

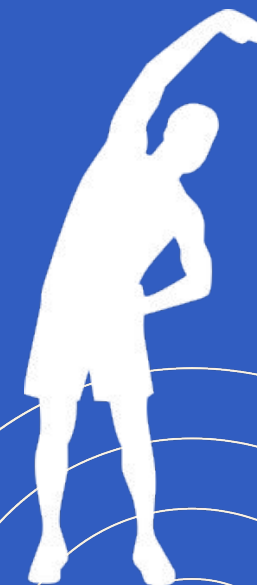
Fit & Meet

Fit & Meet

Fitness Training Management API

Presented by:

Roy Simanovich	209396159
Maya Rom	207485251
Linor Ronen	322216045
Benji Zev Kehat	203283908



System Overview

Fit & Meet

Fit & Meet is an application we've crafted during our software engineering course as part of our computer science bachelor's degree. It strives to streamline the process of discovering and connecting with suitable trainers for individuals interested in various forms of fitness training.

On the flip side, it provides trainers with a platform to showcase their expertise to potential trainees, simplifying the process of attracting new sign-ups for their exercises.

In essence, Fit & Meet is a tool designed to simplify and enrich the fitness journey for both trainers and trainees alike.

Roles Of Team Members

Fit & Meet

Roy	Mainly development of the application itself in the coding aspect, focus on Full Stack development of the following components: Profile (View self, others, change profile details, change password, delete account), Admin Control Panel, Trainees list, important API calls (fetch permissions, fetch lists, etc.). Also improving exercise list, refactoring the code itself, implement a proper logout logic, and generic synchronization of the backend with the database. In context of the design: UML diagram and took part in preparing the final presentation.
Maya	Preliminary Research on technologies worth using. Full Stack development of the following components: full skeleton of the application (frontend and backend), the core itself and its implementation among the group members, Trainers list, footer and navigation bar, the design of the application itself, the readme file, UML diagrams, Took part in preparing the final presentation.
Linor	Responsible for syncing the team members about project's progress, making sure that all team members meet deadlines and requirements. Full Stack development of the following components: Exercises list of trainers, exercises addition logic, adding and viewing reviews of trainers. In addition, researched about low cost cloud databases solutions and established the cloud database (using Aiven data platform). Following that, created & configured the tables in the cloud DB. Furthermore, UML diagrams, Took part in preparing the final presentation.
Benji	Lead quality assurance and testing. Responsible for developing test plans, performing manual and automated testing, identifying and documenting bugs and collaborating with the rest of the team to ensure API functionality and stability, Took part in preparing the final presentation.



Current Market Situation

The fitness management market today is populated with a host of standalone solutions. However, the need for a comprehensive training management system that efficiently connects trainers, trainees, and tracks progress is still largely unmet.

Identified Problems

1. Lack of a unified platform for trainers and trainees:

Trainers and trainees often struggle to find the right platform to connect, manage classes, and track progress.

2. Poor progress tracking:

Available solutions often lack efficient tools for tracking and analyzing training progress.

3. Limited trainee support:

Existing platforms typically provide limited support for trainees in terms of searching for trainers, classes, and tracking their training.

Fit & Meet Benefits

1. Centralized Platform:

Fit & Meet is a unified platform that connects trainers, trainees, and administrators, streamlining their management process.

2. Improved Tracking:

The built-in tracking and analytics tools provide real-time updates on training progress for both trainers and trainees.

3. Enhanced Support for Trainees:

It allows trainees to search for trainers/classes and track their progress effectively.

Comparison with Similar Systems

Fit & Meet competes favourably with other platforms due to its user-friendly environment, comprehensive management solution, and robust tracking capabilities. Unlike many systems currently available, Fit & Meet offers a **seamless connection between users and a more efficient tracking mechanism.**

System Requirements

Fit & Meet



Functional Requirements

User Management:

Support for full CRUD (Create, Read, Update, and Delete) operations on user accounts.

Authentication:

The application needs to provide secure, stateless authentication using JWTs.

Profile Management:

Users should have the ability to retrieve, update, and delete their profiles.

Trainer and Trainee Management:

Features for trainers to create and manage professional profiles, and for trainees to search trainers, register for sessions, and track their progress.



Non-Functional and Other Requirements

Security:

Fit & Meet must prioritize user data security.

Scalability:

The system should easily scale to accommodate user growth.

Interface:

The API should be user-friendly with clear documentation and intuitive navigation.

Compatibility:

Broad compatibility across various platforms and devices needed.

Testability:

The design should permit easy and thorough testing and validation.



Key Features Slated for Future Implementation

In-App Messaging:

Another crucial planned feature was an in-app communication system between trainers and trainees. This could not be fully realized within the project timeframe but remains a focus for future development.

Social Media Integration:

This is a key feature that could enhance user experience by allowing users to share their progress and achievements on their social media platforms.

UML Diagrams

Use case diagram

The actors in our use case diagram:

Trainer

Trainee

The functionality of the system described in the diagram:

Create a workout (include) Login :

Both trainer and trainee first create a profile and this includes the login process.

Create a workout (include) The appearance of the workout in the training list and viewing by the trainee:

