



Faculty of Computer Science and Information Technology

FutbolLink: Web-Based Social Networking Platform for Footballers

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Abstract

The “FutbolLink”, a web-based social networking platform designed to address the visibility and connectivity challenges faced by aspiring footballers in Malaysia. With football being the nation’s most popular sport, the platform aims to bridge the gap between grassroots talent and professional opportunities by integrating tailored features for showcasing skills, connecting with clubs, and fostering community engagement. By analyzing existing platforms like Social442, BePro, and Be Sport, FutbolLink incorporates their strengths while addressing key limitations. Employing Agile methodology with a Scrum framework, the development ensures iterative improvements and user-centric design. Comprehensive features, including detailed profiles, performance tracking, messaging, and event management, make FutbolLink a hybrid platform that supports both professional networking and football development. The project highlights the potential of digital platforms to democratize access to opportunities, particularly for underrepresented communities, contributing to the growth of Malaysian football.

Keywords: digital platform for football, event management for football, football social networking, football-specific networking tools, FutbolLink

Abstrak

FutbolLink, sebuah platform rangkaian sosial berasaskan web, direka untuk menangani cabaran keterlihatan dan hubungan yang dihadapi oleh pemain bola sepak bercita-cita tinggi di Malaysia. Dengan bola sepak menjadi sukan paling popular di negara ini, platform ini bertujuan merapatkan jurang antara bakat akar umbi dan peluang profesional dengan mengintegrasikan ciri-ciri khas untuk mempamerkan kemahiran, berhubung dengan kelab, dan memupuk penglibatan komuniti. Dengan menganalisis platform sedia ada seperti Social442, BePro, dan Be Sport, FutbolLink menggabungkan kekuatan mereka sambil menangani kekurangan utama. Menggunakan metodologi Agile dengan rangka kerja Scrum, pembangunan platform ini memastikan penambahbaikan iteratif dan reka bentuk yang berpusatkan pengguna. Ciri-ciri komprehensif, termasuk profil terperinci, penjejakan prestasi, pemesejan, dan pengurusan acara, menjadikan FutbolLink platform hibrid yang menyokong rangkaian profesional dan pembangunan bola sepak. Projek ini menonjolkan potensi platform digital untuk mendemokrasikan akses kepada peluang, terutamanya untuk komuniti yang kurang diwakili, sekaligus menyumbang kepada perkembangan bola sepak Malaysia.

Kata Kunci: Platform Digital untuk Bola Sepak, Pengurusan Acara untuk Bola Sepak, Rangkaian Sosial Bola Sepak, Alat Rangkaian Khusus Bola Sepak, FutbolLink

Chapter 1 : Introduction

1.1 Introduction

Most Malaysians are interested in sports activities (55.5%) in which football is the most popular amongst them (11.6%) followed by futsal (11.0%) and badminton (8.5%), (S. Aman et al., 2023). The sport not only enjoys a passionate following but also has a substantial base of participants who are likely to drive its growth further. Aspiring footballers, especially those from underrepresented areas, face significant barriers in gaining visibility and connecting with professional opportunities. This can be the potential for digital platforms to connect and support talent. Given the significant interest, digital platforms tailored to football can help aspiring players connect with clubs, scouts, and coaches. This is where FutbolLink would take the opportunity to be the platforms to give the aspiring footballers in Malaysia to be seen. The FutbolLink social network website focused on skill showcasing, networking, and performance tracking can bridge gaps, especially for players in remote or underserved areas, supporting their progression in the sport for Malaysia.

According to Daniel Higginbotham (2023), while social media platforms have become integral to our personal lives, they are also powerful tools for recruitment. This provides easy access for people to share updates and showcase their abilities. However, general social media platforms often lack the tailored features needed to cater to niche industries like football. This is where FutbolLink, a dedicated football social network, can bridge the gap by acting as a medium for players to showcase their skills and for clubs big and small to efficiently scout and recruit talent.

FutbolLink will be perfect as it doesn't just cater to elite or professional-level clubs but also provides opportunities for non-league and grassroots football teams to discover players. Smaller clubs, which often have limited budgets and resources for extensive scouting operations, can leverage the platform's cost-effective tools to find local talent. These clubs can benefit greatly from features like regional filters and performance data, allowing them to identify promising players from nearby areas who might otherwise go unnoticed.

Players, regardless of their location or experience level, can create profiles to showcase their skills through match highlights, training videos, and position-specific achievements. For

aspiring footballers, especially those in rural areas or those playing at amateur levels, this offers a chance to connect with non-league teams and participate in trials they might not have known existed.

1.2 Problem Statement

In Malaysia, football is the most popular sport among the population, yet aspiring footballers, especially those from underrepresented areas, face significant barriers in gaining visibility and connecting with professional opportunities. While interest in football is high, there is no centralized digital platform that allows young talent to showcase their skills, track their development, and engage directly with scouts, coaches, and clubs. Existing social media platforms are not optimized for football-specific interactions, such as sharing performance metrics, showcasing game footage, or enabling skill-based searches, which are crucial for identifying talent. This lack of digital infrastructure stunts the growth of promising players, limiting the sport's development potential in Malaysia.

A dedicated football platform is essential to address these gaps, providing players with accessible tools to share their achievements and connect with football professionals, while also equipping clubs with efficient scouting tools that expand their reach. By centralizing and digitalizing the process, such a platform could democratize access to opportunities in football, helping to bridge the gap between grassroots talent and professional pathways, and paving the way for Malaysia to elevate its football standing both locally and internationally.

1.3 Objectives

- To design intuitive User Interface (UI) and User Experience (UX).
 - Provide a simple, easy-to-use interface with quick load times and intuitive navigation. Make sure that users with different levels of technical expertise can easily create accounts, maintain their profiles, and share media by designing the platform to be user-friendly.
- To develop a web-based social network platform where users can use to interact with other football fans and clubs.
 - A football-centred social networking platform need to have the accommodation of creating a football community by them finding the people that have the same interest in them. Make sure that the users can interact with other users and club in order for them to be given the opportunity to show their talent and likings in football.
- To evaluate the social network platform functionalities based on the account's roles.
 - Different roles give different functions and the users or recruiters can only access them by their specific roles. Make sure the users and recruiters functions align with their respective roles.

1.4 Methodology

A proper methodology is crucial in producing any project. It can be the turning point of the project whether it will be a success or failure. Based on the FutbolLink requirements and objectives, it is well-suited for this project to adapt with the Agile Methodology. The agile methodology is a systematic strategy that divides projects into manageable stages with an emphasis on ongoing improvement. Planning, carrying out, and assessing the process are all iterative Artem Gurnov (2024). Artem Gurnov also stated that there are different type of agile methodologies including Scrum, Kanban, Lean, Extreme Programming (XP), and Adaptive Project Framework (APF). Scrum and Extreme Programming are the ones that most software developers use to create projects.

After further investigation into the agile methodology, the decision to use Scrum as the agile methodology would be perfect for this project that involves rapid changes in requirements. Scrum is agile, incremental and iterative development method, documented in the Scrum framework, which is a set of practices, roles, events, artifacts, and rules designed to guide in the execution of the project. Scrum is adaptable and flexible.

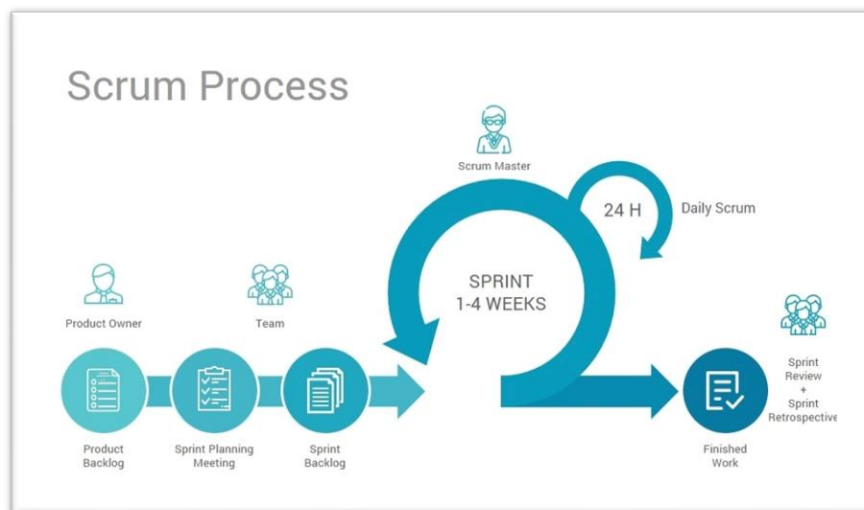


Figure 1.1: Scrum Process (Optimimus.io, 2024)

These are the steps taken to adapt the project with the Scrum methodology:

- a) Product Backlog Creation:

- i. Gather Requirements: Identify key functionalities, like user profiles, event management, media sharing, and performance tracking. Translate these into user stories or feature descriptions.
- ii. Prioritize: Rank features based on priority, focusing first on core functionalities essential for user experience, such as registration and profile setup.
- iii. Define the Criteria: For each feature, set clear criteria to define when it's "done."

b) Sprint Planning

- i. Determine the Sprint Length: Determine how long each sprint will take that suits the pace of the project.
- ii. Define Sprint Goals: Set a specific goal for each sprint.
- iii. Select the Backlog Items: Pick the highest-priority items from the product backlog that align with the sprint goal and are achievable within the sprint timeframe.
- iv. Break Down Tasks: List the specific tasks needed for each feature.

c) Sprint Backlog

- i. Select the task for the sprint: Move the prioritized tasks for the chosen feature into a "Sprint Backlog" list.
- ii. Track Progress: Track the progress of the project after each sprint.

d) Daily Scrum

- i. Set a routine: Review progress, plan the day's tasks, and identify any challenges.
- ii. Resolve issues: Set aside time to research solutions or consult resources.

e) Sprint Review

- i. Review completed work: At the end of each sprint, review the finished progress. Test the feature thoroughly and check it against the acceptance criteria.
- ii. Collect feedback: Collect feedback on the functionality, usability, and any adjustments that is needed.

f) Sprint Retrospective

- i. Reflect on the sprint: Note what went well, what was challenging, and what could improve in the next sprint.
- ii. Plan for improvement: Decide on one or two adjustments for the next sprint.

g) Repeat and Project Completion

- i. Repeat the process: Repeat the process for each sprint going back to sprint planning and working through the cycle until all the items in the Product Backlog is completed or the project's goals is achieved.
- ii. Final project review: Conduct a final project review, documenting the outcomes, achievements gained, and complete the project.

In conclusion, adapting the Scrum from Agile methodology will help the project to be run smoothly as the method provides clear structure and also adaptable as the project involves rapid changes in requirements.

1.5 Project Scope

The scope of the FutbolLink web-based project encompasses various key areas designed to facilitate connections between players and clubs while promoting football talent development.

First, the project will include comprehensive user account management capabilities, allowing both players and clubs to register, log in, and manage their profiles. This feature will include password recovery options and user role differentiation to ensure each user type has appropriate access and permissions.

Next, the platform will focus on profile features, enabling players to create customizable profiles that showcase their skills, statistics, achievements, and multimedia content such as videos and images. Clubs will also have dedicated profiles where they can post their recruitment needs, share team information, and highlight club events. A verification option will be integrated, allowing users to apply for verification based on their role in the football ecosystem. This includes verification for clubs, coaches, and players who have played

or are currently playing in League 1, 2, or 3. Verified users will have a special badge on their profiles, enhancing credibility and trust within the community.

A robust media upload functionality will be integrated, allowing users to easily upload and manage pictures and videos relevant to their football journey or club activities. The platform will support various media formats and sizes, ensuring quality user experience.

To facilitate effective talent discovery, the project will implement search and discovery mechanisms that allow clubs to filter and search for players based on criteria such as position, age, skill level, and location. Additionally, a recommendation system will suggest players or clubs based on user interactions and preferences.

Communication features will also be a critical aspect of the platform. A secure messaging system will enable direct communication between players and clubs, facilitating inquiries and trial invitations. Users will receive notifications about messages, trial opportunities, or profile views to stay engaged with the platform.

The project will include performance tracking and feedback functionalities, allowing coaches and scouts to provide ratings and comments on player performances based on uploaded videos or live events. This will enable players to track their development and receive actionable insights for improvement.

To support clubs in their recruitment efforts, the platform will feature event management tools, enabling clubs to organize and manage trials, training sessions, and recruitment events. Players will be able to register for these events and keep track of their schedules through integrated calendar features.

To foster community engagement, the project will develop a social feed where users can share updates, achievements, and announcements, promoting interaction within the football community. Furthermore, groups or forums will be established for discussions on training, tactics, and local football culture.

In conclusion, this project scope defines the essential functionalities and features that will be developed for the football-specific social network. By creating an inclusive and supportive platform, the project aims to facilitate meaningful connections between players and clubs while fostering the development of football talent within the community. Notably, features unrelated to football and advanced analytics beyond the initial scope may be considered for future development phases.

1.6 Significance Of Project

The significance of this project lies in its potential to make an impact on Malaysian football while also providing a unique learning and growth opportunity. By developing a platform that connects players with clubs and scouts, tackling real challenges in talent visibility and accessibility, especially for young players from underrepresented areas.

UI/UX design plays a vital role in developing products that are both aesthetically pleasing and highly functional. While UI (User Interface) design emphasizes the visual aspects and layout of a product, UX (User Experience) design focuses on making the product intuitive and aligned with user needs, (GeeksforGeeks, 2024).

This project allows users to showcase skills in web development, UX design, and problem-solving, building a portfolio piece that demonstrates both technical expertise and the ability to address social needs. Additionally, creating a platform with interactive features like skill-based search, media uploads, and messaging provides hands-on experience with complex functionality, boosting capabilities in backend development and user-centered design.

1.7 Project Schedule

The development of FutbolLink involves 5 stages of development which are Initialization, Planning, Execution, Monitoring, and Closing. The table 1.1 shows the schedule of the project to make sure that the project developed systematically.

Table 1.1: Project Schedule

Task	Start Date	End Date
Initialization	3/10/2024	14/11/2024
Define project objectives and scope	3/10/2024	9/10/2024
Brief proposal	10/10/2024	22/10/2024
Planning	22/10/2024	14/2/2024
Create project plan	22/10/2024	26/10/2024
Choosing the methodology	27/10/2024	29/10/2024
Final proposal	30/10/2024	14/11/2024

Backlog creation	15/11/2024	17/11/2024
Research and information gathering.	18/11/2024	22/11/2024
Planning the user interface and development.	23/11/2024	2/12/2024
Develop prototype.	3/12/2024	17/12/2024
Review the design of the project.	18/12/2024	27/12/2024
Amendments.	28/12/2024	3/1/2024
Final Review before developing.	4/1/2025	10/1/2025
Final report and paper after amendments.	11/1/2025	14/2/2024
Execution	27/1/2025	27/4/2025
Create user registration and profile creation for Clubs and Players.	27/1/2025	9/2/2025
Add media upload functionality (Pictures and Videos).	10/2/2025	23/2/2025
Add search and discovery mechanisms.	24/2/2025	9/3/2025
Add messaging and notifications.	10/3/2025	23/3/2025
Add event management tools and social feed.	24/3/2025	6/4/2025
Identify any defects and issues.	7/4/2025	13/4/2025
Resolves the issues and recheck for any other issues.	14/4/2025	27/4/2025
Monitoring	28/4/2025	2/6/2025
Perform User Acceptance Test (UAT).	28/4/2025	4/5/2025

Apply changes based on the feedback from the UAT.	5/5/2025	18/5/2025
Perform another UAT before finalizing the project.	19/5/2025	1/6/2025
Closing	2/6/2025	29/6/2025
Document the project outcome.	2/6/2025	15/6/2025
Conduct final review and evaluation.	16/6/2025	29/6/2025



Figure 1.2: Gantt Chart for FutbolLink Development

1.8 Project Outcome

The expected outcomes of FutbolLink are centered around increased visibility for players, streamlined recruitment processes for clubs, enhanced communication and networking opportunities, and the promotion of local football culture. By creating an inclusive platform, the project aims to support the growth and development of football talent within the community.

Chapter 2 : Literature Review

2.1 Introduction

This chapter presents the literature review of the FutbolLink, a web-based social network for football fans in Malaysia. The goal is to design an intuitive platform that incorporates diverse features such as live events and professional networking. The pros and cons of the platform that is being made then being compared with similar social networks, identifying successful elements from existing systems to guide the development of the new web-based network.

2.2 Background Study

Football is the most popular sport in Malaysia, with substantial participation and passionate following. However, aspiring footballers, particularly those from rural or underserved areas, face challenges in gaining visibility and accessing professional opportunities. Despite the high interest, the absence of a centralized, football-specific digital platform impedes the growth and discovery of grassroots talent.

Existing general social media platforms lack tailored features necessary for football, such as performance tracking, game footage sharing, and skill-based searches. This creates a gap in connecting players with scouts, coaches, and clubs effectively. For example, clubs, especially smaller ones with limited resources, struggle to scout local talent cost-effectively, while players face barriers in showcasing their abilities to a broader audience.

A dedicated football platform like FutbolLink can address these challenges. By offering tailored tools such as regional filters, performance metrics, and profile-based showcases, it democratizes access to football opportunities. Such a platform would empower players to

highlight their achievements and connect with professionals, fostering football development at grassroots and professional levels. Moreover, it can support clubs in scouting cost-effectively and expand their reach to untapped talent pools, ultimately elevating Malaysia's footballing standards both locally and internationally.

2.3 Review on existing social networks

Two existing social networks, Social442 and Be-Pro, are evaluated and compared in this study. Both platforms share similarities with the FutbolLink project, making them suitable benchmarks for comparison. Both social networks are tested by signing into the social network.

2.3.1 Social442

Social442 (*Social442*, 2016), offers a dynamic platform dedicated to football fans, players, and clubs. It allows users to engage in live match discussions, follow team updates, and access football news. Social442 will let user to choose on the club they want to follow up upon registration for an account. This will make it more specific on what the user supports and will show more on the user's interest.

After completing registration, users are taken to their "home" page, commonly referred to as the feed. This section serves as the primary page for updates and content tailored to the football teams and players the user has chosen to follow, as illustrated in Figure 2.1. The feed provides a dynamic experience, offering facts, statistics, and updates about the players and clubs of interest to ensure users remain well-informed. Additionally, a simple scrolling mechanism is implemented, enabling users to seamlessly browse through more posts without any complications. This intuitive design ensures that new content is easily accessible and readily available.

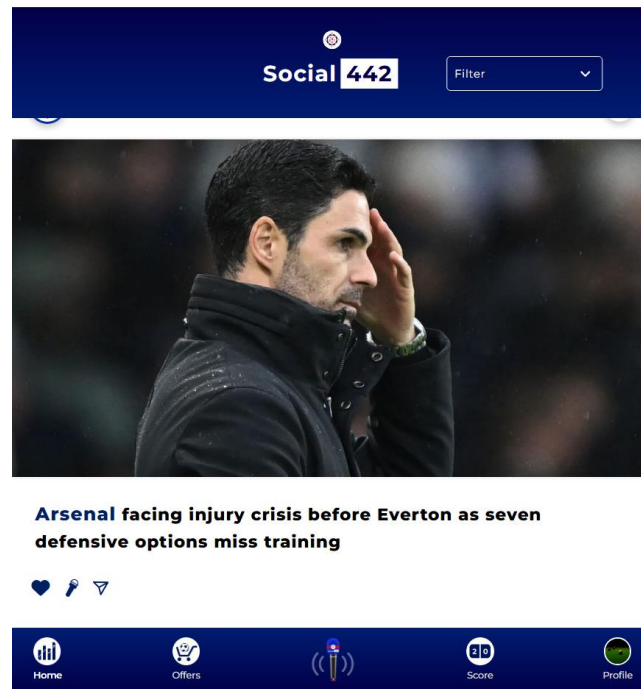


Figure 2.1: “Home” Page of Social442

Social442 further enhances user engagement by including discussions and topics relevant to the football interests’ users selected during registration. These discussions provide an interactive element, encouraging users to explore and connect with others who share similar interests. At the bottom of the feed, a navigation bar is displayed, featuring options like "home," "score," and "profile" for easy access to different sections of the platform. These features collectively contribute to creating a streamlined and personalized experience for football enthusiasts. Upon clicking score, they will show the live score of each match for today’s matches as shown in Figure 2.2. This is rather a useful feature as football fans can know on other leagues scores thus making the leagues interesting. For profile, the user will be taken to their own profile page where they can see posts, friends, following, profile pictures and other personal social media stuff. Figure 2.3 shows the profile page for an account in Social442.

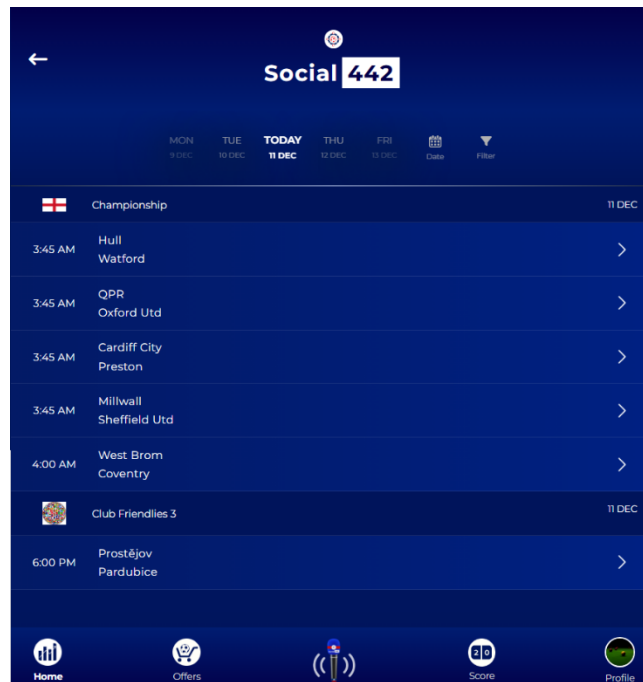


Figure 2.2: "Score" Page of Social442

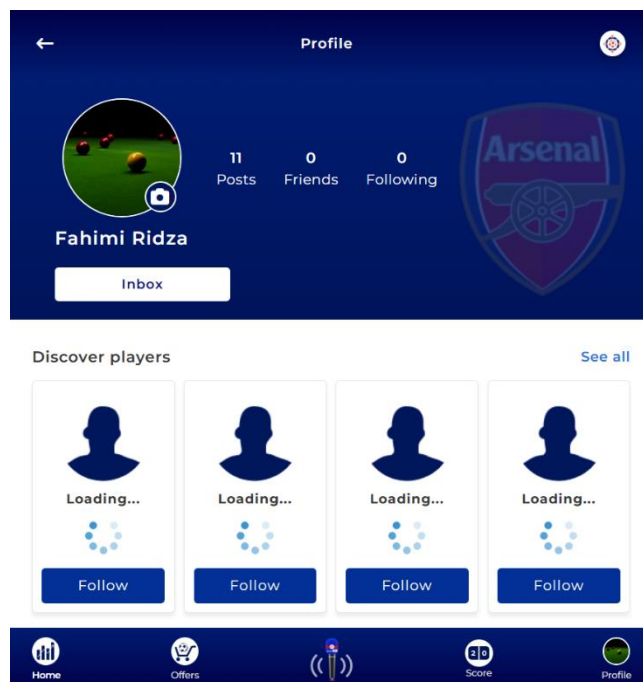


Figure 2.3: "Profile" Page of Social442

Returning to the homepage, users will find additional options located in the top right corner of the page, where three buttons are visible. The first button is "inbox," functioning similarly to the messaging system found in most social networks. Here, users can read

messages that have been sent to them or view those they have sent. The second button is "search," an essential feature for any social network. Social442's search function is particularly unique, as it not only allows users to search for specific topics but also offers a variety of suggestions when clicked. Under the search bar, users can find categories such as players, clubs, videos, and fans, as illustrated in Figure 2.4, which adds an extra layer of functionality to the search experience.

The final button is "notification," which organizes alerts into five distinct categories: timeline, players, fans, notifications, and general. These categories help streamline the notification process, allowing users to quickly navigate and manage their notifications. Figure 2.5 displays the state of the notification bar, showing how these options are presented to users.

Social442 is a straightforward platform, but its design leaves much to be desired, particularly on the desktop version, which seems to have been optimized for mobile use instead as shown in Figure 2.6. While Social442 functions similarly to mainstream social media platforms like Instagram, its interface feels cluttered and complicated, which can make it difficult for users to navigate. Surprisingly, the layout resembles that of an online newspaper rather than a typical social media site, which may confuse users looking for a more familiar experience.

The notification system is another area where Social442 falls short. By dividing notifications into five separate categories, the platform creates unnecessary complexity, which can hinder the user experience. However, despite these drawbacks, Social442 shows potential as a dedicated platform for football fans. With some design adjustments and simplifications, it could evolve into a more effective and user-friendly social network focused on the football community.

Upon reviewing Social442 as a whole, it shows great promise as a social network with significant potential for growth. Some of its features, such as the "score" and "search" options, are particularly well-executed and enhance the user experience. However, there are several areas that could be improved to elevate the platform to one of the best in the world. Key areas for improvement include refining the interface to make it more intuitive and user-friendly, as well as simplifying the notification system, which currently feels overly complicated. With these adjustments, Social442 could better serve its football community and attract a larger user base.

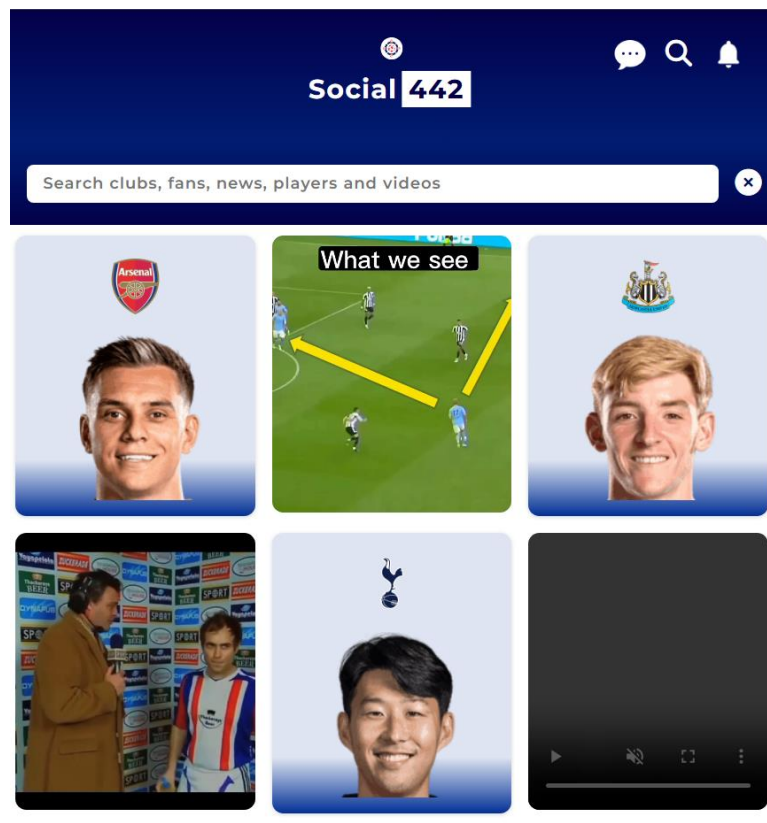


Figure 2.4: “Search” Page of Social442

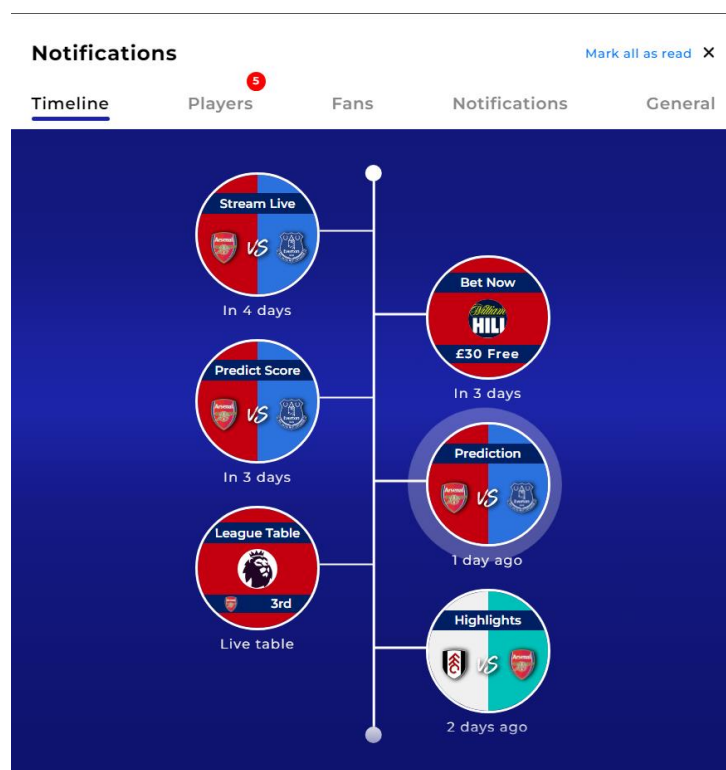


Figure 2.5: “Notification” Page of Social442

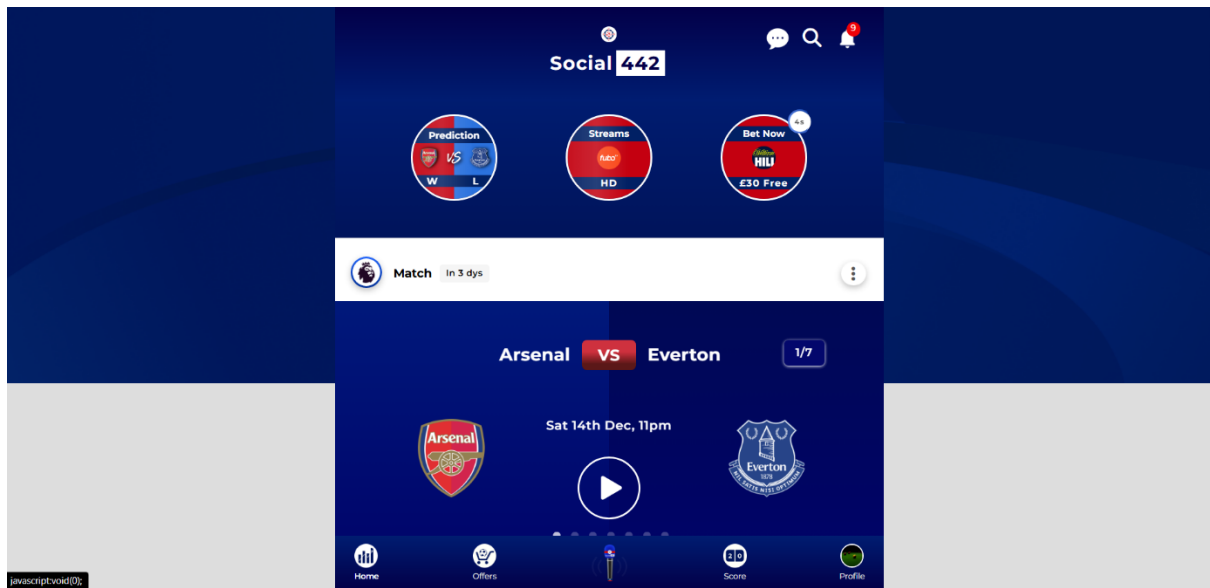


Figure 2.6: Interface of Social442

2.3.2 BePro

BePro (BE-PRO.COM, n.d.), is a specialized professional networking platform dedicated to the football industry. It facilitates connections between players, coaches, scouts, agents, and clubs, providing a space for users to showcase their profiles, highlight achievements, and explore career opportunities. The platform is designed to support career growth by offering tools for scouting, recruitment, and professional development. Functioning similarly to LinkedIn, BePro serves as a global hub where football industry professionals can network, collaborate, and advance their careers.

