WELLTRACKR: REVOLUTIONIZING FITNESS AND WELLNESS WITH AN INTEGRATED FULL-STACK WEB APPLICATION

BY

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This Report Presented in Partial Fulfillment of the Requirements for the Degree of Bachelor of Science in Computer Science and Engineering

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APPROVAL

This Project titled "**WellTrackr: Revolutionizing Fitness and Wellness with an Integrated Full-Stack Web Application**", submitted by Md.Tasin Alam, ID No: 201-15-14305 to the Department of Computer Science and Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 26.01.2024.

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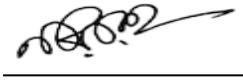

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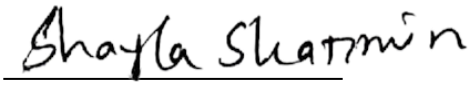

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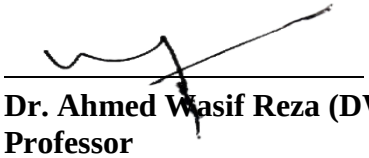

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I hereby declare that, this project has been done by us under the supervision of **Ms. Umme Ayman**, Lecturer, Department of CSE Daffodil International University. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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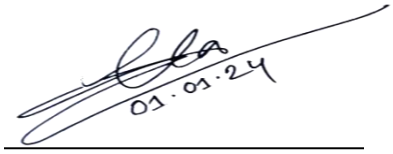

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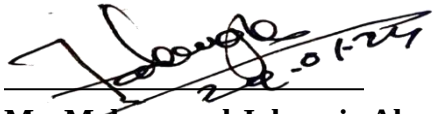

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I am grateful and wish my profound indebtedness to **Ms. Umme Ayman**, **Lecturer**, Department of CSE Daffodil International University, Dhaka. Deep Knowledge & keen interest of my supervisor in the **"Website Design and Development"** field to carry out this project. Her endless patience, scholarly guidance, continual encouragement, constant and energetic supervision, constructive criticism, valuable advice, reading many inferior drafts and correcting them at all stages have made it possible to complete this project. I want to express our heartiest gratitude to **Ms. Umme Ayman**, **Mr. Mohammad Jahangir Alam**, and the Head Department of CSE for his kind help in finishing my project and also to other faculty members and the staff of CSE department of Daffodil International University.

I want to thank my Daffodil International University course mates, who participated in this discussion while completing the coursework. Finally, I must acknowledge with due respect the constant support and patience of my parents.

ABSTRACT

WellTrackr is a modern health and wellness tracker project that provides a complete and innovative solution to address the changing needs of the health and wellness sector. WellTrackr was conceived and created as a personal project, showcasing my skills as a proficient full-stack developer. WellTrackr strives to offer a comprehensive platform that effortlessly combines user-friendly interfaces, data-driven insights, and interactive community elements to empower individuals in their pursuit of health and wellness, in a time where health and wellness are of utmost importance. The main characteristics consist of an engaging homepage with interactive banner sections, extensive galleries, a thorough list of health and wellness coaches, and the ability to schedule classes, a lively community forum, and a customized dashboard that caters to various user roles. WellTrackr incorporates sophisticated login and registration processes to guarantee user involvement and satisfaction, seamlessly integrating social login alternatives. JWT token authorization is used to safeguard private routes, ensuring secure access to sensitive portions of the platform. In addition, WellTrackr integrates an advanced payment system using SSLCommerz, enabling customers to effortlessly access premium features and advantages. The project is carefully organized to provide a design that adapts to the needs of consumers on different devices. WellTrackr is an innovative and aesthetically pleasing health and wellness tracking platform that not only transforms the way people monitor their health and wellness advancements but also promotes a feeling of community and involvement. This project report explores the technological complexities, design decisions, and functionality of WellTrackr, demonstrating the dedication to achieving high standards in every phase of its development.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

CHAPTER 1

INTRODUCTION

1.1 Introduction

The health and wellness and wellness business has experienced a digital revolution in recent years, as there has been an increasing need for efficient health and wellness tracking systems. The WellTrackr project is an innovative health and wellness tracker that aims to meet the changing requirements of health-conscious persons in the modern digital age. WellTrackr is the result of the collaboration between a skilled solo full-stack developer and combines advanced technical innovation with outstanding design in the realm of exercise and wellbeing. This research explores the complexities of WellTrackr, highlighting its distinctive attributes, design concepts, and operational capabilities. Notable features consist of a dynamic site with prominent sections for banners, rich collections of images, a wide range of health and wellness trainers, the ability to schedule classes, an active community forum, and personalized dashboards. The login and registration systems are strong and reliable, offering many choices such as social login and JWT token authentication to enhance user involvement and safeguard their security. Additionally, WellTrackr integrates a sophisticated SSL e-commerz payment system, providing effortless access to high-quality features. The careful and precise design guarantees a user-focused experience on different devices. WellTrackr is not just a basic health and wellness tracker, but rather a holistic health and wellness companion that revolutionizes the way health and wellness progress is monitored and encourages active participation in the community. Every element of its growth demonstrates a steadfast dedication to achieving the highest standards.

1.2 Motivation

The development of WellTrackr began in a strong drive to take on the transformative changes emerging in the health and wellness and wellness sector. In recent years, there has been an important move towards using digital solutions to achieve health and health and wellness goals. This wave of change emphasizes the need for creative platforms that can not only easily adjust to these changing circumstances but also provide a complete and up-to-date health and wellness experience to individuals.

WellTrackr is motivated by a steadfast dedication to technology and an unshakable desire to inspire individuals on their own unique health and wellness paths. The primary goal of the project is to connect traditional health and wellness tracking with the digital era, giving a platform that not only accurately monitors progress but also creates an active feeling of community and participation. Moreover, WellTrackr is driven by its strong desire to challenge the existing design norms and elevate the standards for health and wellness tracking. The platform aims to provide users with a visually appealing and user-focused platform that goes beyond traditional boundaries, making health and wellness accessible and enjoyable for a wide range of individuals.

WellTrackr is guided by a deep awareness of the changing health and wellness industry and a strong dedication to using technology to transform how people pursue and accomplish their health and wellness goals. This statement highlights the idea that in the modern era, the pursuit of health and wellness is seen as a shared endeavor rather than an individual one, emphasizing the importance of overall health and energy.

1.3 Objectives

Empowering health and wellness enthusiasts with limitless possibilities for comprehensive tracking and addressing diverse wellness challenges.

1. Create a health and wellness tracker platform that prioritizes the needs of users in the health and wellness and wellness industry by seamlessly incorporating advanced technology and design.

2. Design an engaging, user-friendly interface to boost health and wellness tracking involvement.

3. Develop and integrate secure login and registration systems, incorporating social login capabilities, to enhance user convenience and safeguard user data.

4. Employ JWT token authorization to protect secret routes and sensitive user data, ensuring that only authorized users have secure access.

5. Create a robust database to hold user information, health and wellness progress statistics, and community interactions, enabling personalized experiences and insights based on data analysis.

6. Create interactive banner sections, image galleries, and class scheduling functionalities to offer consumers a comprehensive health and wellness monitoring experience.

7. Foster active health and wellness community, enabling users to share experiences and insights.

8. Empower trainers to oversee their schedules, engage with members, and incorporate new sessions into the platform, fostering efficient health and wellness instruction and involvement.

9. Deploy a sophisticated SSLCommerz payment system to enable effortless access to exclusive services and advantages for consumers.

1.4 Expected Outcomes

The planned benefits of the WellTrackr project comprise a diverse strategy to better the health and wellness and wellness experience for consumers. WellTrackr's primary objective is to provide a user-centric platform that prioritizes the individual's requirements and preferences. This involves the development of a captivating and aesthetically pleasing design that not only grabs users' attention but also motivates them to actively participate in tracking their health and wellness progress and participating with the community.

Moreover, the platform is anticipated to offer quick accessibility via simplified login and registration procedures, including the choice for social login, guaranteeing a seamless entry for users. WellTrackr prioritizes data security and privacy by utilizing JWT token authorization, ensuring a highly secure environment for safeguarding sensitive user information. Users may expect to obtain significant, data-driven insights into their health and wellness status, enabling them to better establish and accomplish their wellness objectives. The project's dedication to fostering community development is apparent through the establishment of a dynamic health and wellness community via a specialized forum, which encourages user engagement, the exchange of knowledge, and a feeling of inclusion.

The inclusion of efficient trainer management tools will empower health and wellness coaches to optimally arrange sessions, engage with members, and incorporate classes, consequently augmenting their coaching proficiency and fortifying trainer-trainee connections. Effortless integration of an SSLCommerz payment system guarantees convenient access to high-quality features, enhancing the value of customers' health and wellness experience. WellTrackr's dedication to cross-device interoperability guarantees that customers may have a uniform and user-friendly experience on different platforms, such as PCs, tablets, and mobile devices. To summarize, the WellTrackr project aims to develop a comprehensive health and wellness tracking platform that not only empowers individuals in their pursuit of wellness but also makes a beneficial impact on the growing health and wellness and wellness industry.

1.4.1 Maintain The Website

Implement a system of ongoing surveillance, frequent software enhancements, and prompt assistance to resolve user inquiries and technical problems, guaranteeing a smooth and protected user encounter on WellTrackr.

1.5 Project Management and Finance

Here, I have divided the dashboard into three parts.

1. Admin Dashboard (Only admin can access)

2. Trainer Dashboard (Only admin-verified trainer can access)

3. User Dashboard (All users can access if they signed in this site)

1.6 Report Layout

The report layout describes a summary of all the chapters. A summary of all chapters is given:

Chapter 1: Introduction

An overview of WellTrackr is given in Chapter 1, together with information on its purpose, objectives, feasibility study, anticipated results, and report format.

Chapter 2: In this chapter, the background of the invention is elucidated, including its associated responsibilities and constraints.

Chapter 3: This chapter encompasses the Requirement Specification, featuring three key figures: a Business Process Model, a Use Case Diagram, and a Logical Data Model diagram. Each of these figures will be thoroughly elucidated and explained in detail.

Chapter 4: In this chapter, the Design Specification is presented, which includes design-specific illustrations and a detailed explanation of the website's design.

Chapter 5: In the Implementation and Testing chapter, we delve into the finalization of aesthetics and the seamless integration of technologies employed in website development. The successful validation of this integration is rigorously tested and confirmed during the testing phase.

Chapter 6: The chapter on Impact on Society, Environment, and Sustainability delves into the societal reception, efficacy, and long-term sustainability strategy of the design, while also considering any societal concerns or rejections.

Chapter 7: In the Conclusion and Future Scope chapter, we delve into forthcoming developments and wrap up the project's finalization process.

CHAPTER 2
BACKGROUND

2.1 Terminologies

Since the beginning of the project, our goal has been to develop a highly organized web platform specifically designed for health and wellness monitoring. This platform will cater to both health and wellness enthusiasts and professional trainers in the health and wellness industry. The software streamlines the frequently arduous process of finding appropriate workout regimens and monitoring progress, providing users with an intuitive interface. Ensuring data privacy and security is of utmost importance, and rigorous steps have been implemented to guarantee these elements. Moreover, advanced and reliable online payment mechanisms have been incorporated, providing consumers with convenient access to premium features. This project also provides a chance to promote health and wellness entrepreneurship and improve the general well-being of individuals on their health and wellness journeys.

2.2 Related works

In the context of health and wellness tracking platforms, we conducted a comprehensive analysis of existing solutions. Here are our findings:

1. Existing health and wellness tracking platforms often lack comprehensive and dynamic features.

2. User interfaces on most platforms are not intuitive, with limited functionalities such as login, logout, and user dashboards.

3. Information about health and wellness classes, schedules, and trainer details is often incomplete or unavailable.

4. Many platforms do not provide detailed health and wellness class pricing or location information.

5. The booking systems on these platforms are frequently not user-friendly, leading to a less-than-optimal user experience.

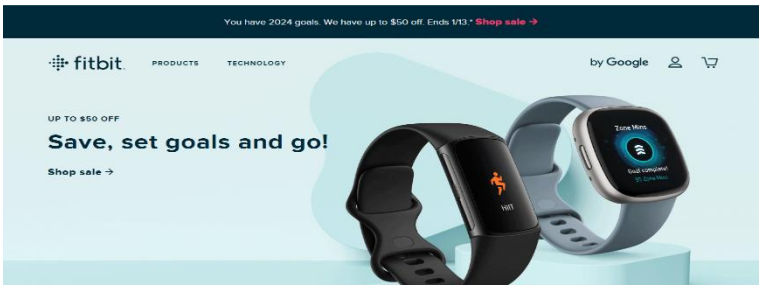
6. A majority of health and wellness tracking websites lack integrated online payment systems, hindering convenience for users.

While exploring related works, we also considered popular health and wellness websites such as https://www.fitbit.com/, https://www.myhealth and wellnesspal.com/, and https://www.strava.com/ .However, these platforms primarily focus on wearable devices and individual health and wellness tracking, rather than the comprehensive health and wellness tracking and community engagement offered by our project.

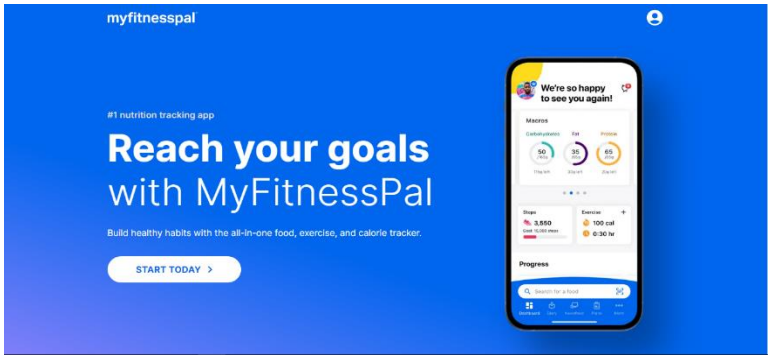
In Bangladesh, there is a clear opportunity for a more dynamic and user-centric health and wellness tracking platform. Our project aims to address these limitations by providing a dynamic, user-friendly interface with detailed information on health and wellness classes, trainers, and schedules. Additionally, we have implemented a secure online payment system to enhance user convenience and satisfaction, setting our health and wellness tracking platform apart from existing solutions in the industry.

2.3 Comparative Studies

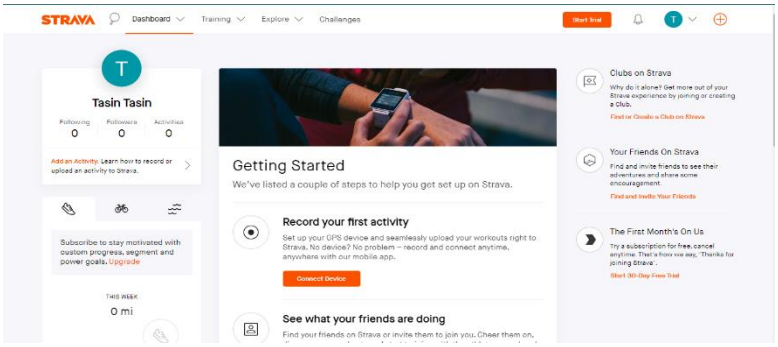
In order to assess the distinctiveness and efficacy of our health and wellness tracker platform, we performed a comparative analysis with many established health and wellness monitoring solutions. This analysis enables us to emphasize the unique characteristics and benefits of our project:



Fitbit [17] is a renowned brand that specializes in wearable devices for tracking health and wellness. Although it does exceptionally well in tracking individual health and wellness, it does not provide the extensive community and class scheduling tools available on our platform.



My Health and wellness Pal [18] is a popular health and wellness application that is frequently utilized to monitor and record nutritional intake and exercise routines. Nevertheless, it mainly serves individual users and lacks the extensive community involvement and trainer interactions offered by our project.



Strava [19] is renowned for its ability to track cycling and running activities, but it does not offer a wide variety of health and wellness programs or scheduling options like our site does.

Current local health and wellness platforms in Bangladesh face constraints including inadequate information, absence of user-friendly booking systems, and a lack of integrated online payment methods. Our platform overcomes these limitations by offering a dynamic, data-intensive, and secure health and wellness tracking experience.

Our comparative analysis shows that there exist health and wellness tracking systems that focus on individuals. However, our project is unique since it provides a comprehensive platform that serves both health and wellness amateurs and professional trainers. Our health and wellness tracker distinguishes itself in the health and wellness tracking industry by offering comprehensive features such as in-depth class information, thorough trainer profiles, and safe online payment options. This ensures a well-rounded health and wellness experience that surpasses mere individual tracking.