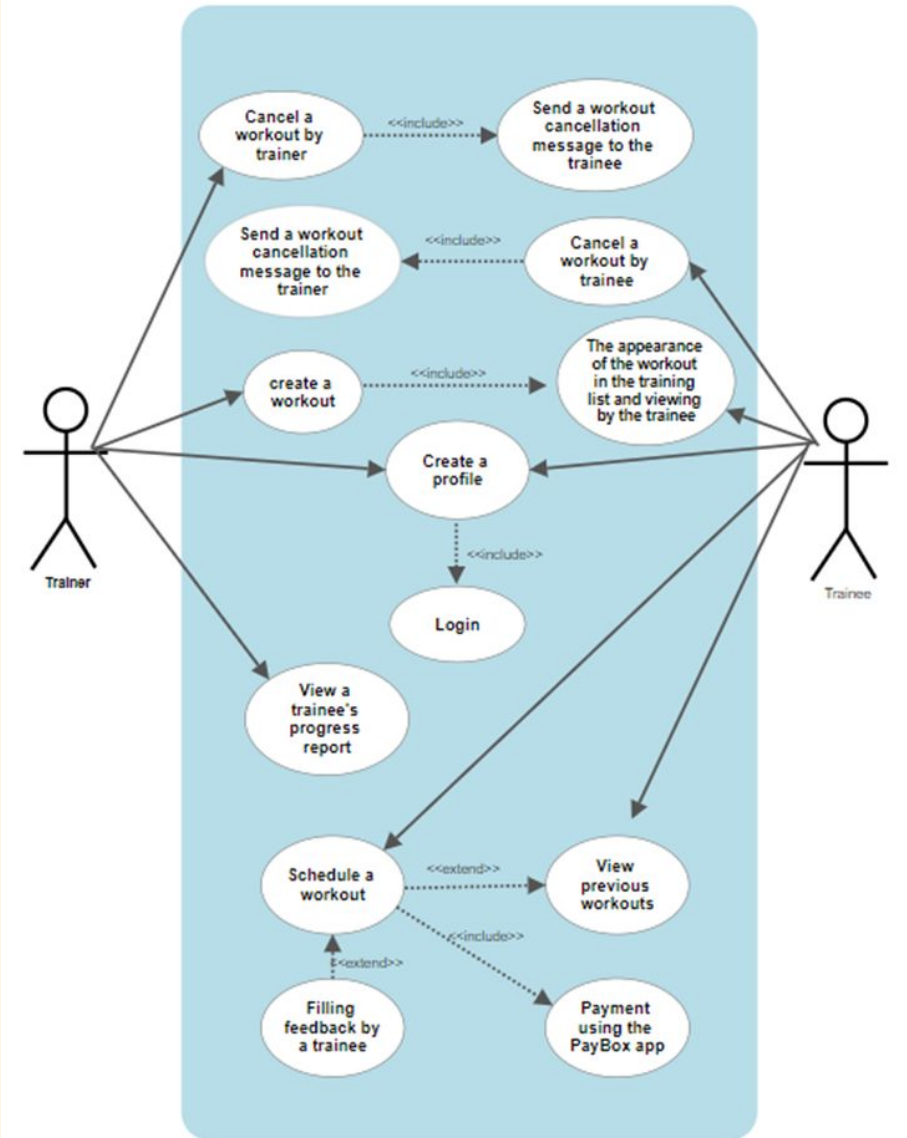
A trainer can create a workout and then the workout will appear in his training list and in addition the trainee will be able to watch the workout and register.

Schedule a workout (include) Payment using the PayBox app and in addition may lead to Filling feedback by a trainee and View previous workouts:

A trainee can schedule a workout and this includes the option to pay through the Paybox app. In addition, when trainee schedule a workout , the following actions can happen:

Watch previous trainings he took.

Add review for trainer.



System Structure & Architecture

Fit & Meet

Our application, Fit & Meet, operates on a clear and efficient structure, divided into two major segments: the client side (front-end) and the server side (back-end).

Front-End (“client” directory):

The front-end of our application is responsible for interfacing with the user and presenting data in a user-friendly manner:

- **Components (.js files):** These include all the React components that make up the different pages on our website such as Home, Admin, Login, Create Exercise.
- **Styles (.css files):** These contain the styling and layout specifications for our React components.
- **Images (in public/images directory):** These include all the static images used throughout the application.

Back-End (“server” directory):

The back-end handles the core operations and processing of our application.

- **Python scripts (.py files):** These scripts manage everything from user authentication and profile management to exercise lists and training plans.
- **Server.py:** This is the main server script file that ties together all the backend modules and runs the server side of our application.
- **Exts.py:** This file is used to manage Flask extensions such as SQLAlchemy for database and Flask JWT-Extended for token-based authentication.

System Structure & Architecture

Fit & Meet

Database:

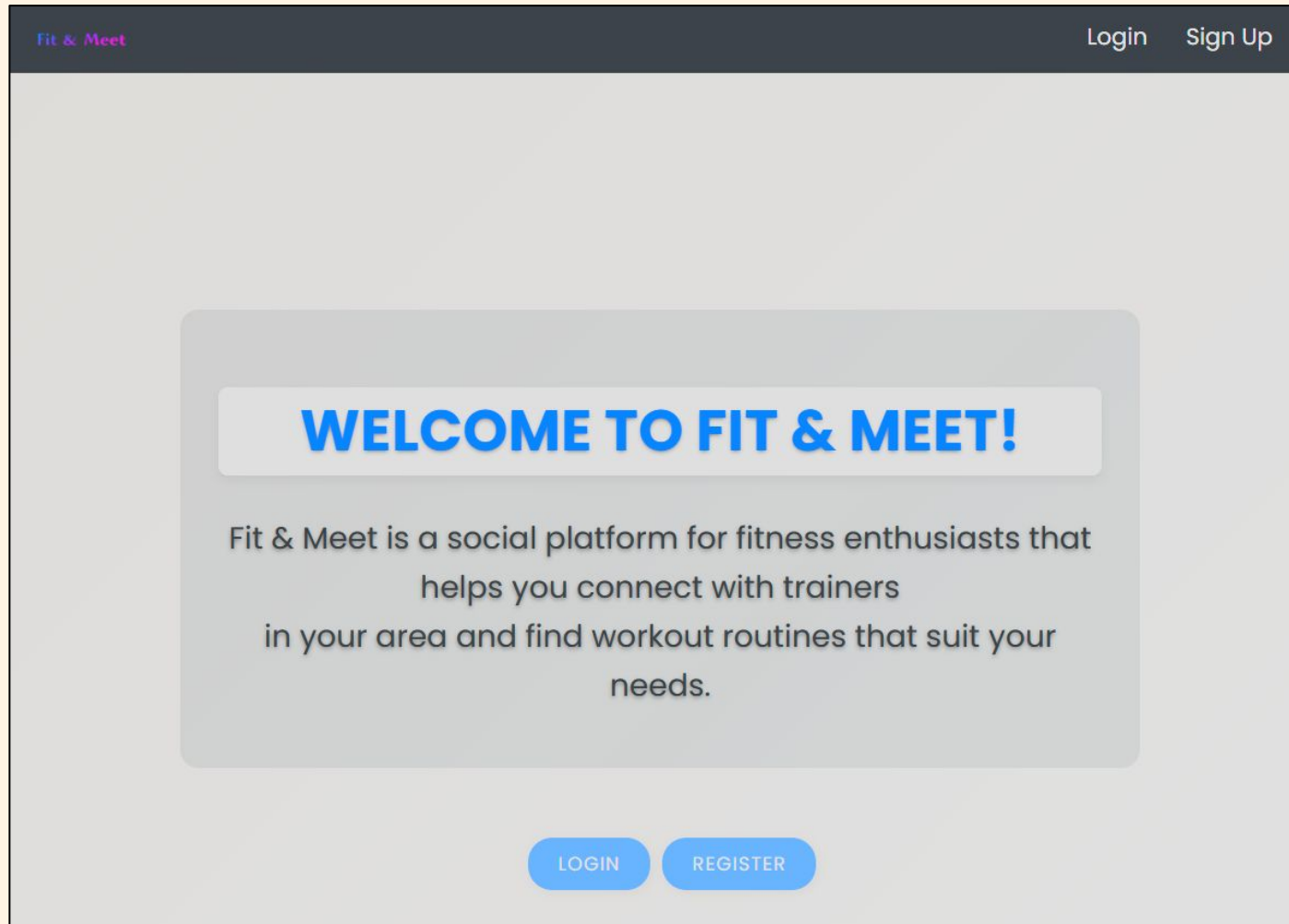
The heart of our application is an Aiven MySQL database, connected to our back-end using SQLAlchemy, the Python SQL toolkit, and Object-Relational Map (ORM). Holding all data related to user profiles, trainers, trainees and sessions, this database is essential for providing a customized user experience and seamless data management.