During the registration process, users are required to provide general information and specify their desired role within the football industry. They can choose from options such as player, coach, scout, or manager. This selection determines the user's interactions and functionalities on the platform. For instance, players can begin searching for clubs to join, while managers can look for players, coaches, or scouts to build their teams. This tailored approach ensures that users can engage with the platform in ways that align with their professional aspirations and needs.

After creating their profile, users are directed to their personalized profile page, which displays the information they provided during registration as shown in Figure 2.7. This page highlights the user's general details and chosen position within football. Additionally, users have the option to upload their football CVs and achievements, showcasing their accomplishments. This feature is particularly beneficial for scouts, as it allows them to evaluate and identify players who align with their recruitment plans effectively.

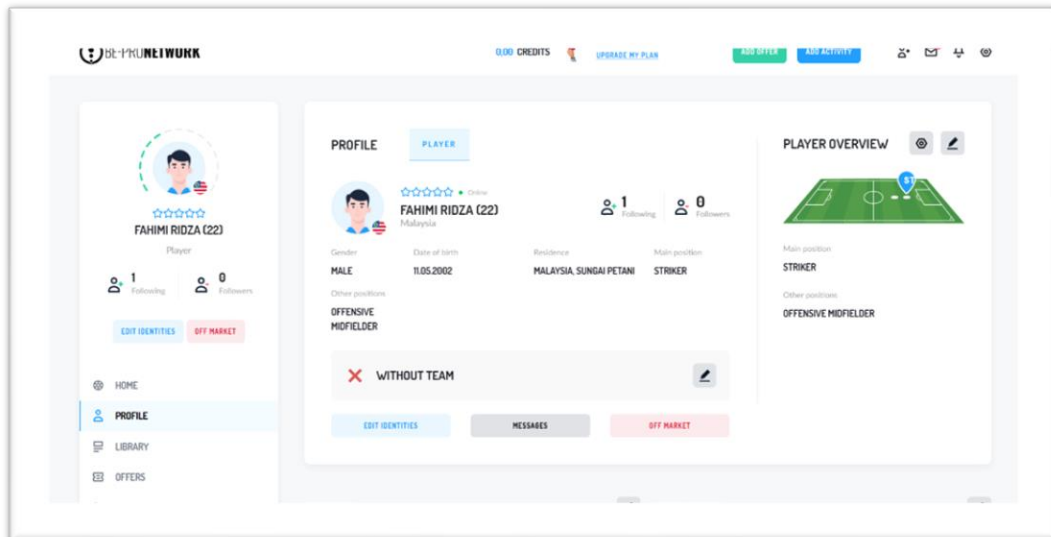


Figure 2.7: Profile for BePro

Users can navigate to their homepage to stay updated on the activities of players and other professionals within the football network. The homepage provides a dynamic view, showcasing ongoing offers for various roles such as players, coaches, scouts, and managers, as depicted in Figure 2.8. It also highlights the profiles of selected players, offering quick insights into their backgrounds and achievements, as shown in Figure 2.9.

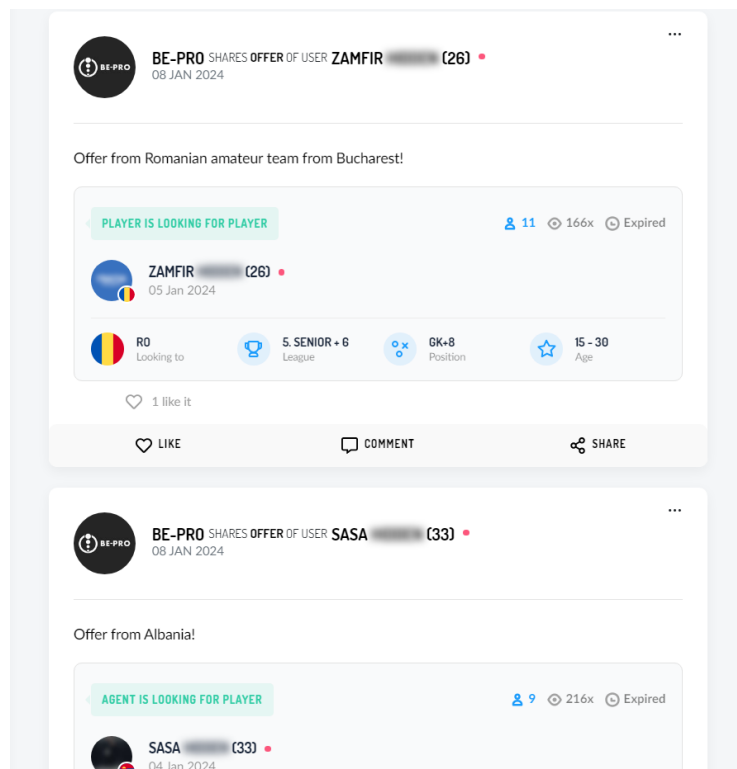


Figure 2.8: Homepage of BePro

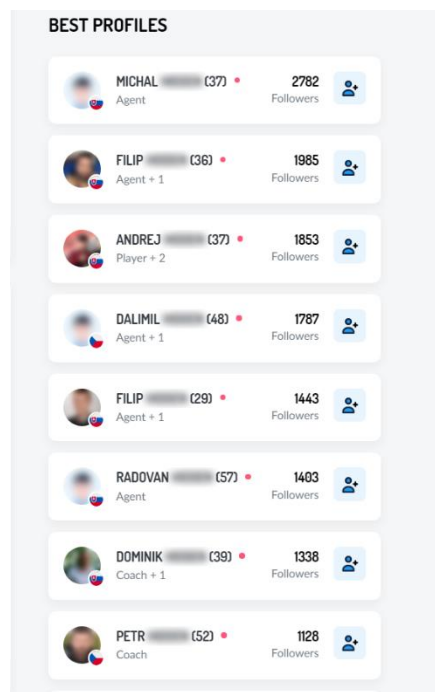


Figure 2.9: Profile Option in BePro

On the left-hand side of the homepage, an "Offers" button allows users to explore job opportunities posted by others on the platform. This feature is reminiscent of LinkedIn, functioning as a hub for job seekers and recruiters. It provides detailed information about available positions, including the role, league, and salary offered, as illustrated in Figure 2.10. This streamlined approach facilitates professional connections and career advancement within the football industry.

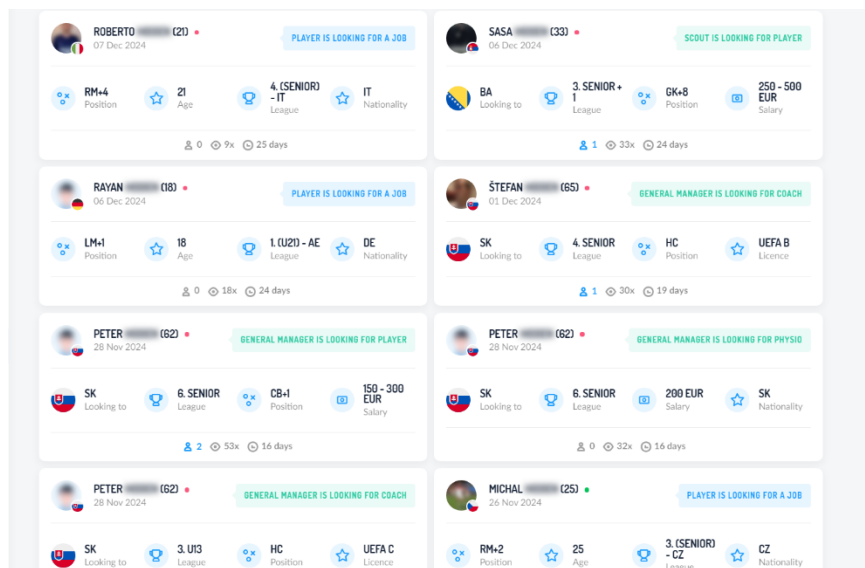


Figure 2.10: Offers Page for BePro

The user interface of BePro is well-organized, offering a seamless and user-friendly experience. One standout feature is the “Add Offer” button, located at the top right corner of the site. This unique feature allows users to post or browse job opportunities, catering to both job seekers and recruiters. What sets it apart is the option to post offers for arranging friendly matches, as shown in Figure 2.11. This functionality is particularly valuable for individuals or teams looking for opponents for practice games.

Additionally, the platform includes standard social networking features such as posting, messaging, and commenting. However, some of these features, particularly the more advanced and unique ones, require a subscription. This paywall is a notable drawback, as many of the most beneficial tools are locked behind a payment barrier, as illustrated in Figure 2.12. Despite this limitation, BePro’s intuitive design and innovative offerings make it a valuable platform for football professionals.

ADD OFFER

1. CHOICE OF IDENTITY

2. CREATE AN OFFER

3. ADDITIONAL INFORMATION

OFFER TYPE: *

☒
JOB SEEKING

☐
JOB OFFERING

☐
WE ARE LOOKING FOR
TEAM FOR FRIENDLY
MATCH

LOOKING FOR AS: *

Please choose

ADD ANONYMOUSLY: *

Please choose

 YOU CAN ADD ANONYMOUS OFFER FOR 30 DAYS FOR THE PRICE OF 9.9 €

Figure 2.11: Add Offer Page for BePro

	FREE ACCOUNT ACTIVE MEMBERSHIP	1 MONTH MEMBERSHIP BUY MEMBERSHIP	3 MONTHS MEMBERSHIP BUY MEMBERSHIP	12 MONTHS MEMBERSHIP BUY MEMBERSHIP
Creating a profile	✓	✓	✓	✓
Creating an offer	✓	✓	✓	✓
Applying for an offer	✓	✓	✓	✓
Sending messages	✓	✓	✓	✓
Read and reply to messages	✗	✓	✓	✓
User search	✗	✓	✓	✓
All user info in profile	✗	✓	✓	✓
Additional information in user profile	✗	✓	✓	✓
All user info in an offer	✗	✓	✓	✓
Adding an activity	✓	✓	✓	✓
Viewing comments	✗	✓	✓	✓
Viewing highlight video in user profile	✗	✓	✓	✓
Anonymous offer	9,90€	9,90€	9,90€	9,90€
Promotion	1€	1€	1€	1€
Promotion on BE-PRO social media	149,90€	149,90€	149,90€	149,90€
Bonus credit	✗	✗	5€	10€

Figure 2.12: Subscription Plan for BePro

BePro functions as the LinkedIn of the football world, providing a platform where clubs can find players to fill their rosters and players can discover clubs seeking talent. Unlike traditional social media platforms like how Social442 is, BePro focuses on professional networking and career advancement within the football industry. It offers an engaging and interactive experience, making it a valuable tool for fostering football development and talent discovery globally. Through features such as job postings, personalized profiles, and scouting tools, it connects various stakeholders in the football ecosystem, including players, coaches, scouts, and managers. Although some of its most unique features require a subscription, limiting access for certain users, BePro's well-structured design and clear focus on professional growth make it a significant contributor to the sport's advancement. It not only facilitates opportunities but also supports development through resources like performance analytics and training guidance, bridging gaps between talent and opportunities across the globe.

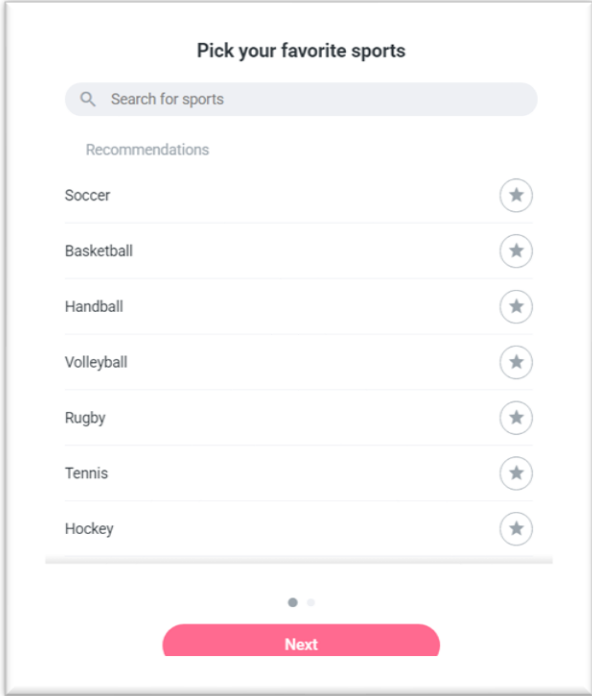
2.3.3 Be Sport

Be Sport (*Be Sport*, 2015), is a social media platform based in Paris, France. It was designed mainly to re-connect the different sides of the sports ecosystem. It covers not only soccer but also other sports that are in this world. Be Sport speciality is that it allows user to discover local events and connect with the sports world.

Be Sport was designed to be both horizontal (all sports) and universal (everyone, everywhere). Initially, Be Sport was developed to be an online social place to follow professional athletes but it changed into a rather one of the biggest sports social media platform.

To access Be Sport, the user first must register an account. Be Sport registration is easier than both of them as it only needs simple details. Once the user entered the registration form, the website will ask for sports that the user interested in. This will affect the timeline of the user as it will show more of the sports that have chosen by the user in their timeline rather than sports that the user is not interested in.

Once finished, the user will be taken to the profile to manage it. Then, the user can go to home where it will show the timeline of the user. The user can write a post, upload photos, add a poll, and more options. This is the most necessary thing for a social media platform.



The screenshot shows a mobile app interface for selecting favorite sports. At the top, the title "Pick your favorite sports" is centered. Below it is a search bar with a magnifying glass icon and the text "Search for sports". Under the search bar, the word "Recommendations" is displayed. A list of sports follows: Soccer, Basketball, Handball, Volleyball, Rugby, Tennis, and Hockey. Each sport name is on the left, and a circular icon with a star is on the right of each item. At the bottom of the screen, there is a pink button labeled "Next".

Figure 2.13: Favourite Sports Selection

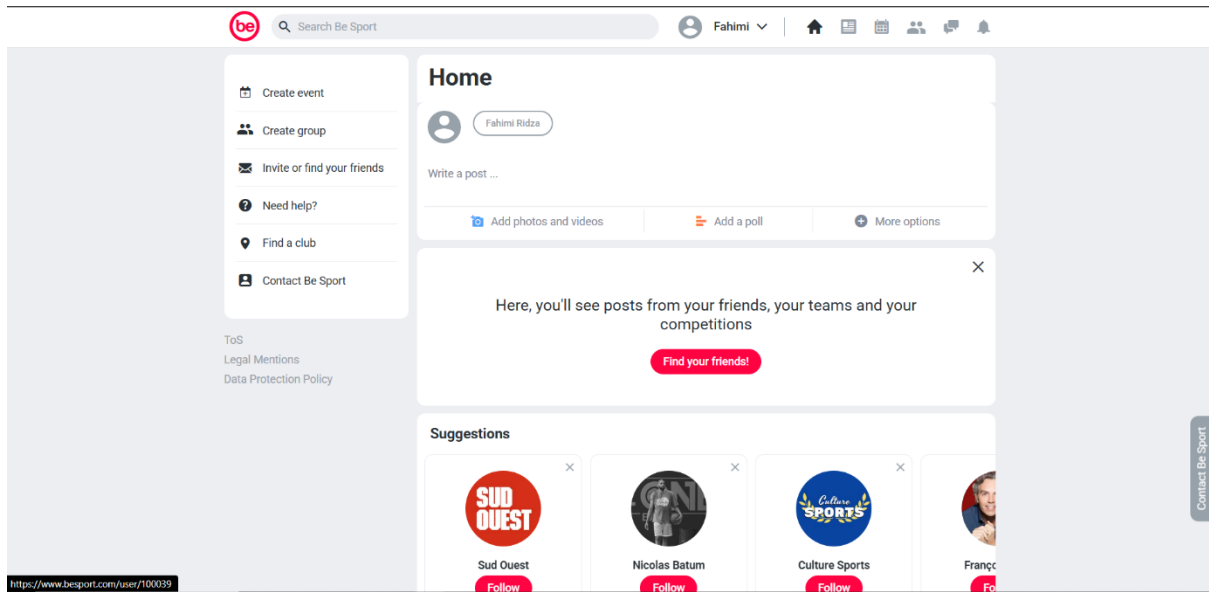


Figure 2.14: Homepage of Be Sport

At the top right, the user can access other pages like the News. On the News page, the user will be shown the news that has been chosen by Be Sport. The news will correlate with the sports that the user have chosen during registration. The user also can view the scores of the games live or that had finished. This feature is important to sports fans as it will help on keeping up on the scores of the sports that the sports fans follow.

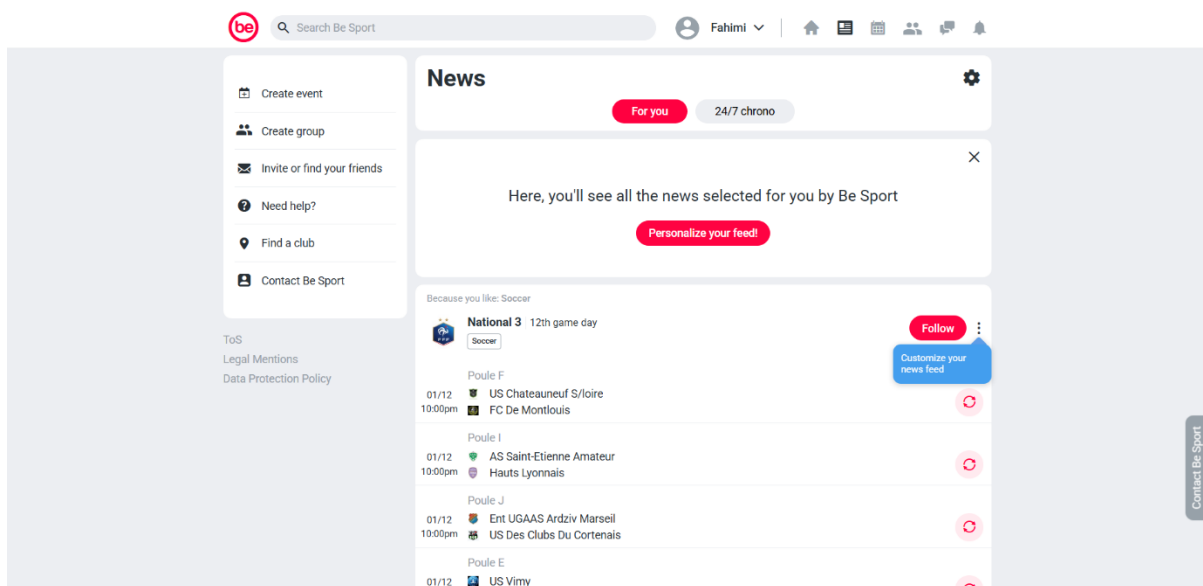


Figure 2.15: News Page of Be Sport

The next one is messaging. Similar to any other social media platform, the user can access messaging and send messages to other accounts or club that they fancy to reach out to. Other than messaging, the website also offer another important feature for any social media platform which is notifications. This is important as it will notify any updates to the user so that the user will not miss any important details. The design of the pages are very simple and user-friendly as they are easily accessible.

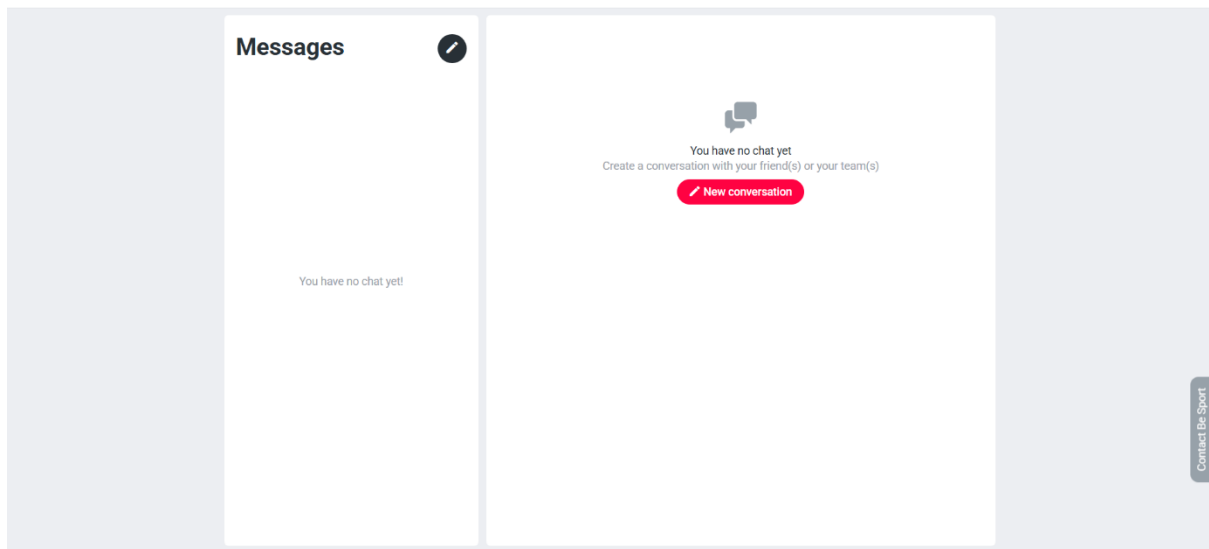


Figure 2.16: Messages Page of Be Sport

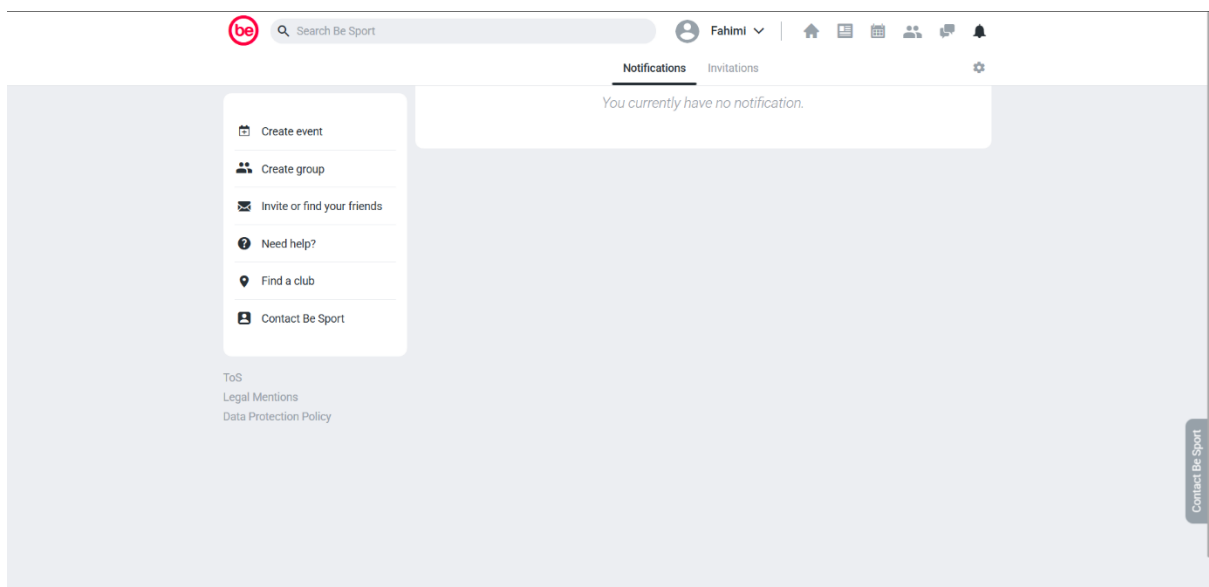
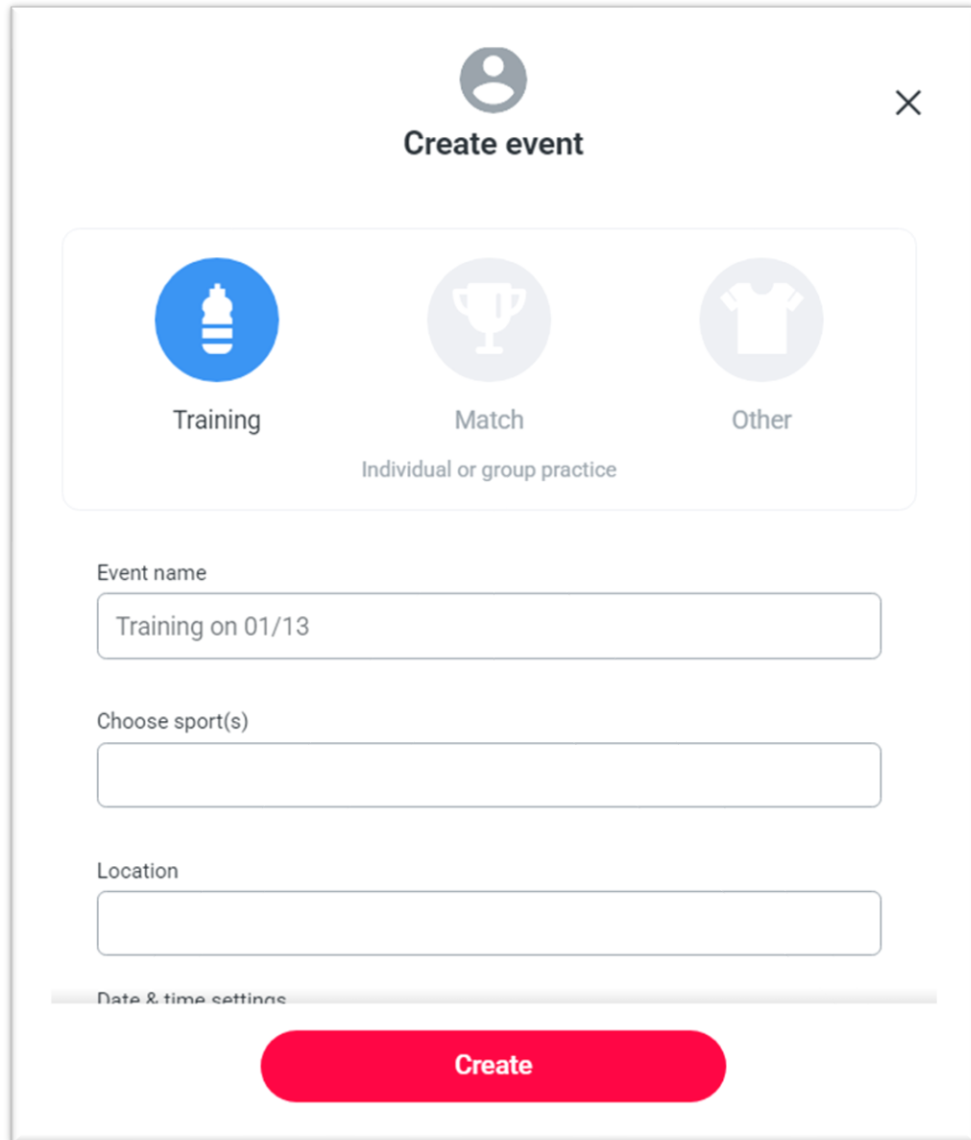


Figure 2.17: Notification Page of Be Sport

One of the best features that Be Sport had to offer is “create event”. This feature let the user to create event for anyone who interested to join in. The event can vary into anything. From training, match, to organizing a tournament. This will connect the sports community. By creating event also can help in finding the talent that was not chosen by the public eyes

especially in rural areas. If the feature is used correctly, it can help in developing sports in areas that hasn't been known.



The image shows a mobile app interface for creating an event. At the top, there's a header with a person icon and the text "Create event" next to a close button (X). Below the header, there are three circular icons: a blue one with a person and a bar chart labeled "Training", a grey one with a trophy labeled "Match", and a grey one with a t-shirt labeled "Other". Under the "Match" icon, it says "Individual or group practice". Below these icons are three text input fields: "Event name" (containing "Training on 01/13"), "Choose sport(s)", and "Location". At the bottom, there's a red button labeled "Create".

Figure 2.18: Event Management of Be Sport

Be Sport is a Paris-based social media platform designed to connect the global sports ecosystem across various disciplines. Initially created for following professional athletes, it has evolved into a comprehensive platform where users can register easily, customize their timeline based on sports preferences, and engage through posts, polls, and photos.

The platform features a personalized News page with curated updates and live scores, messaging tools, and notifications to keep users informed and connected. A standout feature is the ability to create events, enabling users to organize training, matches, or tournaments, fostering community connections and discovering hidden talent, particularly in rural areas.

However, Be Sport faces challenges such as limited awareness, a niche focus that may not appeal to non-sports fans, and competition from larger platforms. Its success relies heavily on user engagement with unique features like event creation to stand out and make a broader impact.

2.4 Comparison Between Existing Social Networks and Proposed Social Network

Comparison between existing social networks and proposed social networks which is FutbolLink is important to see what the existing social networks have to offer and what need to be included into FutbolLink to achieve the best version of the social network platforms for football.

Table 2.1 Comparison Between Existing Social Networks and Proposed Social Network

Social Networks Features	Existing Social Networks			Proposed Social Network
	Social442	BePro	BeSport	FutbolLink
Fan Engagement	✓	✗	✓	✓
Professional Networking	✗	✓	✓	✓
Role-Specific Profiles	✗	✓	✗	✓
Live Score	✓	✗	✓	✗
Subscription	✗	✓	✗	✗
Community Discussion	✓	✗	✗	✓
Content Sharing	✓	✓ (Only CVs)	✓	✓
Notification	✓ (Clatter Notification Bar)	✓	✓	✓
User Interface	✗ (Not good)	✓	✓	✓
Offers Posting	✗	✓	✗	✓

CV/Achievements	✗	✓	✗	✓
Posting				
Event Management	✗	✗	✓	✗

By comparing Social442, BePro, and Be Sport, FutbolLink is designed as an enhanced hybrid platform combining the best features of them. FutbolLink will support fan engagement, professional networking, and role-specific profiles while maintaining a user-friendly interface and subscription-free core features. It plans to include community discussion, content sharing (including CVs), offers posting, event management and an intuitive notification system.