2.4 Scope of the Problem

Health and wellness Industry Gap Solution

1. Existing health and wellness tracking platforms mainly focus on individual tracking.

2. Lack features for class scheduling, trainer engagement, and community interaction.

3. Incomplete class information, user-unfriendly booking systems, and lack of integrated online payment options.

4. Project aims to provide dynamic, user-friendly health and wellness tracking platform.

5. User interface should be captivating and aesthetically pleasing.

2.5 Challenges

Successfully overcoming numerous key obstacles was a crucial aspect of establishing a comprehensive health and fitness tracker. The following items were included:

1. Data Integration: The project necessitated the careful amalgamation of many data sources, including class details, trainer profiles, and user information. This step was crucial in establishing a unified and streamlined system.

2. Security: The primary emphasis was on creating strong security procedures to protect user data and financial activities. This entailed guaranteeing the confidentiality of data and implementing robust encryption techniques.

3. User Experience: It was crucial to create a user interface that was easy to understand and navigate. The objective was to create a platform that is easily accessible and attractive to both individuals interested in wellness and fitness coaches, which required a thorough comprehension of user experience principles.

4. Community Engagement: In order to foster a lively community on the platform, we established efficient lines of contact. The objective was to improve user interaction and engagement on the site.

5. Payment Integration: The integration of a robust and reliable online payment system was of utmost importance. The process required thorough testing and strict compliance with tough payment standards to guarantee user confidence and system dependability.

6. Platform Scalability: Ensuring the capacity to handle increased user traffic and accommodate future growth was of utmost importance. Achieving consistent performance and dependability while scaling the platform was a primary technological objective.

7. Competition: The strategic challenge was to distinguish the platform in the competitive market for health and wellness tracking. This was resolved by implementing novel characteristics and generating a distinctive value proposition.

In summary, these obstacles were overcome with skill and commitment, resulting in the triumphant creation of a health and wellness monitoring system that efficiently serves the requirements of both health enthusiasts and professional trainers. This achievement displays a resolute dedication to excellence and user contentment in a rapidly changing market.

CHAPTER 3

REQUIREMENT SPECIFICATION

3.1 Business Process Modeling

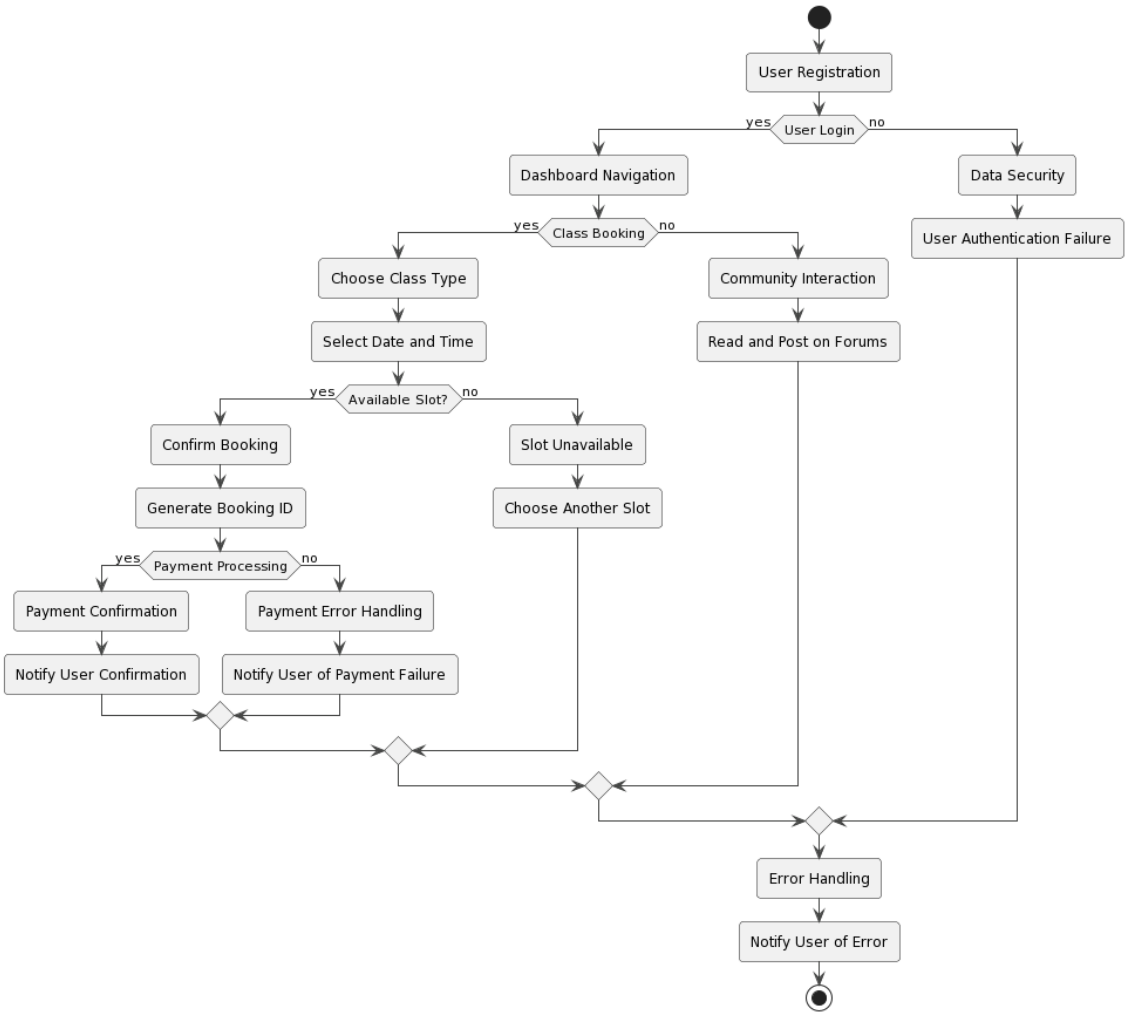


Figure 3.1: Business Process Model Diagram

3.2 Requirement Collection and Analysis

In my web application, various collections and essential functionalities such as admin login, user login, registration, and more are integral components. In the table below, I have provided descriptions of some of these key aspects.

Serial no	Requirement Name	Analysis
01	User Registration	Users can freely access the website, but to utilize the services and access detailed health and wellness information, they must complete a registration process. Upon registration, users will gain full access to all features and resources available on the platform.
02	User Login	Following the registration phase, users will need to log in to the site using their email address and password.
03	Classes	Only certified health and wellness trainers have the authority to add health and wellness classes, but administrative approval is required for both the trainer and the class before they become visible on the website. Once approved by the admin, the class will be displayed on the website.
04	Payment System	If a user identifies their preferred health and wellness class, they have the option to either add it and make a payment or proceed with direct payment from the class details page in the health and wellness tracker project.
05	Admin Login	To address and manage all security-related concerns, administrators are required to log in and maintain the dashboard in the health and wellness tracker project.

Table 3.2: Requirement and analysis

3.3 Use Case Modeling and Description

This use case diagram illustrates the interactions and relationships between users, trainers, and administrators within the health and wellness tracker project. It showcases the perspectives, accessible tools, and attributes associated with each of these entities. Additionally, it highlights the connections between trainers and administrators, as well as their shared access to specific tools and attributes.

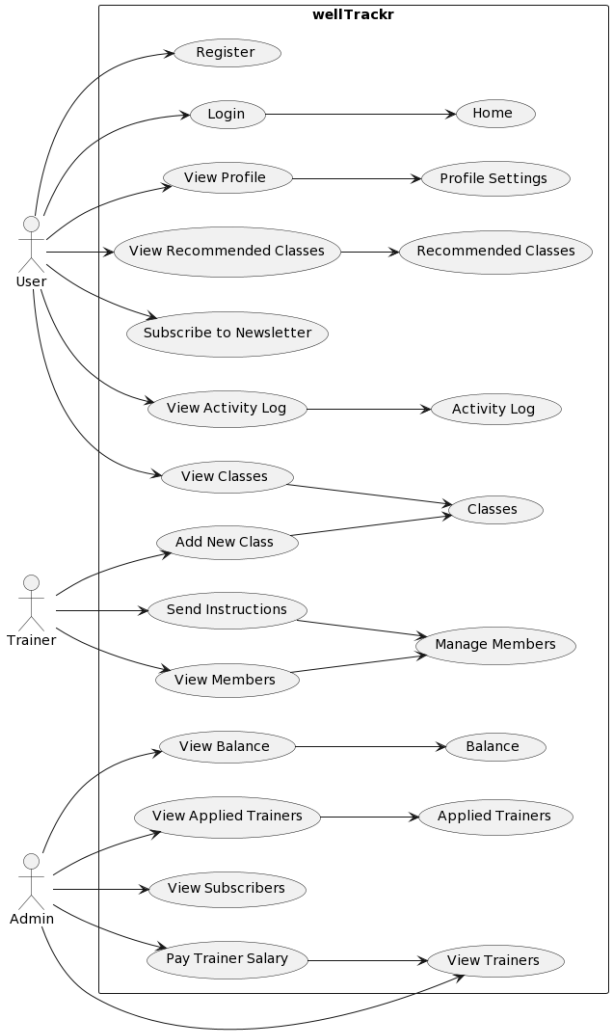


Figure 3.3: Use Case Diagram

3.4 Logical Data Model:

The Logical Data Model (LDM) plays a pivotal role in our health and wellness tracker project. It offers a visual representation of data elements and their interconnections within the system. Through the LDM, users gain a deeper understanding of how data is organized and accessed, enhancing their ability to find relevant information efficiently. Moreover, the LDM serves as a blueprint for our development team, aiding them in comprehending data structures and making necessary adjustments.

Entities and Attributes:

In the context of our health and wellness tracker project, the Logical Data Model outlines the core entities, their attributes, and the relationships that define the system's data structure. The LDM ensures the efficient operation and reliability of our health and wellness tracking platform.

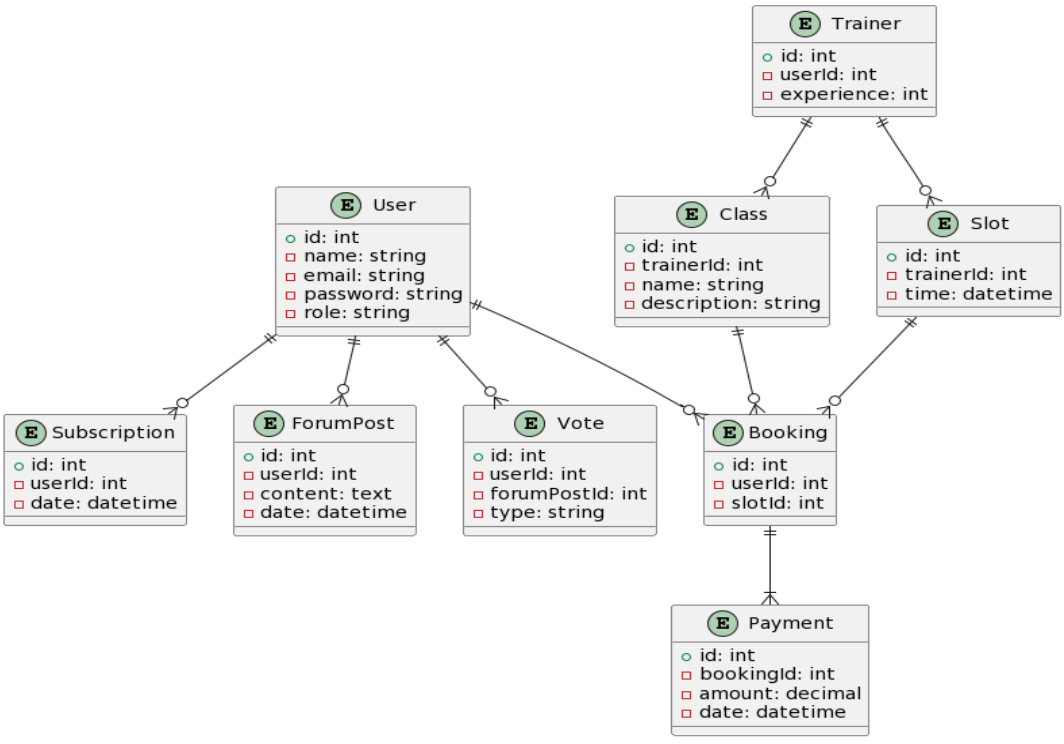


Figure 3.4: Logical Data Model Diagram

3.5 Design Requirement

In my health and wellness tracker project, I have developed a dynamic website that comprises two essential sections: the Client side (Frontend) and the Server side (Backend), as detailed in Chapter 4. To create an interactive and user-friendly interface on the frontend, I utilized React.js, a powerful JavaScript library known for its component-based architecture, promoting modularity and code reusability. Here are the key technologies and tools I employed for the frontend and backend development:

1. React.js: The frontend of the application is built using React.js, a versatile JavaScript library renowned for its component-based approach, enhancing code modularity and reusability.

2. Tailwind CSS: For styling and design, I adopted Tailwind CSS, a utility-first CSS framework that offers extensive styling capabilities while maintaining a highly maintainable codebase.

3. DaisyUI: Enhancing Tailwind CSS, DaisyUI is an extension that provides a wide array of utility classes and components, granting greater flexibility and control over the visual aspects of the health and wellness tracker website.

4. Preline: To ensure clean and consistent code formatting, I integrated Preline, a valuable tool that aids in code maintenance and readability.

5. Express.js: On the server side, I implemented Express.js, a robust web application framework designed for Node.js. Express simplifies the development of scalable backend APIs, handling routing, middleware, and essential functionalities seamlessly.

6. MongoDB: As the chosen database server, I opted for MongoDB, a NoSQL database that stores data in a flexible, JSON-like format. MongoDB is exceptionally well-suited for dynamic and scalable applications, offering high performance and seamless integration with Node.js.

Additionally, I also utilized DaisyUI and MambaUI to enhance the overall functionality and aesthetics of the health and wellness tracker project. These technologies collectively contribute to creating a responsive, user-centric, and feature-rich health and wellness tracking platform.

CHAPTER 4

DESIGN SPECIFICATION

4.1 Front-end Design

The health and wellness tracker website features eight homepage pages, requiring registration for users to access features like inquiries, reviews, and payments. The frontend uses ReactJS, TailwindCSS, DaisyUI, and Preline, with administrators managing user roles, reviews, data, and account verifications. Registered users can access health and wellness content, buy premium features, and schedule personalized training sessions with trainers. Administrators can also manage the system, allowing trainers and health and wellness experts to offer their expertise and organize sessions. The website also includes social media links to Facebook, YouTube, and Twitter to increase user involvement and facilitate community interaction. This design aims to foster community and encourage website exploration.

4.1.1 User Interface

The health and wellness tracker website's homepage features a navigation bar and dynamic banner section with health tips, slogans, and images to engage visitors and set the platform's tone.

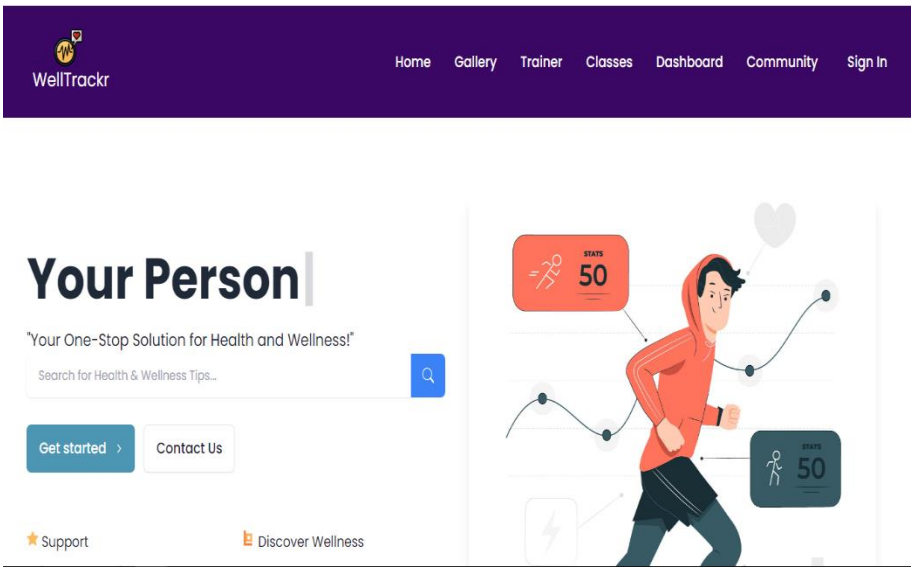


Fig.4.1 Home page (Navbar, Banner)

Now, the other section is known as Featured Activities. Users can see some featured activities here with cards.

