nutritional information.
 - c. Ability to set daily calorie and macro goals.
 - d. Functionality to log your meals throughout the day.
 - e. Personalized meal recommendations based on goals and preferences.
 - f. Other:
14. How likely would you be to participate in AI-powered competitions, such as push-up contests, using your camera? (Yes/No)
15. What specific features or functionalities would you like to see in the fitness community platform?
16. Please share any additional comments or suggestions you have for the future web app:

Use Cases:



Login, Register, Forget Password

Register

User can register an account using a unique isername, email, and phone number.

Login

User can login using his credentials..

Forget Password

In case a user forgets his password. He can reset it.

Validate Registration

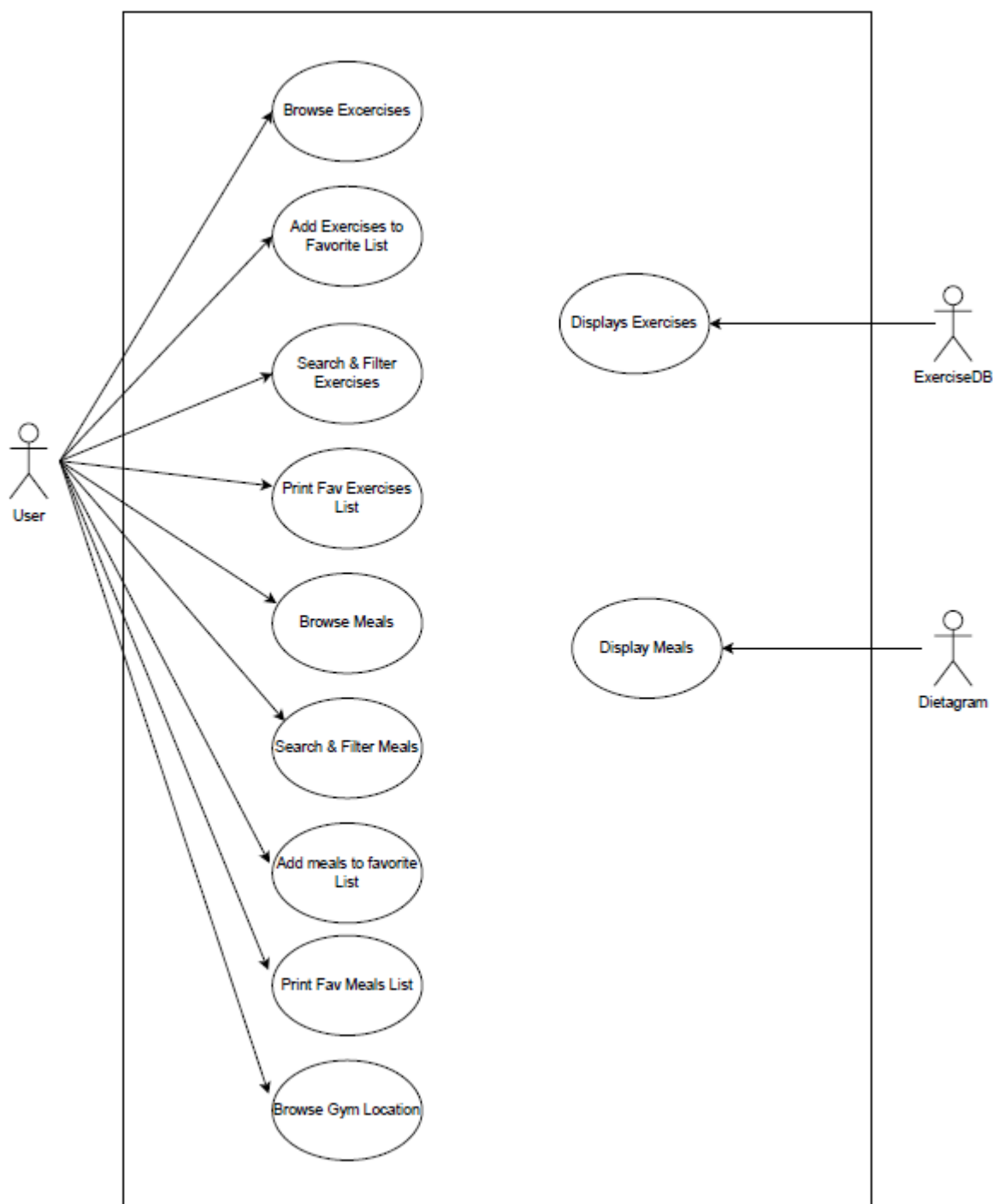
When user registers an account, the system should check if the inputed credentials are valid. Ex: Username is unique, phone number is made of the suitable numbers, and the email is not used for another account.