FutbolLink will serve as a dynamic platform to help individuals in the football industry connect with professionals effortlessly just like BePro. Users can showcase their profiles through detailed CVs, achievements, videos, and more, allowing scouts, coaches, and clubs to discover talent seamlessly. With tools for role-specific networking, offer posting, and interactive community features, FutbolLink will bridge gaps between aspiring players and established professionals, fostering career growth and collaboration. Its intuitive design and diverse functionalities will make it a one-stop solution for football networking and development.

Unlike Social442's cluttered design or BePro's subscription barriers, FutbolLink will provide accessible tools for clubs and players to connect, scout, and collaborate effectively. This streamlined approach is tailored for comprehensive football industry integration.

2.5 Review of Technologies and Tools

2.5.1 Introduction

Developing FutbolLink as a web-based social networking platform for footballers requires careful selection of technologies and tools to ensure the system is scalable, user-friendly, and efficient. This section reviews the tools and technologies considered and justifies the final selections based on project requirements, usability, community support, and compatibility.

2.5.2 Frontend Technologies

HTML5, CSS3, and JavaScript

HTML5 provides the structure of the web pages, while CSS3 enhances styling and layout. JavaScript is used to add interactivity, form validations, and dynamic updates without reloading the page. These technologies are standard in web development and supported by all modern browsers. They ensure responsive design and compatibility across devices.

Livewire (Laravel)

Livewire is a full-stack framework for Laravel that allows for dynamic user interfaces without leaving the Laravel ecosystem. It simplifies frontend development by allowing developers to use PHP for both server-side and frontend logic, reducing the need for complex JavaScript frameworks.

2.5.3 Backend Technologies

PHP and Laravel Framework

Laravel is a modern PHP framework known for its clean syntax, built-in authentication, ORM (Eloquent), and robust community support. Laravel's MVC architecture ensures organized code and scalability. Features like routing, middleware, and validation are built-in, speeding up development and ensuring security.

2.5.4 Database

MySQL

MySQL is an open-source relational database management system known for performance, reliability, and ease of use. It integrates seamlessly with Laravel through Eloquent ORM. MySQL is suitable for managing user-generated data such as posts, messages, and profiles with strong relational data structures.

2.5.5 Development Tools

Visual Studio Code

A lightweight and powerful source code editor with support for extensions like Laravel Blade, PHP IntelliSense, and Git integration. It offers excellent support for PHP and Laravel, with real-time syntax highlighting and debugging.

XAMPP

An easy-to-install Apache distribution that includes MySQL, PHP, and phpMyAdmin. XAMPP provides a local development server to build and test the application before deployment.

Git & GitHub

Version control using Git and remote storage using GitHub allows collaboration and version tracking. It enables efficient code management, version control, and collaboration during development.

2.5.6 Deployment and Hosting

Hostinger

A budget-friendly VPS hosting provider that supports PHP and MySQL. Chosen for affordability, ease of control panel, and ability to handle Laravel applications for deployment with minimal setup.

phpMyAdmin

A web-based tool for managing MySQL databases. It simplifies database management tasks such as importing/exporting data, running SQL queries, and managing tables.

2.5.7 Summary

The selection of technologies and tools for FutbolLink was based on their compatibility, developer productivity, and community support. By leveraging Laravel with Livewire, MySQL, and modern development tools like Visual Studio Code and XAMPP, FutbolLink ensures a smooth development process and delivers a scalable, maintainable, and user-friendly platform tailored to the Malaysian football ecosystem.

2.6 Benefits on Combining Social442, BePro, and Be Sport

FutbolLink is a hybrid platform combining the best of Social442, BePro, and Be Sport, designed to significantly enhance football development. By blending fan engagement with professional networking, it provides a unique space for players, coaches, and scouts to connect easily. Features such as CV and achievement uploads, video sharing, job postings, and live discussions streamline opportunities for talent discovery and collaboration. The platform's holistic approach brings more benefits than drawbacks, fostering global football growth and bridging gaps between professionals and aspiring talent.

Table 2.2 Benefits of Combining Existing Social Network Platforms

Benefits	Descriptions
Comprehensive Engagement	Offers both fan interaction and professional networking, appealing to a wider audience.
Enhanced Visibility	Allows players and professionals to showcase CVs, achievements, and videos, increasing chances of discovery by scouts and clubs.
Role-Specific Tools	Tailored features for fans, players, coaches, and managers ensure a personalized experience.
Seamless Integration	Combines live discussions, job postings, and scouting tools for a one-stop football platform.
Connectivity	Bridges fans and professionals, fostering collaboration and talent development.

These benefits demonstrate that integrating three distinct social networks into one cohesive platform a blend of social media and professional job posting offers a powerful solution for football. FutbolLink's dual-purpose design ensures accessibility for fans and professionals alike, creating a holistic environment for engagement and career advancement. By fostering connections and facilitating opportunities, the platform stands as a progressive idea that supports the football ecosystem, enhancing collaboration, visibility, and development in football.

2.7 Summary

In conclusion, FutbolLink combines the strengths of Social442, BePro, and Be Sport, creating a unified platform that enhances both fan engagement and professional networking in football. By integrating social media features with tools for career development, such as CV sharing, video highlights, and job postings, it bridges the gap between fans, players, and professionals. This innovative approach supports football development by fostering connections, increasing visibility for talent, and facilitating collaboration, making it a valuable addition to the football ecosystem.

Chapter 3 : Methodology

3.1 Introduction

Agile Methodology was chosen and Scrum is the class of the methodology that has been chosen for this proposed social network website. Brief description of the methodology is listed in this chapter. Questionnaire has been conducted to collect the data or requirements. The data collected was from people that has played football at any level, coaches that has been in this sports for a while, and also to people who views football as some kind of job. The data collected will be identified and analyzed.

Use case diagrams and their descriptions are used in this project to identify the project behavior and the structure of the proposed social network website. Sequence diagram and activity diagrams are also used in this project with the same reason as the use case diagrams.

3.2 Brief Description of Methodology

Scrum consists of sprint where the people involved in the project will have to complete the tasks allocated for each sprint. Treat the sprint as commitment to completing the targeted works for each sprint. Scrum methodology, an Agile approach emphasizing iterative and incremental development, (Hema et al., 2020).

In Scrum, there are **three primary roles** that together form the **Scrum Team**. Each role has distinct responsibilities, ensuring the team collaborates effectively to deliver value. The roles are **Product Owner**, **Scrum Master**, and **Developers**.

- **Scrum Master**

The Scrum Master serves as a servant leader and facilitator, ensuring adherence to Scrum principles and practices. This role involves organizing key Scrum events, such as Sprint Planning, Daily Scrum, Sprint Review, and Retrospective, while actively removing impediments that hinder progress. By coaching the team on agile methodologies, the Scrum Master fosters self-organization and accountability. Additionally, the role includes shielding the team from external distractions, collaborating with the Product Owner to maintain a clear and prioritized backlog, and promoting continuous improvement through reflection

and process enhancement. The Scrum Master creates a positive and productive environment, enabling the team to deliver value effectively.

- **Product Owner**

The Product Owner is responsible for maximizing the value of the product by managing the Product Backlog and serving as the primary bridge between stakeholders and the development team. This role involves defining and communicating the product vision, prioritizing work to align with business objectives and customer needs, and ensuring clarity of requirements for the team. By collaborating with stakeholders to gather feedback and validate requirements, the Product Owner ensures the product meets expectations while balancing business goals and technical constraints. Additionally, the Product Owner inspects deliverables at the end of each Sprint to ensure they meet the Definition of Done and align with the overall vision.

- **Developer**

The Developer in a Scrum team is responsible for turning ideas into tangible deliverables by designing, building, testing, and maintaining the product. This role involves working collaboratively within the team to plan and execute tasks from the Sprint Backlog, ensuring each increment meets the Definition of Done. Developers actively participate in Scrum events, such as Sprint Planning, Daily Scrum, and Sprint Review, to synchronize efforts, address challenges, and adapt plans as needed. Additionally, the Developer focuses on delivering high-quality, functional, and incremental progress while adhering to technical best practices and contributing to continuous improvement within the team.

3.2.1 Artifacts in Scrum

In Scrum, there are total of 3 artifacts. Artifacts are key tools or outputs that provide transparency and alignment among the team and stakeholders. They help track progress and ensure everyone is working toward the same goals. The artifacts are **Product Backlog**, **Sprint Backlog**, and **Increment**.

- **Product Backlog**

The **Product Backlog** is a prioritized list of all the features, requirements, enhancements, and fixes needed for the product. The owner of product backlog is the **Product Owner**. It acts like a to-do-lists, evolving as the product and its environment change. Items in the backlog are typically written as user stories or tasks and are prioritized based on business value and customer needs.

- **Sprint Backlog**

The **Sprint Backlog** is a subset of items selected from the Product Backlog for a specific Sprint. It includes a detailed plan to deliver those items within the Sprint. Owned by the Scrum Team, but in this case, it is owned by the developer, the Sprint Backlog represents the developer's commitment to delivering specific goals in the short term. It often includes a breakdown of tasks to provide better visibility and help manage progress.

- **Increment**

The **Increment** is the sum of all completed Product Backlog items during a Sprint, combined with the value delivered in previous increments. It represents a tangible output of a Sprint that is potentially shippable and ready for release. Each Increment must meet the **Definition of Done**, which is a shared understanding of what “done” means to ensure quality and consistency.

3.2.2 Activities in Scrum

In Scrum, **events** are time-boxed activities designed to provide structure, foster collaboration, and promote continuous improvement. They ensure transparency, inspection, and adaptation throughout the process. The five main Scrum events are **Sprint**, **Sprint Planning**, **Daily Scrum**, **Sprint Review**, and **Sprint Retrospective**.

- **Sprint**

The Sprint is the core of Scrum, representing a time-boxed iteration during which the team works to deliver a usable product increment. Sprints are typically 1-4 weeks long and remain consistent in duration throughout the project. A Sprint includes all other Scrum events and ends with a potentially shippable increment of the product. No changes to the Sprint Goal are allowed once the Sprint starts, ensuring the team stays focused.

- **Sprint Planning**

Sprint Planning occurs at the start of a Sprint and involves the entire Scrum Team. The purpose is to set the Sprint Goal and decide what work will be completed during the Sprint. It answers three key questions.

- **Daily Scrum**

A quick, 5-10 minute session where people review their work and assess progress toward the Sprint Goal. It helps developers stay organized, identify obstacles, and maintain a clear sense of direction.

- **Sprint Review**

The purpose of the Sprint Review is to showcase the progress made on the Product Backlog items in preparation for future deliveries. By the end of the review, the client should be able to clearly see noticeable improvements in the overall product.

- **Sprint Retrospective**

The Sprint Retrospective is the final event of the Sprint and focuses on team improvement. The Scrum Team reflects on what went well, what didn't go well, and what could be improved. The goal is to identify actionable steps to enhance the

team's processes, collaboration, and overall effectiveness. This event is time-boxed to 3 hours for a one-month Sprint and is facilitated by the Scrum Master.

The FutbolLink system is a personal project developed by the researcher to address the current demands identified through an analysis of various existing systems, as highlighted in Chapter 2. While the project does not have concrete stakeholders or external clients, the Scrum methodology is adopted to ensure a structured and iterative development process. Since it is a personal project, the researcher will assume all three Scrum roles: Product Owner, Scrum Master, and Developer.

Application of Scrum Methodology in FutbolLink

- **Product Backlog Creation**

The Product Backlog serves as the foundation of the system, containing a comprehensive list of functionalities and features to be implemented. These items are identified by comparing the gaps and demands highlighted in existing systems. Each functionality is defined as a Product Backlog Item (PBI), ensuring alignment with FutbolLink's purpose of combining social networking and career-building tools for football enthusiasts.

- **Sprint Planning**

During Sprint Planning, the researcher selects a subset of PBIs from the Product Backlog to include in the Sprint Backlog. These PBIs are chosen based on their priority and feasibility for delivery within the sprint duration. The length of each sprint is determined by the researcher and ensures manageable and iterative progress.

- **Daily Scrum**

The Daily Scrum is conducted to review the progress toward the Sprint Goal and to plan the tasks for the next 24 hours. This meeting, lasting approximately 15 minutes, allows the researcher to evaluate the ongoing development and identify any challenges that may require resolution.

- **Incremental Development**

The system is developed incrementally, following the iteration approach fundamental to Scrum. Each sprint results in a potentially shippable increment, which reflects the progress made in achieving the goals outlined in the Sprint Backlog. The iterative nature of this approach ensures continuous improvement and refinement of FutbolLink.

- **Sprint Review**

At the end of each sprint, a Sprint Review is conducted to present the completed increment. While the project does not involve external stakeholders, feedback is gathered from one of the Final Year Project (FYP) supervisor, Dr. Muhammad Asyraf bin Khairuddin. This feedback is used to validate the progress and refine priorities for future sprints.

- **Sprint Retrospective**

Following each sprint, a Sprint Retrospective is held to reflect on the development process and identify areas for improvement. The retrospective ensures that lessons learned from previous sprints are incorporated into subsequent iterations, fostering continuous improvement and efficiency.

The iterative and incremental nature of Scrum ensures that FutbolLink evolves systematically, with each sprint contributing to the overall functionality and usability of the system. The absence of external stakeholders in this project does not hinder the development process, as feedback from the supervisor acts as a substitute for client reviews. These processes will continue until the system is completed and ready for demonstration as part of the Final Year Project.

By employing the Scrum methodology, FutbolLink is developed with a clear structure and iterative feedback, ensuring the creation of a robust and user-centric system aimed at advancing football development in Malaysia.

3.3 Requirement Analysis

The FutbolLink is demonstrated using the questionnaire requirements and UML diagrams such as the use case diagram, sequence diagram, activity diagram, and class diagram.

3.3.1 Requirement Elicitation from Questionnaire

The requirement elicitation was done by distributing a questionnaire via Google Form. The questionnaire is divided into five categories: General Information, Social Networking Features, Professional Networking Features, Community Engagement and Development, and Usability and Preferences. A total of 30 persons answered to the survey. The survey was designed to collect and assess user requirements. Each part focusses on FutbolLink's requirements and possibilities as a football-based social networking platform.

3.3.2 Section A: General Information

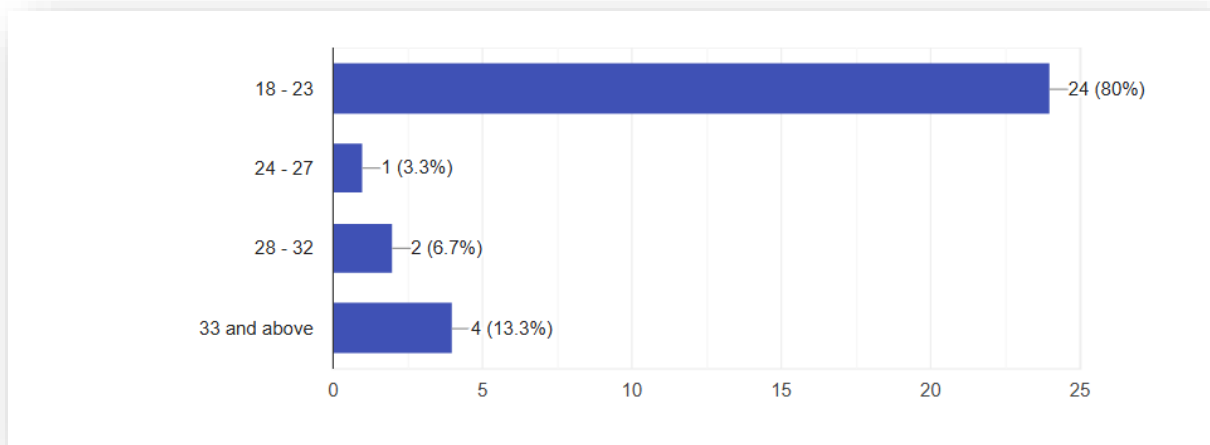


Figure 3.1: Age

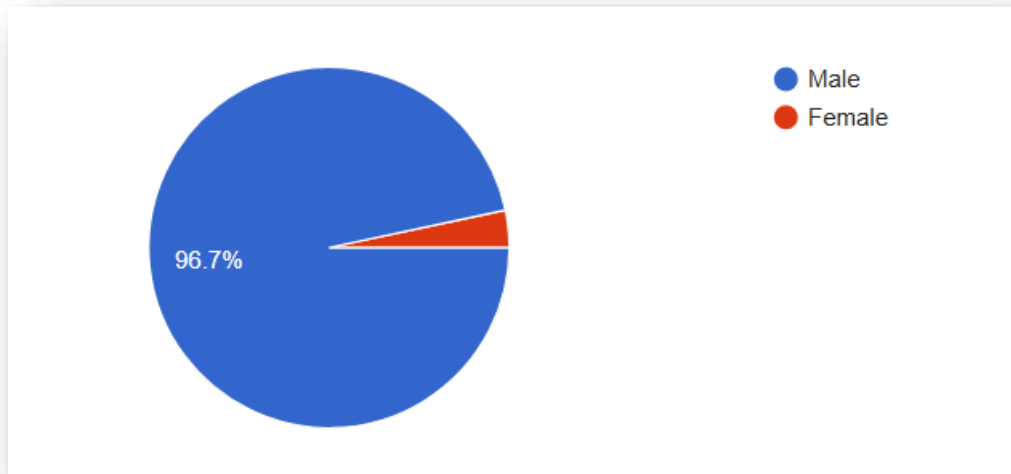


Figure 3.2: Gender

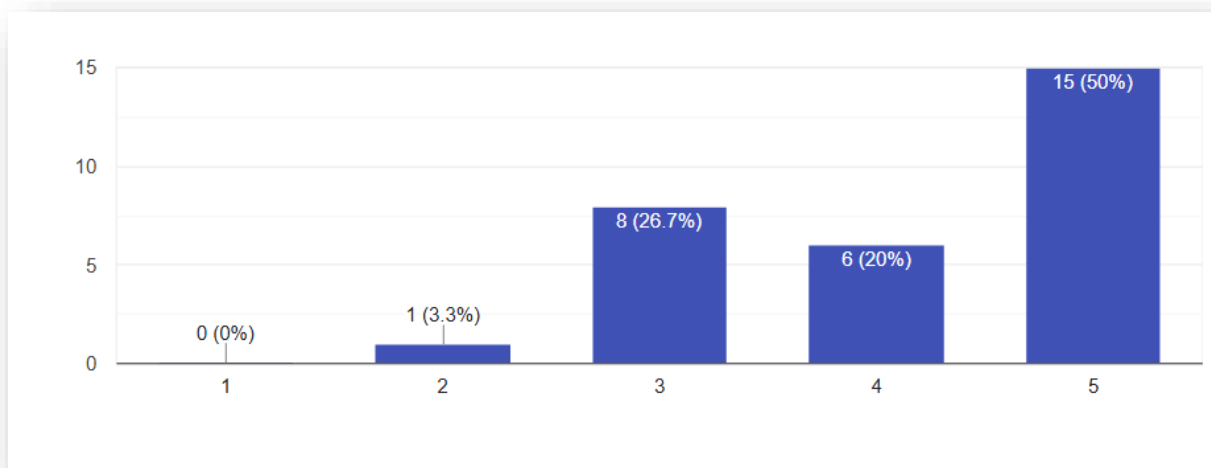


Figure 3.3: Social Media Usage Frequency

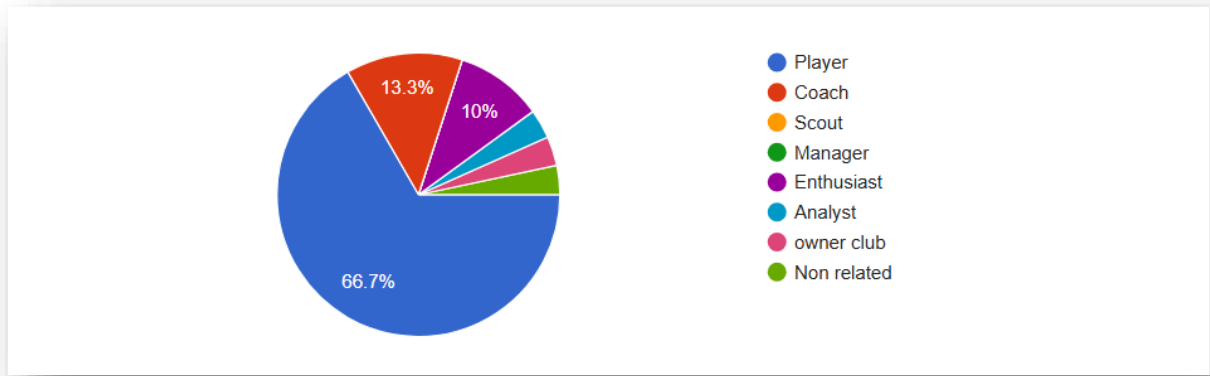


Figure 3.4: Roles in Football

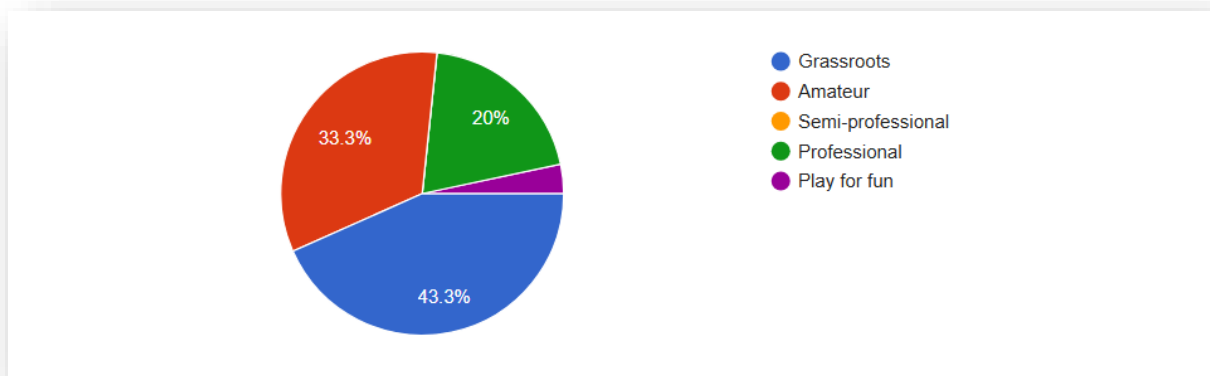


Figure 3.5: Level of Football Participation

The image presents survey data visualized through various charts. The **age distribution** chart shows that the majority of respondents (80%) are aged 18-23, with smaller percentages in older age groups: 24-27 (3.3%), 28-32 (6.7%), and 33 and above (13.3%). A **gender pie chart** reveals that most participants are male (96.7%), with only 3.3% being female. Another chart highlights the **frequency of social media usage**, where half of the respondents (50%) reported frequent use (rated 5 on a scale), while smaller groups rated their usage as 4 (20%), 3 (26.7%), or 2 (3.3%), and none rated it as 1 (least frequent). The **roles in football** pie chart indicates that a significant majority (66.7%) are players, followed by coaches (13.3%), managers (10%), and smaller portions identifying as enthusiasts, scouts, analysts, club owners, or unrelated to football. Finally, the **level of football participation** chart shows that 43.3% of respondents are involved at the semi-professional level, 33.3% at grassroots, 20% at the

amateur level, and smaller groups indicating other levels or reasons for participation. Together, these charts provide insights into the demographics, social media habits, roles, and engagement levels of the respondents in football.

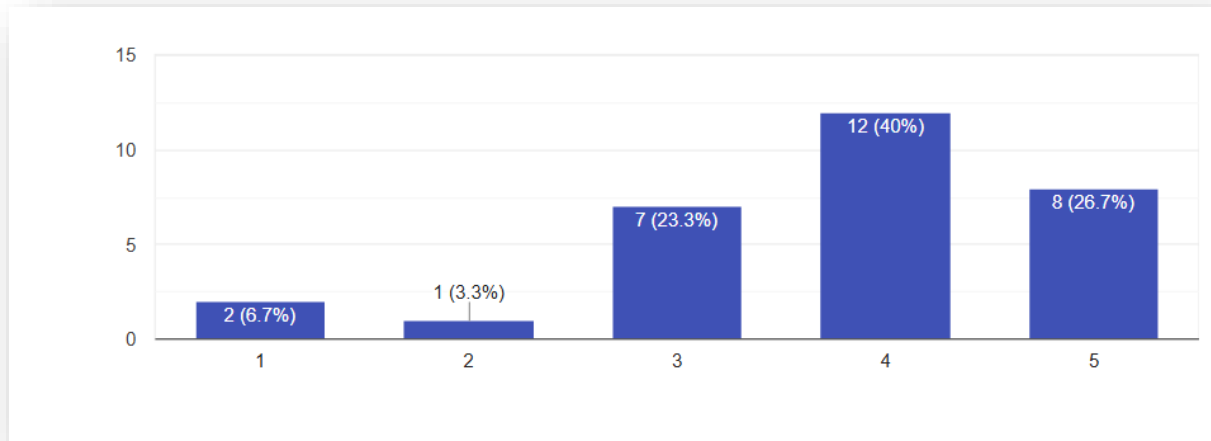


Figure 3.6: Users' Updates Following Importance

The Bar Chart in Figure 3.7 shows that the people have vary their thinking on how important following updates from other users. Most of them choose important at 40% and very important at (26.7%). 7 of the respondents chose neutral on how they feel on following updates, 1 person chose somewhat important and the other 2 chose not important. By this information, real-time updates of the players, coaches, and clubs need to be taken into account as it is quite important for the users.

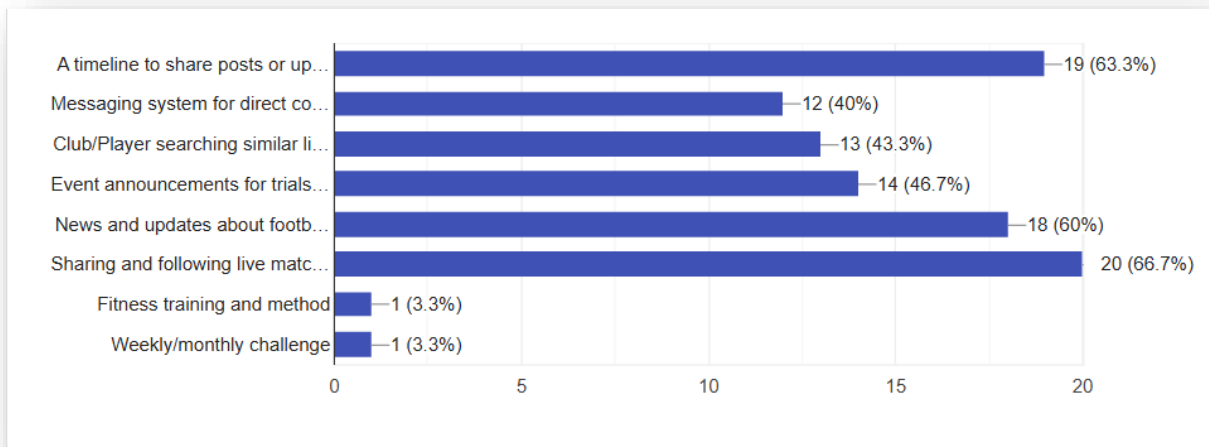


Figure 3.7: Useful Features

Figure 3.8 shows these are the features that the respondents think are most useful in a football-specific social networking platform. The most being “sharing and following live matches” with 20 votes (66.7%) while the closest to it are “timeline to share posts or updates” with 19 (63.3%) and “news and updates about football with 18 (60%). The median tier are “messaging system”, “club/player searching”, and “event announcement”. They have 12 votes (40%), 13 votes (43.3%), and 14 votes (46.7%) accordingly. The least votes are “fitness training and method” and “weekly/monthly challenge” with both having 1 vote each (3.3%). By this chart, the people want a normal social network platform with features that they are used to which is similar to any other social media platform. They also want something new like the “fitness training” and “challenges”.

3.3.3 Section B: Platform Usability

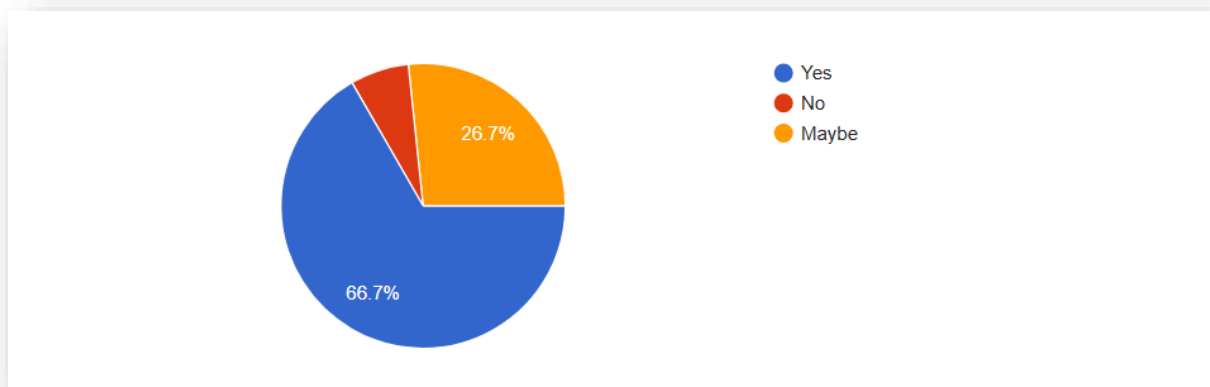


Figure 3.8: FutbolLink as Job Searching

Figure 3.9 illustrates the responses of 30 participants to the question, "Would you use FutbolLink to find clubs, players, or other professionals for your football career?" A significant majority, **66.7%**, indicated they would use the platform ("Yes"), suggesting strong interest in its potential benefits. Another **26.7%** were uncertain ("Maybe"), highlighting an opportunity to address concerns or provide more information to convert them into users. Only a small fraction, **6.7%**, expressed no interest in using the platform ("No"). This data indicates that FutbolLink holds promise as a tool to connect individuals in the football industry, with the potential to cater to a large segment of users actively seeking such services.