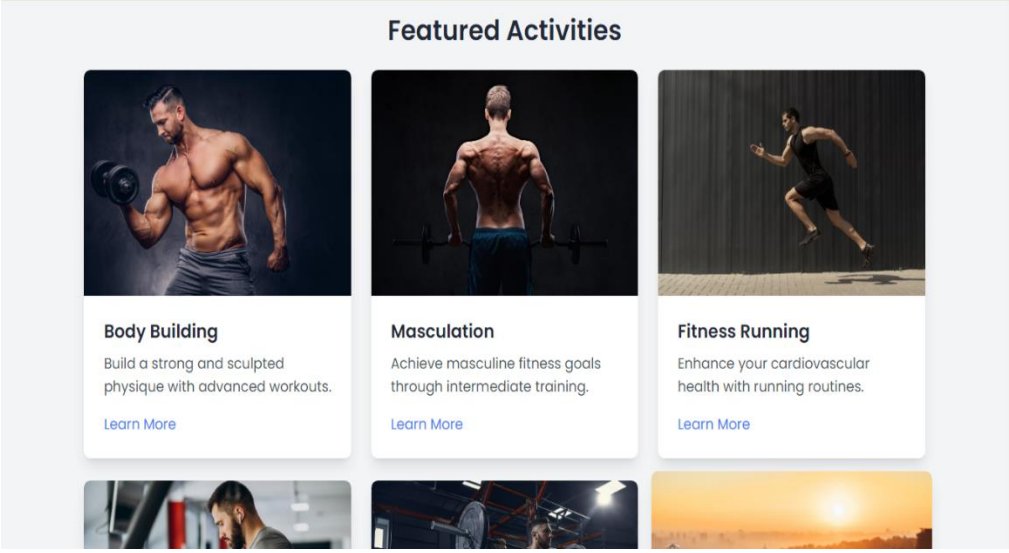


Fig.4.2 Home page (Featured Activities)

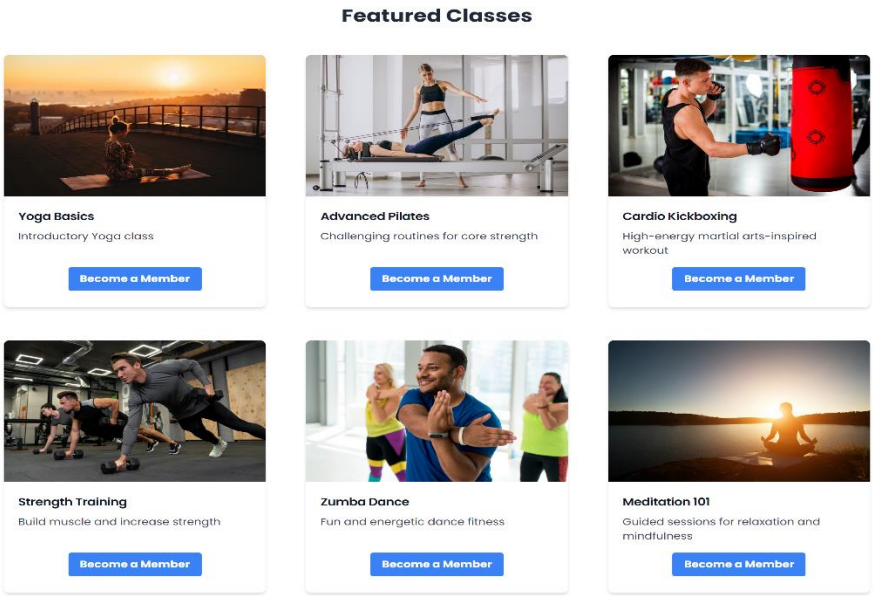


Fig.4.3 Home page (Featured Classes)

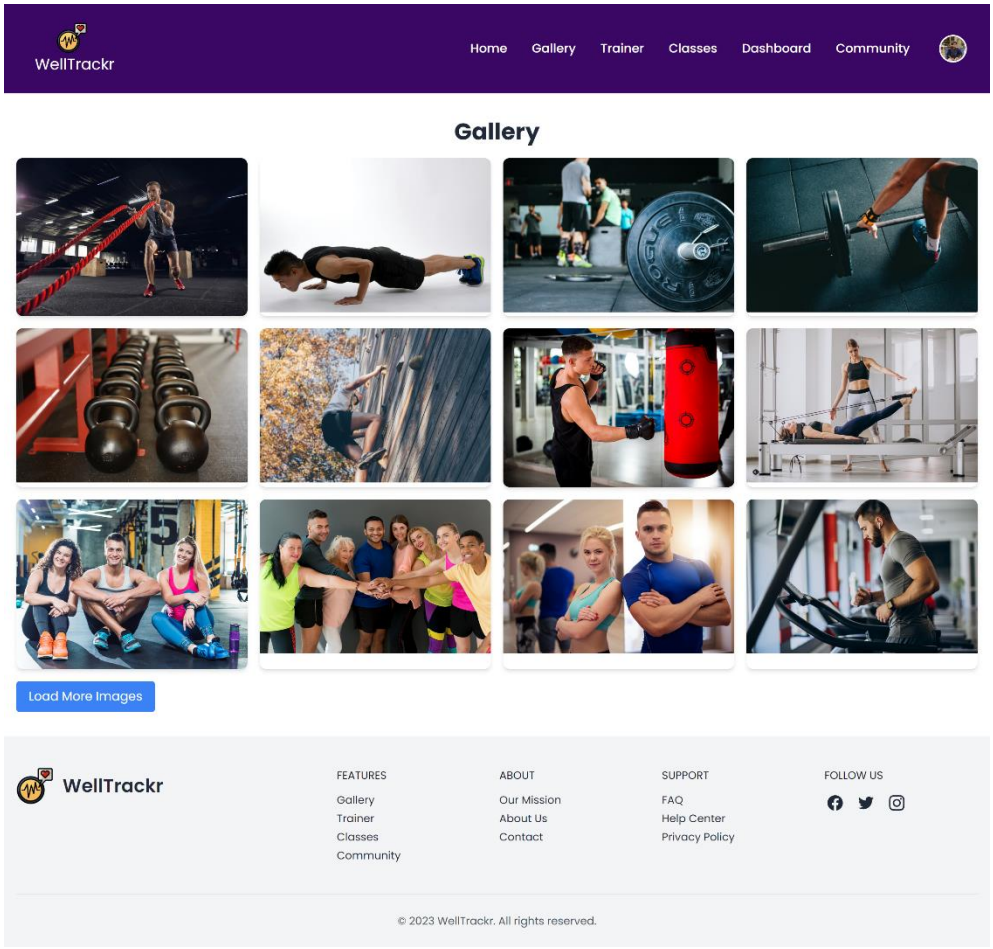


Fig. 4.4 Gallery page

In the gallery page, Users can explore a diverse range of health and wellness-related images, offering inspiration and motivation for their health and wellness goals

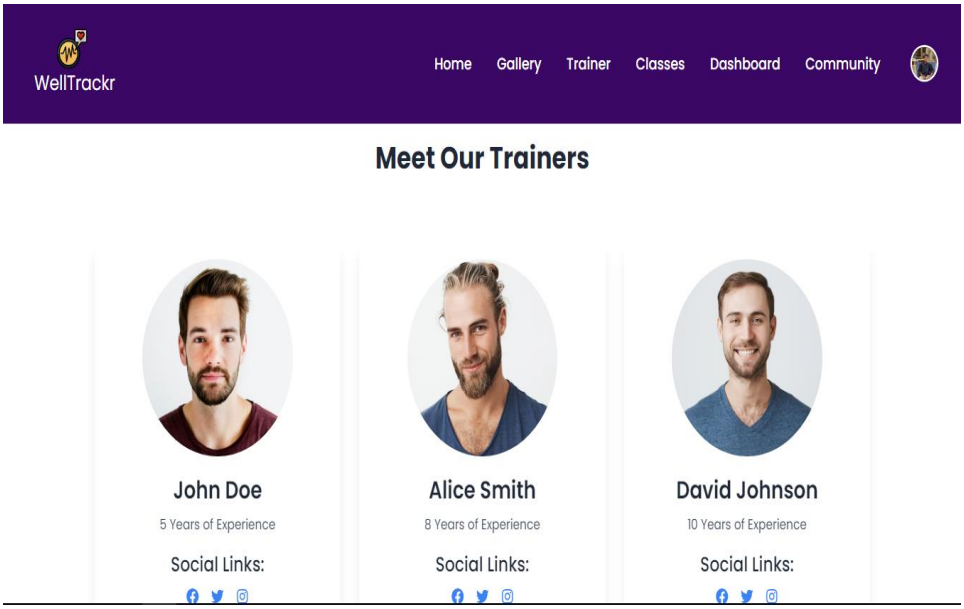


Fig. 4.5 Trainers page (Trainer page)

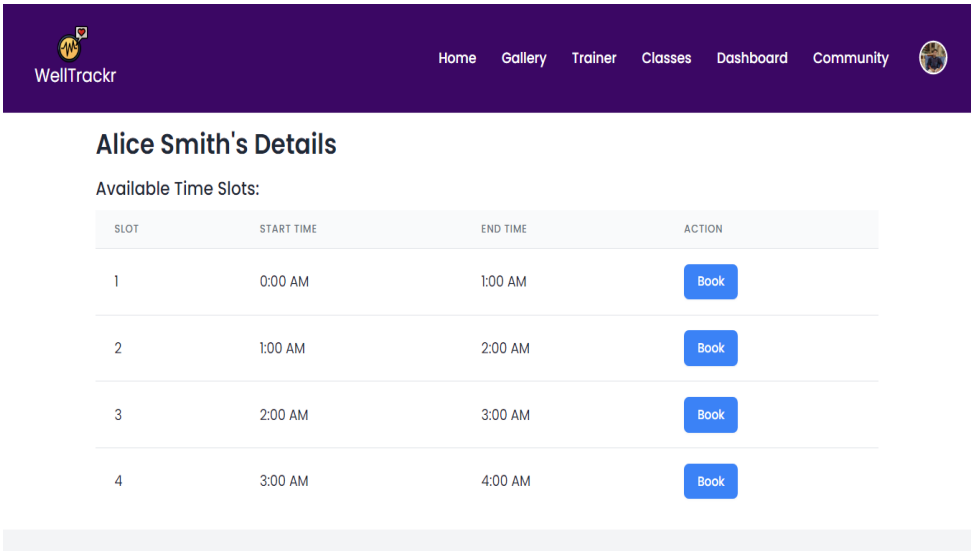


Fig. 4.6 Trainers page (Trainer slot page)

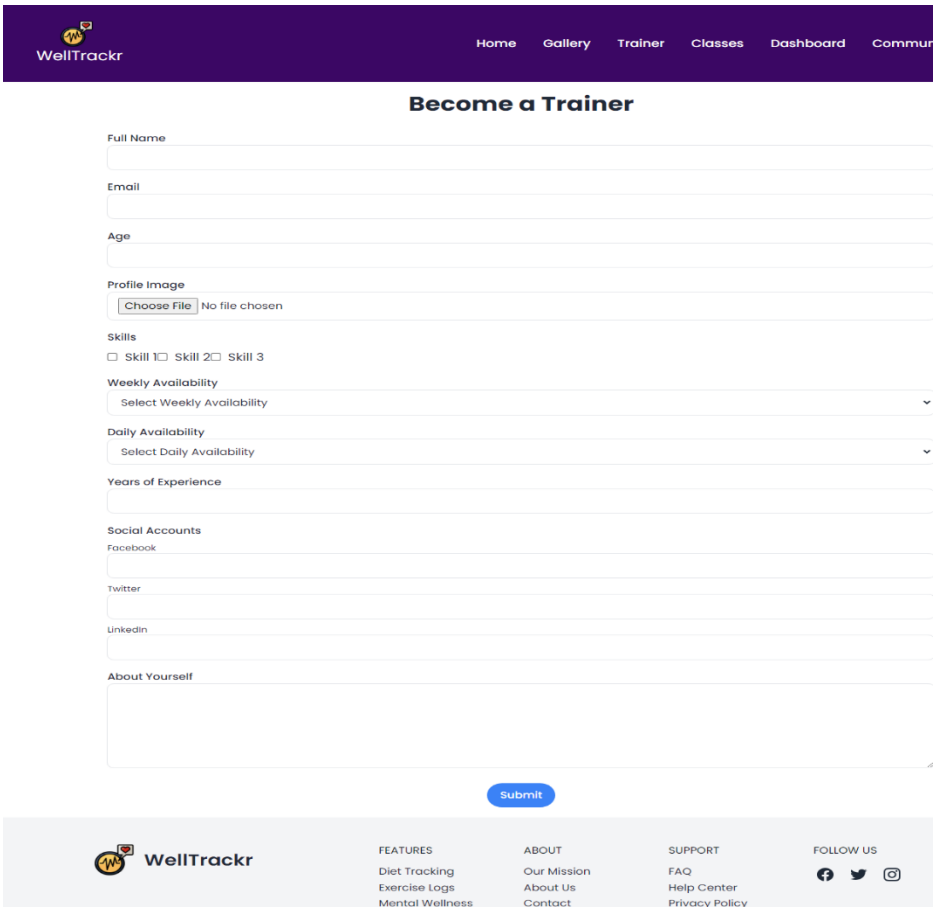


Fig. 4.7 Trainers page (Become a trainer page)

In the trainer page our health and wellness tracker project connects users with certified health and wellness professionals, offering guidance, workouts, and personalized health and wellness plans. It features a comprehensive directory, search and filter functionality, interactive profiles, booking options, user reviews, and a health and wellness blog. It empowers individuals to achieve health and wellness goals and enhance overall wellness. Mobile banking like BKash, Nagad, Upay, DBBL, etc. The user interface of the payment sections is below:

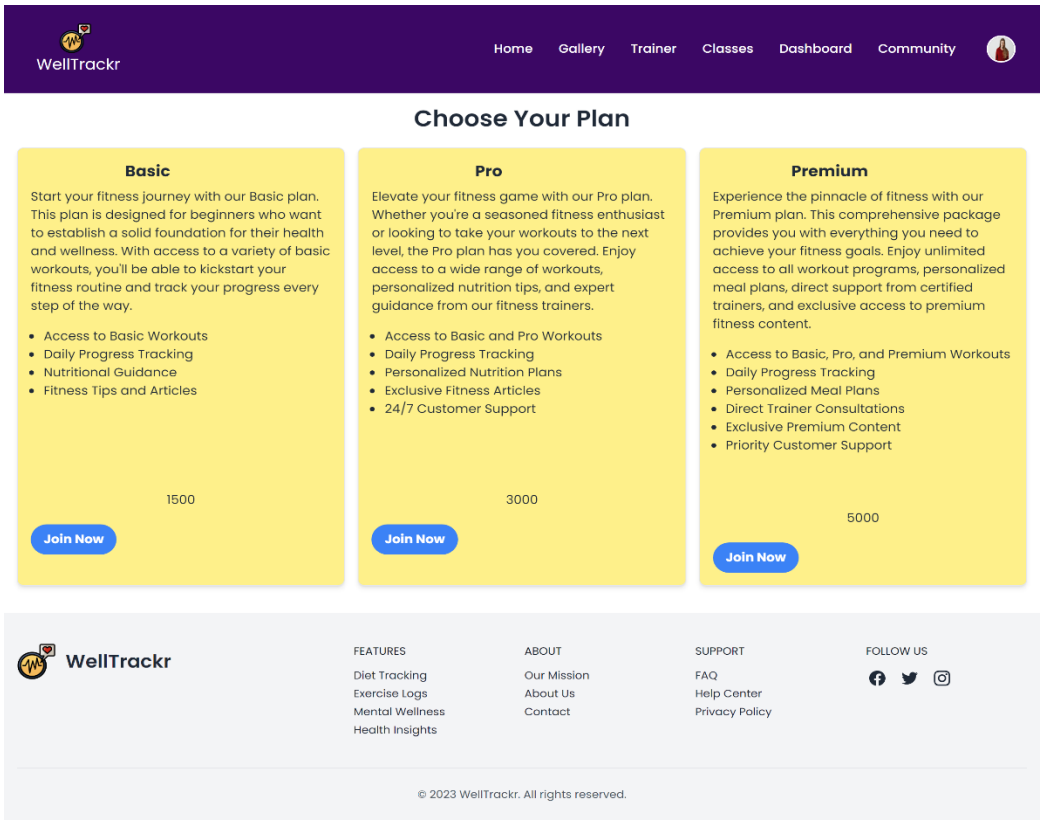


Fig. 4.8 Subscription page (Plans and Join Now payment button)