System Demonstration

Home Page

Fit & Meet



Fit & Meet

System Demonstration

Register Page

After clicking "Register", the registration page opens.

The user is required to fill in details such as username, email address, password, phone number, city, age and more. Also, he is required to choose whether he is trainer or trainee.

SIGN UP FOR FIT & MEET

Username

Email address

Confirm Email

Password

Confirm Password

Phone

Date of Birth

City

Who are you?

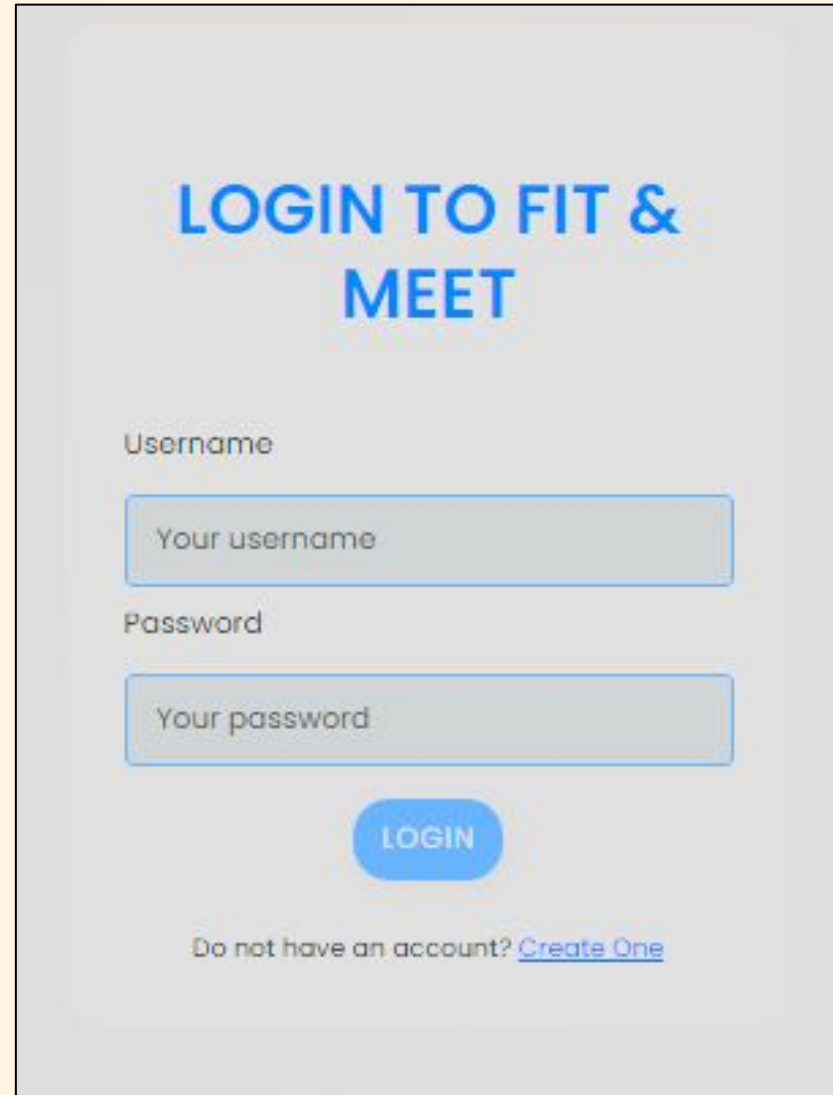
Already have an account? [Log in](#)