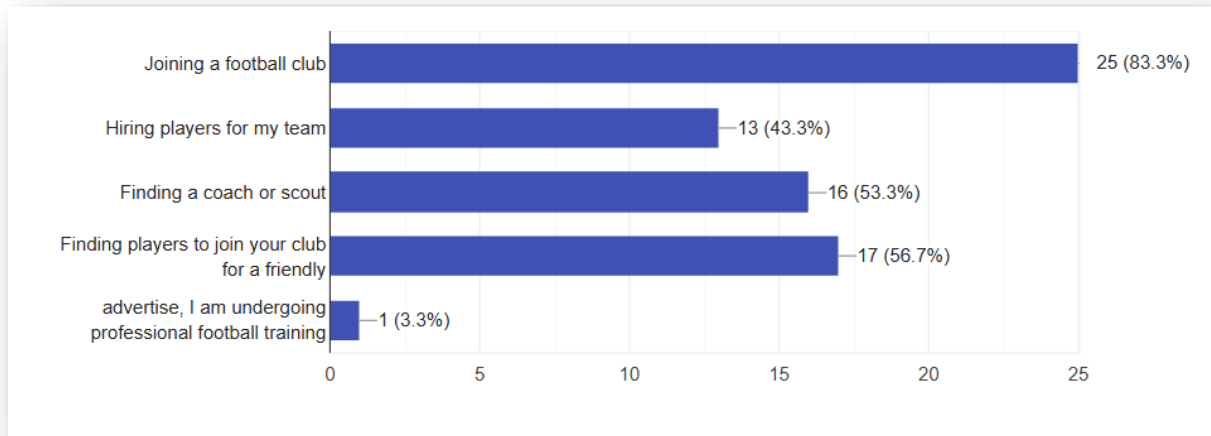


Figure 3.9: Explore Opportunities

Figure 3.10 highlights the types of opportunities users are most interested in exploring on the platform, based on responses from 30 participants. The most popular option, selected by **83.3%**, is "Joining a football club," demonstrating a strong demand for this feature. Following this, **56.7%** expressed interest in "Finding players to join your club for a friendly," and **53.3%** are looking to "Find a coach or scout," indicating a focus on networking and team-building. Additionally, **43.3%** are interested in "Hiring players for my team," while a smaller segment (**3.3%**) seeks to advertise their professional football training. These results emphasize that the platform's primary value lies in connecting players, clubs, and professionals to facilitate career advancement and collaboration.

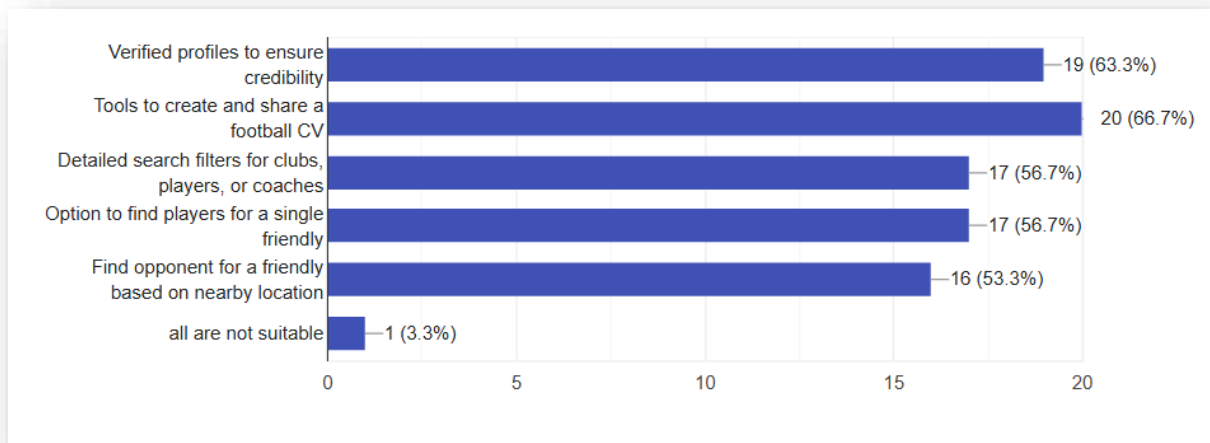


Figure 3.10: Standout Features

Figure 3.11 highlights features respondents believe would enhance FutbolLink as a professional networking platform. The most selected feature, chosen by **66.7%**, is "Tools to create and share a football CV," emphasizing the importance of showcasing professional qualifications. **63.3%** value "Verified profiles to ensure credibility," reflecting a demand for trustworthiness on the platform. Other notable features include "Detailed search filters for clubs, players, or coaches" and the "Option to find players for a single friendly," both selected by **56.7%**. Additionally, **53.3%** would like the ability to "Find opponents for a friendly based on nearby location." A small percentage (**3.3%**) found none of the options suitable.

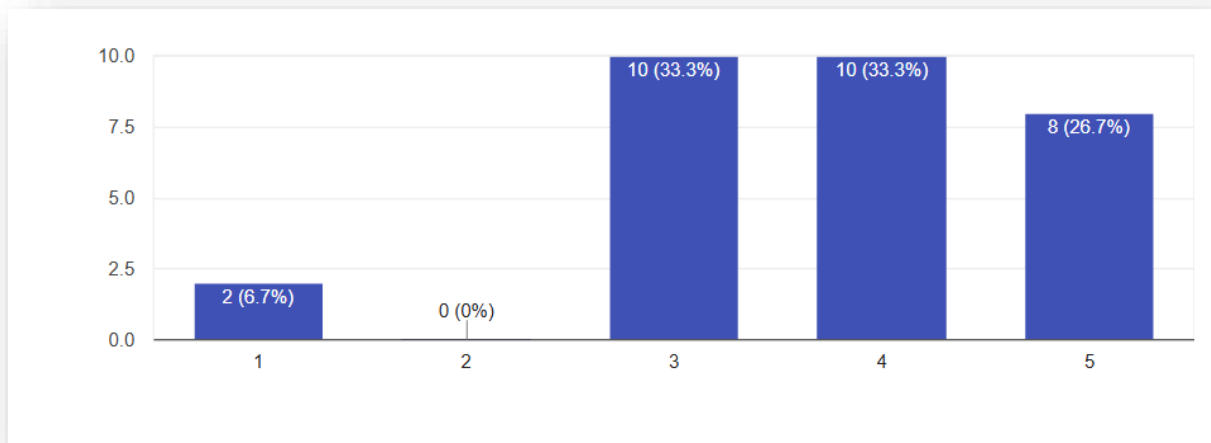


Figure 3.11: FutbolLink to Find Talents and Opportunities

Figure 3.12 reveals how often users would utilize FutbolLink to search for opportunities or talents. Most respondents were evenly split, with **33.3%** selecting "3" and another **33.3%** choosing "4" on a frequency scale of 1 to 5, suggesting moderate to frequent usage. **26.7%** indicated the highest usage level of "5," while **6.7%** selected the lowest frequency of "1." None selected "2," highlighting a general inclination toward regular usage rather than minimal engagement.

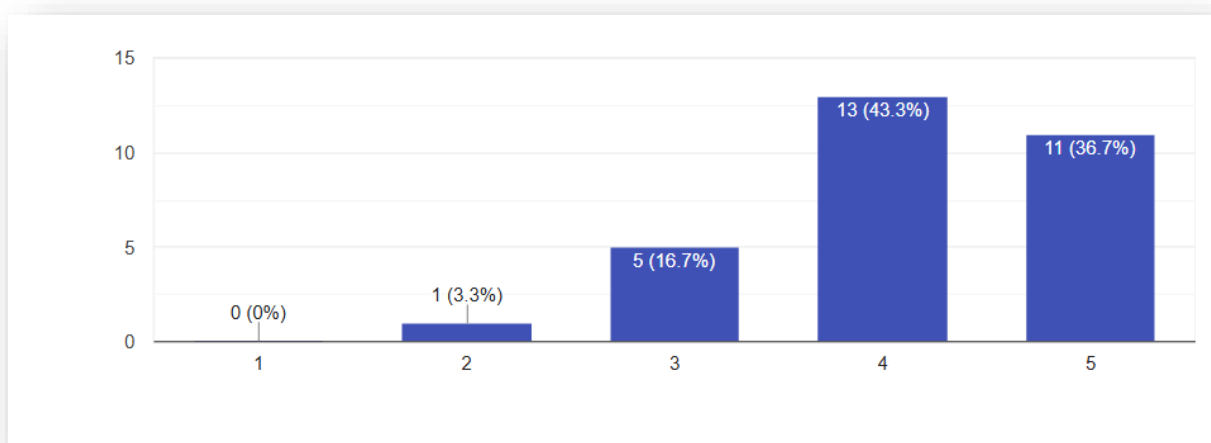


Figure 3.12: Detailed Profile Showcasing Importance

Figure 3.14 evaluates how important users find detailed profiles that showcase players' or coaches' career histories, achievements, and references. The majority consider this important, with **43.3%** rating it "4" and **36.7%** rating it "5" on a 5-point scale. A smaller group (**16.7%**) gave it a "3," while very few rated it as unimportant, with only **3.3%** choosing "2" and none rating it "1." These results highlight the critical role detailed profiles play in fostering trust and professionalism on the platform.

3.3.4 Section C: Challenges Faced by Users

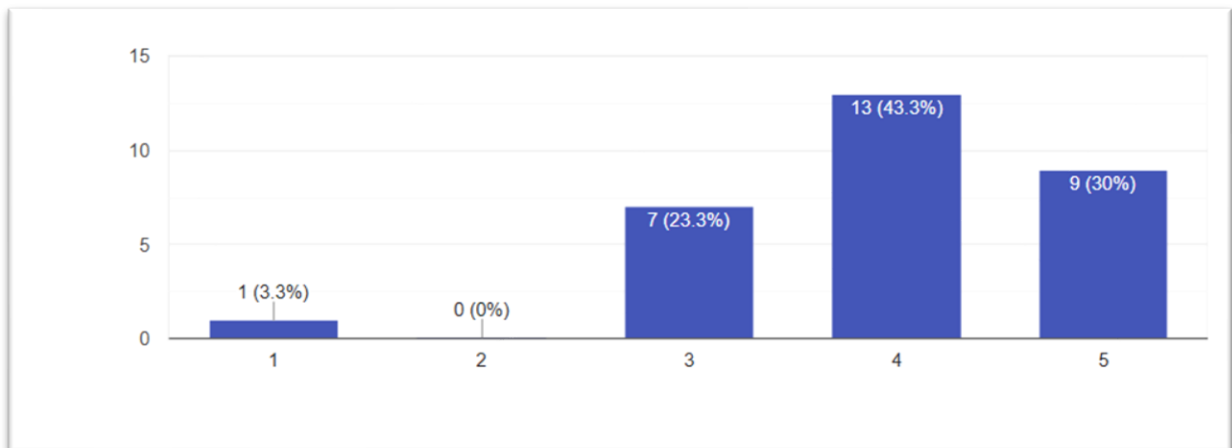


Figure 3.13: Football Connection Importance

Figure 3.15 shows the responses reveal that connecting with other football enthusiasts or professionals is considered important by the majority of participants. **43.3%** rated it as "4" and **30%** as "5" on a 5-point scale, showing a strong preference for networking opportunities. A moderate **23.3%** rated it as "3," indicating some interest, while only **3.3%** considered it unimportant by selecting "1." This indicates that FutbolLink could be instrumental in building a network-driven platform with features such as community forums, messaging systems, and virtual networking events to facilitate meaningful interactions among users.

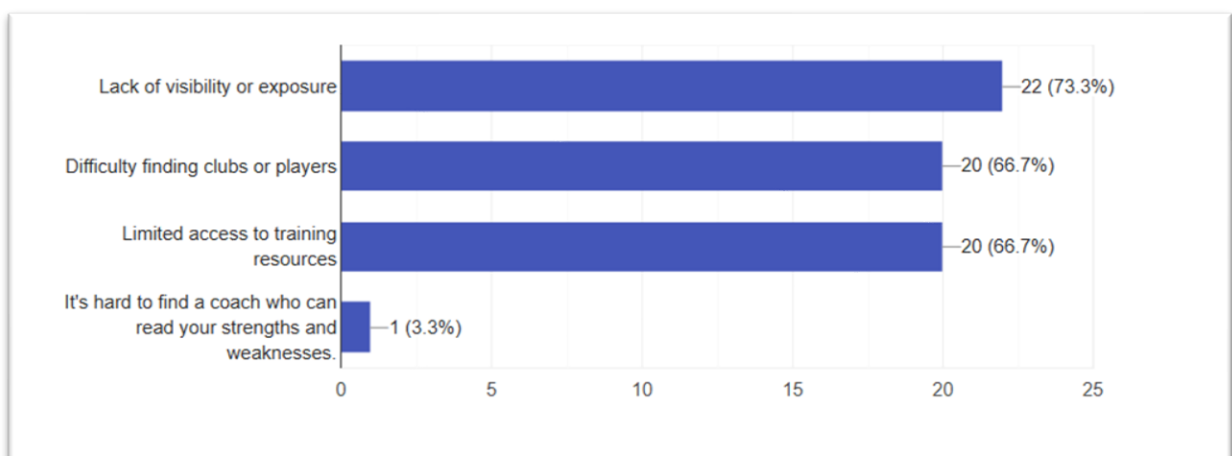


Figure 3.14: Challenges Players Face

Figure 3.16 highlights that **73.3%** of participants believe that a "Lack of visibility or exposure" is the primary challenge players face, followed by "Difficulty finding clubs or players" (**66.7%**) and "Limited access to training resources" (**66.7%**). A minimal **3.3%** mentioned the difficulty of finding a coach who can assess their strengths and weaknesses, suggesting that broader accessibility issues take precedence. To address these challenges, FutbolLink could offer a platform for showcasing talents through detailed profiles, create robust search tools to match users with clubs or teams, and collaborate with training institutions to provide accessible resources.

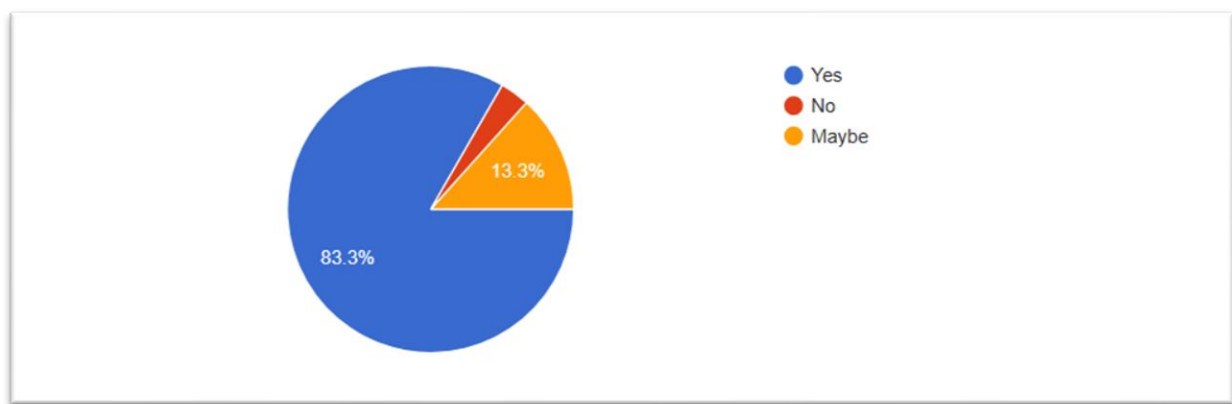


Figure 3.15: FutbolLink Helps on Underrepresented Football Communities

Figure 3.17 shows a resounding **83.3%** of respondents agreed that FutbolLink could help increase the visibility of underrepresented football communities, such as women's football or youth academies in Malaysia. An additional **13.3%** were uncertain ("Maybe"), while only **3.3%** disagreed. This strong support suggests that FutbolLink has the potential to champion inclusivity by creating targeted initiatives, such as promoting women's football leagues, showcasing talent in youth academies, and providing equal opportunities for underrepresented groups to thrive in the football ecosystem.

3.3.5 Section D: User Interaction

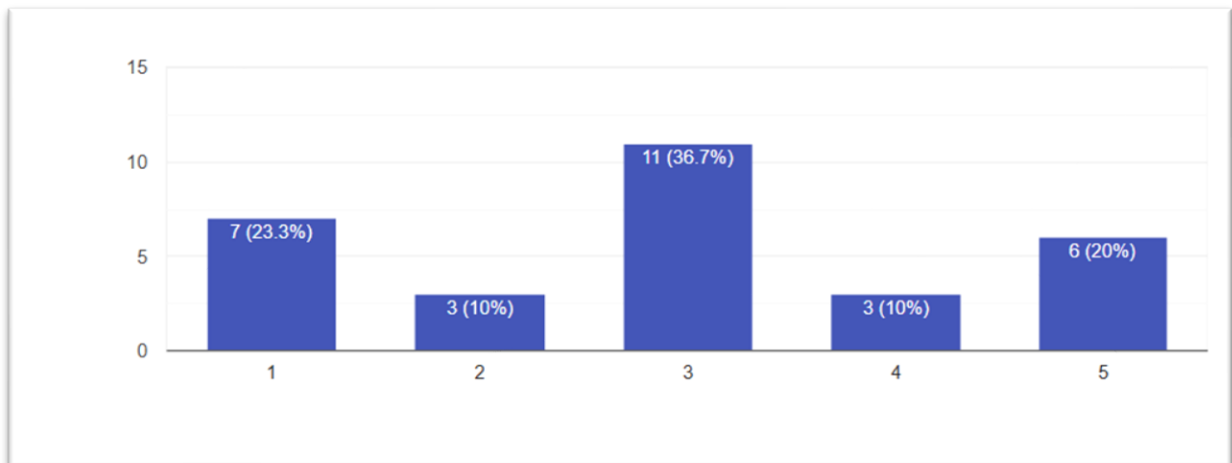


Figure 3.16: Platform Navigation Ease

In terms of platform usability, 36.7% (11 votes) preferred moderate simplicity (a rating of 3 on a scale of 1 to 5), and another 20% (6 votes) leaned toward a cleaner and more accessible interface (rating 5). However, 23.3% (7 votes) rated it as less important, opting for a rating of 1. These preferences indicate a varied demand for a balance between functionality and simplicity, catering to both casual and detail-oriented users.

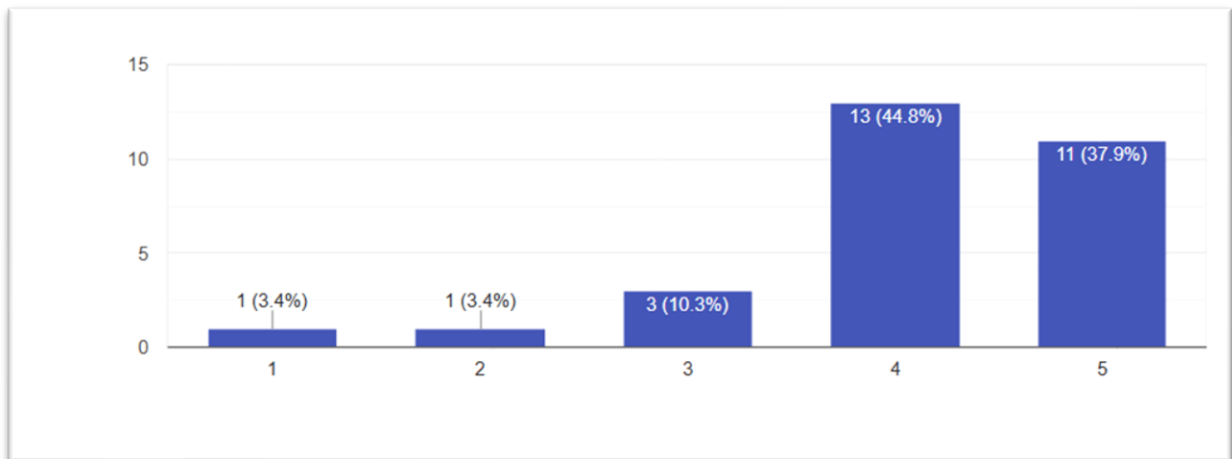


Figure 3.17: Search Function Importance

Figure 3.19 proof that the majority of respondents deemed a robust search function critical, with 44.8% (13 votes) rating its importance as 4 and 37.9% (11 votes) giving it a 5. Only a minority, totaling 6.8% (2 votes), considered it unimportant (ratings 1 and 2). This

demonstrates a strong need for a precise and user-friendly search feature to enhance accessibility and efficiency in finding relevant contacts and opportunities.

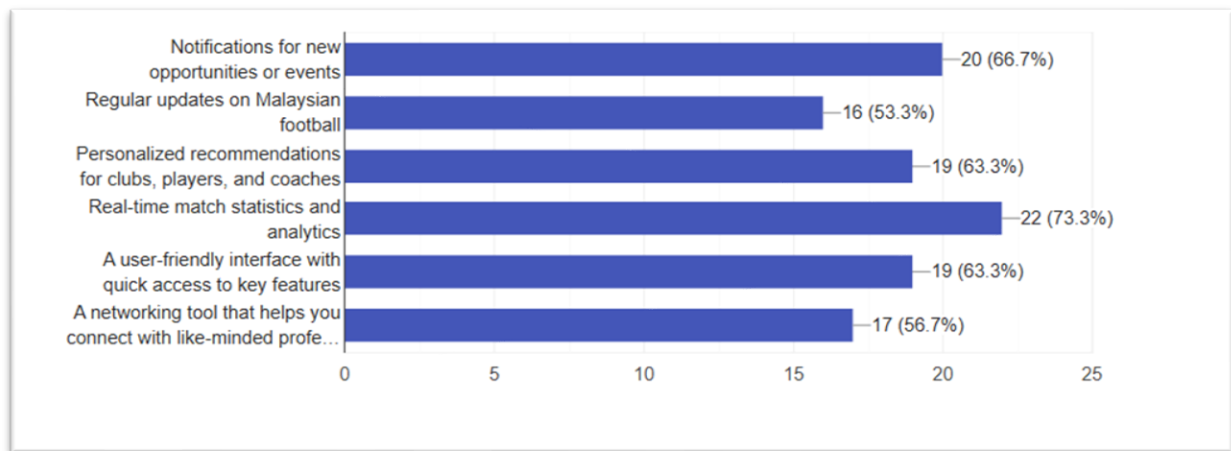


Figure 3.18: Features to Encourage FutbolLink

Among the respondents, 66.7% (20 votes) emphasized the need for notifications about new opportunities or events, while 53.3% (16 votes) valued regular updates on Malaysian football. Personalized recommendations for clubs, players, and coaches, as well as a user-friendly interface for quick access, were highlighted by 63.3% (19 votes each). The most sought-after feature was real-time match statistics and analytics, supported by 73.3% (22 votes). Additionally, 56.7% (17 votes) were interested in a networking tool to connect with like-minded professionals. These features underline the importance of keeping users informed, connected, and engaged with tailored insights and updates.

3.4 Software Requirement

To create a social networking platform, it will need some software requirements in order for it to be successfully created. The software requirements are:

3.4.1 Operating System

- **Windows 10** (or later versions for compatibility with development tools).

3.4.2 Development Software

- **XAMPP**: For creating a local server environment (supports PHP and MySQL).
- **Sublime Text**: For code editing and quick prototyping.
- **Visual Paradigm**: For system design and database interaction diagrams.

3.4.3 Languages and Tools

- **HTML**: For structuring web content.
- **PHP**: For handling dynamic content and server-side logic.
- **JavaScript**: For interactive elements and frontend behavior.
- **MySQL**: For database management (data storage and retrieval).

3.5 Hardware Requirements

Hardware Requirements also needed as the software will not run unless there are hardwares. The Hardware Requirements are:

Laptop:

- Must support tools like XAMPP, Sublime Text, and Visual Paradigm.

Processor:

- AMD Ryzen 7 (4800H or equivalent) for handling intensive processing tasks.

RAM:

- At least **16 GB** to ensure smooth multitasking during development and testing.

Storage:

- At least **1 TB** to store the project files, database, and software installations.

3.6 Use Case Diagram

Figure below illustrates the use case diagram for the FutbolLink Social Networking Website. The platform serves three primary roles: User (Player and Coach), Recruiter (Club and Scout), and Admin. Users and recruiters must create an account to access platform features. Once registered, users can manage their profile, view their timeline, and send messages. They can also apply for positions and search for opportunities available on the platform. Recruiters can perform additional actions such as posting positions, searching for candidates, and conducting hiring processes. Admins have system management responsibilities, including banning or unbanning accounts, and managing or updating system content. The use case diagram provides a comprehensive overview of the functionalities available to each role, highlighting the system's versatility and scope.

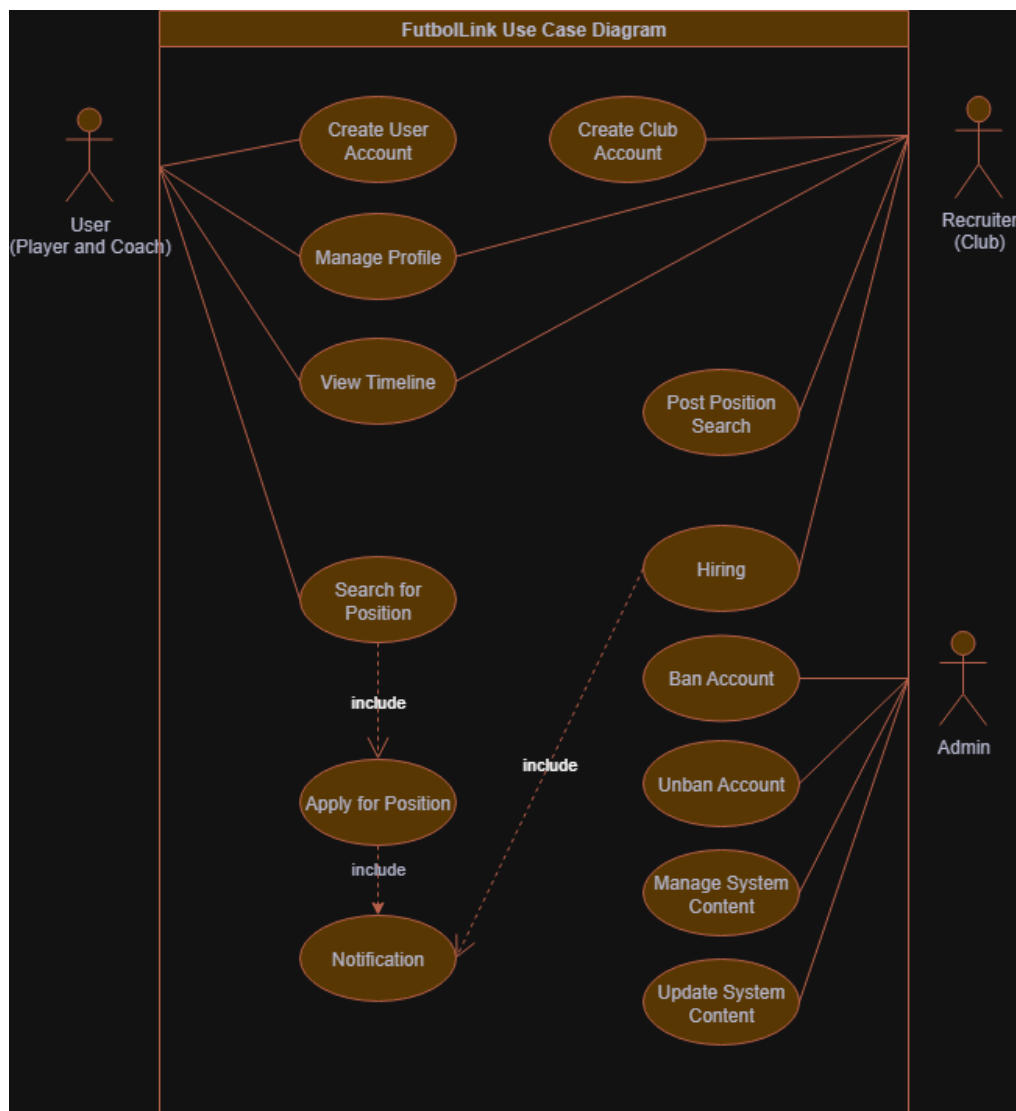


Figure 3.19: Use Case Diagram for FutbolLink

3.7 Use Case Description

The use case description outlines how user (player and coach), recruiter (club and scout), and admin interact with the website to achieve certain functionalities (see Table).

Table 3.1: Use Case Description For Create Account

No	UC1		
Use Case Name	Create Account		
Actor	User (Player and Coach)		
Description	This use case allows users and recruiters to create an account on FutbolLink by filling out a registration form. This enables them to access the platform's features such as searching for clubs, posting positions, and engaging in networking.		
Precondition(s)	1. The user must have access to the system using a web browser with a stable internet connection. 2. The user must not already have an account.		
Postcondition(s)	A new account is successfully created for the user, granting them access to the social networking web.		
Basic Path	1. The user clicks on the “Register” button on the homepage. 2. The system navigates the user to the registration page. 3. The user provides required information, such as name, email address, and sets a password. 4. The user clicks the “Submit” button to complete the registration process. 5. Upon successful registration, the system displays a confirmation message and redirects the user to their profile page.		
Alternative Path	N/A		
Exception	1a	The user is disconnected from the system.	
		1a1	The website displays an error message informing the user about the disconnection.

		1a2	The user must check their internet connection and reload the page to try again.
	2a	The user already has an account.	
		2a1	The system displays an error message stating that the account already exists and suggests logging in instead.

Table 3.2: Use Case Description For Registration for Club

No	UC2
Use Case Name	Club Registration
Actor	Recruiter (Club)
Description	This use case allows recruiters who represent clubs to register for a Club Account on the FutbolLink platform. Upon successful registration, club recruiters gain access to features such as posting job opportunities, managing team details, and reviewing player and coach profiles.
Precondition(s)	1. The actor has accessed the “Create Club Account” registration page directly from the landing or login page. 2. The system displays the Club Registration form tailored for club users.
Postcondition(s)	1. The club recruiter’s account is successfully created and stored in the system. 2. The user is identified as a Club and granted access to club-specific features on FutbolLink.
Basic Path	1. The actor navigates to the “Create Club Account” page. 2. The system displays a registration form for clubs, including fields such as Club Name, Email, Username, Password, and Description. 3. The actor fills in all required fields and uploads a profile logo (optional). 4. The actor submits the registration form. 5. The system validates the form data. 6. Upon successful validation, the system stores the club’s information

	and assigns the type = club (or role_id = 3) in the database. 7. The actor is redirected to the club profile setup page or dashboard. 8. A welcome message or guide is shown explaining key club features.		
Alternative	1a	If required fields are left empty or incorrectly filled	
		1a1	The system highlights validation errors and prompts the actor to correct them.
		1a2	The actor corrects the errors and resubmits the form.
Exception(s)	1a	If the email or username is already taken:	
		1a1	The system displays an error message indicating the conflict.