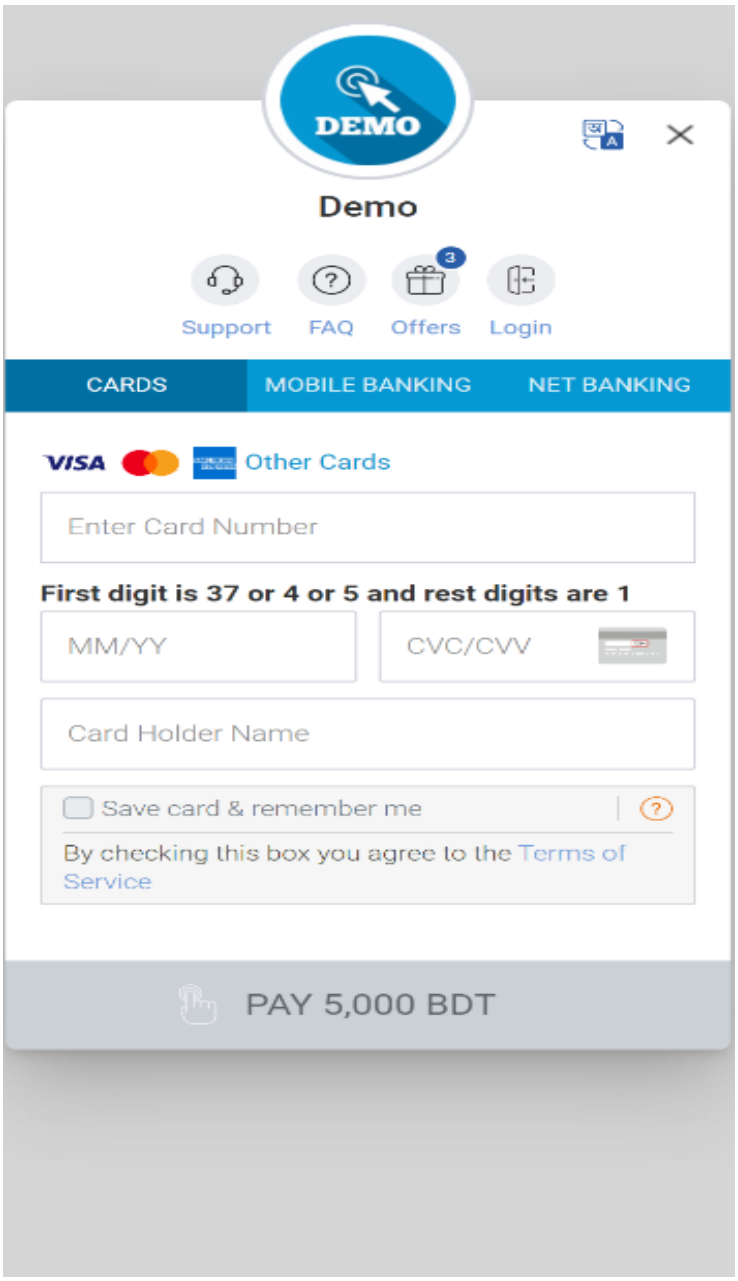


Fig. 4.9 Payment page (Cards payment option)

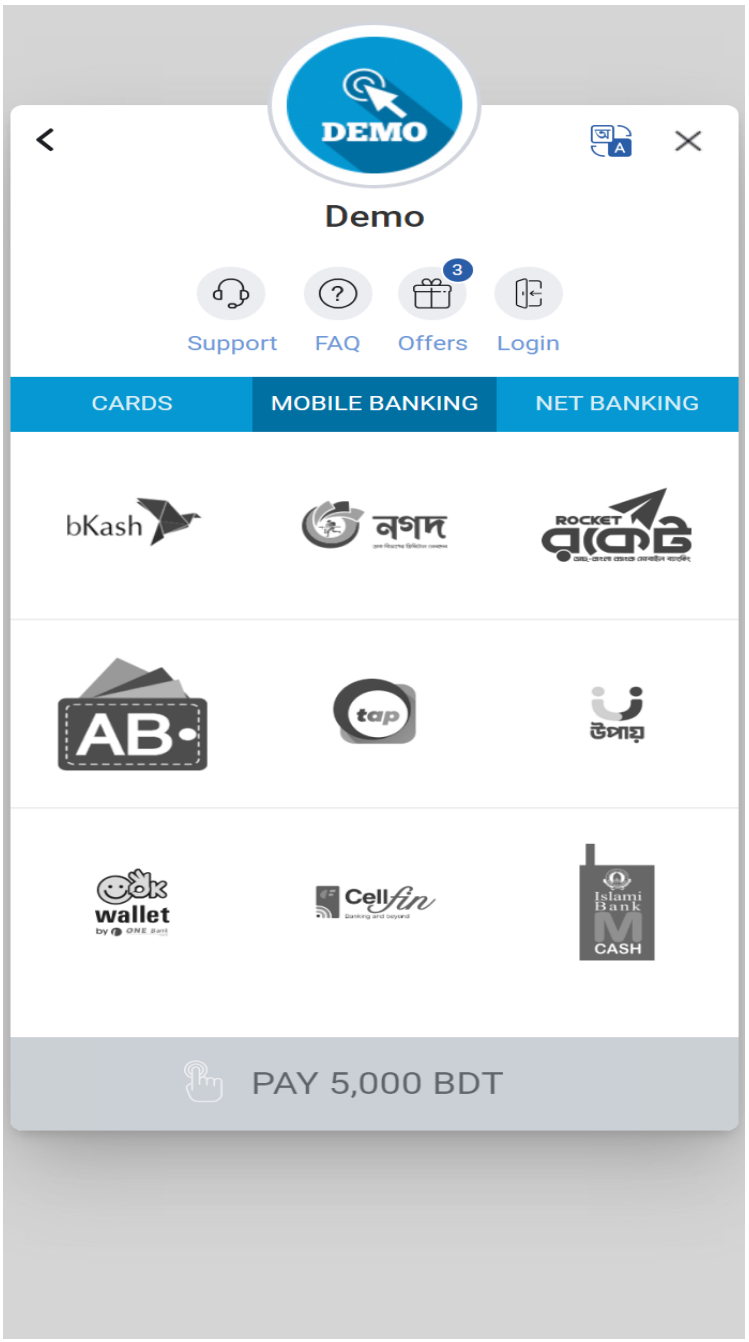


Fig. 4.10 Payment page (Mobile Banking payment option)

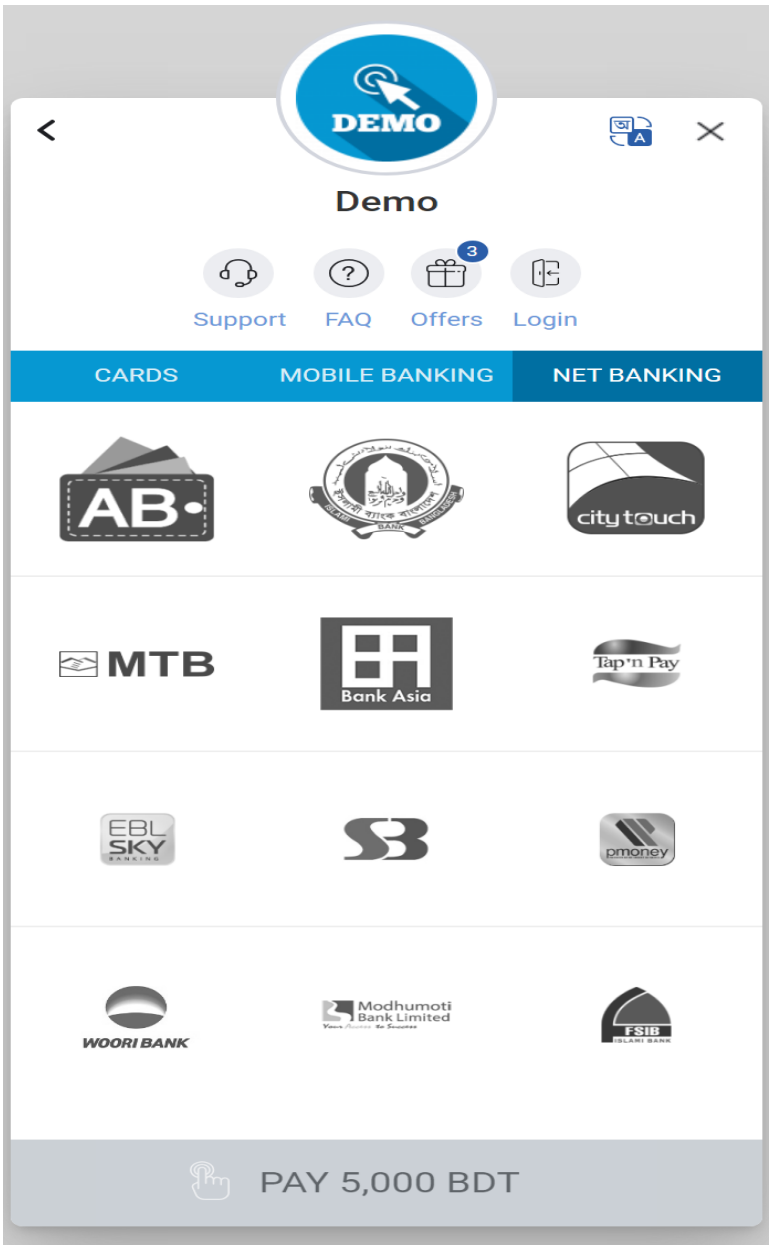


Fig. 4.11 Payment page (Net Banking payment option)

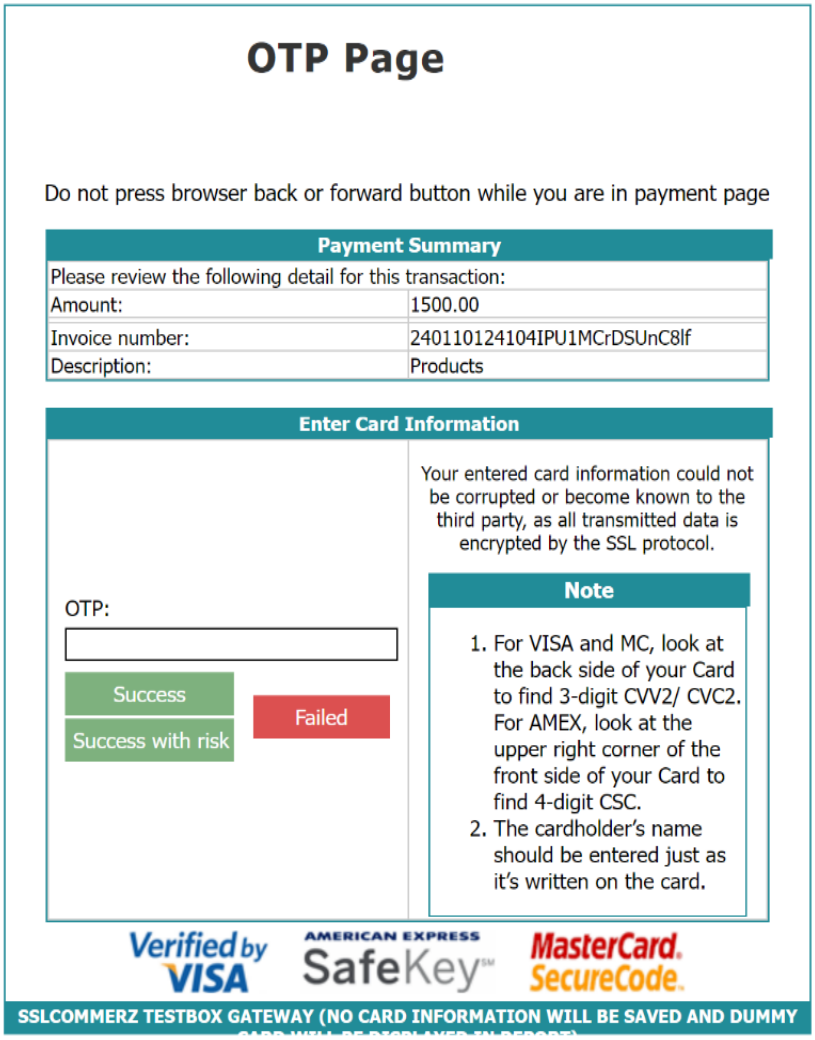


Fig. 4.12 Payment page (Payment can be success/cancel/failed)

If payment is completed, then a successful interface will be shown; otherwise, a failed interface will be shown. The figures are below:

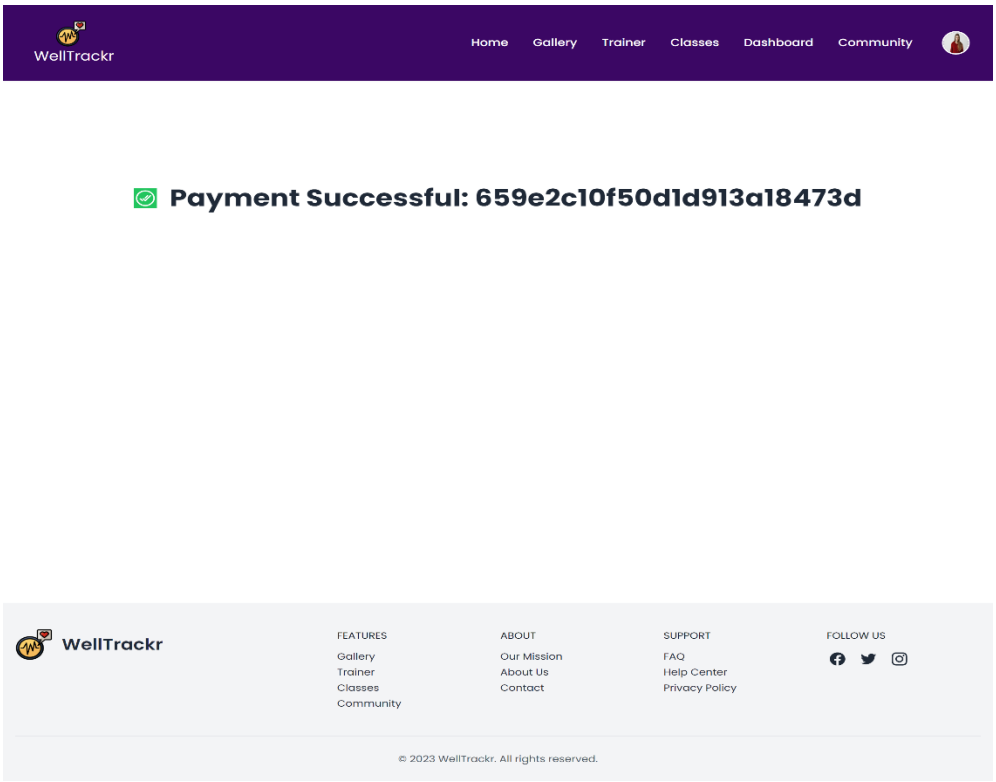


Fig. 4.13 Payment page (Payment Successful)