Fit & Meet

System Demonstration

Login Page

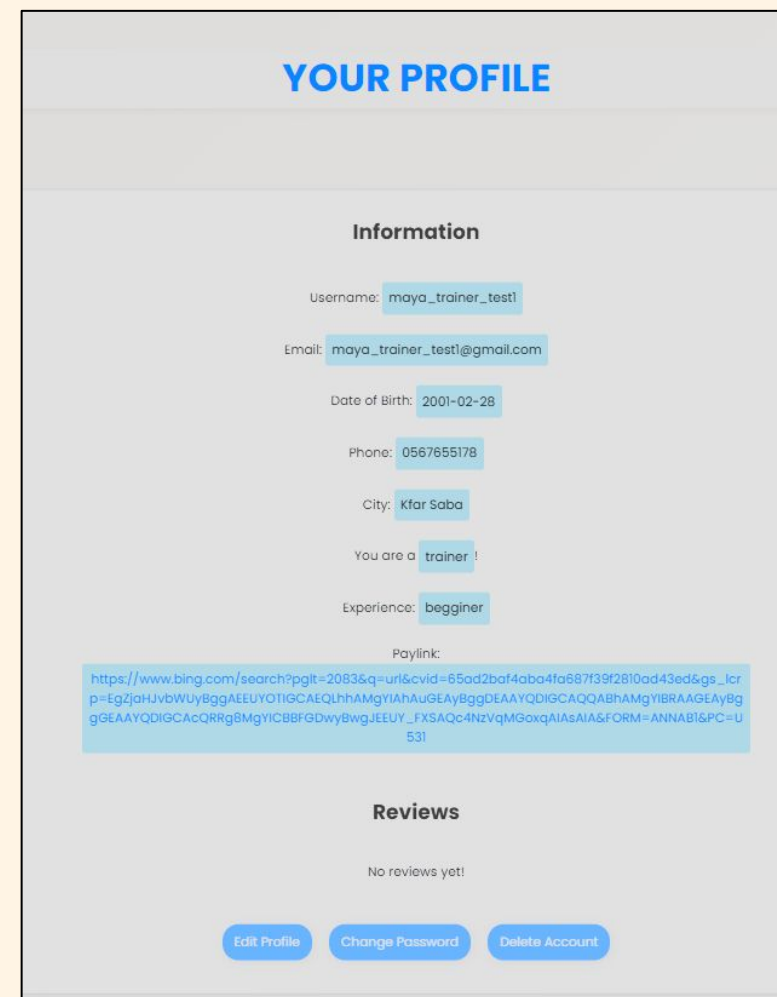
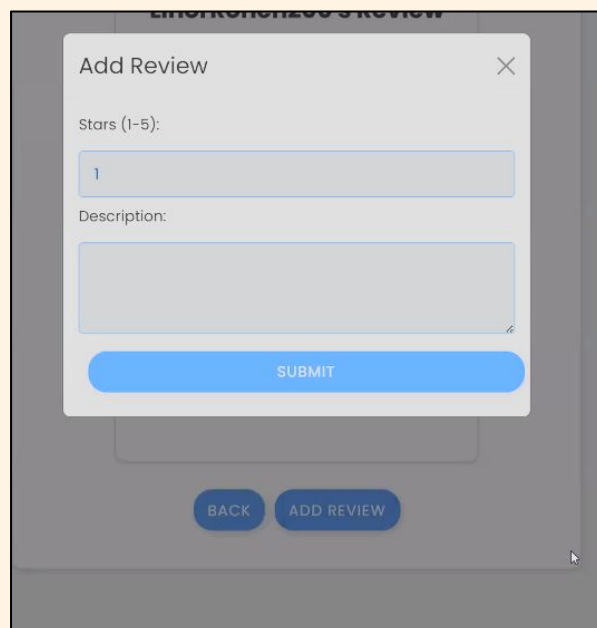
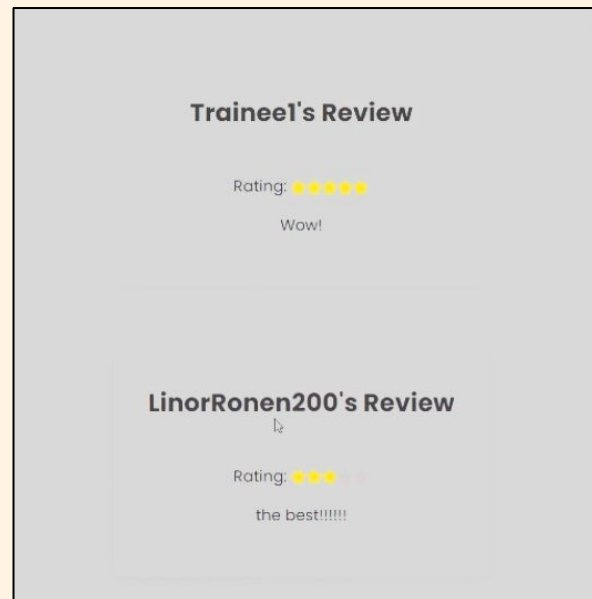
After clicking "Login", the login page opens. The user is required to enter a username and password.

A screenshot of a web application's login page. The page has a light gray background. At the top, the text "LOGIN TO FIT & MEET" is displayed in a bold, blue, sans-serif font. Below this, there are two input fields. The first is labeled "Username" in a small, gray font, and the input box contains the placeholder text "Your username". The second is labeled "Password" in a small, gray font, and the input box contains the placeholder text "Your password". Below the password field is a blue, rounded rectangular button with the word "LOGIN" in white, uppercase letters. At the bottom of the page, there is a line of text that reads "Do not have an account? [Create One](#)", where "Create One" is a blue, underlined link.