Table 3.3: Use Case Description For Manage Profile

No	UC3
Use Case Name	Manage Profile
Actor	User (Player and Coach), Recruiter (Club)
Description	The user can update their profile information, such as personal details, update password, and delete account
Precondition(s)	1. The user must be logged into their account. 2. The user must have an existing profile created during registration.
Postcondition(s)	The user's profile is successfully updated with the new information. The changes are visible to other relevant users on the platform.
Basic Path	1. The user logs into their account. 2. The user navigates to the "Profile" section from the homepage. 3. The user clicks on the "Manage Account" button. 4. The system displays the editable fields for personal and professional details. 5. The user updates the desired fields, such as personal information. 6. The user clicks the "Save Changes" button. 7. The system saves the updates and displays a success message. 8. The updated profile is reflected on the user's profile page.
Alternative Path	N/A

Exception	1a	The user's internet connection is lost during the update process.	
		1a1	The system displays an error message and prompts the user to check their connection.
		1a2	The user reconnects to the internet and retries the update process.
	2a	The user attempts to upload an unsupported file format for their profile picture	
		2a1	The system displays an error message indicating the file type is not supported.
		2a2	The user selects a supported file format and retries the upload.

Table 3.4: Use Case Description For View Timeline

No	UC4
Use Case Name	View Timeline
Actor	User (Player and Coach), Recruiter (Club)
Description	The user can view a timeline of activities, updates, posts, and announcements from other users. This feature helps users stay informed about ongoing discussions, job offers, and events.
Precondition(s)	1. The user must have a registered account and be logged into the system. 2. The system must have relevant timeline data available (e.g., posts, updates, offers).
Postcondition(s)	1. The timeline is successfully displayed to the user. 2. The user can engage with posts (e.g., like, comment) or navigate to detailed views.
Basic Path	1. The user logs into the system using their credentials. 2. The system redirects the user to the homepage, where the timeline is displayed. 3. The user can scroll through the timeline to view posts, offers, and updates.

	4. The user clicks on a post for more details (e.g., a job offer or event announcement). 5. The system displays the detailed information of the selected post. 6. The user can interact with the post by liking, commenting, or sharing it.	
Alternative	3a	The user searches for specific content on the timeline using filters or keywords.
	3a1	The system updates the timeline view to match the user's search query.
Exception(s)	3aa	The timeline fails to load due to connectivity issues.
	3aa1	The system displays an error message indicating a network problem.
	3aa2	The user refreshes the page or checks their internet connection.

Table 3.5: Use Case Description For Messaging

No	UC5
Use Case Name	Job Application Notification
Actor	User (Player and Coach), Recruiter (Club)
Description	This use case allows communication between the user and recruiter through email or in-app notifications. Notifications are automatically triggered by job application events such as submission, acceptance, or rejection.
Precondition(s)	1. Both the user and recruiter must have valid registered accounts and be logged into the platform. 2. A job post must exist. 3. The user has access to job application features.
Postcondition(s)	1. Notifications or emails are successfully sent and delivered to the appropriate user. 2. The recipient can view the application status update in their notification center or email.

Basic Path	1. The user logs into the system and browses job listings. 2. The user applies to a job by submitting the application form. 3. The system sends a notification/email to the recruiter that someone applied. 4. The recruiter logs in and views the application. 5. The recruiter accepts or rejects the application. 6. The system sends a notification/email to the applicant about the application status (accepted/rejected).	
Alternative	1a	If the recruiter does not take action
	1a1	The application remains in a pending state visible in their dashboard.
Exception(s)	1a	If email delivery fails (e.g., due to server issue):
	1a1	The system retries or logs the failure for admin review.

Table 3.6: Use Case Description For Apply For Position

No	UC6
Use Case Name	Apply for Position
Actor	User (Player and Coach)
Description	This use case allows users, such as players or coaches, to apply for available positions posted by recruiters, such as clubs or scouts.
Precondition(s)	1. The user must be logged into their account. 2. The user can fill in the cover letter and send their resume. 3. The user must have access to the system with a stable internet connection.
Postcondition(s)	1. The user's application is successfully submitted to the recruiter. 2. The recruiter receives the application in their email for review.
Basic Path	1. The user navigates to the "Search for Position" page or views a relevant position on their timeline. 2. The user selects a position they are interested in applying for. 3. The system displays the position details, including requirements, salary, and description.

	4. The user clicks the "Apply" button. 5. The system prompts the user to confirm their application and attach any additional documents if needed (optional). 6. The user confirms the application. 7. The system submits the application to the recruiter and displays a success message.		
Alternative	1a	The user attempts to apply for a position without completing their profile.	
		1a1	The system displays a warning message informing the user to complete their profile before applying.
		1a2	The user is redirected to the "Manage Profile" page to complete their profile.
Exception(s)	1a	The user's internet connection is lost during the application process.	
		1a1	The system displays an error message indicating that the application could not be completed due to a connectivity issue.
		1a2	The user can retry submitting the application once the connection is restored.
		The user attempts to apply for a position that has already been closed.	
		2a1	The system notifies the user that the position is no longer available and removes it from the list of active positions.

Table 3.7: Use Case Description For Search For Position

No	UC7
Use Case Name	Search For Position
Actor	User (Player and Coach), Recruiter (Club and Scout)
Description	This use case allows both users and recruiters to search for available opportunities on the FutbolLink platform. Players and coaches can search

	for clubs, teams, or job openings, while recruiters can search for potential candidates (players or coaches) that meet their requirements.		
Precondition(s)	1. The actor has a registered account and is logged into the system. 2. Relevant job positions or profiles have been posted on the platform.		
Postcondition(s)	1. The actor can view a list of available positions or profiles that match their search criteria.		
Basic Path	1. The actor navigates to the Search for Position feature from the dashboard or homepage. 2. The system displays a search bar and filter options, such as: For Users: a. Role (Player, Coach) b. Club type (professional, semi-pro, academy, grassroots) c. Location d. League level For Recruiters: e. Candidate type (Player, Coach) f. Position (e.g., striker, goalkeeper, head coach) g. Skills, experience, or achievements h. Location 3. The actor enters the desired search criteria. 4. The system retrieves and displays a list of relevant results. 5. The actor selects a specific result to view detailed information (e.g., job description for players or candidate profiles for recruiters). 6. The actor can take further action, such as applying for a position (for Users) or contacting a candidate (for Recruiters).		
Alternative	1a	The actor clicks on a notification about a new message.	
	1a1	The system redirects the actor to the specific conversation thread.	
Exception(s)	1a	If no results match the search criteria.	
	1a1	The system displays a message stating, "No results found. Please adjust your search criteria."	
	1a2	The actor refines the search criteria and tries again.	

Table 3.8: Use Case Description For Post Search Position

No	UC8		
Use Case Name	Post Position Search		
Actor	Recruiter (Club)		
Description	This use case allows recruiters, such as clubs or scouts, to post job openings or opportunities for specific positions, enabling them to attract suitable players or coaches to fill their requirements.		
Precondition(s)	1. The recruiter must be logged into the system. 2. The recruiter must have a valid profile with the necessary permissions to post job positions.		
Postcondition(s)	1. The job position is successfully posted and visible to users searching for opportunities.		
Basic Path	1. The recruiter navigates to the Post Position Search section. 2. The system displays a form for posting a new position. 3. The recruiter fills in the following details: • Position type (e.g., player, coach, goalkeeper, etc.). • Required skills or qualifications. • Location of the opportunity. • Contract details (e.g., permanent, short-term). 4. The recruiter reviews the information provided. 5. The recruiter submits the form. 6. The system validates the input and posts the position to the platform.		
Alternative	1a	If the recruiter decides not to proceed with posting	
		1a1	The recruiter cancels the process.
		1a2	No posting are made.
Exception(s)	1a	If required information is missing.	
		1a1	The system displays an error message indicating the missing details.

Table 3.9: Use Case Description For Hiring

No	UC9	
Use Case Name	Hiring	
Actor	Recruiter (Club and Scout)	
Description	This use case allows recruiters, such as clubs, to hire a candidate for an open position after reviewing their profile, applications, or direct engagement.	
Precondition(s)	1. The recruiter must be logged into the system. 2. The recruiter must have posted a position or searched for candidates. 3. Candidates must have submitted applications or be available on the platform for review.	
Postcondition(s)	1. The selected candidate is successfully hired for the position. 2. The position status is updated to "filled" (if applicable). 3. Both the recruiter and the candidate receive a confirmation notification.	
Basic Path	1. The recruiter navigates to the list of applicants for a posted position or searches for candidates using the Search for Position functionality. 2. The recruiter views the candidate profiles, including: • Football CV and achievements. • Skills and qualifications. • Video highlights or other portfolio items (if available). 3. The recruiter selects a suitable candidate from the list. 4. The recruiter clicks on the Accepted button. 5. The system prompts the recruiter to confirm the hiring decision. 6. The recruiter provides the following details in the email: • Contract type • Start date and duration. • Salary or agreed terms. 7. The recruiter confirms the hiring details. 8. The system updates the candidate's profile to reflect the new engagement. 9. Both parties receive a confirmation notification.	
Alternative	1a	If the recruiter decides not to proceed with hiring.

Exception(s)		1a1	The recruiter exits the hiring process.
		1a2	No updates are made.
	1a	If the candidate declines the offer.	
		1a1	The system updates the recruiter's dashboard to reflect the declined status.
	2a	If the recruiter inputs invalid details.	
		2a1	The system displays an error message, prompting the recruiter to correct the input.

Table 3.10: Use Case Description For Ban Account

No	UC10
Use Case Name	Ban Account
Actor	Admin
Description	This use case allows the admin to ban a user or recruiter account due to violations of the platform's terms and conditions or other inappropriate behaviour.
Precondition(s)	1. The admin is logged into the system with administrative privileges. 2. The user or recruiter account to be banned exists on the platform.
Postcondition(s)	1. The account is flagged as banned and cannot access the system. 2. The banned account is stored for record-keeping, with details of the violation
Basic Path	1. The admin navigates to the Manage Accounts section. 2. The admin searches for the specific account by name, email, or user ID. 3. The system displays the account details. 4. The admin selects the Ban Account option. 5. The system prompts the admin to provide a reason for banning the account. 6. The admin confirms the action. 7. The system updates the account status to "Banned" and sends a notification to the user.

Alternative	1a	If the admin decides not to proceed with banning.	
		1a1	The admin cancels the process.
		1a2	No changes are made to the account.
Exception(s)	1a	If the account does not exist.	
		1a1	The system displays an error message, "Account not found."

Table 3.11: Use Case Description For Unban Account

No	UC11		
Use Case Name	Unban Account		
Actor	Admin		
Description	This use case allows the admin to restore access to an account that was previously banned, typically after resolving the violation.		
Precondition(s)	1. The admin is logged into the system with administrative privileges. 2. The account to be unbanned exists and is flagged as "Banned."		
Postcondition(s)	1. The account is restored to active status and can access the system. 2. A record of the unban is logged for administrative purposes.		
Basic Path	1. The admin navigates to the Manage Accounts section. 2. The admin searches for the banned account by name, email, or user ID. 3. The system displays the account details and current status as "Banned." 4. The admin selects the Unban Account option. 5. The system prompts the admin to confirm the action. 6. The admin confirms the action. 7. The system updates the account status to "Active" and sends a notification to the user.		
Alternative	1a	If the admin decides not to proceed with unbanning.	
		1a1	The admin cancels the process.
		1a2	No changes are made to the account.
Exception(s)	1a	If the account does not exist.	

		1a1	The system displays an error message, “Account not found.”
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Table 3.12: Use Case Description For Manage System Content

No	UC12		
Use Case Name	Manage System Content		
Actor	Admin		
Description	This use case allows the admin to review, edit, or delete inappropriate content (e.g., posts, messages, or offers) to maintain a safe and professional environment on the platform.		
Precondition(s)	1. The admin is logged into the system with administrative privileges. 2. Content exists on the platform for review.		
Postcondition(s)	1. The selected content is reviewed and edited or removed as needed. 2. A record of the action is logged.		
Basic Path	1. The admin navigates to the Content Management section. 2. The system displays flagged or reported content. 3. The admin selects a piece of content to review. 4. The system displays the content details, including the author and the reason for being flagged. 5. The admin decides to: 6. Edit the content. 7. Delete the content. 8. Mark the content as safe. 9. The system updates the status of the content based on the admin’s decision.		
Alternative	1a	If no content has been flagged.	
		1a1	The system displays a message, “No flagged content available.”
Exception(s)	1a	If the flagged content no longer exists.	
		1a1	The system displays an error message, “Content not found.”

Table 3.13: Use Case Description For Update System Content

No	UC13		
Use Case Name	Update System Content		
Actor	Admin		
Description	This use case allows the admin to make updates or changes to the platform's system content, such as terms of service, FAQs, or help documentation.		
Precondition(s)	1. The admin is logged into the system with administrative privileges.		
Postcondition(s)	1. The updated content is visible to users on the platform.		
Basic Path	1. The admin navigates to the System Content Management section. 2. The admin selects the content category to update. 3. The system displays the current version of the content. 4. The admin makes the necessary changes. 5. The admin saves and publishes the changes. 6. The system updates the content and notifies users if necessary.		
Alternative	1a	If the admin decides not to proceed with updating content.	
	1a1	The admin cancels the process.	
	1a2	No changes are made.	
Exception(s)	1a	If the system encounters an error during the update.	
	1a1	The system displays an error message and logs the issue for troubleshooting.	

3.8 Sequence Diagram

Figure demonstrates the chain of interactions between objects or components in an FutbolLink social networking website across time.