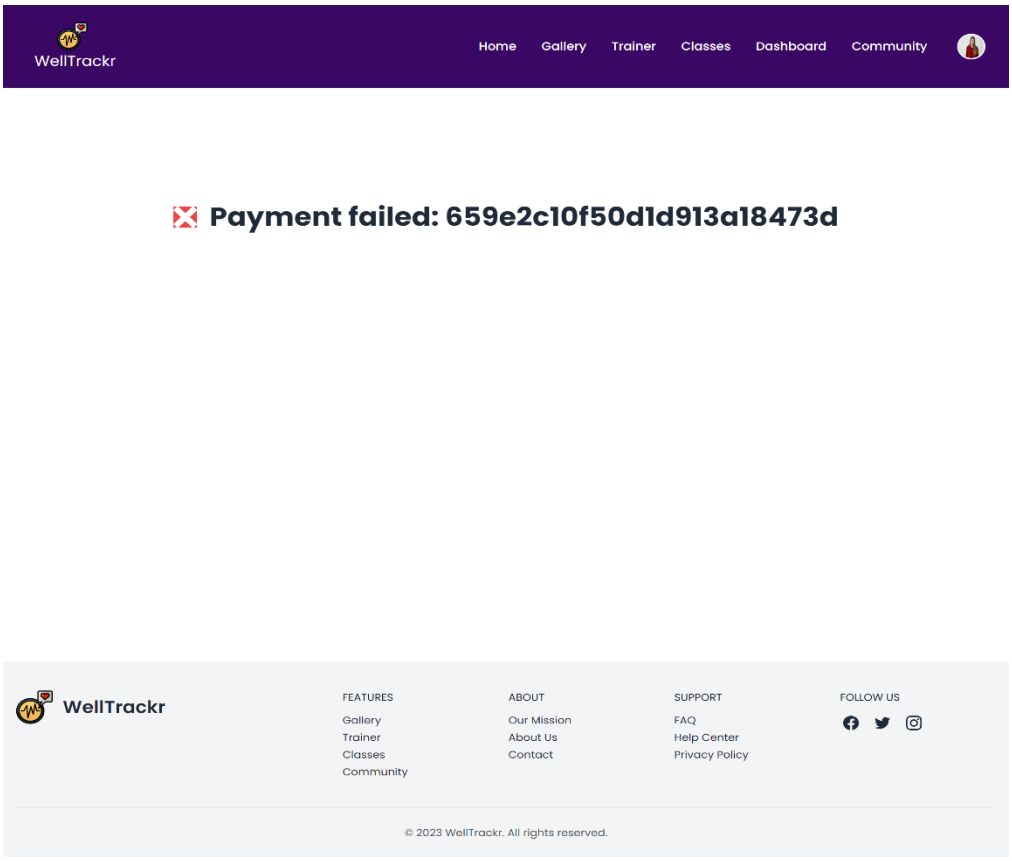


Fig. 4.14 Payment page (Payment failed or cancel)

Currently, the user has the ability to view the steps section directly on the home page. This part features a slider that displays all user evaluations, as well as a Contact Us area that allows users to get in touch with the website owner. The website has a section where users can access information about our organization and the reasons why they should utilize our services. Additionally, there is a review section where users may provide feedback regarding the website's security and reliability. Lastly, a footer section is included. Here are all the figures:

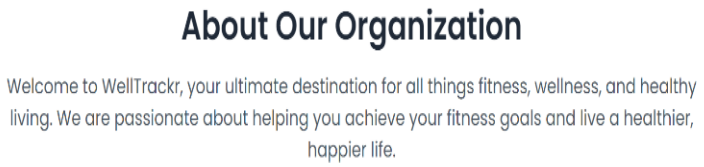


Fig. 4.15 Home page (About Our Organization)

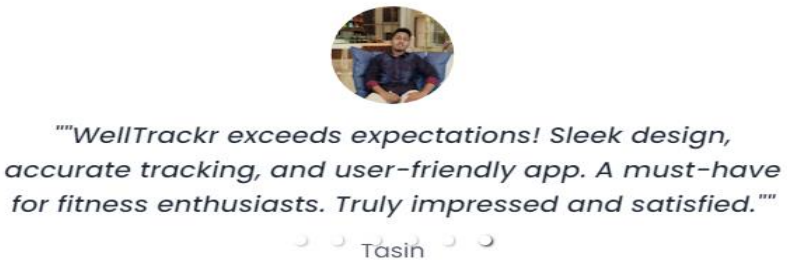


Fig. 4.16 Home page (Testimonials)

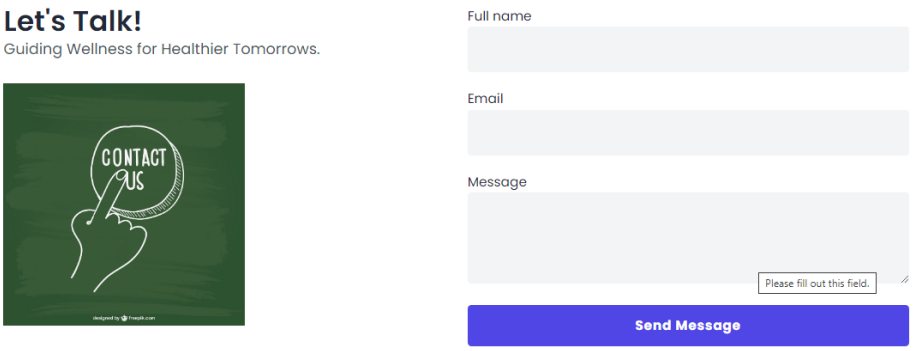


Fig. 4.17 Home page (Contact us)

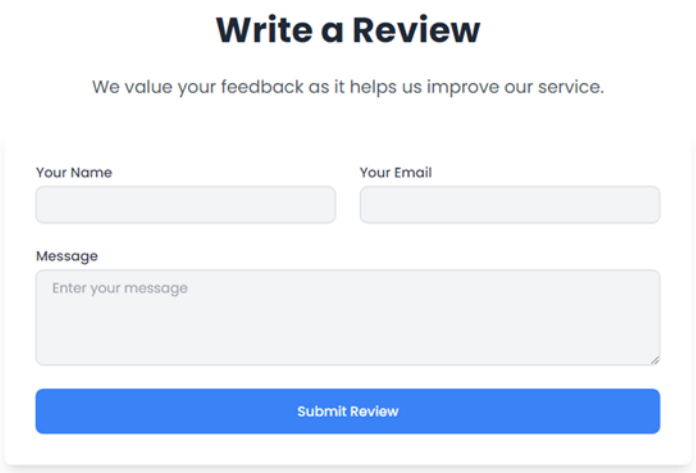


Fig. 4.18 Home page (Review)

If the user is new, they need to register. They can be logged in if they already have an account. The interface is below:

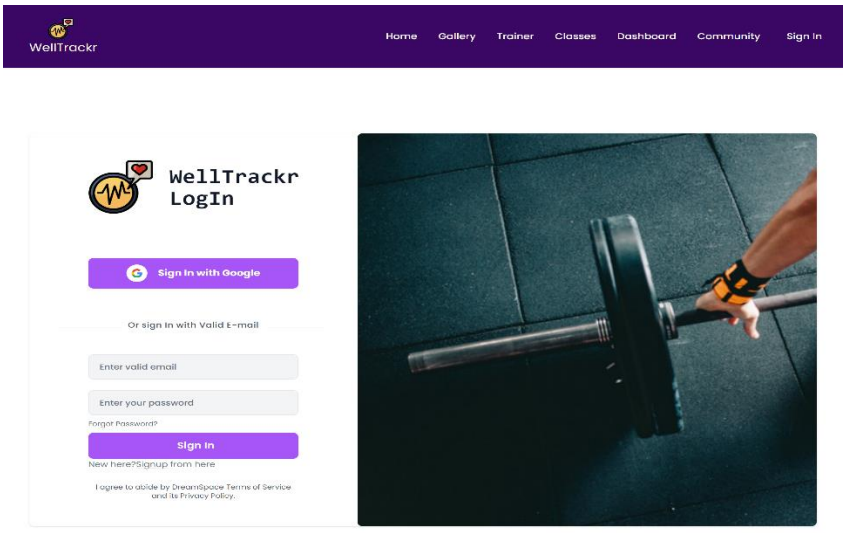


Fig. 4.19 Login page (For existing users)

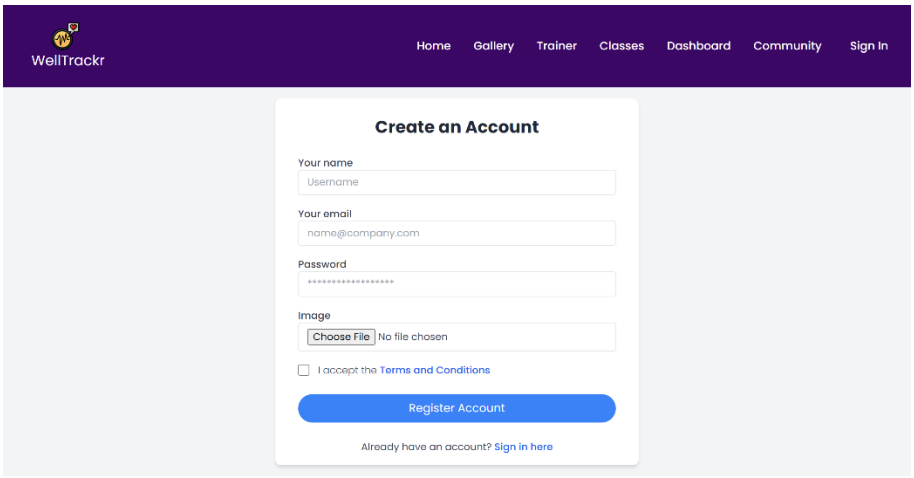


Fig. 4.20 Register page (For new users)

The **User Dashboard** provides a user-focused interface on the health and wellness tracker website, encompassing vital functionalities:

1. User Profile: Users have the ability to oversee and control their personal information and preferences, guaranteeing a tailored and individualized experience.

2. Activity Log: A detailed log offers a complete record of everyday actions, including information about current trainers and training sessions, allowing users to monitor their progress.

3. Booked sessions: Users may access and control their scheduled health and wellness sessions, making it easier to monitor attendance.

4. User reviews: Users provide feedback and reviews, promoting community involvement and sharing their experiences.

5. Payment History: Clear and comprehensive financial records exhibit payment data, augmenting user confidence and providing a clear view of their financial situation.

This user-centric dashboard enables users to customize their health and wellness path, monitor their progress, and actively participate in the health and wellness community. The user interfaces and figures are below:

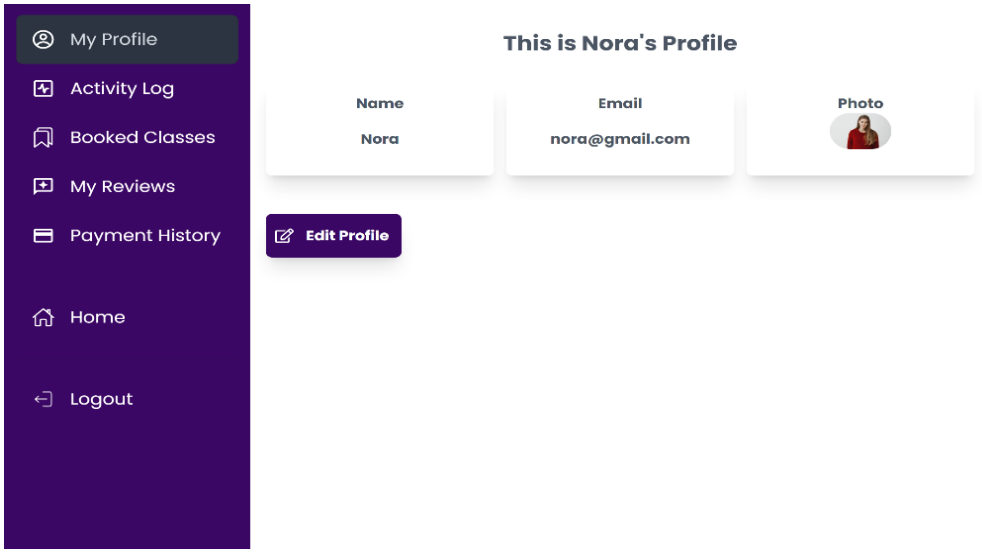


Fig. 4.21 User Dashboard (User Profile)

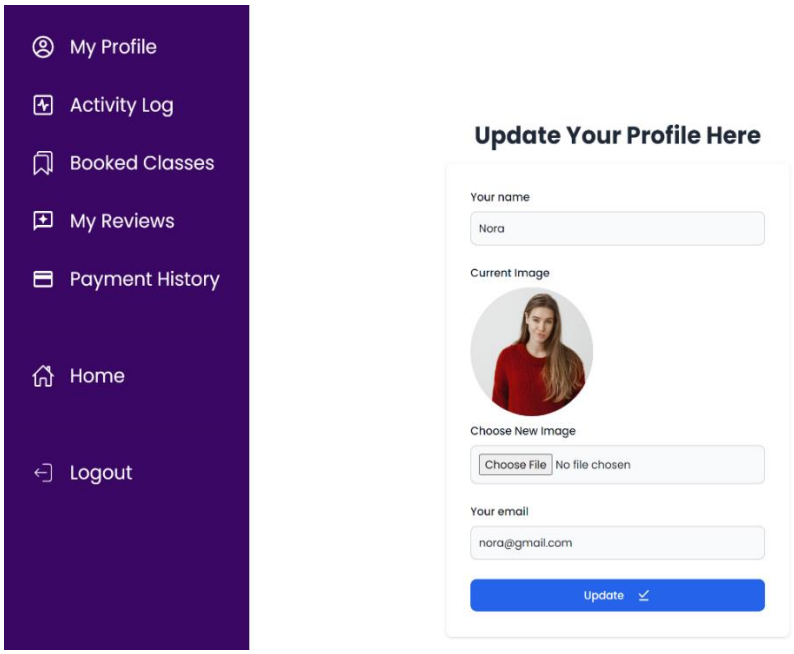


Fig. 4.22 User Dashboard (Update User info)

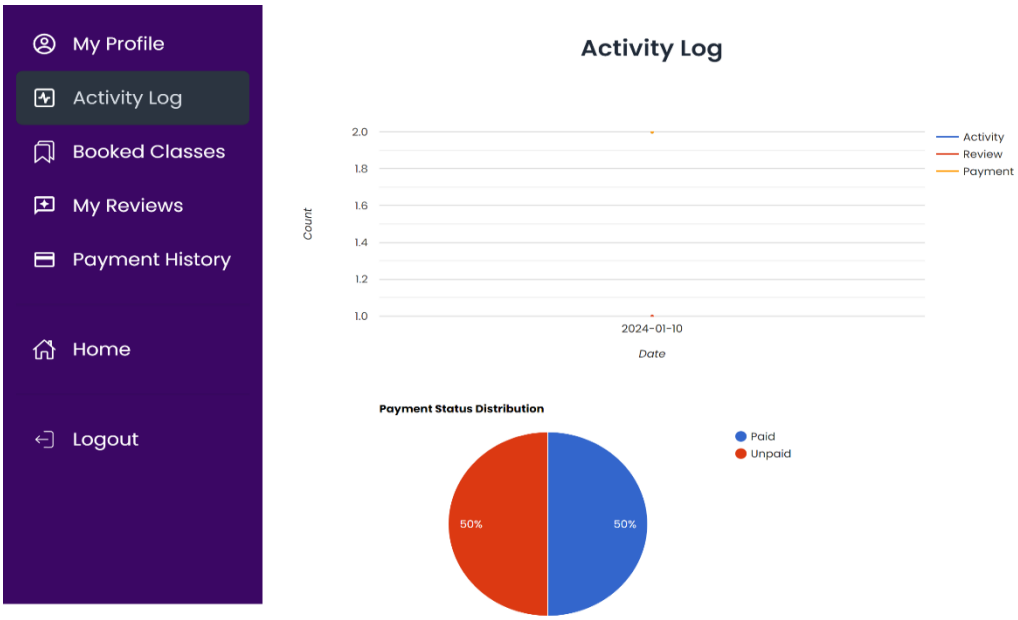


Fig. 4.23 User Dashboard (Activity Log)