Validate Credentials

System should make sure the login credentials exist in the system..

Send reset Email

In case a user requests to change his password. An email should be sent for him to get a



System Main Features

Browse Exercises:

User can browse a set of different exercise. Search through them using a search engine or filter based on equipment, body part, or equipment type

Browse Gym Locations

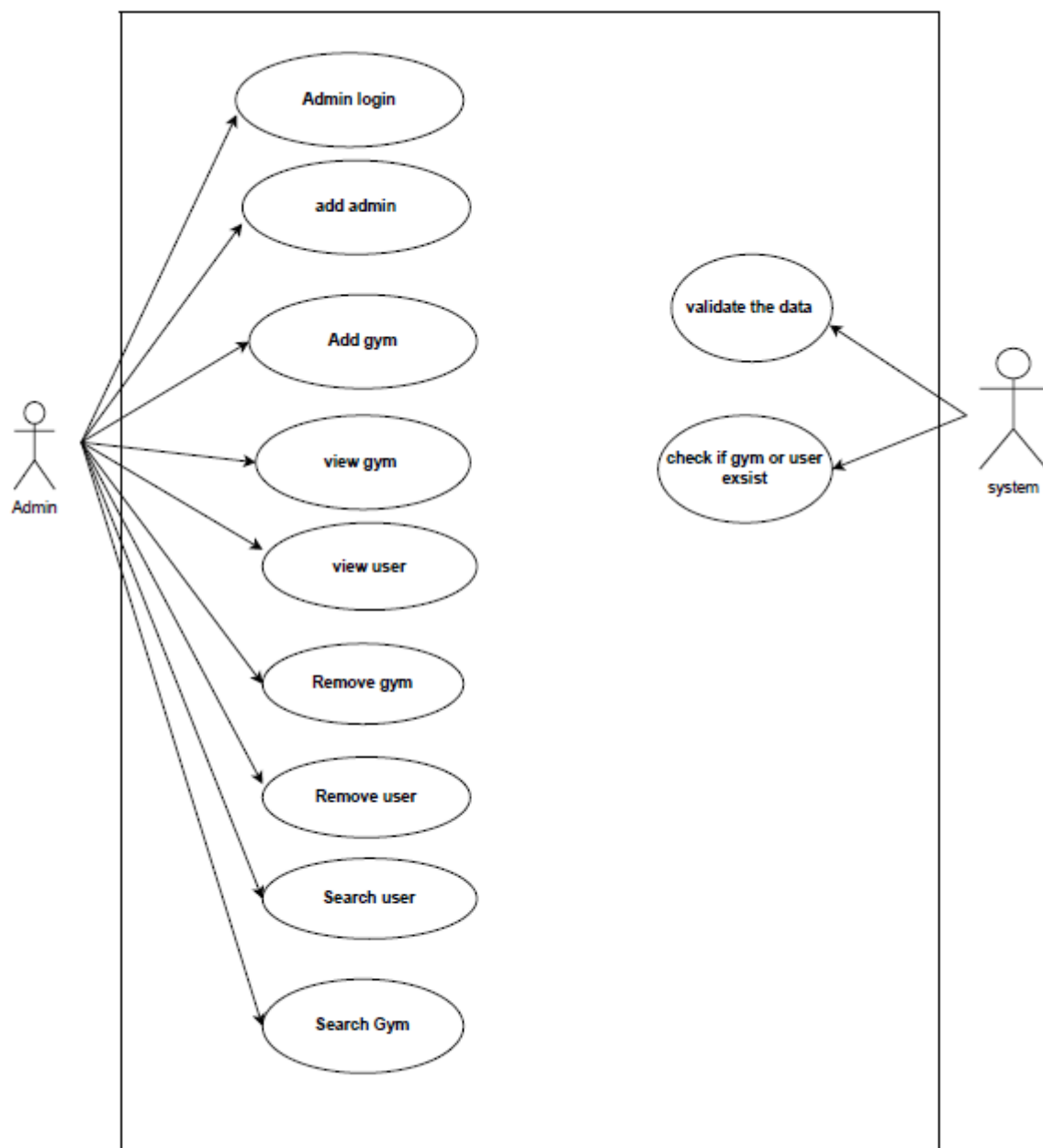
User can use a map to look to gym branches beside his location.