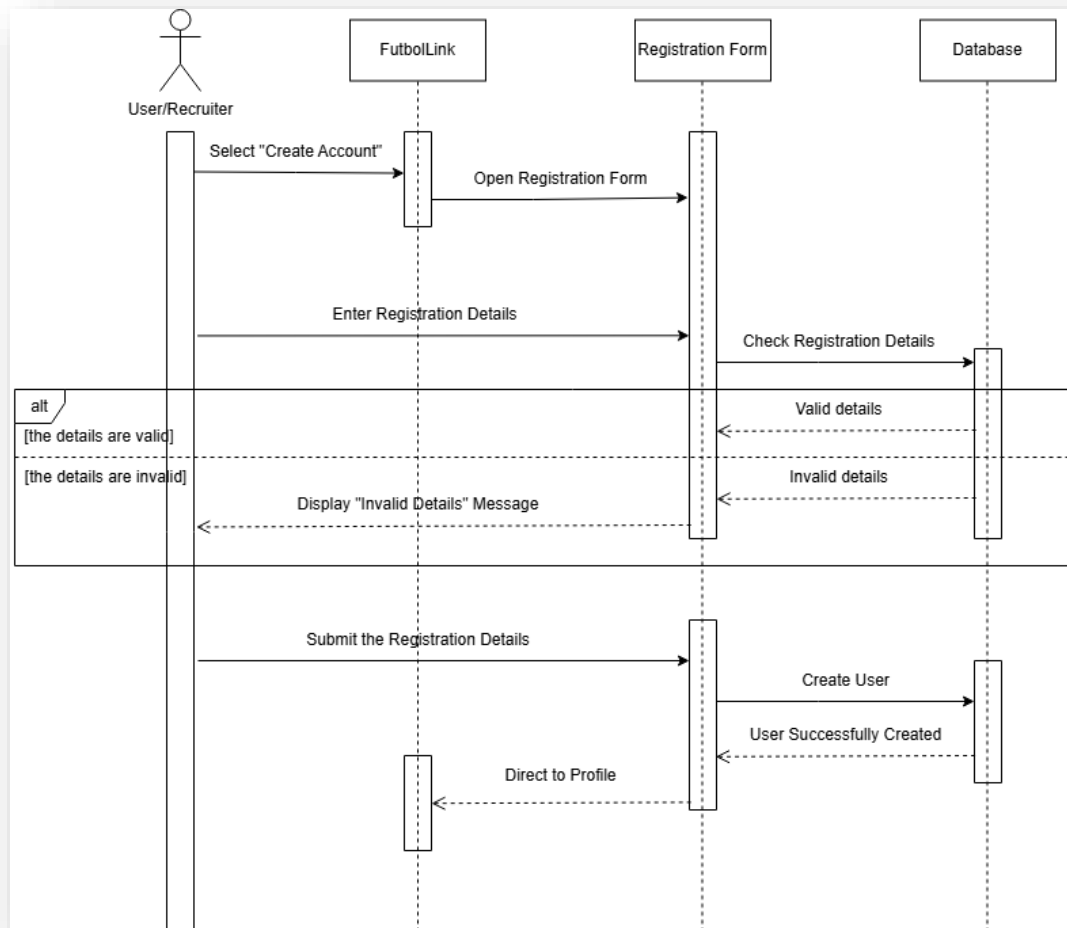


Figure 3.20: Sequence Diagram For Create Account

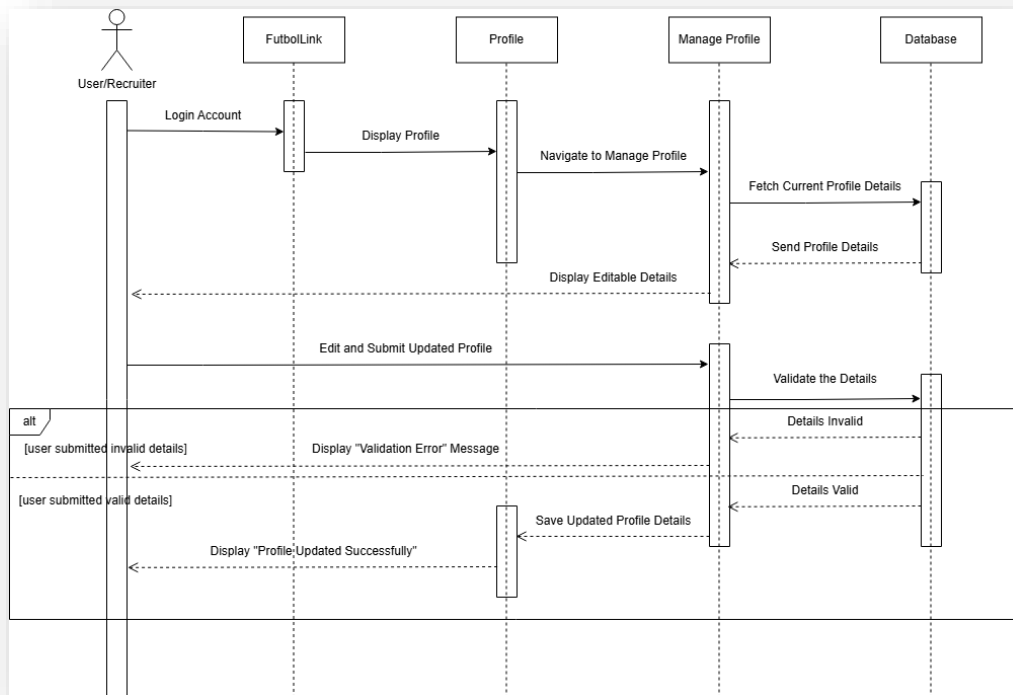


Figure 3.21: Sequence Diagram For Manage Profile

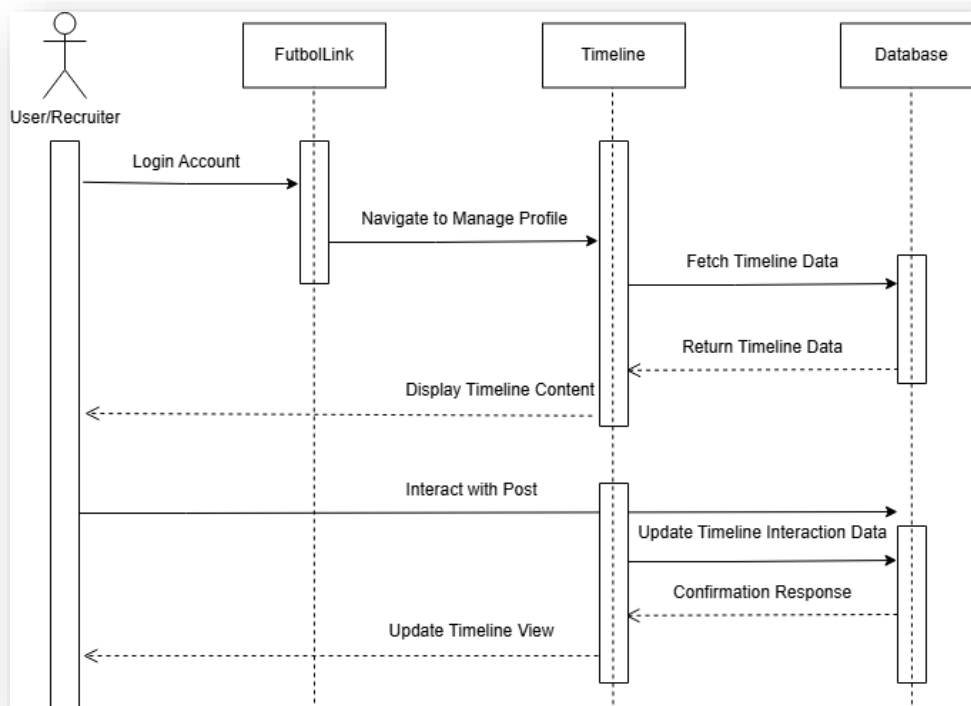


Figure 3.22: Sequence Diagram For View Timeline

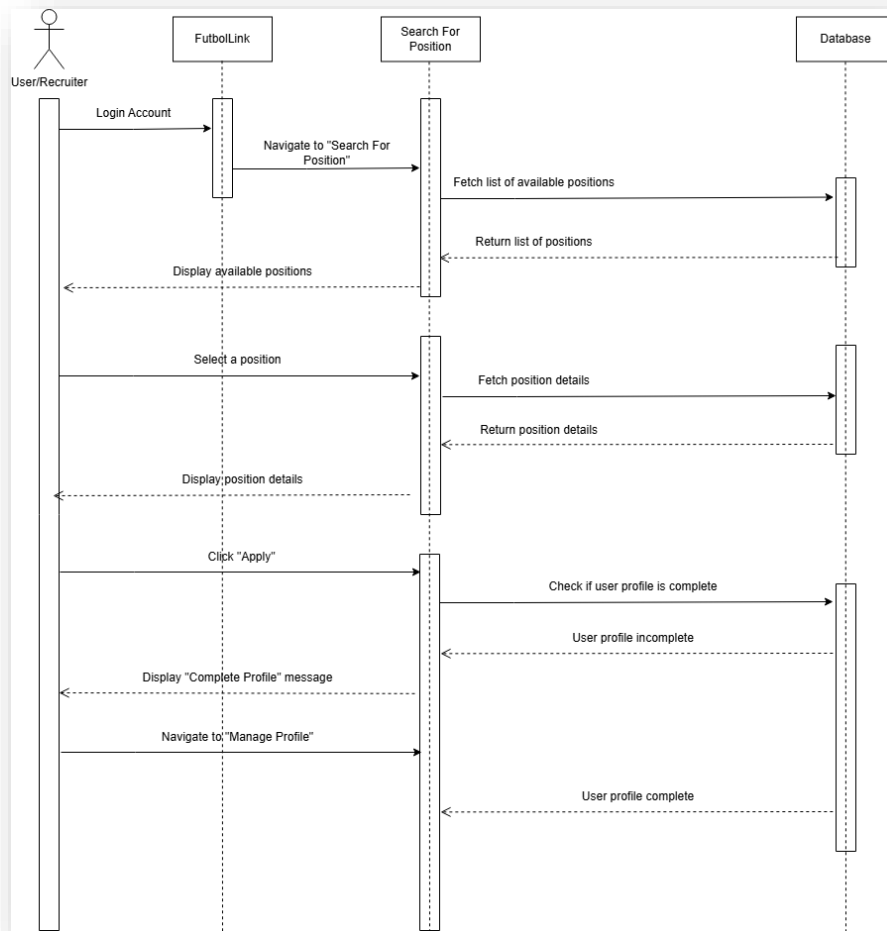


Figure 3.23: Sequence Diagram For Messaging

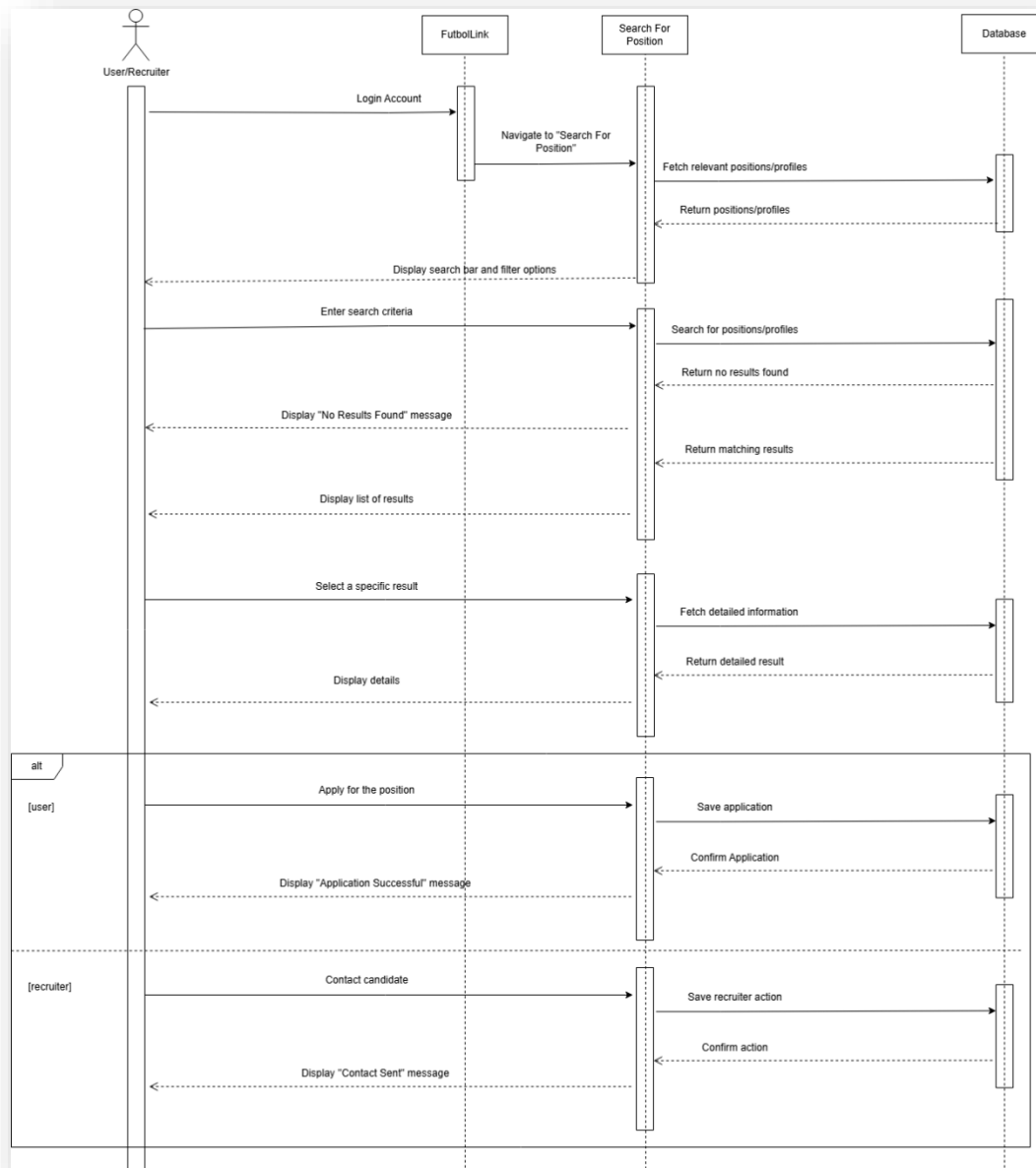


Figure 3.24: Sequence Diagram For Apply For Position

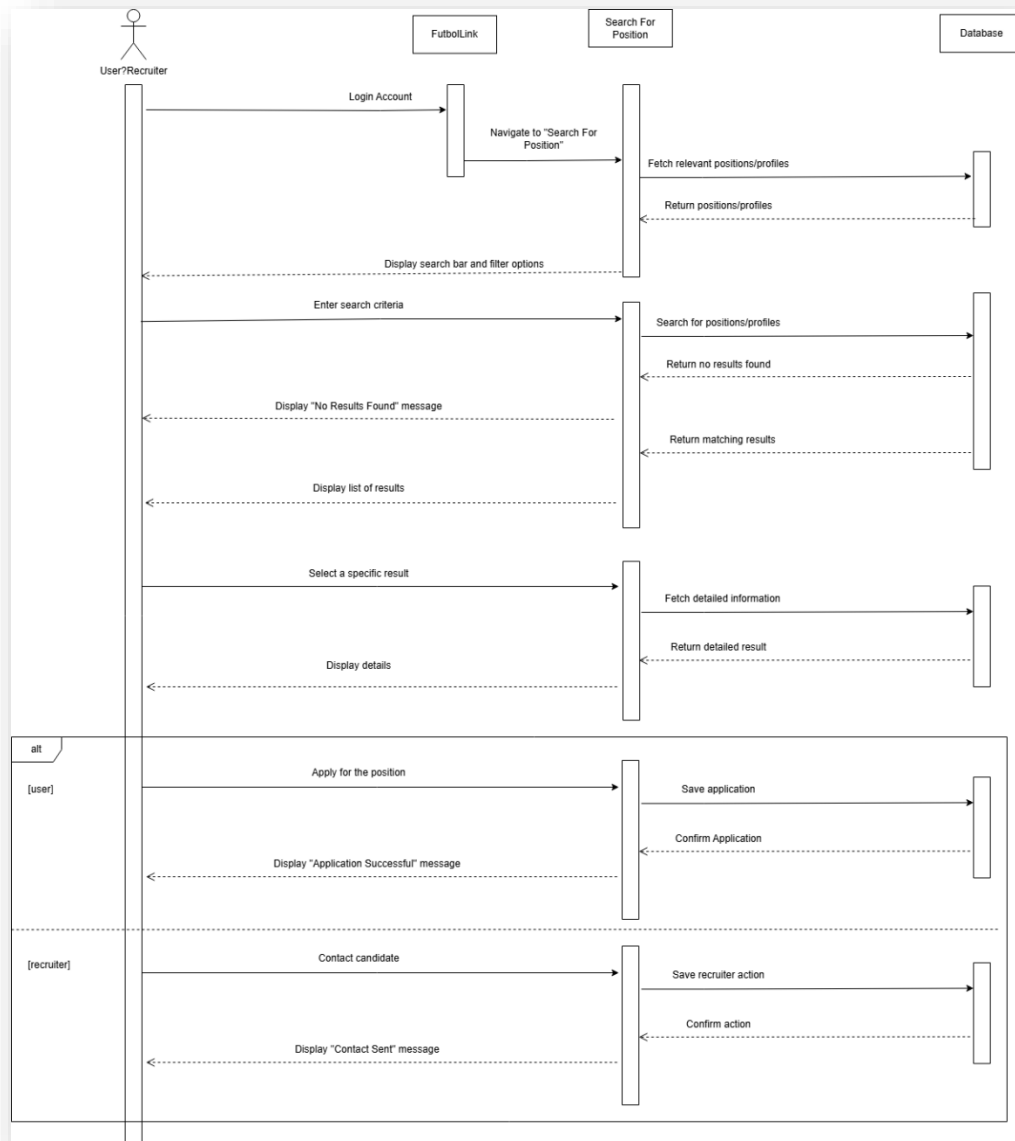


Figure 3.25: Sequence Diagram For Search For Position

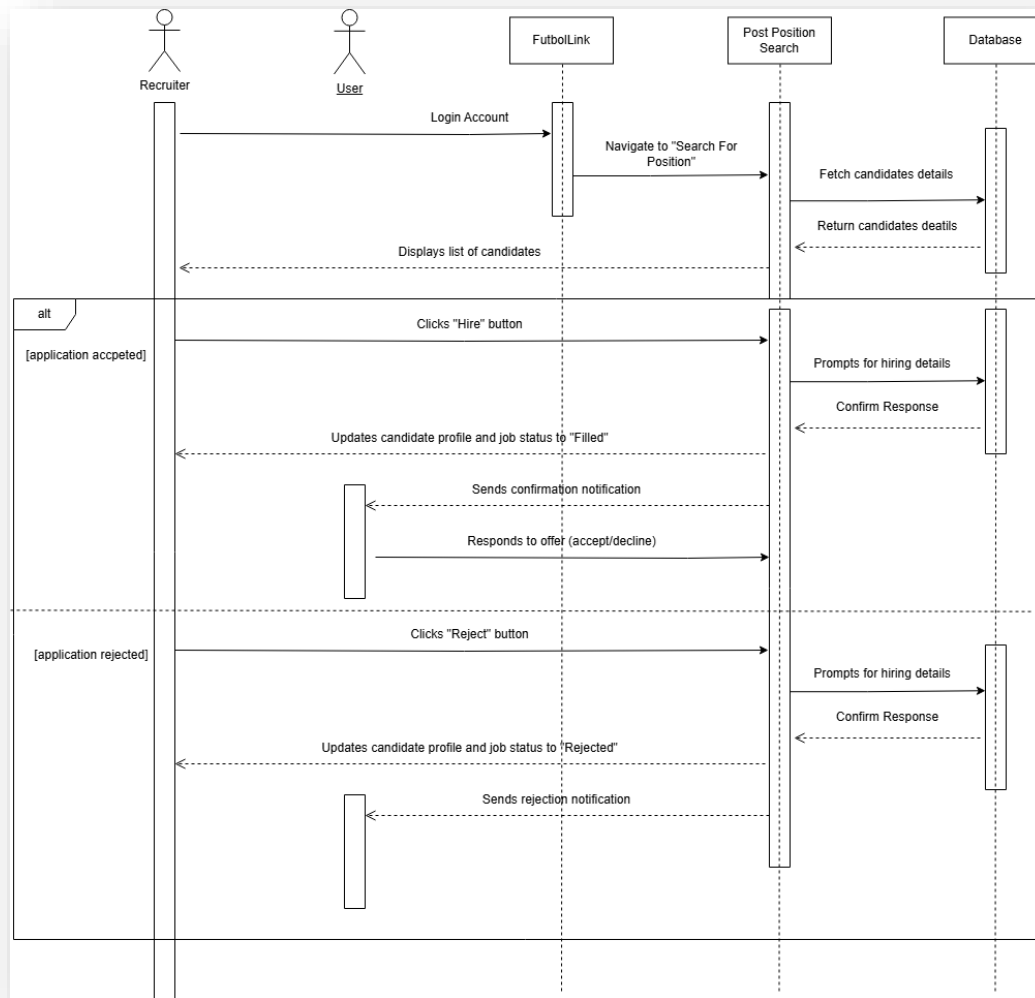


Figure 3.26: Sequence Diagram For Hiring

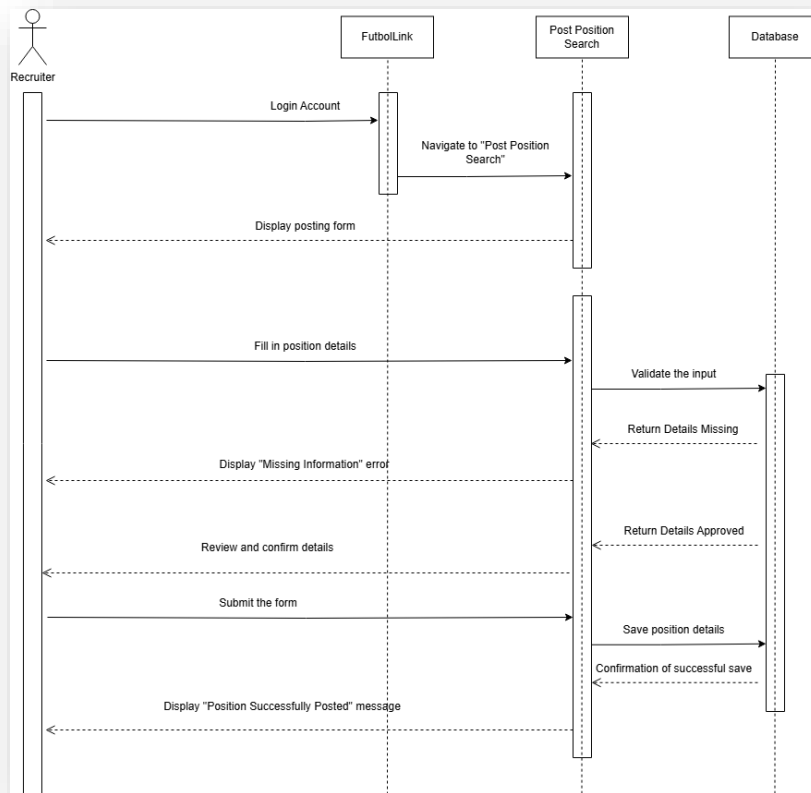


Figure 3.27: Sequence Diagram For Post Position Search

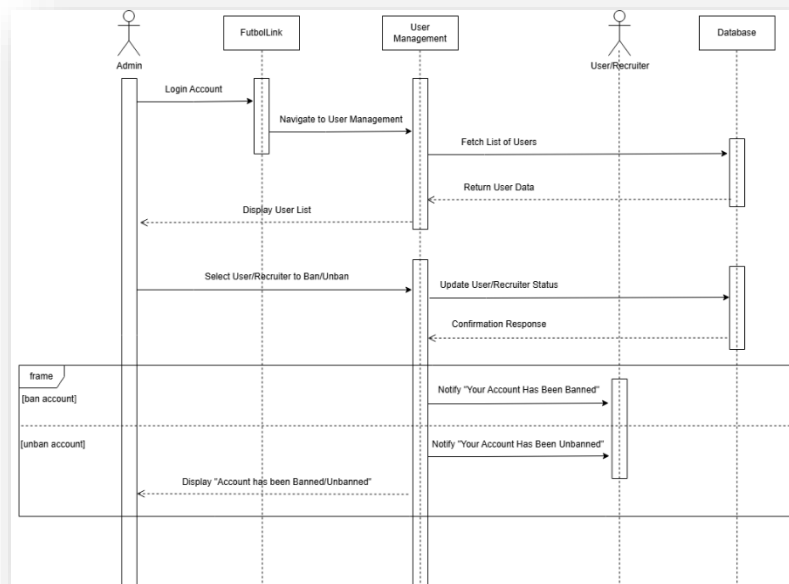


Figure 3.28: Sequence Diagram For Ban/Unban

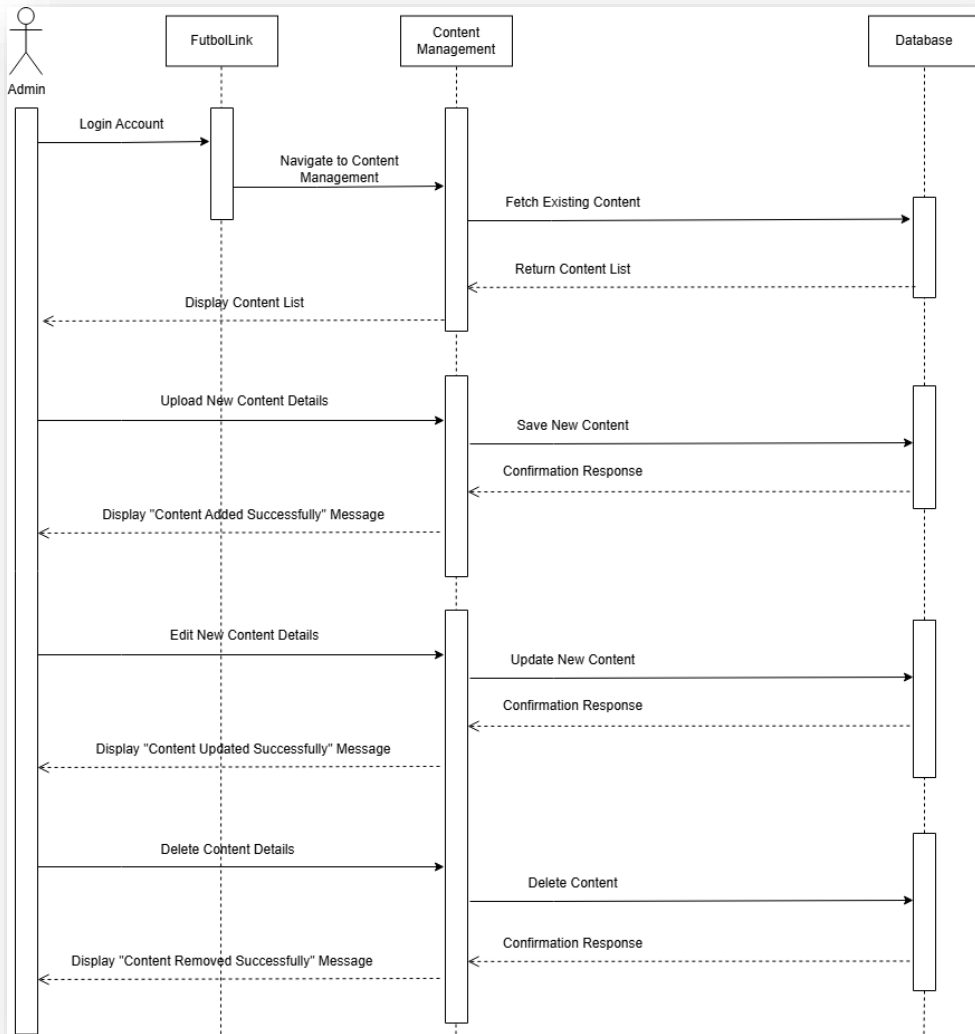


Figure 3.29: Sequence Diagram For Manage System Content

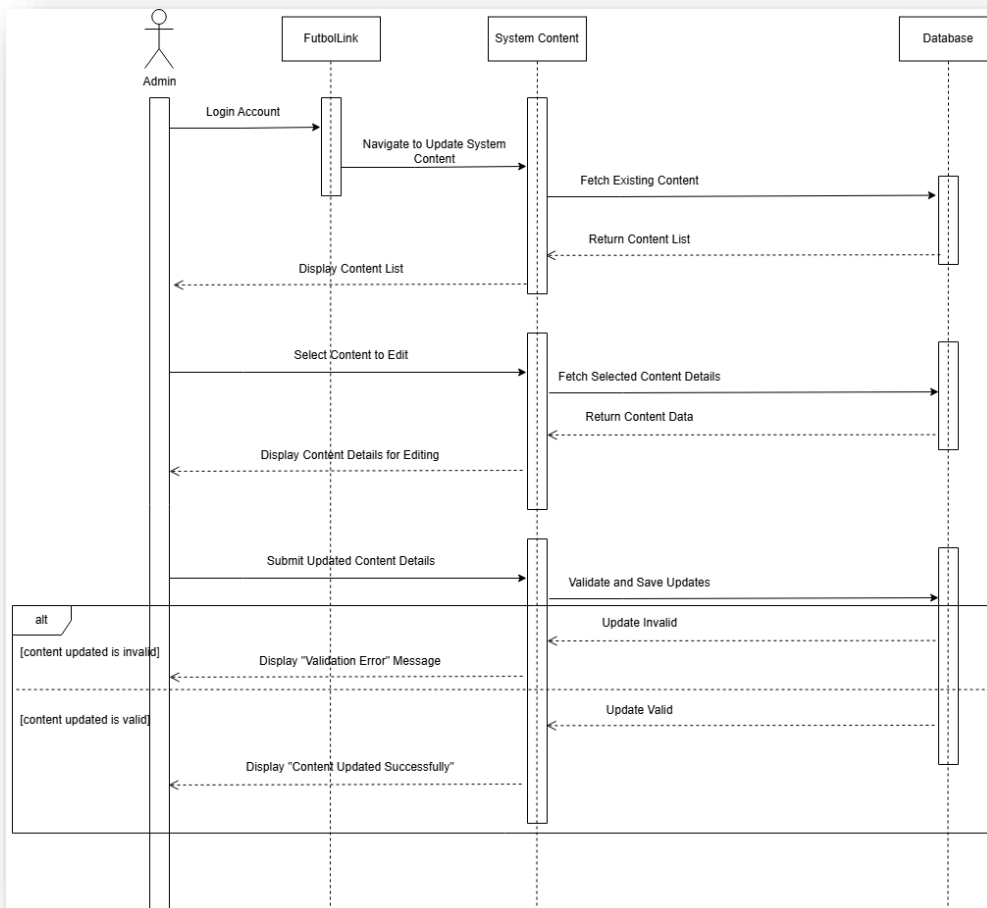


Figure 3.30: Sequence Diagram For Update System Content

3.9 Activity Diagram

The activity diagram for FutbolLink, shown in Figure 3.26, visually illustrates the sequence and interactions of activities within the system, providing a clear representation of its operational processes.

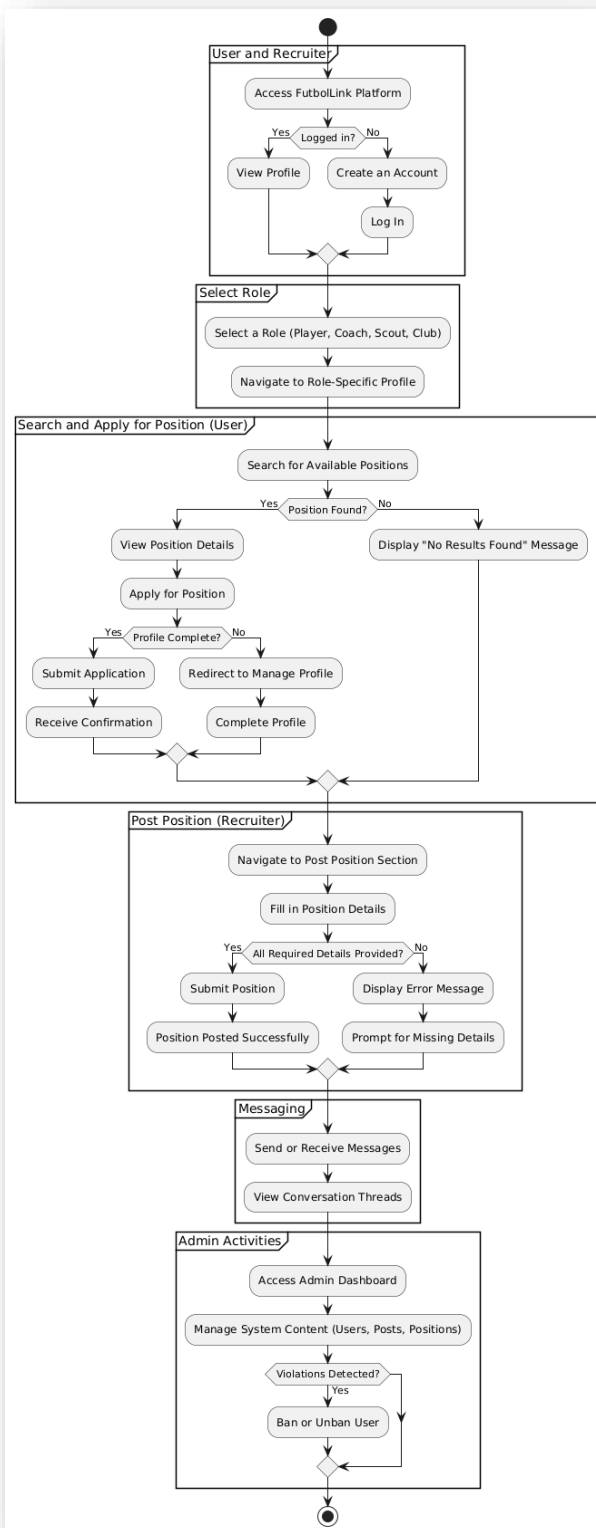


Figure 3.31: Activity Diagram for FutbolLink

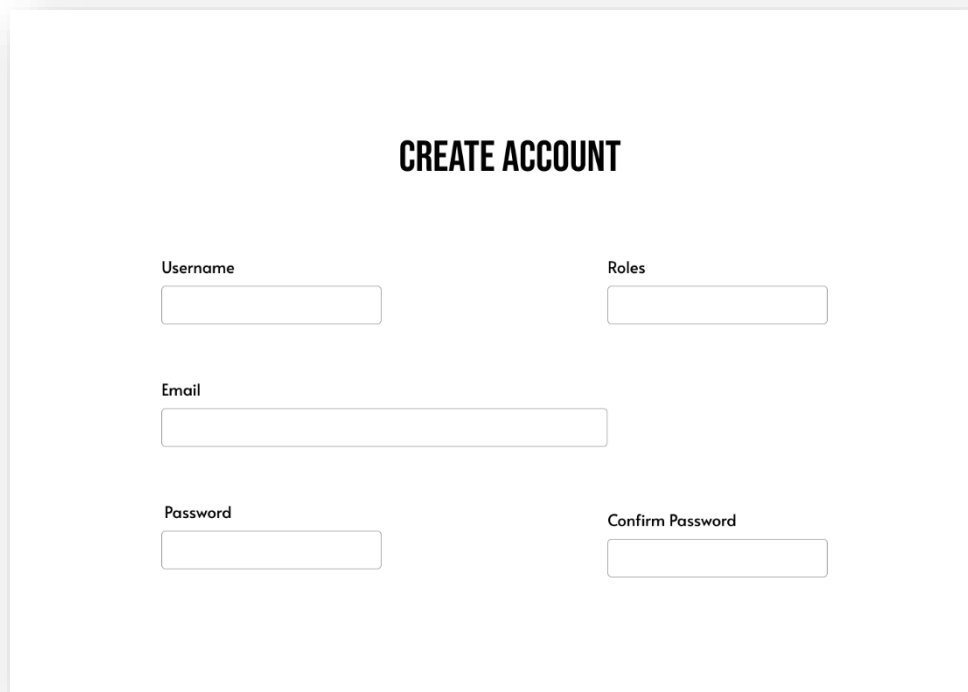
3.10 User Interface Design

User Interface Design is important because it directly affects how users interact with a product, influencing their overall experience and satisfaction. Without proper User Interface Design, the social networking platform will be a mess and the functions will clatter all over the place resulting in unsatisfactory of user experience.

3.10.1 Wireframe

Wireframes are a fundamental part of the User Interface Design, serving as the blueprint for a product's layout and structure. Wireframes are the early stages of designing and often changes further into the project development.

Figure shows the wireframe of Create Account where the users or the recruiters will see if they want to create a new account. It needs some general information including username, email address, and password. In FutbolLink, the users or the recruiters will have to fill in a “Roles” form where they can choose to be Players, Coaches, Clubs, Managers, or Scouts. This will affect the users ability to access certain features according to the roles respectively.



CREATE ACCOUNT

Username

Roles

Email

Password

Confirm Password

Figure 3.32: Account Creation

Figure 3.33 shows the “Manage Account” page where the users can access once their account has been created. The users can change their username, password, and email address in this page. The user can also upload their achievements in order for recruiters to see the achievements of the players or coaches. The users can also change their position based on what roles they are. The roles unfortunately cannot be changed as new roles require new account.

The wireframe shows a 'PERSONAL INFORMATION' section. It includes a circular profile picture placeholder. Below it, there are four input fields: 'Username' (containing 'RichardLison'), 'Roles' (containing 'Player' with a lock icon), 'Email' (containing 'richardlison123@gmail.com'), and 'Position' (containing 'Striker'). At the bottom, there is an 'Achievements' section with an 'Upload Files...' button and a file upload icon.

Figure 3.33: Manage Account Wireframe

Figure 3.34 shows the wireframe “Timeline” for FutbolLink. The user can post anything of their interest and also they can see some posts of people they follow.

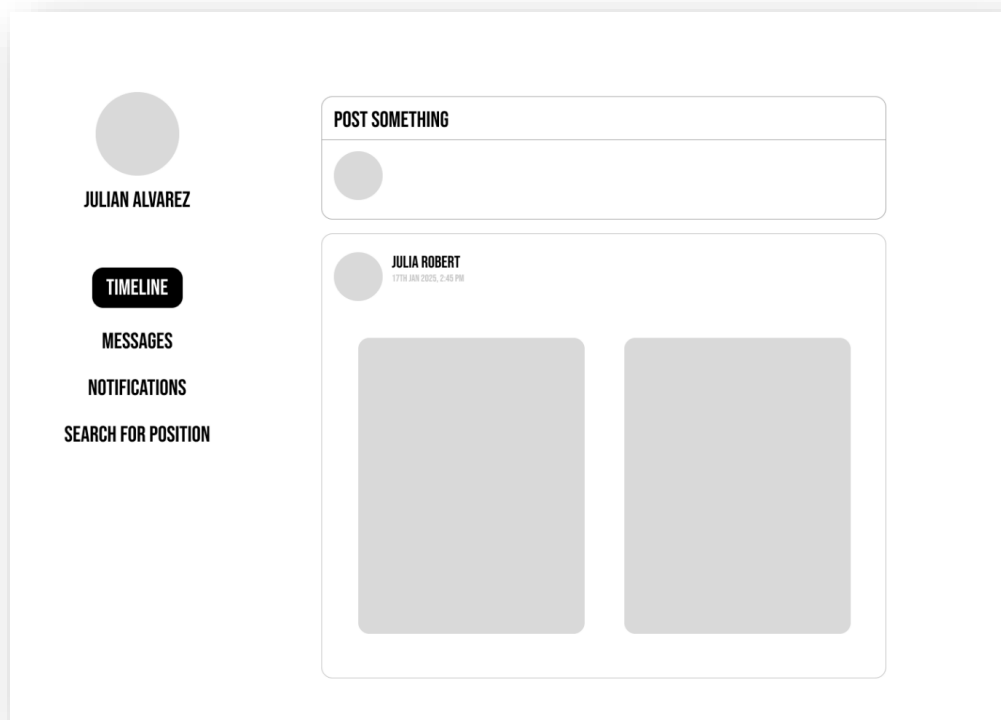


Figure 3.34: Timeline Wireframe

Figure 3.35 shows the wireframe in “Search for Position” where the users can use to view any new “job” promotion. Players can apply for their desire clubs or positions they want while the coaches can apply for position in coaching according to what they had achieved.

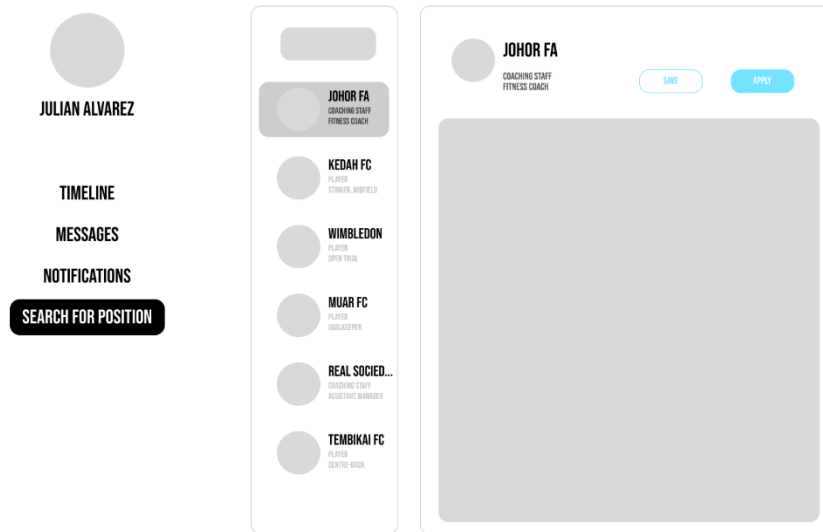


Figure 3.35: Search for Position Wireframe

Figure 3.36 and Figure 3.37 shows the different side of the wireframe where it can only be accessed by the recruiters. The recruiters can choose the applied candidates. They can choose whether to accept for a further interview or just decline. The recruiters can also post “job” according to what they want. The recruiters can save or just post the “job” applications.

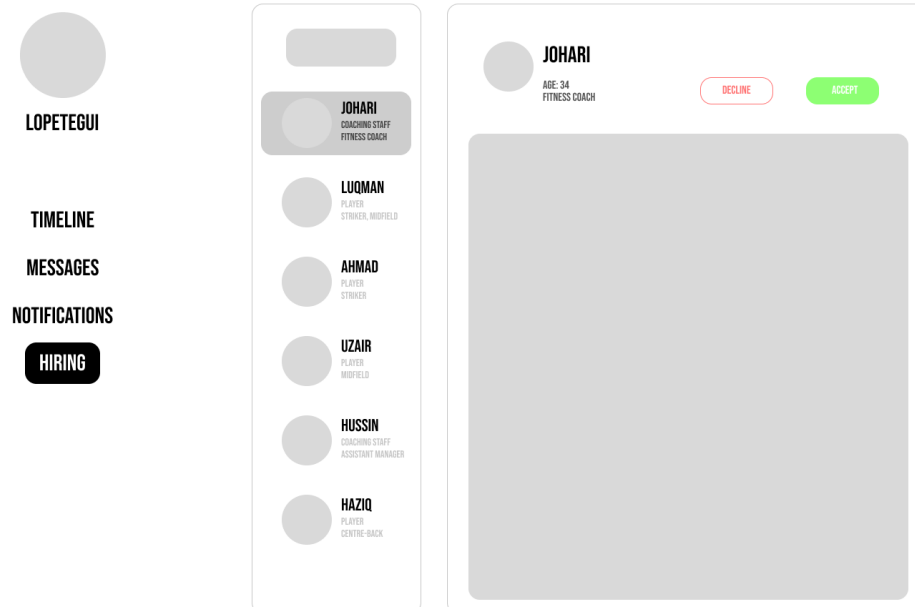


Figure 3.36: Hiring Wireframe

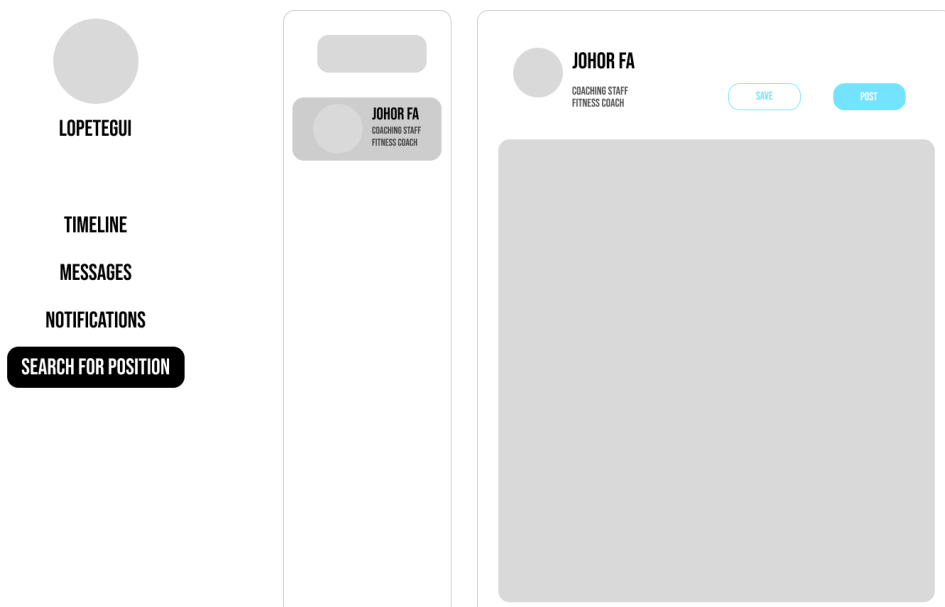


Figure 3.37: Post Position Wireframe

3.10.2 Database Design

Database is a process of creating a plan on how the database is stored, organized, and manipulated in a database. It defines on how it is structurally possible to store data of each other across the table. Figure 3.39 shows the Database Design for FutbolLink.

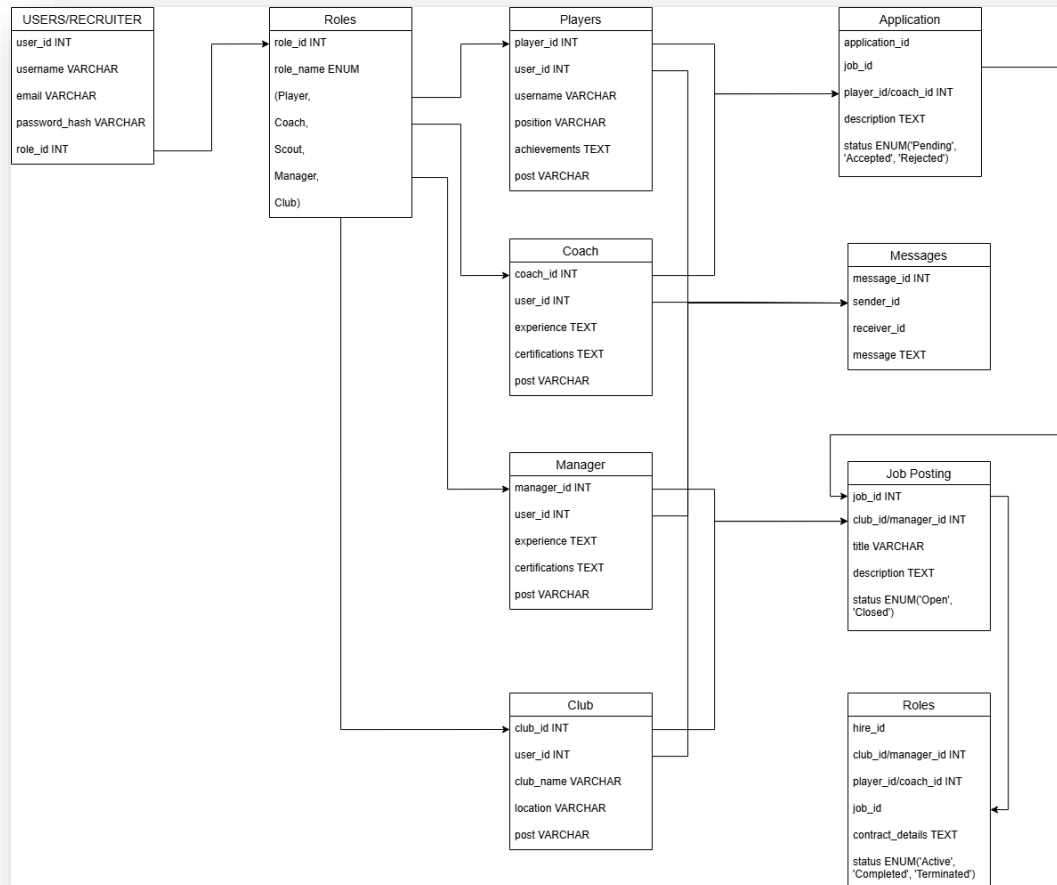


Figure 3.38: Database Design for FutbolLink

3.11 Data Dictionary

The data dictionary provides a structured overview of the database schema used in the development of the FutbolLink platform. It defines each table, its associated fields, data types, and a brief description of their purpose. This documentation ensures clarity in understanding how data is stored, retrieved, and managed within the system, facilitating easier maintenance, development, and potential future upgrades.