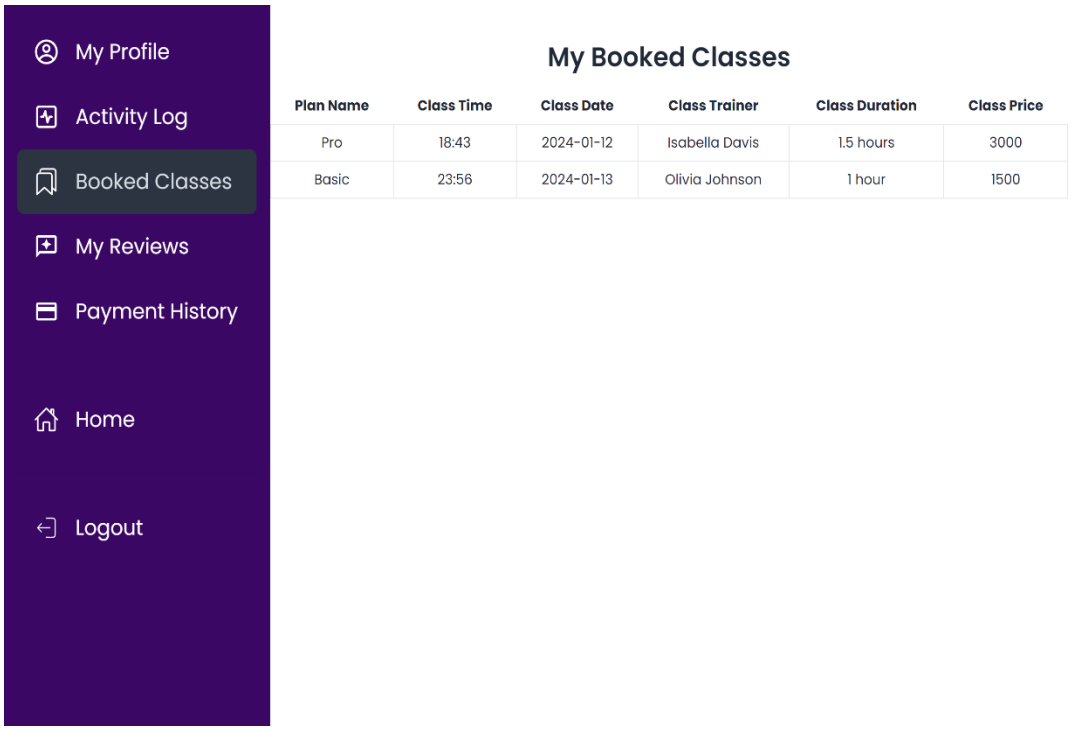


Fig. 4.24 User Dashboard (Booked Classes)

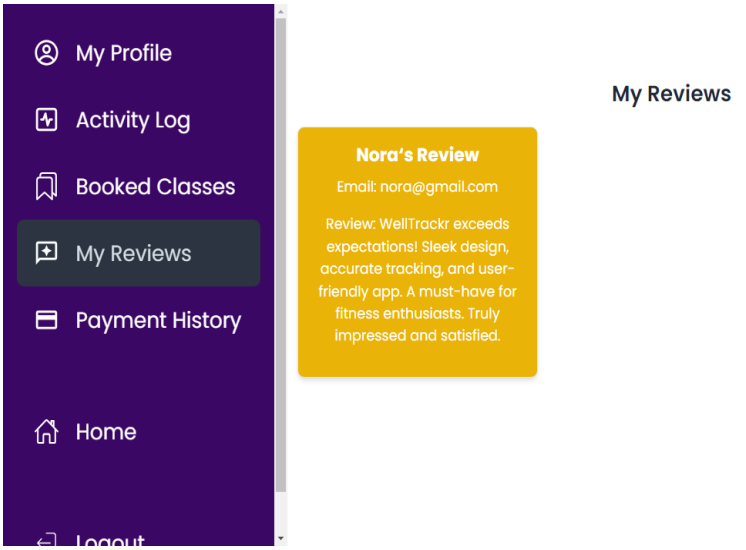


Fig. 4.25 User Dashboard (My Reviews)

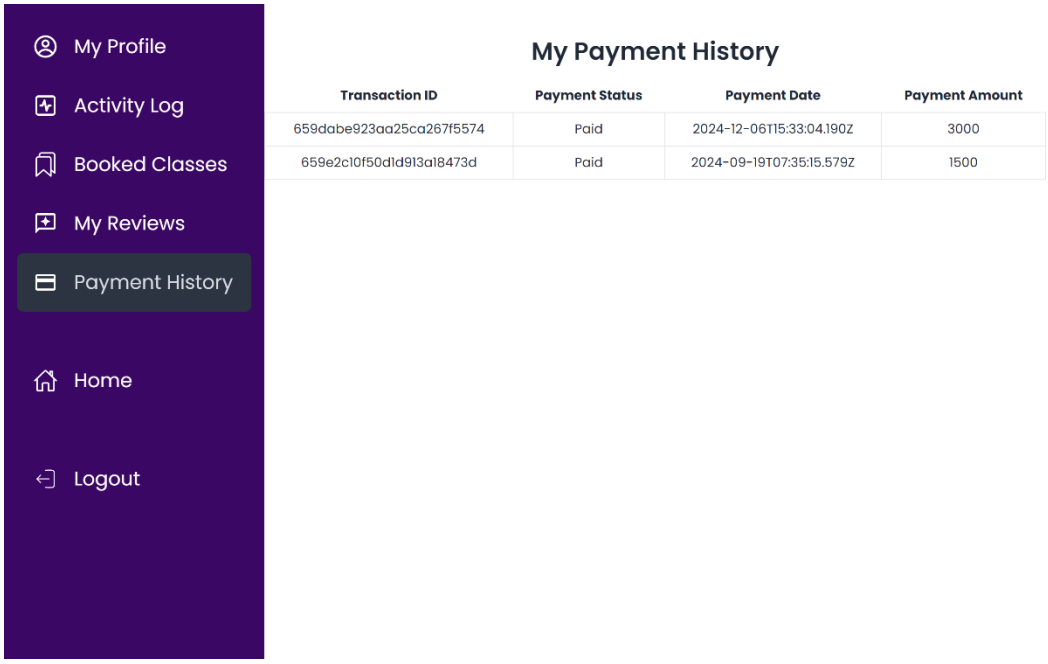


Fig. 4.26 User Dashboard (Payment History)

The **Trainer dashboard** serves as a centralized center for health and wellness trainers on the health and wellness tracker website. It offers fundamental features:

1. Slot Management: Trainers may effectively oversee their available time slots for member bookings, streamlining the scheduling process.

2. Member Management: Trainers can access a comprehensive list of the members they are responsible for, enabling effective communication and tailored training guidance.

3. Forum Contribution: Trainers and admins have the ability to enhance the community by creating fresh forum posts, encouraging active participation.

4. Class Creation: Trainers may effortlessly establish and oversee health and wellness classes, thereby extending their range of services.

This dashboard optimizes trainer operations, facilitating effective communication with members, streamlined scheduling, and active engagement in the health and wellness community.

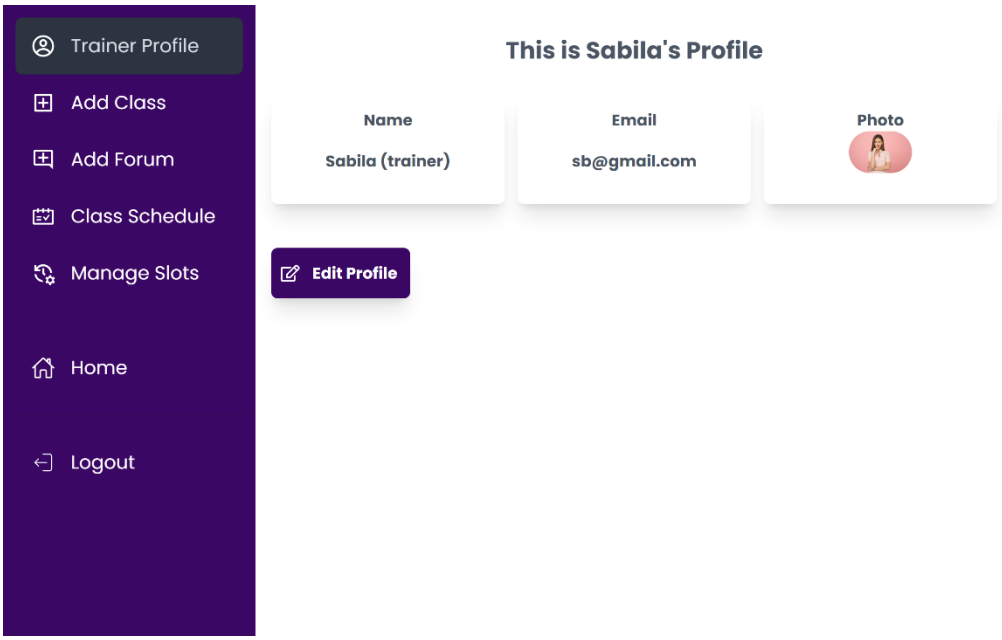


Fig. 4.27 Trainer Dashboard (Trainer Profile)

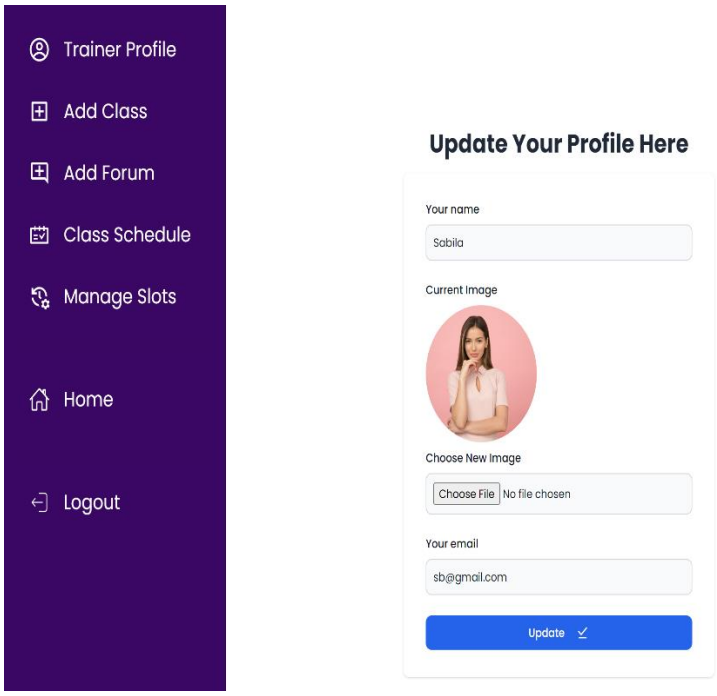


Fig. 4.28 Trainer Dashboard (Update Trainer Profile)

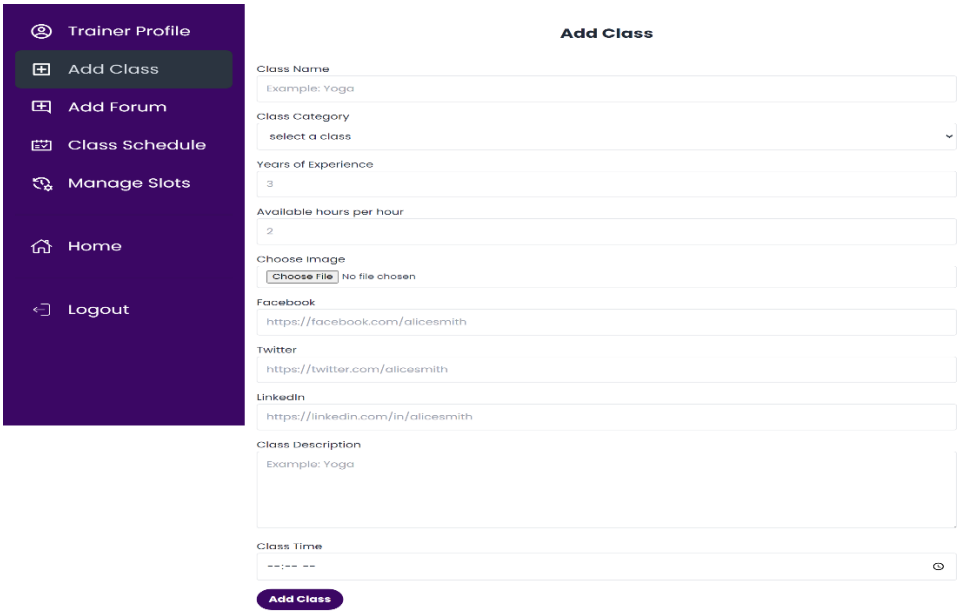


Fig. 4.29 Trainer Dashboard (Add Class)

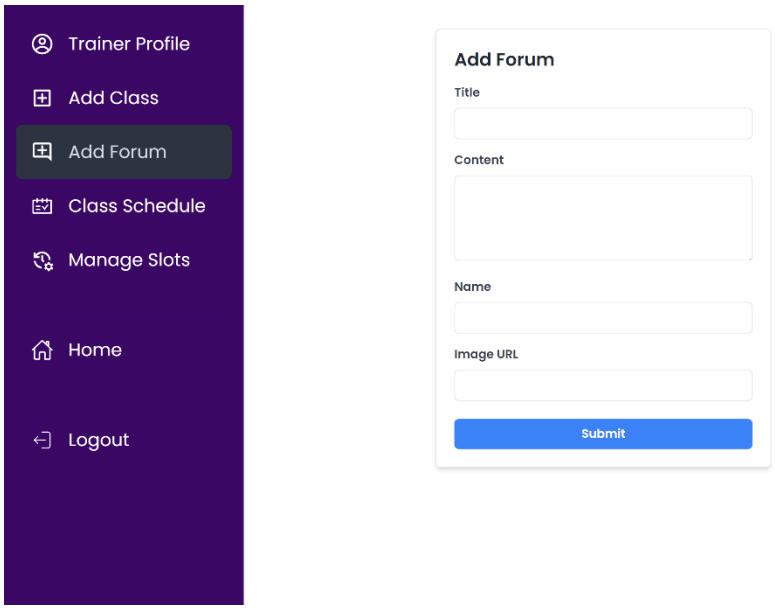


Fig. 4.30 Trainer Dashboard (Add Forum)

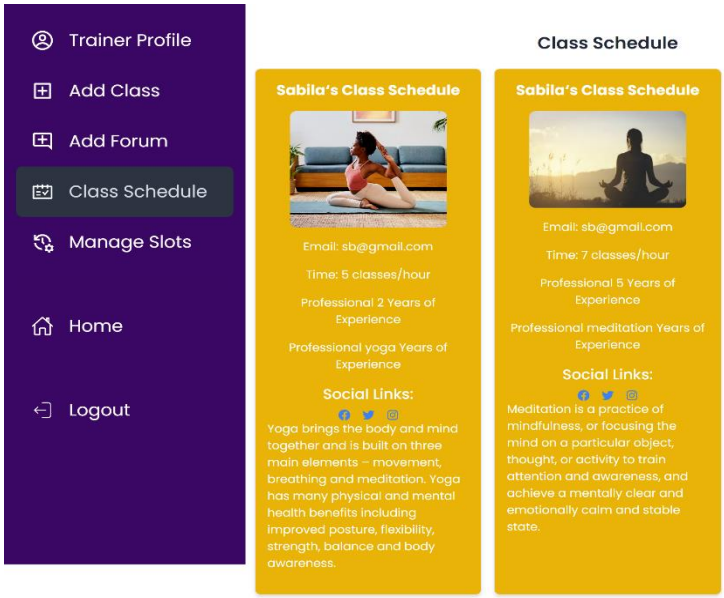


Fig. 4.31 Trainer Dashboard (Class Schedule)

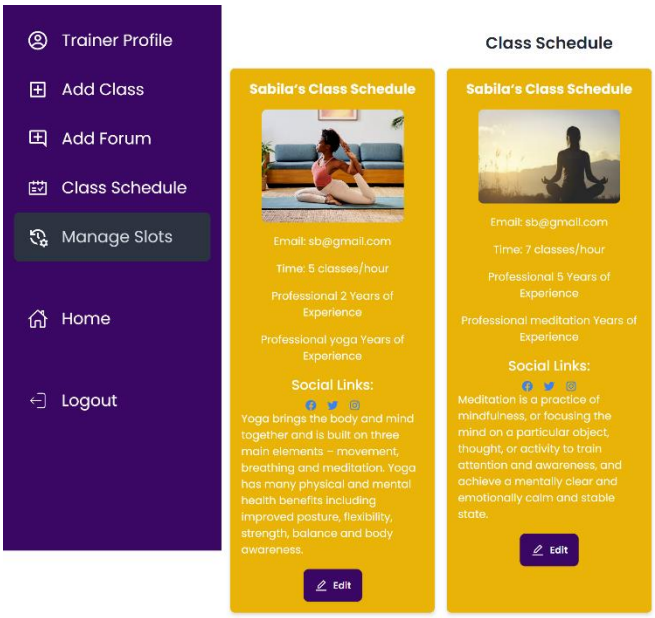


Fig. 4.32 Trainer Dashboard (Manage Slot)

The Admin dashboard is a crucial element of the website, offering extensive management and information. It provides three fundamental capabilities:

1. Subscriber or Role Management: Administrators have the ability to access and oversee all individuals who have subscribed to the newsletter. They can also handle payments for trainers, ensuring that financial transactions are carried out smoothly and effectively.