System Demonstration

Trainer Profile Page

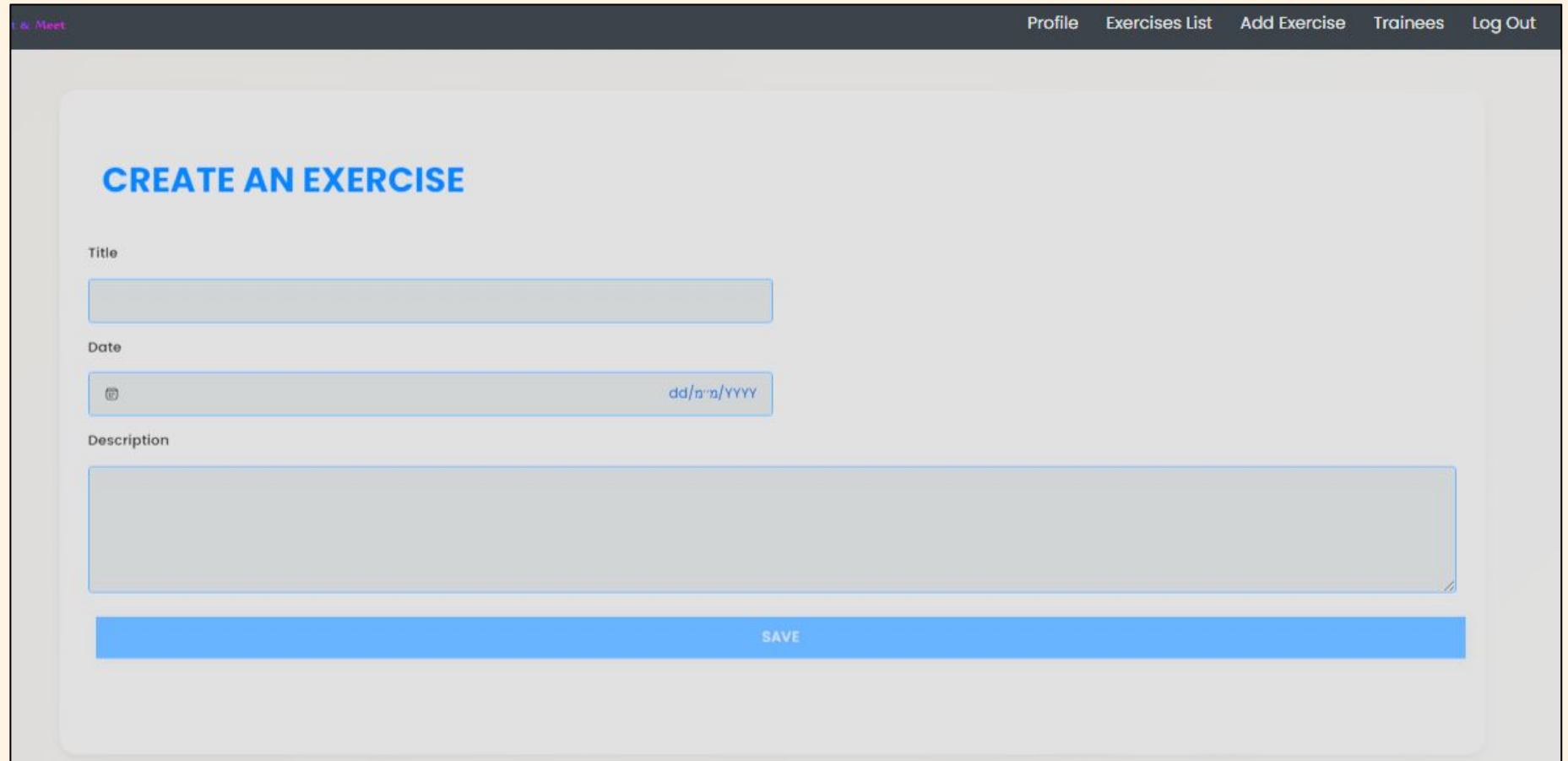
If the trainer wants to view his profile details or make changes to them - he clicks on "Profile" in the top menu and the next page is displayed.



System Demonstration

Create Exercise Page

When a trainer wants to publish a new exercise - he clicks on "Add Exercise" in the top menu. After that, he will be shown the next page, which requires the entry of a title, date and additional detail. The exercise that the trainer added will be shown to the trainees.



The screenshot displays the 'CREATE AN EXERCISE' page within the Fit & Meet application. The top navigation bar includes links for Profile, Exercises List, Add Exercise, Trainees, and Log Out. The main content area features a form with the following fields:

- Title:** A single-line text input field.
- Date:** A date picker field showing a calendar icon and the format dd/mm/yyyy.
- Description:** A multi-line text area for detailed input.

A prominent blue **SAVE** button is located at the bottom of the form.

System Demonstration

Trainee Profile Page

If the trainee wants to view his profile details or make changes to them - he clicks on "Profile" in the top menu and the next page is displayed.

Profile Exercises History Trainers Log Out

YOUR PROFILE

Information

Username: maya_test1

Email: maya_test1@gmail.com

Date of Birth: 2000-12-12

Phone: 0567655170

City: Kfar Saba

You are a trainee

Height: 1.65 meters

Weight: 100 kg

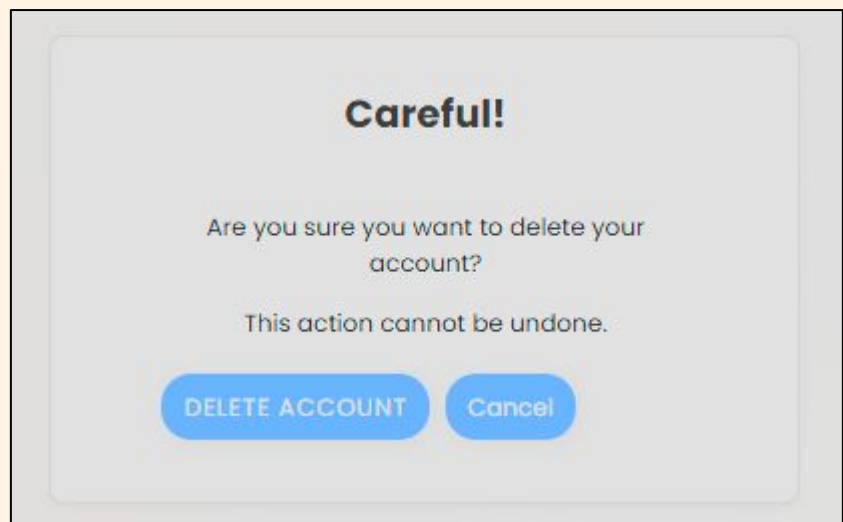
Goal: fun

Edit Profile Change Password Delete Account

System Demonstration

In the trainee/trainer profile page, there are 3 buttons: delete user, change password and edit profile.

Delete Account



A confirmation modal with a light gray background and rounded corners. It contains a bold heading 'Careful!', a question 'Are you sure you want to delete your account?', a warning 'This action cannot be undone.', and two blue buttons at the bottom: 'DELETE ACCOUNT' and 'Cancel'.