Table 3.14: users Data Dictionary

Table Name	Field Name	Data Type	Description
users	id	BIGINT	Unique identifier for each user
	name	VARCHAR (255)	Full name of the user
	username	VARCHAR (255)	Unique username
	email	VARCHAR (255)	Email address of the user
	password	VARCHAR (255)	Hashed password
	profile_photo_path	TEXT	Path to user's profile photo
	description	TEXT NULLABLE	User's bio or short description
	type	VARCHAR (255)	Used to distinguish individual users from clubs
	created_at	TIMESTAMP	Account creation timestamp
	updated_at	TIMESTAMP	Account update timestamp

Table 3.15: posts Data Dictionary

Table Name	Field Name	Data Type	Description
posts	id	BIGINT	Unique identifier for each user
	user_id	BIGINT	Full name of the user
	content	TEXT	Unique username
	media_path	TEXT NULLABLE	Email address of the user
	post_type	VARCHAR (255)	Hashed password
	created_at	TIMESTAMP	Account creation timestamp
	updated_at	TIMESTAMP	Account update timestamp

Table 3.16: comments Data Dictionary

Table Name	Field Name	Data Type	Description
comments	id	BIGINT (PK, Auto Inc)	Unique identifier for each comment
	post_id	BIGINT	Foreign key referencing the related post ('posts.id')
	user_id	BIGINT	Foreign key referencing the commenter ('users.id')
	comment_text	TEXT	The text content of the comment
	created_at	TIMESTAMP	Comment creation timestamp
	updated_at	TIMESTAMP	Comment update timestamp

Table 3.17: likes Data Dictionary

Table Name	Field Name	Data Type	Description
likes	id	BIGINT (PK, Auto Inc)	Unique identifier for each like
	post_id	BIGINT	Foreign key referencing the liked post ('posts.id')
	user_id	BIGINT	Foreign key referencing the user who liked ('users.id')
	created_at	TIMESTAMP	Like timestamp
	updated_at	TIMESTAMP	Update timestamp (if any)

Table 3.18: jobs Data Dictionary

Table Name	Field Name	Data Type	Description
jobs	id	BIGINT (PK, Auto Inc)	Unique identifier for each job post
	recruiter_id	BIGINT	Foreign key referencing the recruiter or club ('users.id')
	title	VARCHAR(255)	Title of the job
	description	TEXT	Detailed description of the job opportunity
	location	VARCHAR(255)	Location where the job is based
	media_path	TEXT NULLABLE	Supporting media for the job post
	created_at	TIMESTAMP	Job posting creation time
	updated_at	TIMESTAMP	Update time of the job post

Table 3.19: applications Data Dictionary

Table Name	Field Name	Data Type	Description
applications	id	BIGINT (PK, Auto Inc)	Unique identifier for each application
	job_id	BIGINT	Foreign key referencing the job ('jobs.id')
	applicant_id	BIGINT	Foreign key referencing the applicant ('users.id')
	status	VARCHAR(255)	Status of the application (e.g., 'pending', 'accepted', 'rejected')
	created_at	TIMESTAMP	Time of application
	updated_at	TIMESTAMP	Update time (status change, etc.)

3.12 Summary

In summary, This chapter detailed the methodology, questionnaire design, and the various modeling tools used to develop the FutbolLink platform. The methodology section outlined a systematic approach to system development, ensuring that each phase—requirement gathering, design, and implementation—is meticulously planned and executed. The use of appropriate tools, such as Visual Paradigm and structured frameworks, guarantees that the platform meets the functional and non-functional requirements.

The questionnaire design focused on gathering valuable insights from key stakeholders, including players, coaches, and recruiters. This step ensured that the platform addresses the real-world needs and expectations of its target audience, making it a practical and user-centric solution.

The use case analysis provided a clear understanding of user interactions and system functionalities, offering detailed scenarios such as searching for positions, posting job openings, and hiring processes. This was complemented by sequence diagrams that visually illustrated the step-by-step interactions between users and the system, providing a dynamic view of system behavior.

Lastly, the activity diagram captured the workflow of critical operations, emphasizing the logical sequence of actions required to achieve the desired outcomes. These diagrams ensure that the platform is designed to deliver seamless and efficient user experiences.

Chapter 4 : Implementation

4.1 Introduction

This chapter describes the development of the proposed social network platform. The development of the social network platform was made according to the system requirements that have been analyzed back in Chapter 3. This is to make the project meet the expected outcomes. Software like XAMPP and Visual Studio Code that has been installed for the development of the platform to build the project will be explained in this chapter. Screenshots of the structure of the platform will also be shown in detail.

4.2 Installation and Configuration of System's Components

To make the proposed social network platform a success, some software needed to be installed. One of them is XAMPP and the other is Visual Studio Code. On the other hand, to build the APTS, Hostinger and phpMyAdmin was used.

4.2.1 XAMPP

XAMPP is a software package that provides a complete local web server environment. It is designed to help developers and students run and test websites or web applications directly on their own computers, without needing an internet connection or access to an external server. XAMPP makes it easy to simulate how a website would work online by setting up all the necessary components in one simple installation.

The name XAMPP stands for cross-platform (X), Apache, MySQL or MariaDB, PHP, and Perl. These are the main tools bundled in the software. Apache acts as the web server, MySQL or MariaDB handles databases, while PHP and Perl are programming languages used to build dynamic web content. Instead of installing each of these tools separately and configuring them manually, XAMPP provides a user-friendly interface to manage them all in one place.

The main function of XAMPP is to create a local development environment. This allows users to build, test, and debug websites safely on their own machines before going live. It is especially useful for learning web development, experimenting with code, and developing full-featured web applications without affecting a live server. XAMPP can be downloaded from <https://www.apachefriends.org/>

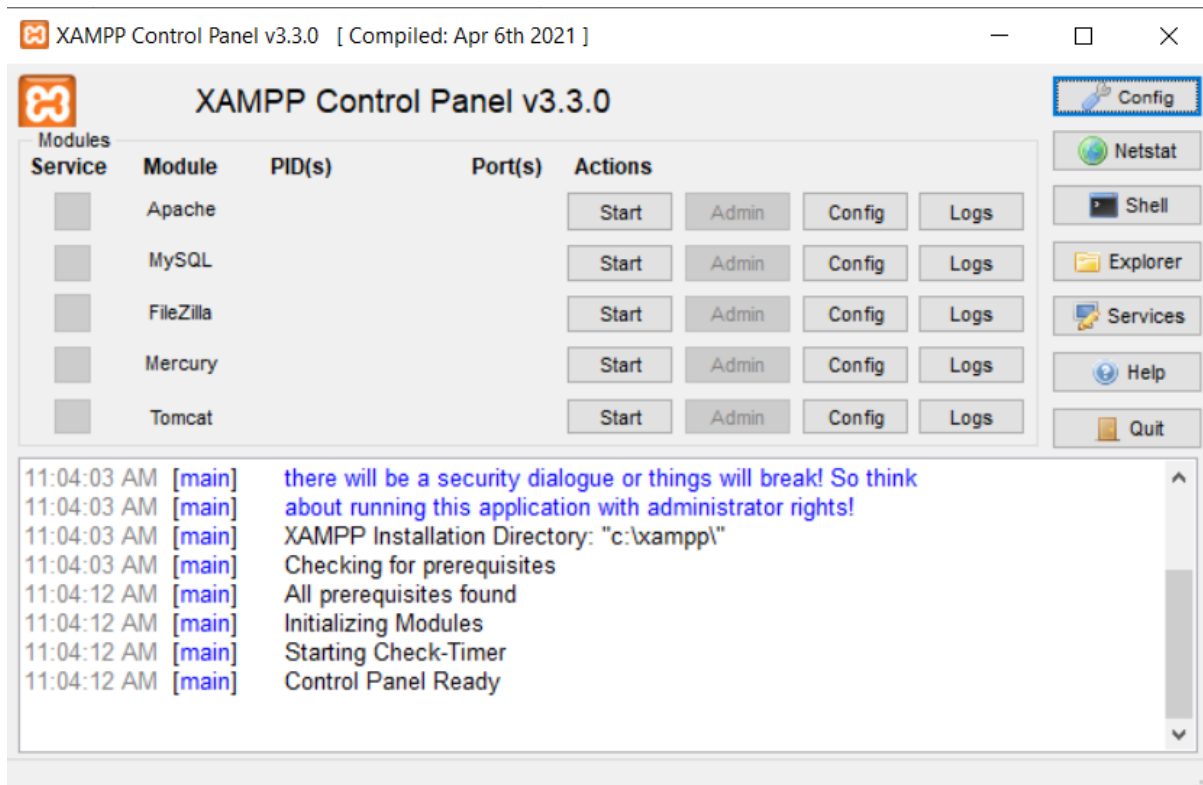


Figure 4.1: XAMPP Control Panel

After the installation, XAMPP can be accessed and will display the control panel like in Figure 4.1. There are 5 modules that has been shown in Figure 4.1 and each module have its own functionality. To access the functionality of the module, the user can press the start action and the module will run from the user's device. For example, when the Apache module in XAMPP is activated, it initiates the Apache web server on the local machine, enabling it to process HTTP requests. This transforms the computer into a functional local server environment. When a user accesses `http://localhost` through a web browser, the Apache server responds by retrieving files stored in the `htdocs` directory, located within the XAMPP installation folder. It then delivers these files—such as HTML or PHP pages—to the browser for display. This setup allows developers to build, test, and run websites locally, without the need for an internet connection or a live web hosting service.

4.2.2 Visual Studio Code

Visual Studio Code (VS Code) is a free and lightweight source-code editor developed by Microsoft. It is widely used by developers and students to write, edit, and manage code for various programming languages such as HTML, CSS, JavaScript, PHP, Python, and more. VS Code provides an efficient and user-friendly interface that supports software development

across multiple platforms including Windows, macOS, and Linux. It is especially suitable for web and application development due to its powerful features and flexibility.

VS Code offers a wide range of tools and extensions that enhance productivity. Some of its key features include syntax highlighting, intelligent code completion (IntelliSense), real-time error checking, version control integration (Git), debugging support, and a built-in terminal. Users can also install extensions from the Visual Studio Code Marketplace to add support for new languages, themes, frameworks, and development tools. This allows developers to customize their workspace based on specific project needs.

The main function of VS Code is to provide a professional and streamlined environment for writing and managing code. It is designed to simplify the development process by integrating multiple tools into one editor. VS Code helps users to write clean, efficient, and well-organized code while also supporting testing and debugging. It is particularly useful for building and maintaining web applications, and it works well in combination with local server software like XAMPP. VS Code can be downloaded from <https://code.visualstudio.com/>

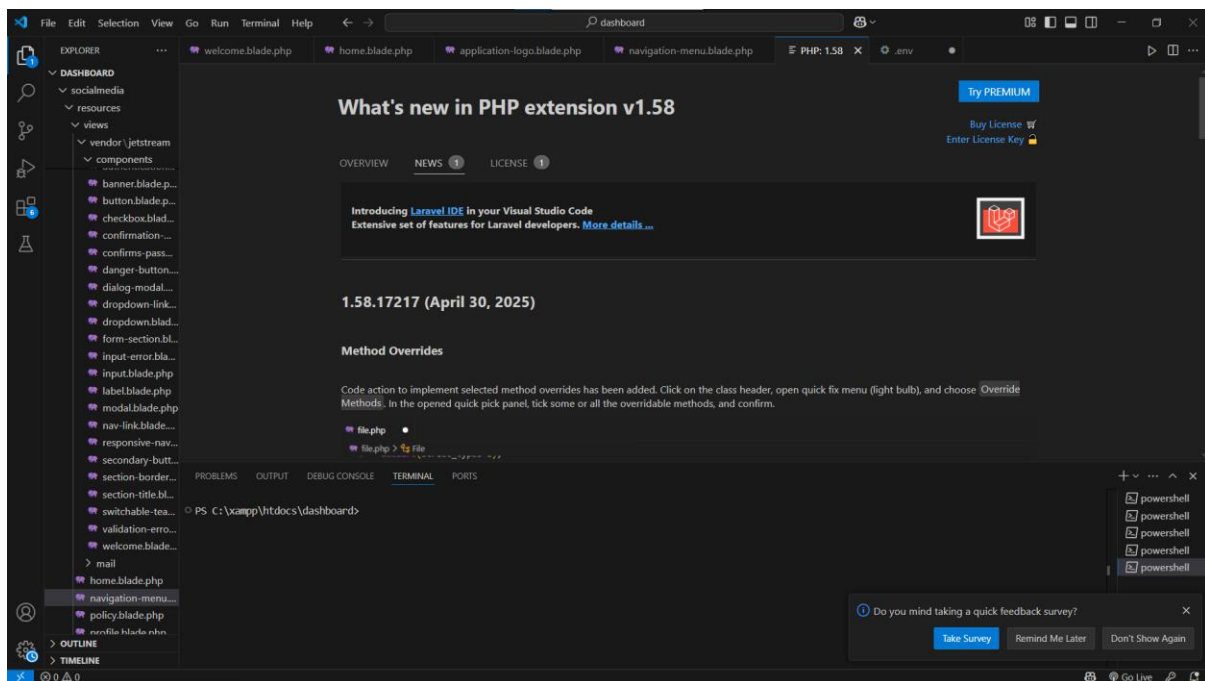


Figure 4.2: Visual Studio Code Main Page

After installation, Visual Studio Code can be launched to display the main interface, as shown in Figure 4.2. The interface typically includes several sections such as the activity bar (on the left), editor window (center), sidebar (for file explorer and extensions), and terminal (at

the bottom). Users can open folders or specific files and begin writing or editing code. VS Code also allows users to run terminal commands, manage Git repositories, and preview changes directly within the editor. Its clean design and powerful features make it a preferred choice for developers working on websites, applications, and other software projects.

4.2.3 Hostinger

Hostinger is a popular web hosting provider that offers reliable and affordable hosting services for websites and web applications. It is commonly used by individuals, businesses, developers, and students to publish their websites online. As a web host, Hostinger provides the server space and resources needed to make a website accessible to anyone via the internet. It supports a variety of hosting types, including shared hosting, VPS (Virtual Private Server), cloud hosting, and WordPress hosting, making it suitable for both beginners and advanced users.

The main function of Hostinger is to store website files and make them available to users around the world through the internet. When a domain name is connected to a Hostinger-hosted website, the server handles all incoming requests and delivers the corresponding files—such as HTML, CSS, images, and scripts—to the visitor’s browser. Hostinger also includes tools like cPanel or its own custom control panel (hPanel) that allow users to manage files, databases, domains, email accounts, and other hosting features in a user-friendly environment.

Hostinger offers key features such as fast loading speeds, high uptime reliability, free SSL certificates, domain registration, automated backups, and 24/7 customer support. It also supports popular web technologies such as PHP, MySQL, and WordPress, allowing users to deploy dynamic and interactive websites. For developers, Hostinger provides access to FTP, SSH, Git integration, and database management, making it a complete platform for launching and managing web projects.

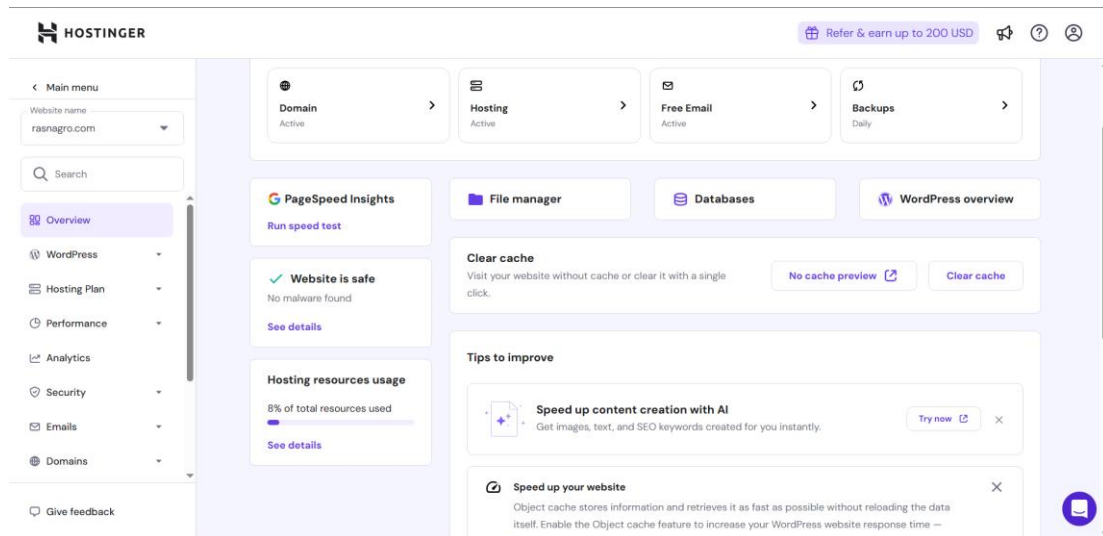


Figure 4.3: Hostinger Control Panel

After purchasing a hosting plan, users gain access to Hostinger’s control panel, as shown in Figure 4.3. From this dashboard, users can upload website files, create databases, manage domains, and configure hosting settings. To make a website live, the user uploads the website files (such as those developed using XAMPP or VS Code) to the server using the file manager or an FTP client. Once uploaded and connected to a domain, the website becomes publicly accessible through the internet. Hostinger’s simple setup process and powerful tools make it an ideal choice for hosting websites of all sizes and types.

4.2.4 phpMyAdmin

phpMyAdmin is a free, web-based software tool used to manage MySQL or MariaDB databases through an easy-to-use graphical interface. Instead of typing complex commands, users can perform database tasks like creating, editing, deleting tables, running SQL queries, and managing users with just a few clicks. It is commonly bundled with software packages like XAMPP and hosted on a local or remote server.

The main function of phpMyAdmin is to simplify database management for developers and students, allowing them to organize and manipulate their databases without needing deep command-line knowledge. When accessed through a web browser, phpMyAdmin connects to the database server, displaying the database structure and contents visually, making it easier to work with data for websites or applications.

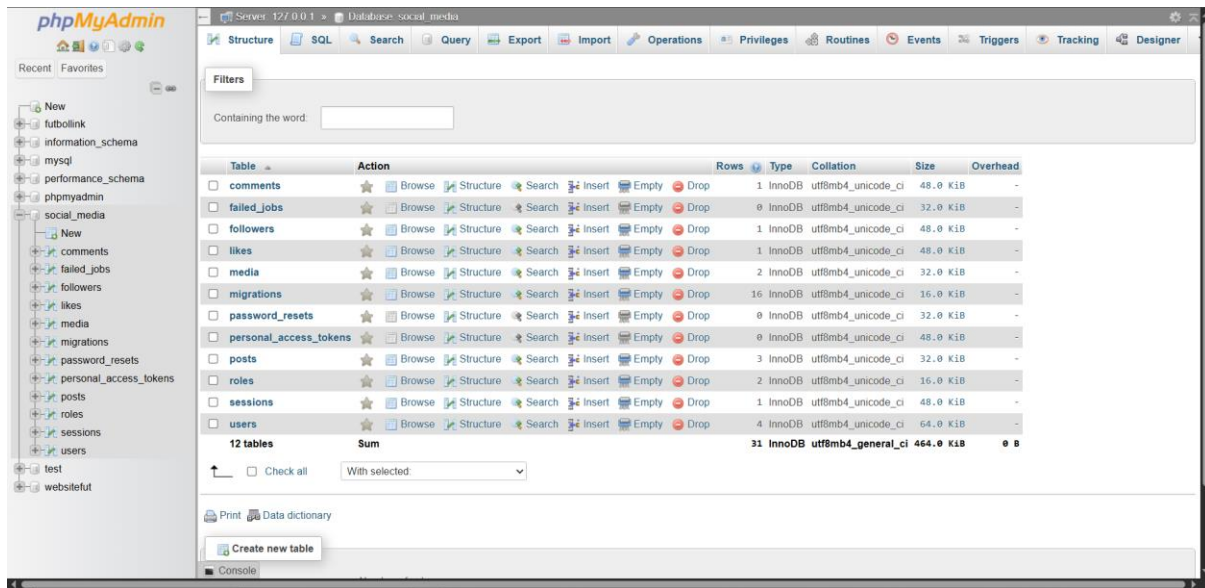


Figure 4.4: phpMyAdmin Interface

After launching phpMyAdmin (usually by visiting <http://localhost/phpmyadmin>), users are presented with a dashboard that lists all available databases. From here, users can create new databases, import/export data, run SQL queries, and manage permissions. This tool is essential for anyone working with MySQL or MariaDB databases, especially during website development and testing.

4.3 Implementation of Proposed Social Network Platform

4.3.1 Overview of the Platform

There are 3 types of people in FutbolLink which are the Users (Player, Coach), Recruiter (Clubs, Manager), and Administrator.

Type of Users	Modules
All (User, Recruiter, Admin)	i. Edit profile ii. Change password iii. Upload and manage videos/photos iv. Apply for trials and events v. Communicate with recruiters and clubs by sending application through website via email. vi. View feedback and ratings from coaches or clubs (Comment).

Recruiter	i. Edit profile ii. Change password iii. Post recruitment announcements. iv. Search for players. v. View player profiles, videos, and posts. vi. Send trial invitations and messages to players through email. vii. Provide feedback and ratings to players. (Comment)
Administrator	i. Manage all user accounts (players, recruiters) ii. Edit profile and change password iii. Monitor platform activity and content iv. Manage and moderate posted content (videos, comments) v. Generate reports on platform usage and performance vi. Handle user support and resolve issues

4.3.2 Main Page for FutbolLink

After accessing the website through the link, the main page will be opened which will be the login page. User will need to enter the credentials (E-mail and password) that has been created and stored inside the database in order to access their FutbolLink's account. Any wrong credentials can lead to users are not able to access their FutbolLink's account.

If the users have never created an account for FutbolLink, the user can create their account under the login button which was written "Sign Up Now". After the user click it, they will be taken to another page called register page. Submitting the form in the page and the form submission passes validation, an account for the user will be created and the user now can access the FutbolLink Social Network.

If the new user is a club which in this case a "Recruiter", they can register as a club under the "Sign Up Now" which have "Register Now". The recruiter will also need to submit the

registration form for their club and if the form submission passes validation, the club account has been created, and they can access the FutbolLink Social Network.

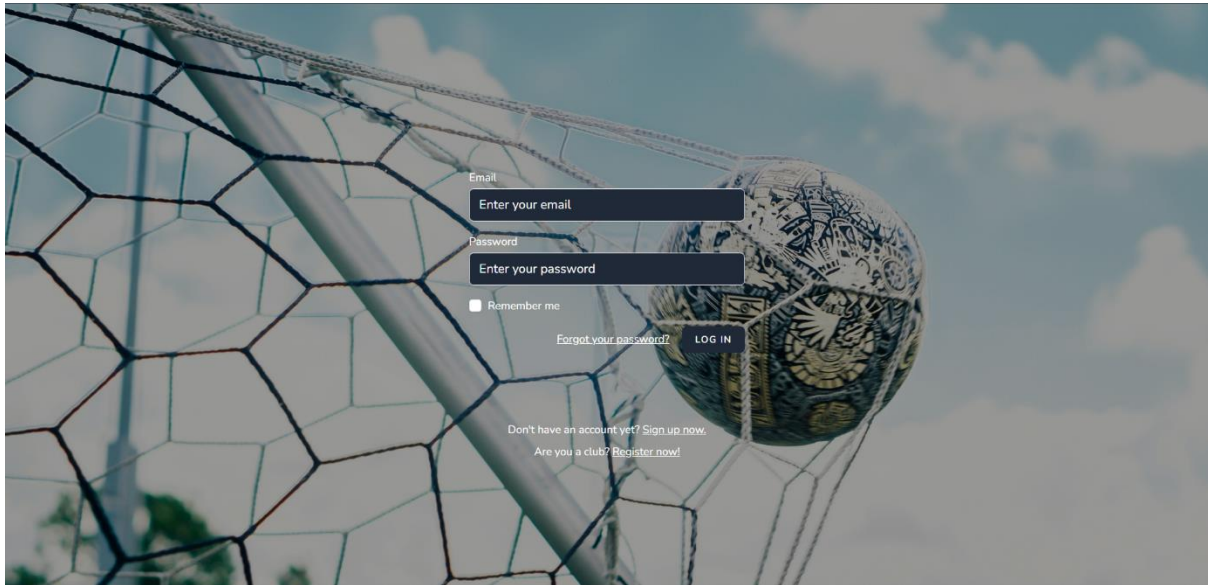
The login page features a background image of a soccer goal net and a ball. The form is centered and includes fields for 'Email' and 'Password', both with placeholder text 'Enter your email' and 'Enter your password' respectively. Below these is a 'Remember me' checkbox. To the right of the password field is a 'LOG IN' button. Below the login fields are two links: 'Forgot your password?' and 'Don't have an account yet? Sign up now.' At the bottom, there is a link 'Are you a club? Register now!'.

Figure 4.5: Login Page for FutbolLink

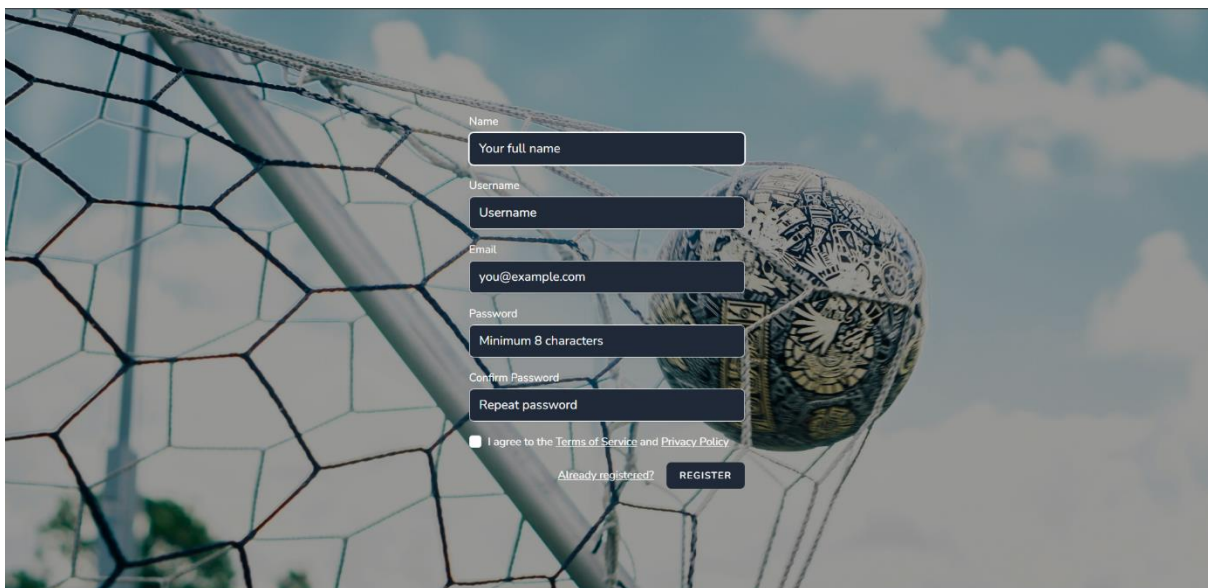
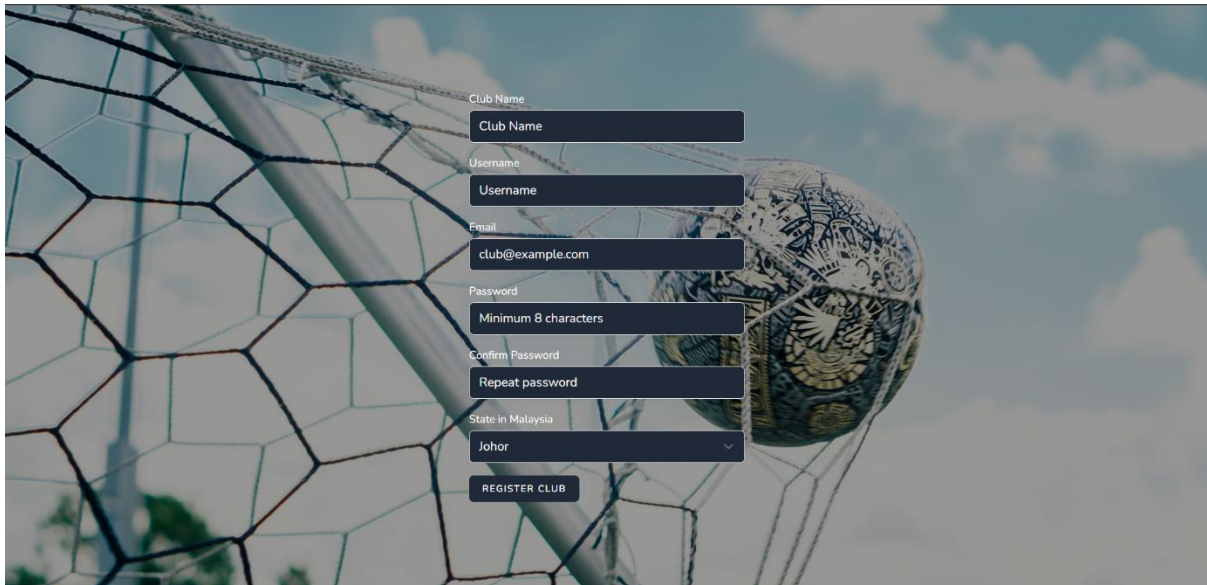
The registration page features the same background image of a soccer goal net and a ball. The form is centered and includes fields for 'Name' (placeholder: 'Your full name'), 'Username' (placeholder: 'Username'), 'Email' (placeholder: 'you@example.com'), 'Password' (placeholder: 'Minimum 8 characters'), and 'Confirm Password' (placeholder: 'Repeat password'). Below these fields is a checkbox for 'I agree to the Terms of Service and Privacy Policy'. At the bottom, there is a link 'Already registered?' and a 'REGISTER' button.