2. Management of Trainers: Administrators supervise all trainers, possess the authority to remunerate their salaries, and are capable of evaluating and authorizing trainer applications, thereby optimizing the onboarding procedure.

3. Financial Summary: The dashboard provides a concise overview of the website's financial status, showcasing the aggregate outstanding amounts and payments. Visual representations, such as pie charts, illustrate the proportion of individuals who subscribe to the newsletter compared to those who are paid members.

The comprehensive dashboard provides administrators with a wide range of options to effectively oversee the health and wellness tracker website, guaranteeing seamless operations and financial accountability.

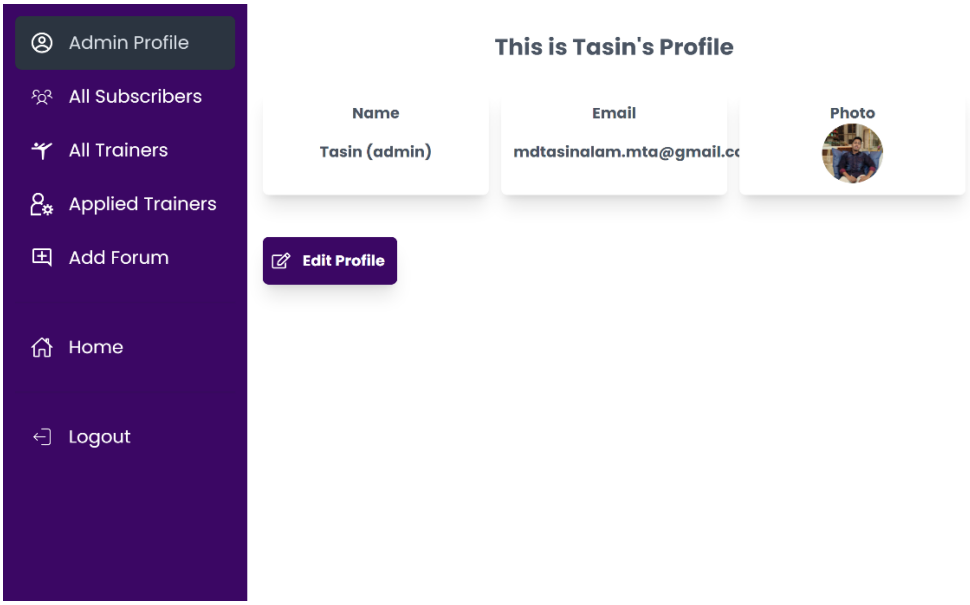


Fig. 4.33 Admin Dashboard (Admin profile)

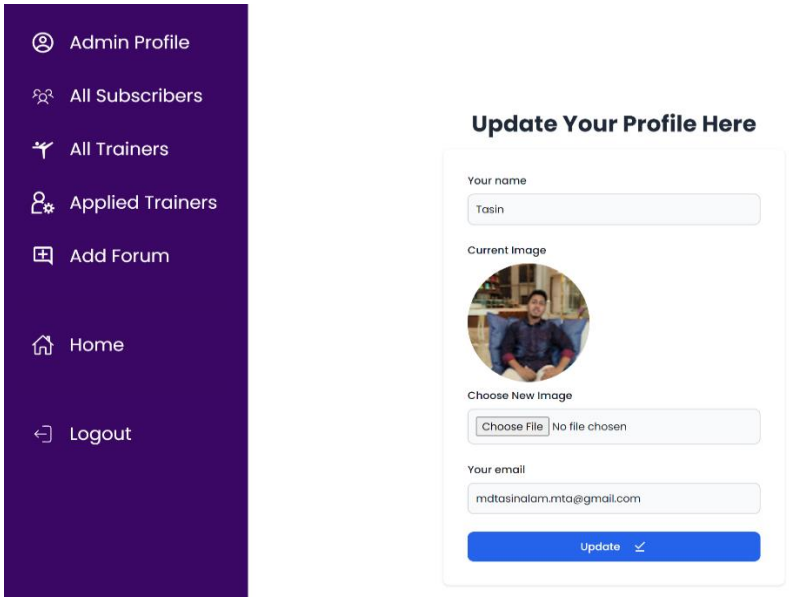


Fig. 4.34 Admin Dashboard (Update profile image and email)

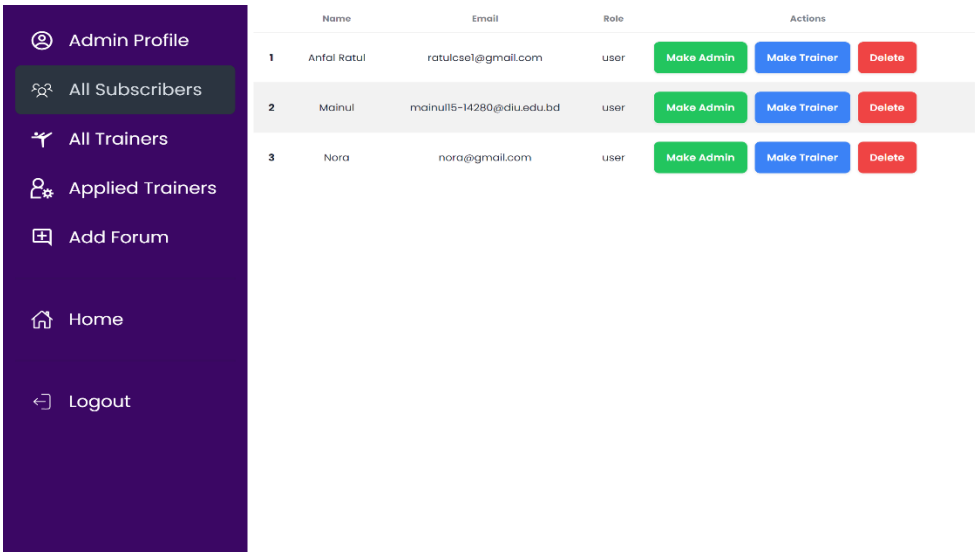


Fig. 4.35 Admin Dashboard (All Subscribers)

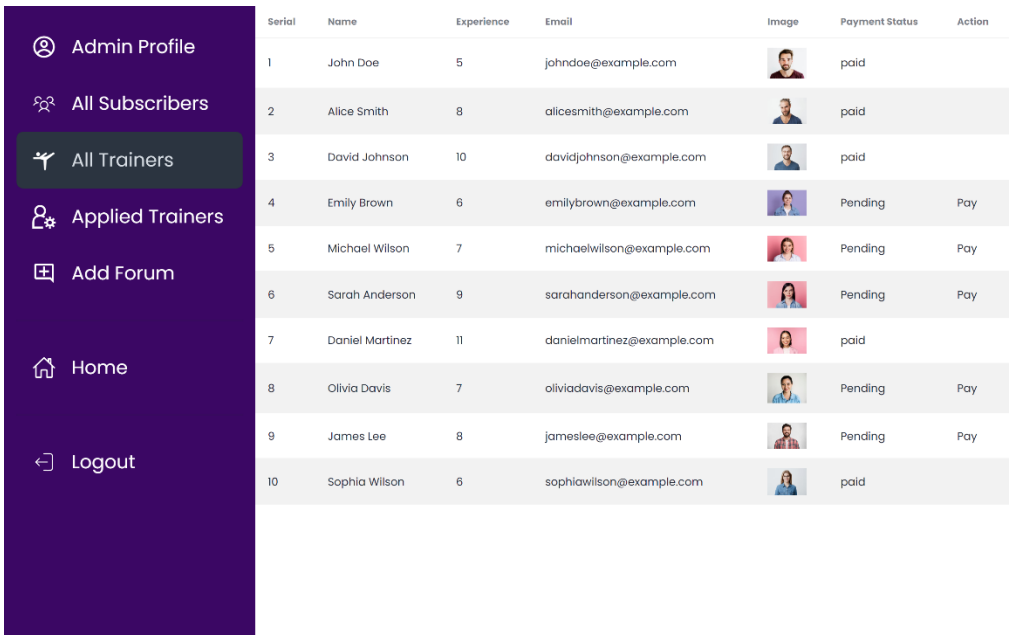


Fig. 4.36 Admin Dashboard (All Trainers)

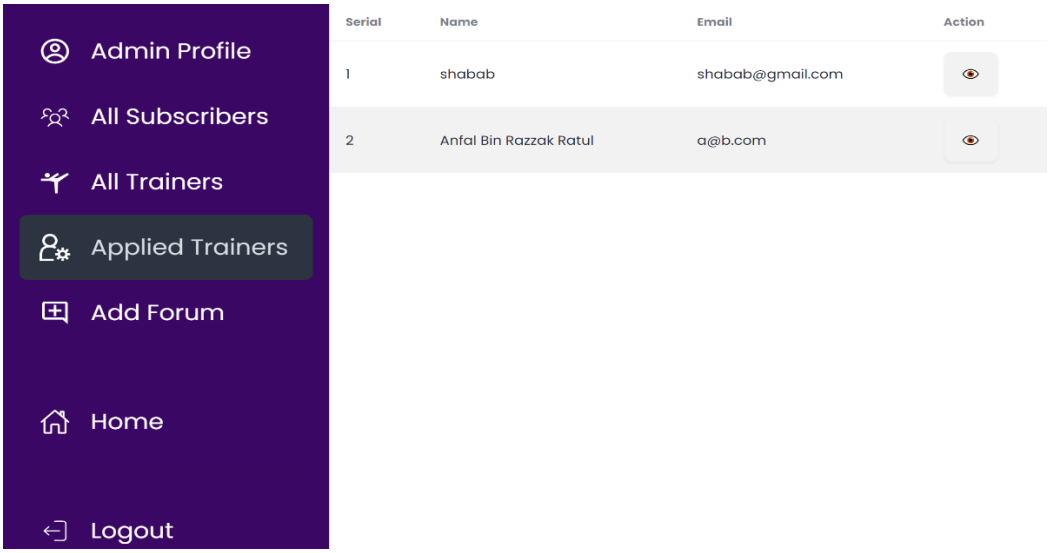


Fig. 4.37 Admin Dashboard (Applied Trainers)

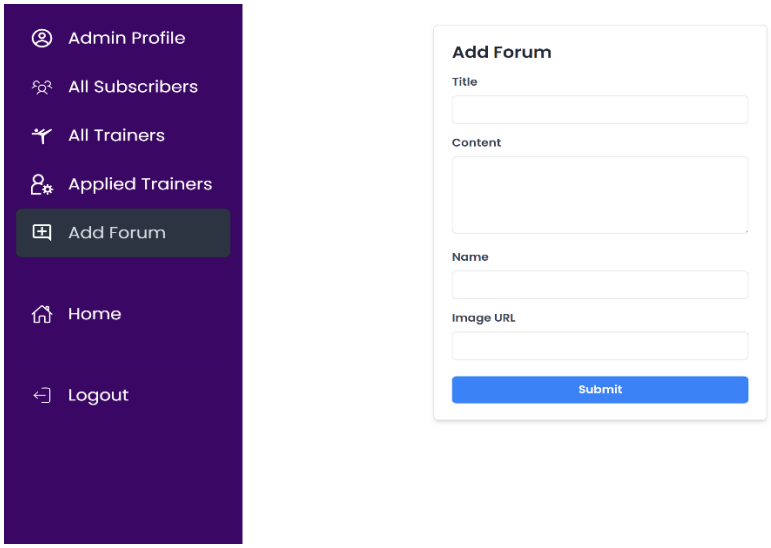


Fig. 4.38 Admin Dashboard (Add Forum)

4.2 Back-end Design

The health and wellness tracker website's back-end design is based on Node.js, utilizing the Express.js framework, and MongoDB as the database solution. Node.js offers a resilient runtime environment for executing activities on the server side, enabling efficient management of HTTP requests and answers. Express.js streamlines the process of developing RESTful APIs and routing, guaranteeing smooth and efficient communication between the client and server.MongoDB is utilized as the preferred database, providing versatility in handling user data, trainer profiles, forum postings, and other crucial information. JSON Web Tokens (JWT) are utilized for user authentication, hence bolstering security and authorization.

The backend design facilitates the inclusion of many user roles, such as Admin, Trainer, and Member, each possessing unique rights and levels of access. JWT tokens are created after a successful login and saved on the client's device, enabling safe and authorized access to protected routes.Furthermore, the back end is responsible for the management of profile image storage through the utilization of Firebase. The server additionally coordinates email alerts using EmailJS for actions connected to users.

In summary, the back-end design of the health and wellness tracker website guarantees the seamless functioning of the platform by facilitating user authentication, data storage, and secure communication between the client and server components.

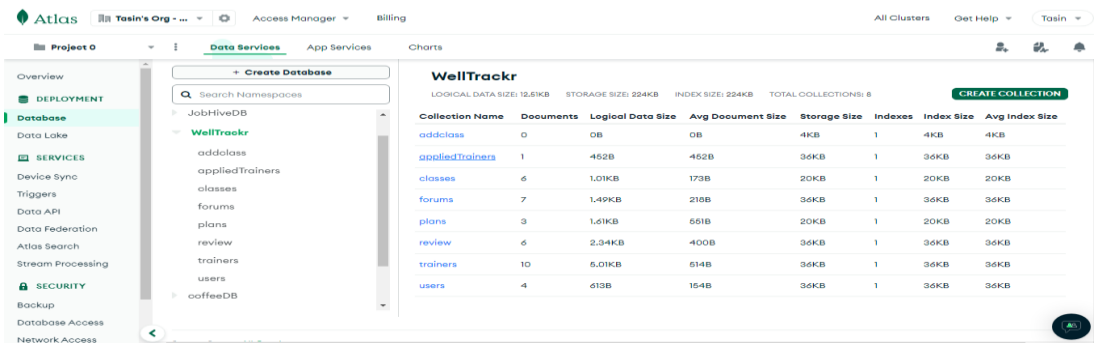


Fig. 4.2.1 MongoDB Cluster (All Collections)

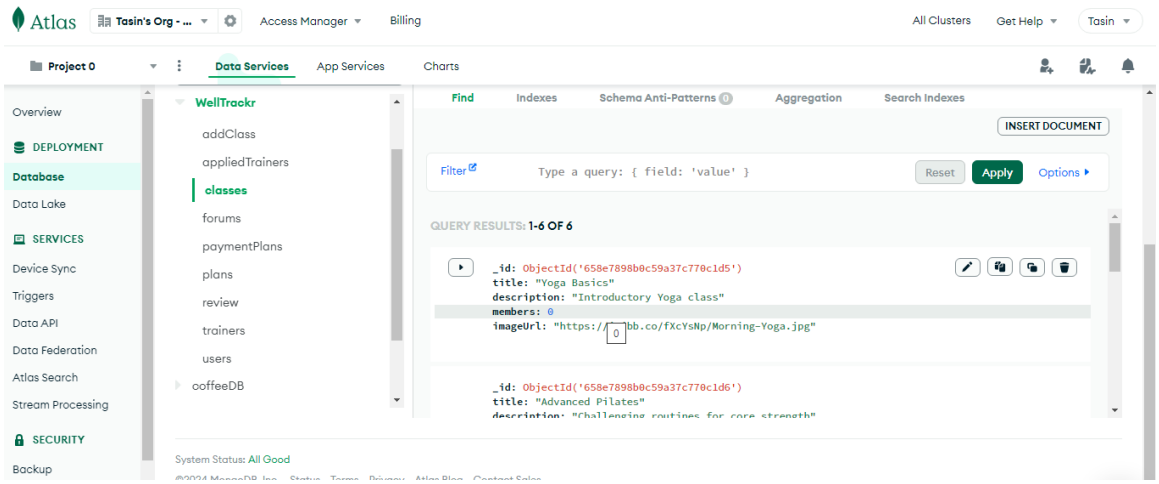


Fig. 4.2.2 MongoDB Cluster (Classes Collections)

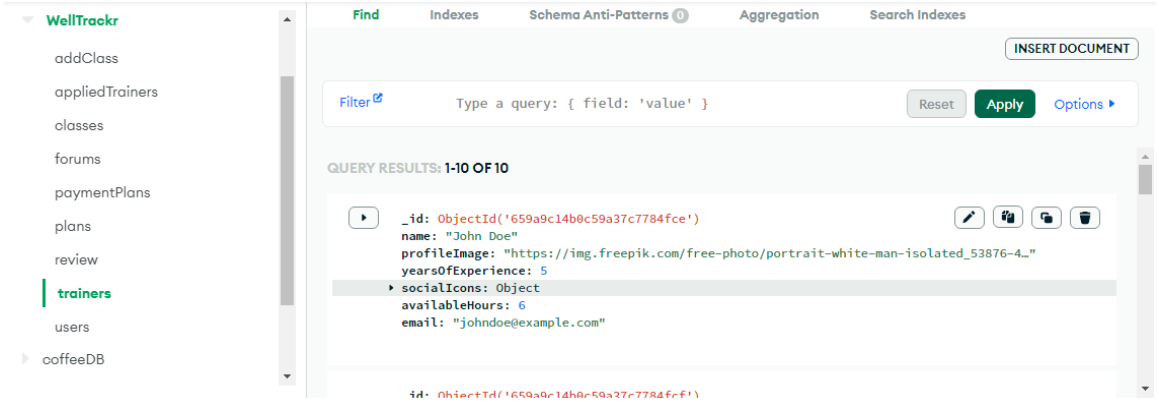


Fig. 4.2.3 MongoDB Cluster (Trainers Collection)

4.3 Interaction Design and User Experience (UX)

The health and wellness tracker project prioritizes user experience and interface design to develop a platform that not only tracks physical activity but also promotes empowerment, motivation, and user happiness. The platform showcases a user-friendly and aesthetically pleasing layout, facilitating effortless navigation across various functions and sections. Personalization is a crucial element of the user experience, enabling customers to establish health and wellness objectives, monitor preferences, and tailor their dashboard.Seamless tracking is a crucial attribute that effortlessly combines with different wearables and devices to streamline the task of capturing and synchronizing data. Users have the ability to record physical activities, monitor their heart rate, and track the number of calories they have burned in real-time. Utilizing advanced data visualization techniques enables users to gain valuable insights into their development over time, empowering them to make well-informed decisions regarding their workout routines.