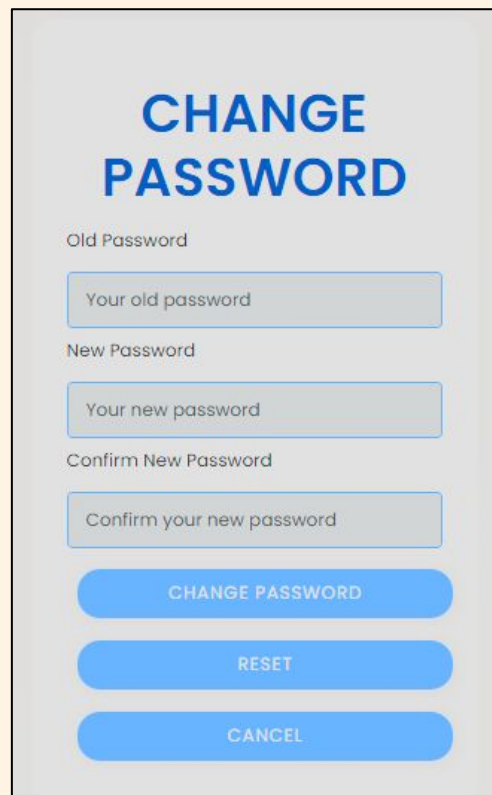
Careful!

Are you sure you want to delete your account?

This action cannot be undone.

DELETE ACCOUNT Cancel

Change Password



A form titled 'CHANGE PASSWORD' in bold blue letters. It contains three input fields: 'Old Password' (placeholder: 'Your old password'), 'New Password' (placeholder: 'Your new password'), and 'Confirm New Password' (placeholder: 'Confirm your new password'). Below the fields are three blue buttons: 'CHANGE PASSWORD', 'RESET', and 'CANCEL'.

CHANGE PASSWORD

Old Password

Your old password

New Password

Your new password

Confirm New Password

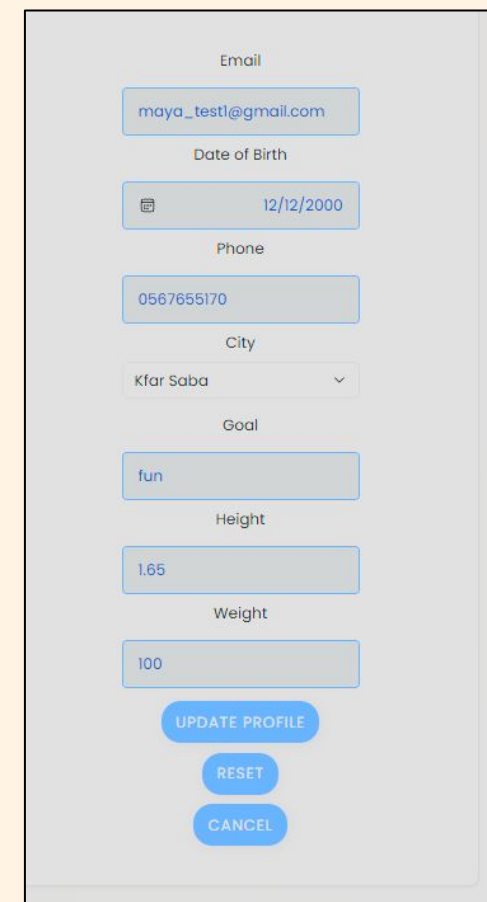
Confirm your new password

CHANGE PASSWORD

RESET

CANCEL

Edit Profile



A form titled 'Edit Profile' with a light gray background and rounded corners. It contains several input fields: 'Email' (placeholder: 'maya_testl@gmail.com'), 'Date of Birth' (placeholder: '12/12/2000'), 'Phone' (placeholder: '0567655170'), 'City' (placeholder: 'Kfar Saba' with a dropdown arrow), 'Goal' (placeholder: 'fun'), 'Height' (placeholder: '1.65'), and 'Weight' (placeholder: '100'). Below the fields are three blue buttons: 'UPDATE PROFILE', 'RESET', and 'CANCEL'.