Browse Meals:

User can browse a set of different meals. Search through them using a search engine or filtering based on the type of ingredients used

ExerciseDB & Dietagram.

Are APIs that provide us with the set of exercises and meals.



Admin Side

Admin login:

Admin enter username and password , System check if the username and password

Add Gym:

Admin add gym name and location.

System management:

Admin manages the system entities.

Add Admin :

add the address ,name , phone number, ID ,and birthdate of new admin to add him to the system.

View gym:

Admin view gyms exist in the system and view it name and location.

View user:

Admin view users of the system.

Remove gym:

Admin enter gym name or id.
The system search for the gym.
If exist it remove it, if it does not find gym it send a message that gym not exist.

Remove User:

admin enter user username or id
the system search for the user ,
if exist it remove it , if it does not find user it send a message that user not exist.

Search gym:

Admin enter gym name or id , if gym exist the system print the data of the gym if not system print a message that gym not exist.

Search user:

Admin enter user username or id
if user exist the system print the data of the user if not system print a message that user not exist.

Prototyping:

Login user page:

Enter Username...

Password

☒ Remember me

Login

[Forget password?](#) [Create account!](#)

Sign up user page:

Username

First Name

Last Name

Phone number


Email

Password

Confirm password

let's go

Forget password page:




Forget Password

Provide your account's email to reset your password

Email

Next




New Credentials

Your identity has been verified! Set your new password

Update

Workout Api:

FitNation

[Home](#) [Favorites](#)

Select Body Part ▼

Select Equipment ▼

Apply Filters

3/4 sit-up

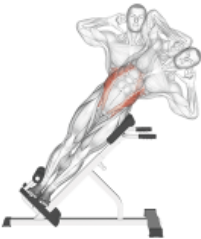


Body Part: waist

Equipment: body weight

or

45° side bend



Body Part: waist

Equipment: body weight

or

air bike



Body Part: waist

Equipment: body weight

or

all fours squad stretch

Recipes Api:

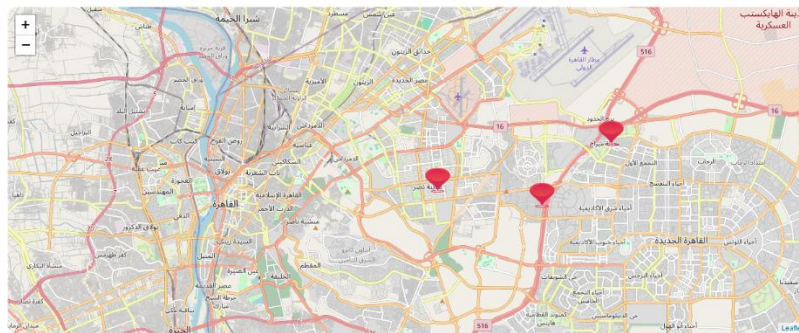


Recipe Table

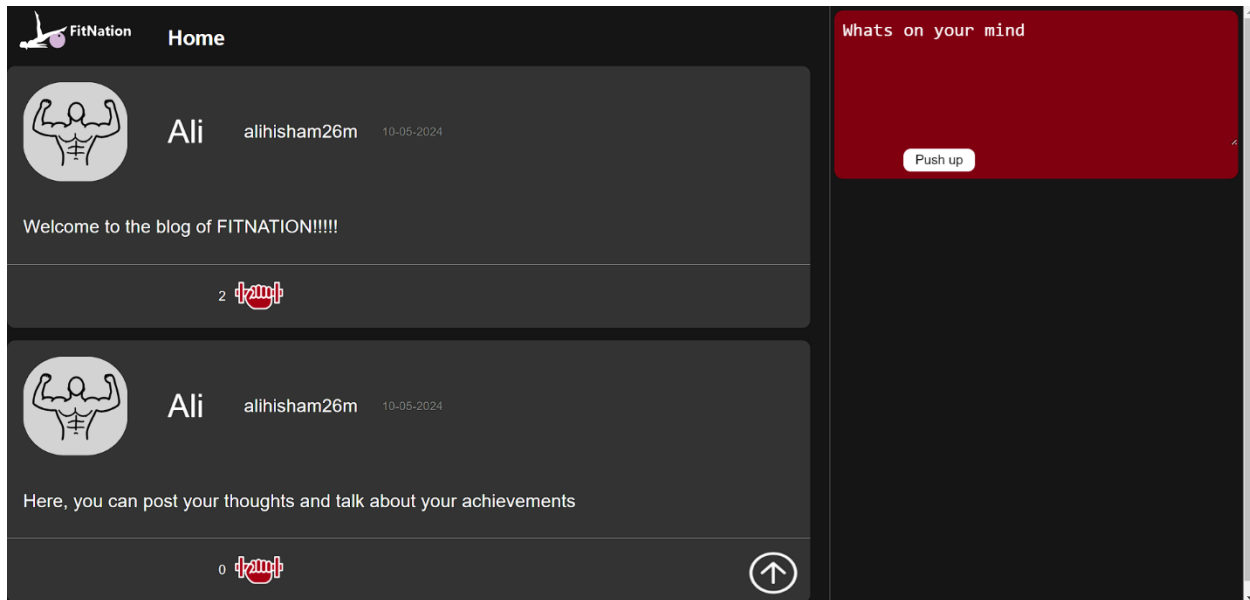
Name	Calorie	Fats	Carbs	Proteins
Chicken	205	16	2	13
Chicken Pie	456	0	0	10
Chicken Fat	900	99.8	0.00	0.00
Mayo Chicken	310	13	37	12
Chicken Stew	500	1	1	1
Chicken Soup	31	1.02	3.88	1.68
Chicken Tail	289	17.3	9.42	22.5
Chicken Feet	215	14.6	0.20	19.4
Chicken Liver	172	6	1.1	26
Chicken Stock	5	0.12	0.62	0.39
Chicken Adobo	195	8	0	30
Chicken Asado	138	6.08	8.01	13.1
Chicken Heart	153	9.33	0.71	15.5
Chicken Wings	350	2	79	2
Chicken Wrap	225	8.93	21.8	13.6

Branches about page:

Our Locations



Blog page:



Add Admin page:

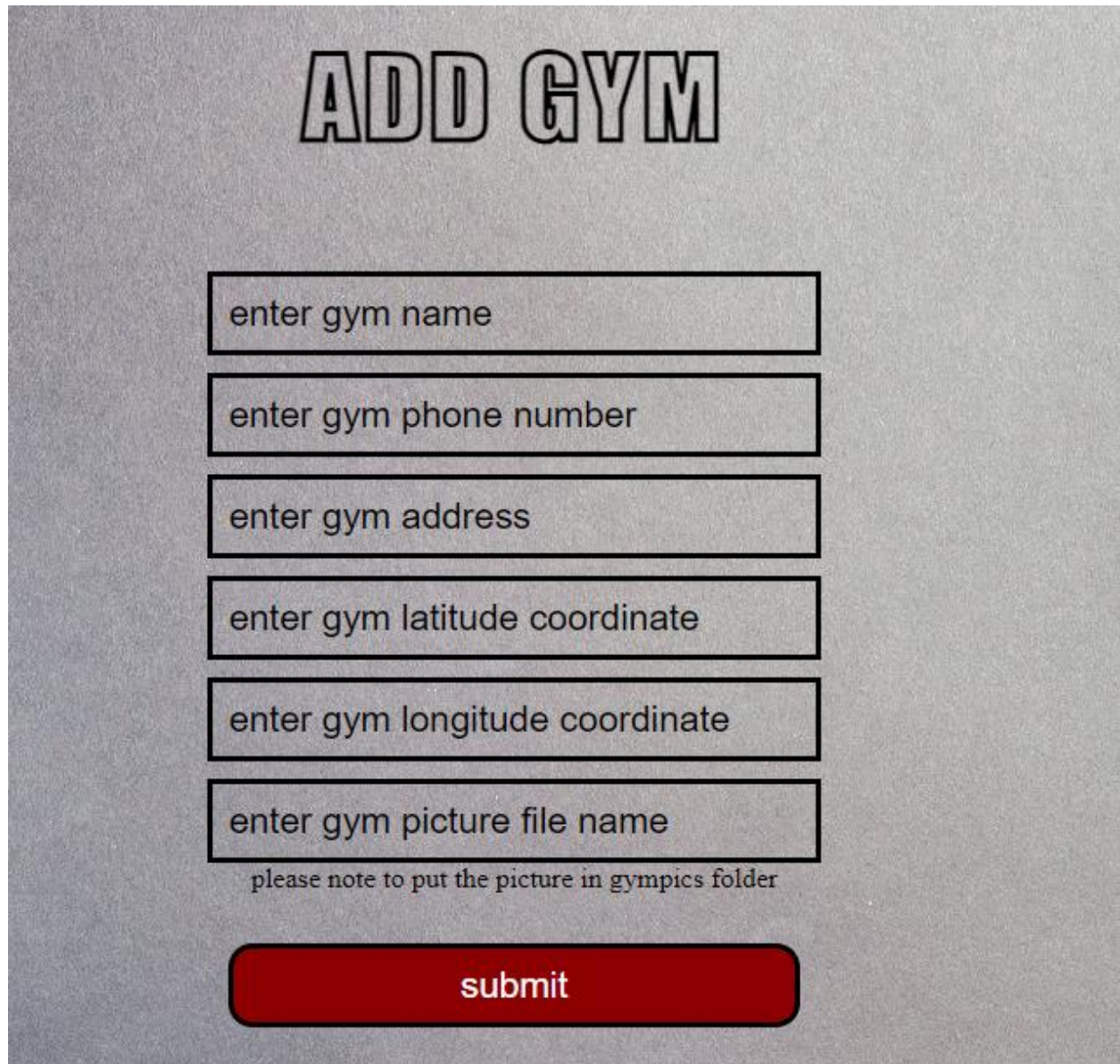
ADD ADMIN

Username

First Name	Second Name
Phone number	Email
Password	Confirm password

Add

Add Gym page:

A screenshot of a web form titled "ADD GYM" in large, bold, black-outlined letters. Below the title are six text input fields, each with a black border and a light gray background. The fields are labeled "enter gym name", "enter gym phone number", "enter gym address", "enter gym latitude coordinate", "enter gym longitude coordinate", and "enter gym picture file name". Below the last field is a note in a smaller font: "please note to put the picture in gympics folder". At the bottom of the form is a red, rounded rectangular button with the word "submit" in white text.

ADD GYM

please note to put the picture in gympics folder

View Admin page:

ID	Username	First Name	Last Name	Phone Number	Email
123216	mozaky11	Mohamed	Emad	2121212121	momomomomom@gmail.com
123218	admin1	adham	hesham	1289976553	tabereb714@gexige.com

View Gym page:

ID	Gym Name	Address	Phone Number
9	Morph Gym	nasr city	0224050035
12	Golds Gym	nasr city	01270089775
14	zeyadfit	nasr city	01270089775

View user page:

ID	Username	First Name	Last Name	Phone Number	Email
12	Mozaky11	Mohamed	Emad	1015118963	mohamedzaky970@gmail.com
13	AliHesham	Ali	Hesham	1015118954	ali@rgola.com
14	Mozaky111	dsad	dsad	1015118965	mohamedzaky970@gmail.com
15	adham	adham	adham	1015118954	adhamdod2003@gmail.com
16	adham2	dasads	dsaadsads	224050035	bogofep927@haboty.com
17	ramez	ramez	montaser	1274883519	ramezmontaser3@gmail.com
18	adham123	adham	montaser	1276628776	tabereb714@gexige.com

Remove user or search page:

Remove user

ID

Delete

UML Diagram:

gym	
Gym_Name	
Address	
Phone_Number	
ID	
latitude	
longitude	
picname	

admin	
ID	
Username	
First_Name	
Second_Name	
Phone_Number	
Email	
Password	

user	
ID	
First_Name	
Last_Name	
Username	
Password	
Email	
Phone_Number	

favorite_exercises	
username	
id	