The use of gamification components, such as achievements, challenges, and prizes, introduces an enjoyable and competitive aspect to the process of pursuing health and wellness goals. Users have the ability to establish personal achievements, acquire badges, and engage in friendly competition to maintain their interest and involvement.

Community participation is facilitated by the utilization of forums, discussion boards, and social features, which enable users to establish connections with individuals who have similar interests and actively seek inspiration and guidance. The health and wellness tracker is designed to be mobile adaptable, allowing users to conveniently view their health and wellness statistics and interact with the platform while on the move.To summarize, the health and wellness tracker project places emphasis on interaction design and user experience in order to develop a platform that is centered around the user and promotes general well-being in an interesting manner.

4.4 Implementation Requirements

Implementation Requirements for WellTrackr Portal:

1. **Front-end Framework:** The project will utilize React.js to ensure a high level of performance. Tailwind CSS, coupled with DaisyUI and Preline, will be employed for efficient and responsive styling.
2. **Back-end Framework:** Develop the back-end using Node.js with Express.js to create scalable APIs.
3. **Database Integration:** Use MongoDB for efficient data modeling, storage, and retrieval.
4. **API Development**: Design and implement RESTful APIs to handle user requests, property listings, and interactions.
5. **Authentication:** Integrate secure authentication mechanisms like JWT with Firebase to protect user accounts and data.
6. **State Management**: Implement state management solutions with Context API to manage application state and data flow.
7. **Error Handling**: Develop robust error handling and validation mechanisms to ensure data integrity and application reliability.
8. **Testing:** Conduct comprehensive unit, integration, and end-to-end tests using testing frameworks compatible with React, Node.js, and MongoDB.
9. **Performance Optimization**: Optimize codebase, database queries, and server configurations to enhance platform performance and responsiveness.
10. **Security Measures:** Implement security protocols, data encryption, and firewall protections to safeguard user information and platform integrity.
11. **Deployment:** Deploy in Vercel, firebase and Netlify for safety.

CHAPTER 5

IMPLEMENTATION AND TESTING

5.1 Implementation of Database

In the WellTrackr project, MongoDB served as the core database system for data storage and management. The selection of MongoDB was based on its aptitude for handling extensive volumes of unstructured data and its adaptable document-centric data model. Furthermore, MongoDB offered a user-friendly interface, enhancing the ease of interaction on the client-side. This technology choice empowered the development of an effective and expandable data management solution for the project.

5.2 Implementation of Front-end Design

The main goal of our project is to create a visually appealing and easy-to-use front-end design, which is a considerable task. Our goal is to achieve a harmonious equilibrium between comprehensive functionality and a user-friendly website interface. Furthermore, a critical problem we encounter is guaranteeing the responsiveness of the website on various platforms, such as smartphones, tablets, laptops, and notebooks. In order to tackle this issue, we employ Tailwind CSS for different areas, ensuring that responsive design guidelines are followed consistently. ReactJS is crucial in delivering a smooth and user-friendly interactive experience that aligns with our front-end design goals. This method effectively combines front-end design considerations with responsive and user-centric technologies :

1. I have strived for a clean and captivating homepage design.
2. On our website, all options and features should be understandable.
3. Users can quickly register and log in to the process.
4. The website incorporates eye-catching and informative cards, carousels, and a Bootstrap theme.
5. In this project, it is easy to visit multiple options and filter them easily.

5.3 Testing Implementation

The testing implementation of a health and wellness tracker project is crucial for its performance and durability. A multi-level testing technique is used to verify system performance and usability. Unit testing examines system components and functions, identifying and fixing coding issues. Integration testing evaluates how components work together, ensuring module integration and data flow. UI testing ensures the user interface is intuitive, attractive, and responsive across devices and screen sizes. Functionality testing evaluates the health and wellness tracker's basic functions, including workout tracking, class scheduling, community forums, and user dashboards. Security testing prioritizes data security, identifying flaws and protecting user data through encryption and authentication. Performance testing evaluates the system's responsiveness, speed, and scalability for increasing users. User acceptance testing ensures the platform meets user needs before deployment. Regression testing ensures new features do not cause issues or interrupt functionality. Compatibility testing ensures the health and wellness tracker works seamlessly on various devices and browsers. Load testing simulates high user traffic situations to test performance and identify bottlenecks. This rigorous testing ensures a reliable, durable, and easy-to-use health and wellness tracker.

5.4 Test Results and Reports

Test Result and Reports Is Given Below-

Table 5.1: Test data and type

Table No	Description	Text data	Expected result	status
01	User log in	Email Password / via sign in with google	With valid registered data entire home page	Pass
02	User view class's information	Select option Make confirm	Can view Booking	Pass
03	User payment	Account info	Payment successful	Pass
04	User transaction	Go to payment info	Can view	Pass
05	Admin log in	Email password	All under admin dashboard.	pass
06	Become a trainer	Import valid info	Make a portfolio	Pass
07	admin approved	Verified by admin	Approved confirmation	Pass
08	Transaction	Can preview	Editable all info	Pass

CHAPTER 6

IMPACT ON SOCIETY, ENVIRONMENT, SUSTAINABILITY

6.1 Impact on Society

The WellTrackr health and wellness tracker project has a significant and far-reaching impact on society. By advocating for a more healthful way of life and facilitating convenient availability of health and wellness amenities, it contributes to enhanced personal welfare. Consequently, this leads to wider societal advantages, such as decreased healthcare expenses and a population that is more physically and mentally involved. Moreover, the project promotes health and wellness entrepreneurship, enabling individuals to establish their own health and wellness-oriented enterprises, so potentially benefiting local economies. WellTrackr's prioritization of user privacy and data security establishes a benchmark for responsible utilization of technology, cultivating an environment of confidence and responsibility in the era of digital advancements.

6.2 Impact on Environment

The WellTrackr health and wellness tracker project has a primarily beneficial environmental impact. The project's promotion of physical exercise and healthy lives indirectly aids in alleviating the strain on healthcare systems and potentially reducing carbon emissions linked to inactive lifestyles. In addition, WellTrackr, being a digital platform, reduces the requirement for printed materials or physical resources, therefore conforming to sustainable principles. Furthermore, the project's focus on educating users about the ecological advantages of outdoor health and wellness activities promotes a deeper understanding and respect for the natural world, potentially resulting in heightened conservation endeavors. In general, WellTrackr aims to exert a beneficial impact on both personal well-being and ecological consciousness.

6.3 Ethical Aspects

Preserving user privacy and safeguarding data security are crucial ethical considerations in the WellTrackr health and wellness tracker project. We strictly comply with data protection standards and employ strong security measures to protect user information. Furthermore, our platform advocates for a wholesome and optimistic attitude to physical health and wellness, abstaining from supporting any detrimental methods or unattainable body ideals. We promote the adoption of responsible and well-rounded health and wellness objectives, while opposing the pursuit of extreme means. Moreover, our community norms promote courteous and encouraging exchanges among users. WellTrackr is dedicated to maintaining ethical principles that promote the well-being of users and the integrity of data.

6.4 Sustainability Plan

Regular utilization of this website by the general user leads to a gradual enhancement in sustainability over time. If deemed essential, we will progressively incorporate additional functionalities. The advertising fee is strategically managed and must remain within the optimal monetary range. I am optimistic about it.

CHAPTER 7

CONCLUSION AND FUTURE SCOPE

7.1 Discussion and Conclusion

Discussion:

The discussion section covers our health and wellness tracker project's main points. User feedback praises the user-friendly UI and easy navigation. Secure online payment methods have been lauded for improving user experience. Optimizing image loading animations and enlarging the gallery are also addressed. The initiative has simplified health and wellness tracking and increased user involvement, and continual improvements improve the user experience.

Conclusion:

In conclusion, the WellTrackr health and wellness tracker project offers health and wellness lovers and experts a complete and creative solution. It reinvented health and wellness monitoring with a simple interface, powerful data management, and user involvement. Its responsive design makes the platform accessible on all devices. WellTrackr simplifies health and wellness and builds community around health and wellness. Successful implementation shows our dedication to quality in every step of development, setting a new health and wellness industry benchmark.

7.2 Scope for Further Developments

The health and wellness tracker project has potential future. More accurate health and health and wellness insights may be added with advanced machine learning techniques. Compatibility with smartwatches and health and wellness trackers can improve user experience. Partnerships with healthcare providers or exercise equipment manufacturers could improve data-sharing and functionality. User engagement can be increased using gamification and social features. The idea has great potential for growth and innovation in the ever-changing health and health and wellness industry.

References:

The project utilized design inspiration from ThemeForest, Dribbble, and Behance to enhance the health and wellness tracker website's appearance and uniqueness, with implementation and customization tailored to the project. So now, I am inserting these links below as references:

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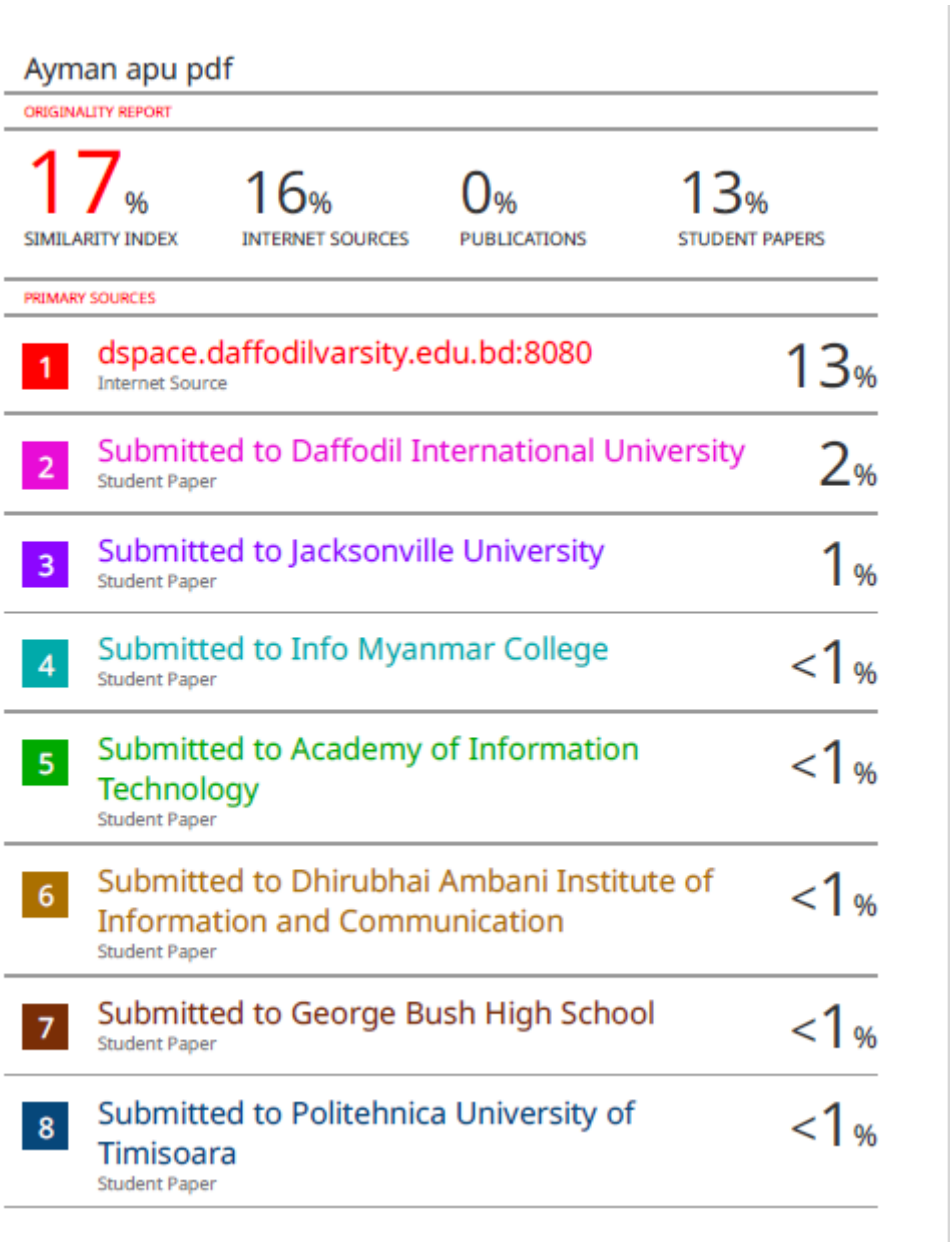

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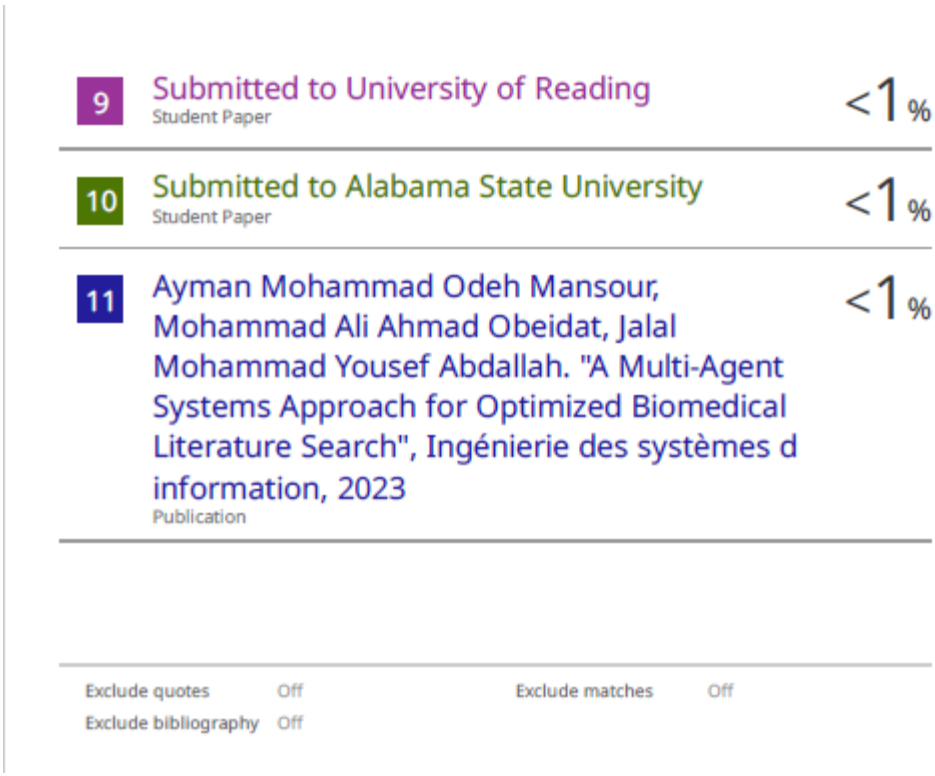
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