Email

maya_testl@gmail.com

Date of Birth

12/12/2000

Phone

0567655170

City

Kfar Saba

Goal

fun

Height

1.65

Weight

100

UPDATE PROFILE

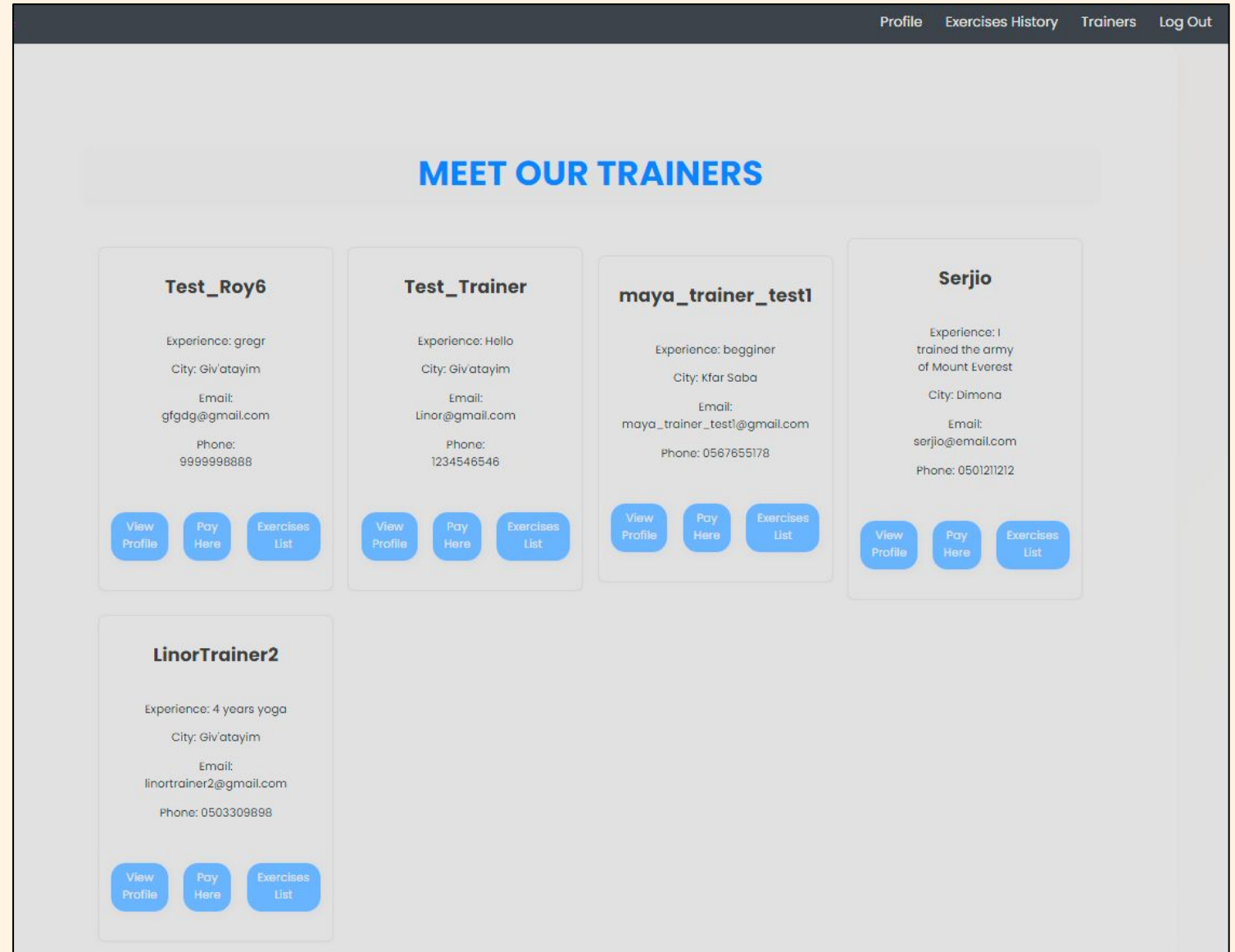
RESET

CANCEL

System Demonstration

Trainers Page

When the trainee clicks on "Trainers" in the top menu, tabs are presented to him, with each tab containing concise information about each trainer.



System Demonstration

Trainers Exercise List Page

Fit & Meet

After selecting trainer tab and clicking on "exercise list", the trainee is presented with a list of all the exercises offered by the trainer and details about them. If he wants to register for training, he must click on "Register".

Profile Exercises History Trainers Log Out				
EXERCISES FOR TRAINER ID: 22				
#	Title	Date	Description	Actions
1	Yoga with linor	2024-04-24	yoga	REGISTER
2	Yoga with linor	2024-04-24	yoga	REGISTER
3	Yoga with linor	2024-04-24	yoga	REGISTER
4	Yoga with linor3	2024-04-24	fhfh	REGISTER
5	Yoga with linorfff	2024-04-24	fhfhngghg	REGISTER

System Demonstration

Fit & Meet

Trainees List Page

A coach who wants to view the profiles of the trainees registered for his exercise, will click on "trainees" in the top menu.

TRAINEES

View all trainees that are registered to your exercises.

Name: Test_Roy2

ID: 1
City: Ashdod
Email: me2@hiyorix.com
Phone: 9999999999

Registered exercises:

Name: Yoga with linor
Date: Wed, 24 Apr 2024 00:00:00 GMT
Description: yoga

Name: Yoga with linorffff
Date: Wed, 24 Apr 2024 00:00:00 GMT
Description: fhfhngghg

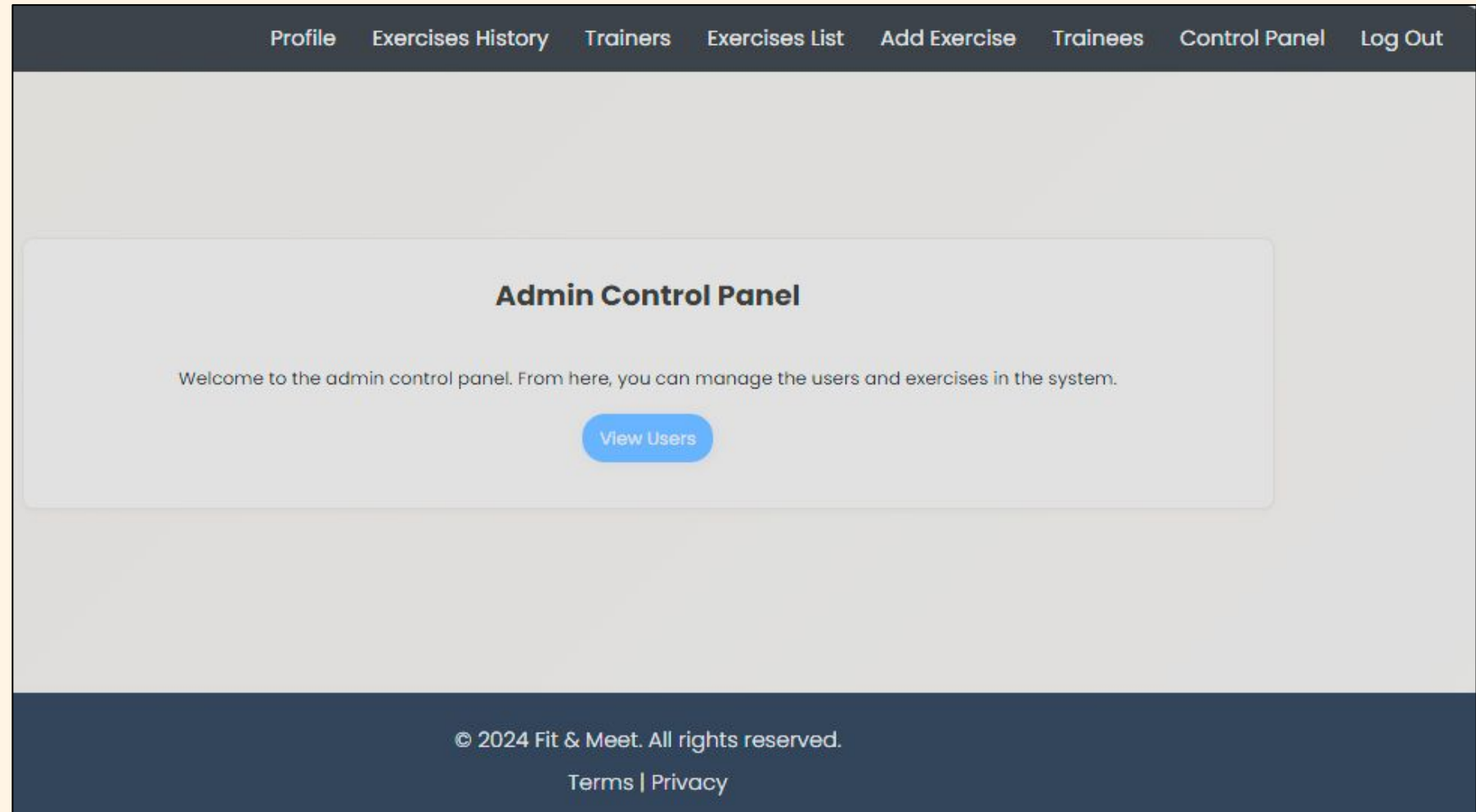
[View Profile](#)

System Demonstration

Admin Control Panel

Fit & Meet

Below is the "Control Panel" page, when an admin user connects to the system and clicks on "Control Panel", the following page will be displayed:



Demonstration

Users List (Admin Panel) Page

After the administrator clicks on "view users", he will be shown a table with the details of all users registered in the system - both trainers and trainees.

USERS LIST (ADMIN PANEL)

[Click on a username to view the details of that user](#)

This control panel is only for debugging purposes.

[View the list of users in the system](#)

ID	USERNAME	EMAIL	PHONE NUMBER	CITY	DATE OF BIRTH	PERMISSION
1	TEST_ROY2	ME2@HYORIX.COM	9999999999	ASHDOD	02 JANUARY 1999	TRAINEE
2	TEST_ROY44	GDGRGRG@GMAIL.COM	5555555555	HOLON	01 JANUARY 1999	TRAINEE
3	TEST_ROY5	N/A	N/A	N/A	N/A	N/A
4	TEST_ROY6	GFGDG@GMAIL.COM	9999990000	GIV'ATAYIM	01 JANUARY 1999	TRAINER
5	TEST_ROY8	BLABLABLA2@GMAIL.COM	4564564666	DIMONA	01 JANUARY 1998	TRAINEE
6	TEST_TRAINER	LINOR@GMAIL.COM	1234546546	GIV'ATAYIM	01 JANUARY 1990	TRAINER
8	LINOR_TEST	LINOR.RONEN@GMAIL.COM	0502609292	MOD'IN-MACCABIM-RE'UT	01 JANUARY 2000	TRAINEE
9	LINOR_TEST1	N/A	N/A	N/A	N/A	N/A
10	MAYAROM	MAYA_ROM@EPAM.COM	0547655170	KFAR SABA	10 DECEMBER 1999	TRAINEE
11	LINOR_TEST3	RONI.RONEN@GMAIL.COM	0503604242	JERUSALEM	01 JANUARY 2000	TRAINEE
12	LINOR_TEST5	N/A	N/A	N/A	N/A	N/A
13	LINOR_TEST55	N/A	N/A	N/A	N/A	N/A
14	LINOR_TEST100	N/A	N/A	N/A	N/A	N/A
15	LINORRONEN	N/A	N/A	N/A	N/A	N/A
16	LINORRONEN200	LINORRONEN@GMAIL.COM	0506932414	GIV'ATAYIM	31 JANUARY 2000	TRAINEE
17	MAYA_TEST1	MAYA_TEST1@GMAIL.COM	0567655170	KFAR SABA	12 DECEMBER 2000	TRAINEE
18	MAYA_TRAINER_TEST1	MAYA_TRAINER_TEST1@GMAIL.COM	0567655178	KFAR SABA	28 FEBRUARY 2001	TRAINER
19	TEST_ADMIN	ISITMYADMIN@ARIELAC.IL	0503254363	ARIEL	01 JANUARY 1999	ADMIN
20	SERJIO	SERJIO@EMAIL.COM	0501211212	DIMONA	01 FEBRUARY 1994	TRAINER
21	TRAINEE1	TRAINEE1@EMAIL.COM	0501234567	ACRE	10 JUNE 1997	TRAINEE
22	LINORTRAINER2	LINORTRAINER2@GMAIL.COM	0503309898	GIV'ATAYIM	30 JUNE 2002	TRAINER
23	TRAINEE2	TRAINEE2@MAIL.COM	0501234567	NESS ZIONA	04 JUNE 2002	TRAINEE

[Back to Admin Panel](#)

Fit & Meet

Gaps and Challenges

Fit & Meet

As with any project, we encountered some challenges and recognized gaps between our original design and the actual implementation:

Gaps

Real-time Progress Tracking Implementation:

One of the core features of our design was real-time tracking of fitness progress for trainees. However, we faced challenges in implementing this feature within the given time frame.

Integration of In-App Messaging:

Initially, we envisioned a comprehensive in-app messaging system to facilitate communication between trainers and trainees. Due to technical constraints and time limitations, this feature has been moved to our future development plans.

Challenges

Complex User Management:

Developing an efficient user management system that adheres to high security and privacy standards proved to be more challenging than anticipated.

Time Constraint:

In line with development best practices, we sought to balance functionality and quality. However, some features took longer to polish, limiting the time available for other components.

Coordinated Development: Balancing tasks among team members while ensuring that development in one area does not unintentionally disrupt work in another area proved challenging.

Conclusion

Despite facing some unanticipated challenges during the development process, we successfully created an efficient, scalable, and user-friendly fitness management application - Fit & Meet.

We were dedicated to overcoming all hurdles and adapting our strategies to align with the project's core objectives. Although some planned features are yet to be implemented, this project allowed us to learn, grow, and improve as a team. The insights we gleaned from the challenges we faced were invaluable and will guide us in future developments. Thank you.