Figure 4.6: User Registration Page for FutbolLink

The image shows a registration form for a club, overlaid on a background image of a soccer goal and a soccer ball. The form fields are as follows:

- Club Name: A text input field.
- Username: A text input field.
- Email: A text input field containing the example email "club@example.com".
- Password: A text input field with a placeholder "Minimum 8 characters".
- Confirm Password: A text input field with a placeholder "Repeat password".
- State in Malaysia: A dropdown menu with "Johor" selected.
- REGISTER CLUB: A button at the bottom of the form.

Figure 4.7: Club Registration Page for FutbolLink

4.3.3 User Module

Upon logging into the user's account, the user will be taken to the homepage of FutbolLink where the user can see the posts that has been made by other users. At the top of the page, the user will see a navigation bar that can take the user to multiple features. The navigation for each role are different. The user's navigation bar contains Home, Jobs, Create Post, Profile, Search, dropdown for account management, and logout.

I. Home

In this page, the user will see another user's post. The user will also see any posting from Clubs or even Admins. The user's post will also appear in this Home page or will be better known as "Timeline".

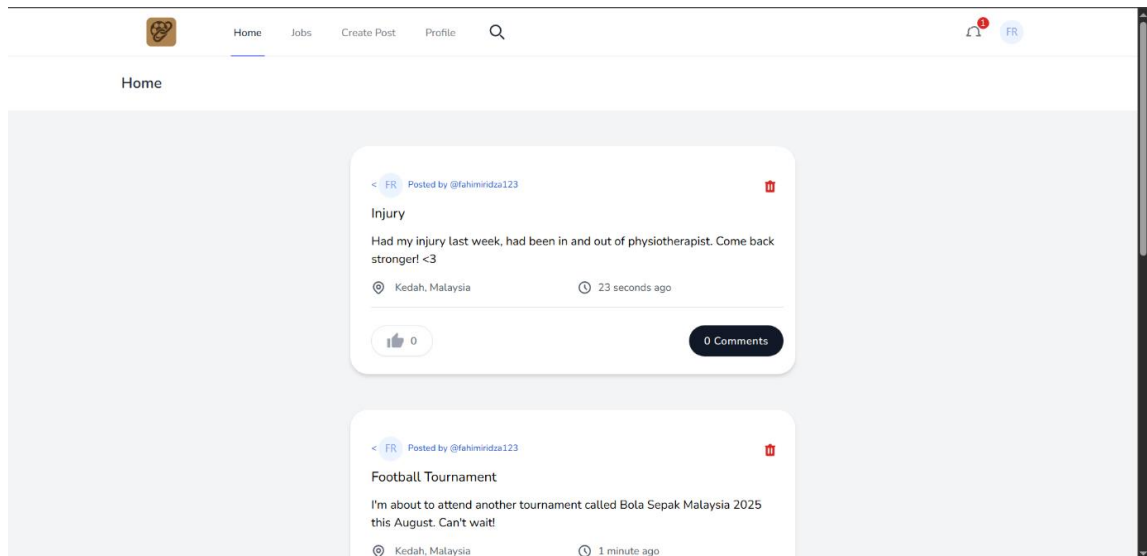


Figure 4.8: Homepage of FutbolLink

II. Jobs

Jobs page will show any jobs that are open for applicants that has been posted by the club. From player searching to coaching staff, any position that are needed by the club that has been posted will appear in this page. The user can click the “Read More” button and it will take the user to the page to know more about the job. If the user is interested in the job, the user can click the “Apply Now” button and it will take the user to another page to submit a cover letter and resume which is optional but encouraged to make the employee searching easier for the recruiter.

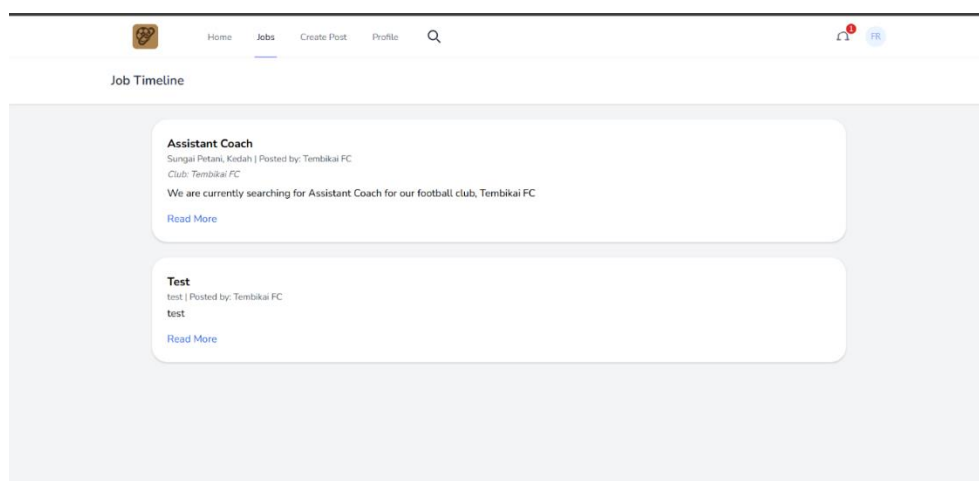


Figure 4.9: Job Timeline for FutbolLink

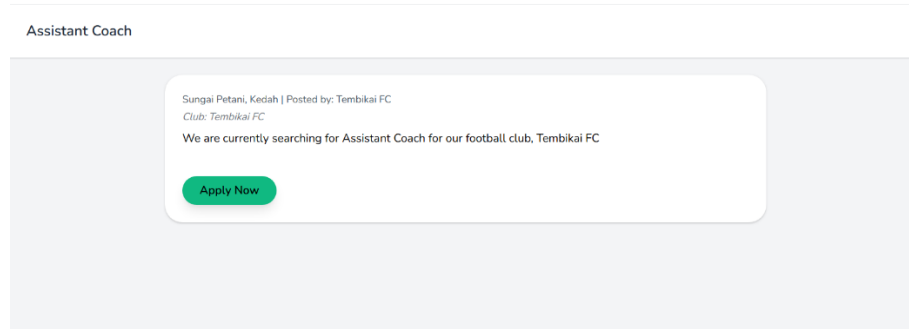


Figure 4.10: Job page

After the user submit the application, an email will be sent to the recruiter's email to let them know that an applicant has applied for the role that has been posted. The resume will also be in the email sent as an attachment. The user will then get an email if their application has been approved or rejected by the club.

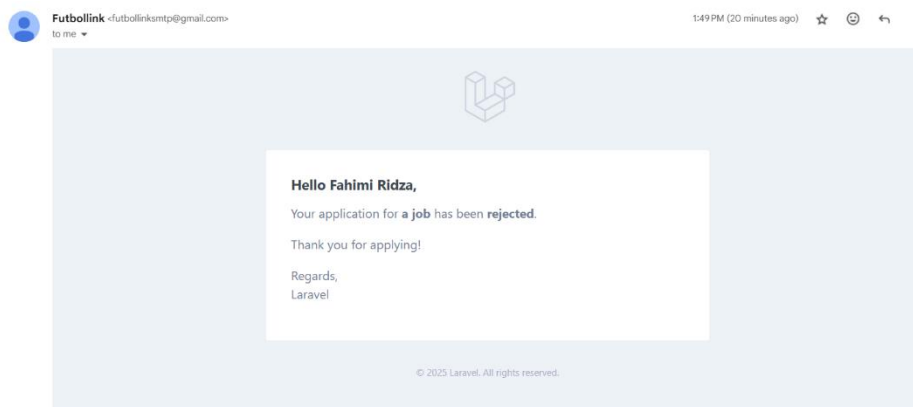


Figure 4.11: Job Approved/Rejected Email

III. Create Post

This page will allow users to create post. The user can make any postings and the user can also attach image or video in the posting and other users can view the post after the user has posted the postings. If the user wanted to delete the post, only the user that posted the post can delete it. The user can also comment in any post.

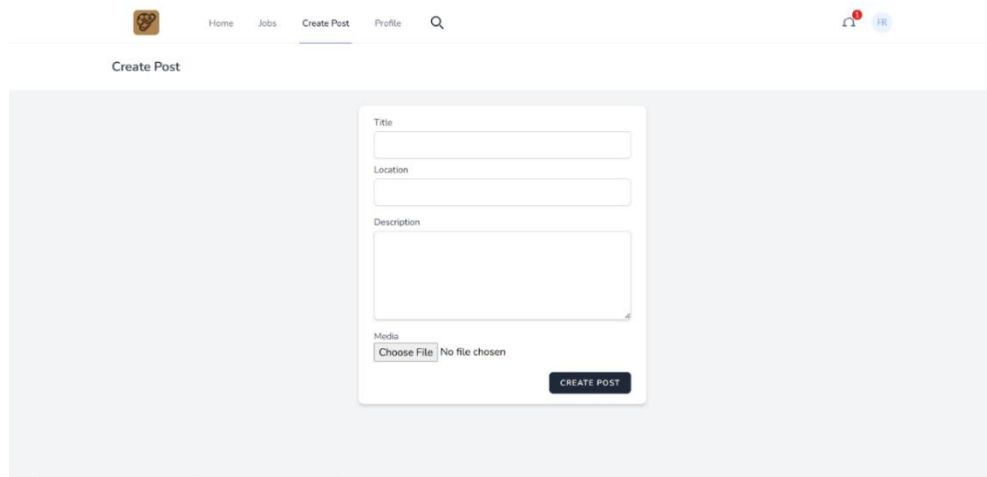


Figure 4.12: Create Post for FutbolLink

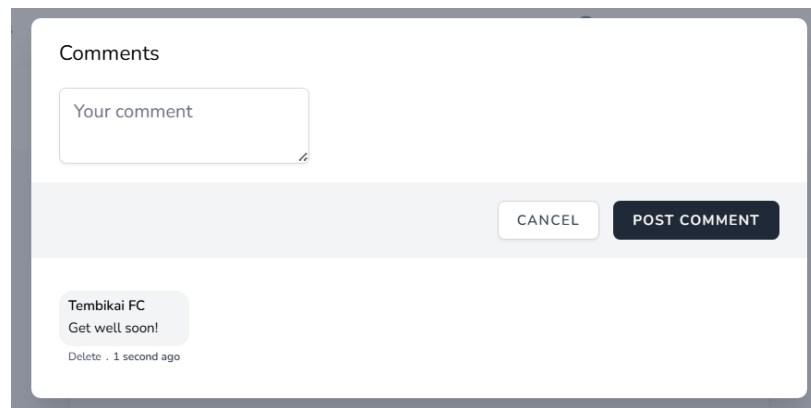


Figure 4.13: Comments

IV. Profile

Profile is where the user's profile can be viewed. The followers, following, and posts will be available in the user's profile page. The user can see their profile picture that has been updated in the user's profile page. At the top right, the user can manage their account. After the user edit their profile, the user will be taken to the profile page and all the updated details will be there.

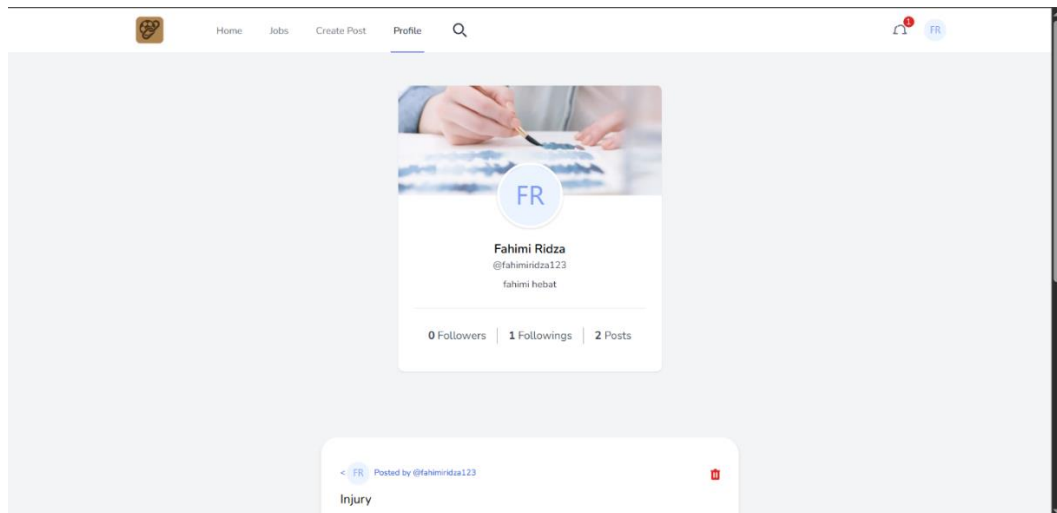


Figure 4.14: Profile

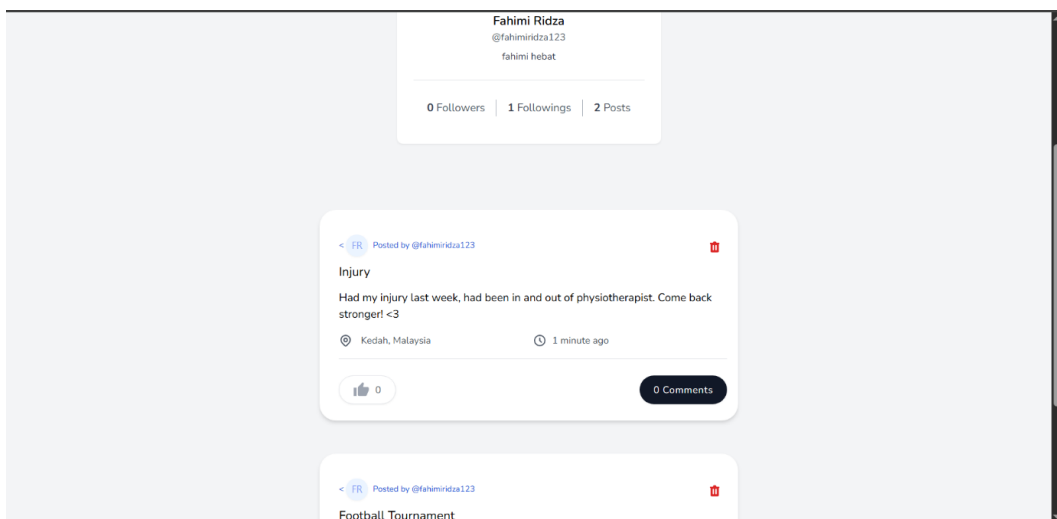


Figure 4.15: Post under Profile

V. Search

Search features can be used to search for specific users or clubs. After searching specific names, it will show the results of the search and if there are no results, the page will show “No Result Found”. The search also functions to find any specific position or jobs that has been posted just to make it easier for users to find any position in football environments.

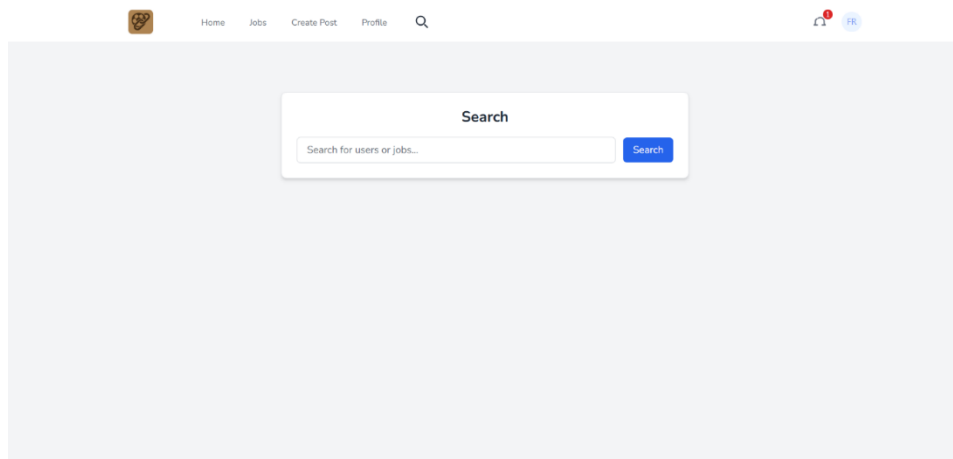


Figure 4.16: Search Page

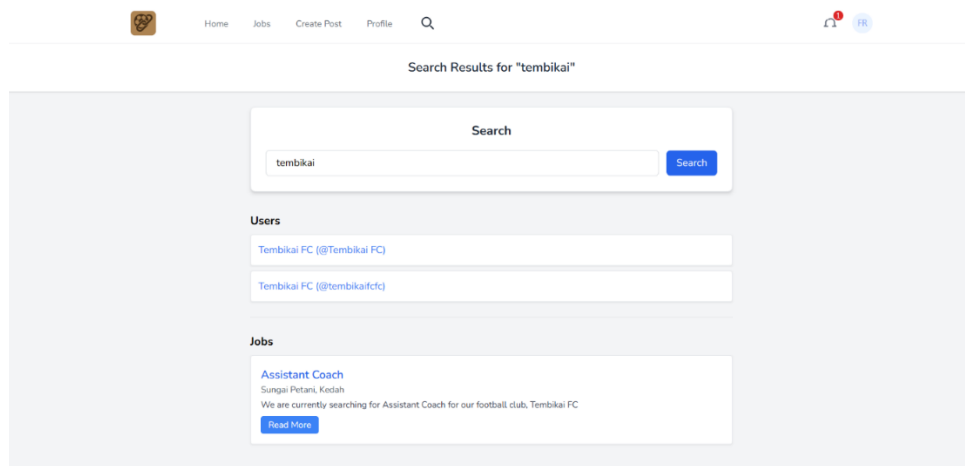


Figure 4.17: Search Page with Results

VI. Manage Profile

The user can update their profile after the user click the Manage profile button at the top-right corner. Once clicked, the user will be redirect to manage account profile where the user can update their account's profile picture, name, username, descriptions, and email. This can be seen in Figure 4.18.

Figure 4.18: Profile Update

The user can also update the password of the account in this page as shown in Figure 4.19.

Figure 4.19: Password Update

If the user no longer want to use the account, the user can delete the account by clicking the delete account button. The user will be asked to enter the account's password to confirm the deletion of the account. Once entered, the account is no longer in the database.

Figure 4.20: Account Deletion

4.3.4 Recruiter Module

As a special user which is Recruiter, this user have some additional features that only the Recruiter can access. Like the normal user, the Recruiter will be taken to Home page and a navigation bar containing Home, Jobs, Create Post, Profile, and Search dropdown for account management, and logout but with additional features. The additional features are Create Job and Job Application. The profile of the Recruiter is also quite different.

I. Create Job

The Recruiter will have the feature to create a job whether it's for football player or coaches. The Recruiter will have to submit the details of the job and the Recruiter can also attach media to the Job Posting for clearer understanding of the job vacancy. Figure shows the Create Post page that can only be used by the Recruiter. Once the job was posted, it will appear at the Jobs page. The job can only be deleted by the club that posted the job.

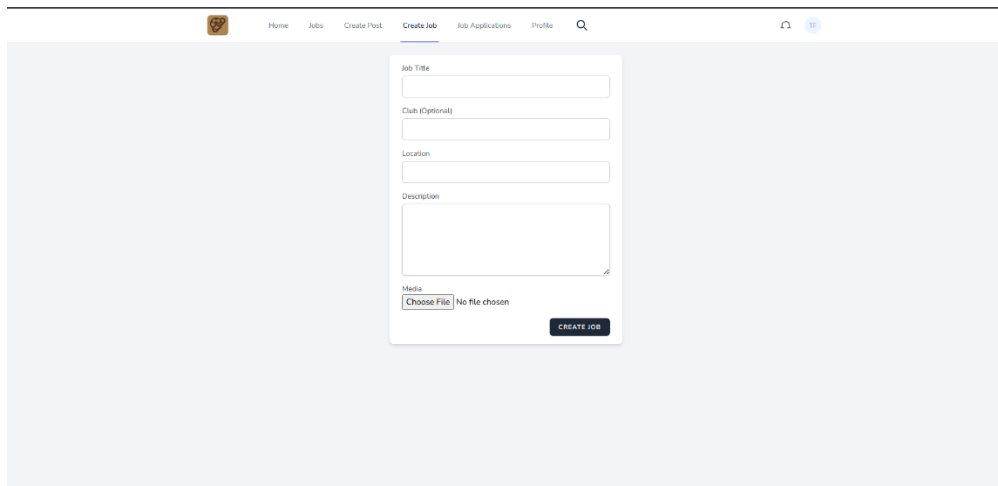
The image shows a web application interface for creating a job. At the top, there is a navigation bar with links: Home, Jobs, Create Post, Create Job (which is highlighted), Job Applications, and Profile. There is also a search icon and a notification bell icon. The main content area is a light gray background. In the center, there is a white form titled 'Job Title'. The form contains several input fields: 'Job Title', 'Club (Optional)', 'Location', and 'Description'. Below these fields is a 'Media' section with a 'Choose File' button and the text 'No file chosen'. At the bottom right of the form is a dark blue button labeled 'CREATE JOB'.

Figure 4.21: Post Creation

If the user applied for the job, the Recruiter will be notified through email as shown in Figure

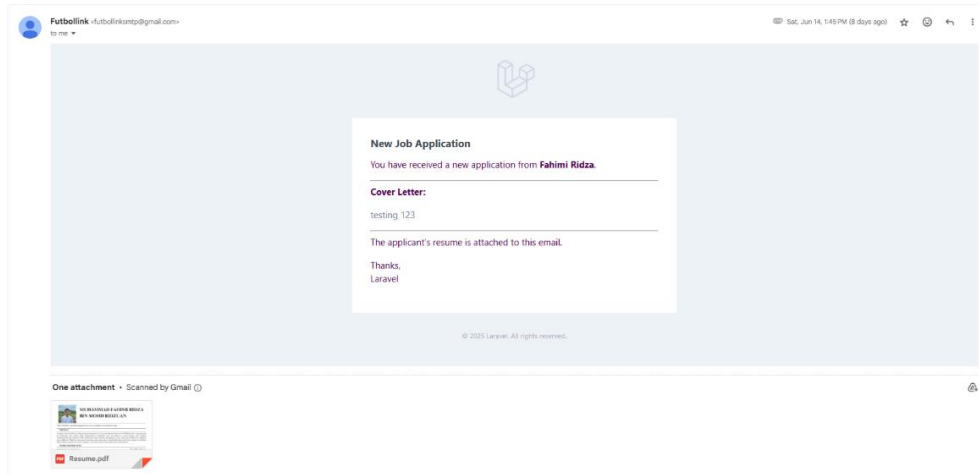


Figure 4.22: Job Application in Email

II. Job Application

Once the user applied for the job, the job application will appear in the Job Application page. The Recruiter can see the applicant's name, the job they applied for, the status of the applicant's application, and actions that need to be taken which are Approved or Rejected.

 Home Jobs Create Post Create Job Job Applications Profile				
Job Applications				
JOB	APPLICANT	STATUS	ACTIONS	
Test	Fahimi Ridza	Rejected	Rejected	Update
Test	Halizeeq	Pending	Accepted	Update

Figure 4.23: Job Application Page

III. Recruiter's Profile

The Recruiter profile will contain an extra button which is Jobs by the Recruiter. Once clicked by the user, it will redirect the user to a page of the jobs that has been posted by the Recruiter that has not been deleted. This will make it easier for user to apply

for positions for the club they interested in. This can be seen in Figure 4.24 and Figure 4.25.

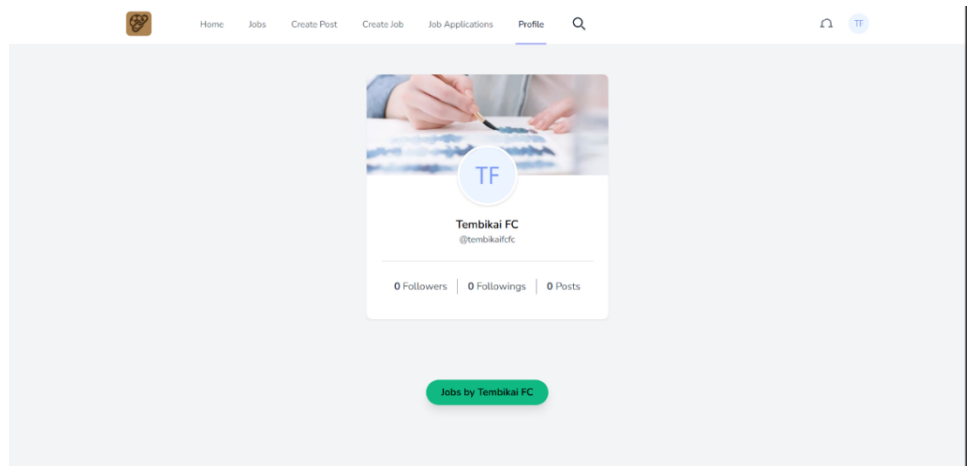


Figure 4.24: Jobs Button in Club Profile

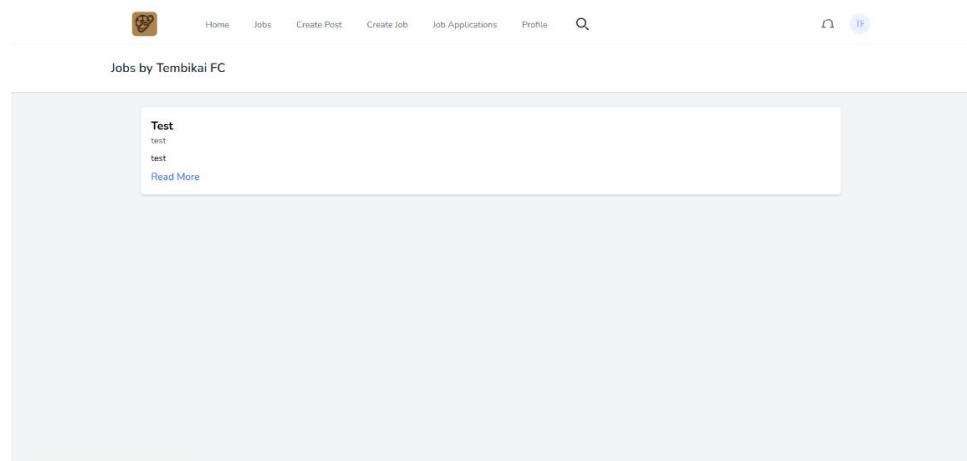


Figure 4.25: Jobs Posted by Club

4.3.5 Admin Module

Admin is responsible for handling the FutbolLink website to be a safe place and not be used with different intention. The admin have the ability to ban, delete, and edit any user or recruiter. Any postings and jobs that need to be deleted is a job for the admin. The admin also have extra feature in navigation bar which is Admin Panel which allow admin to manage users.

I. Delete Post and Job

The admin will also be redirect to Home page after logging in but the admin will have extra button beside the post of any user which when clicked, it will delete the post from the Timeline and no longer can be viewed by anyone. This can be seen as shown in Figure 4.26.

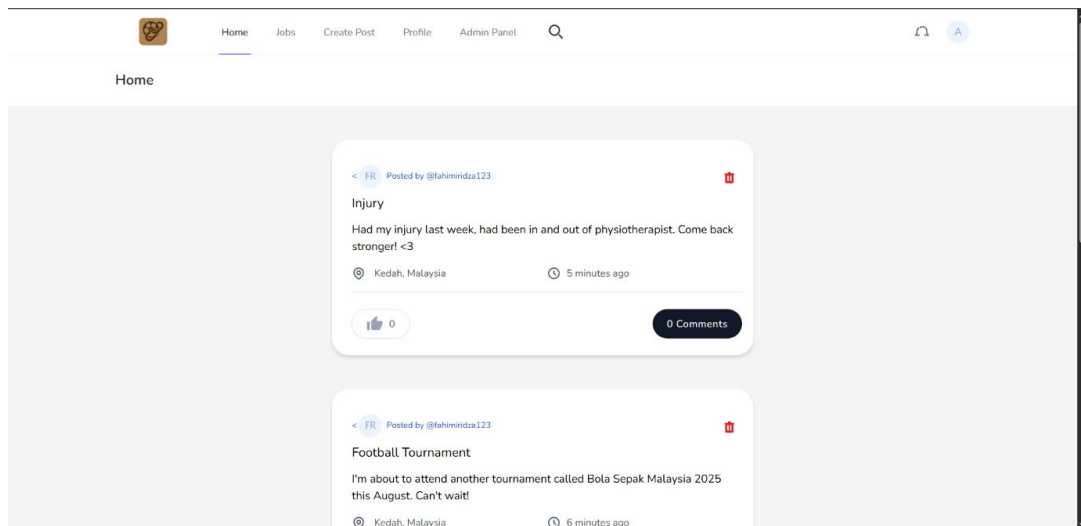


Figure 4.26: Admin Homepage

The admin also have an extra button to delete any Job in Jobs page if it's inappropriate or are against the rules of FutbolLink as shown in Figure 4.27.

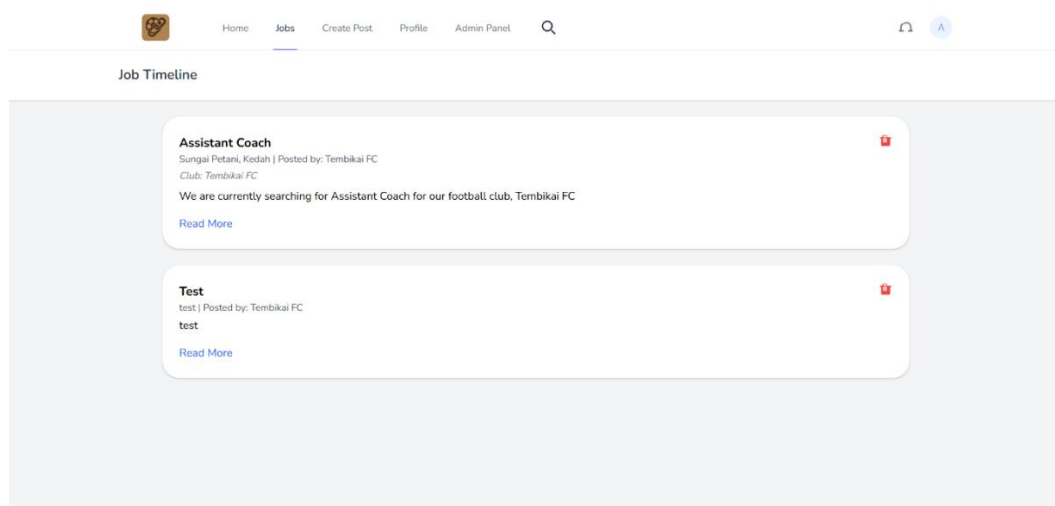
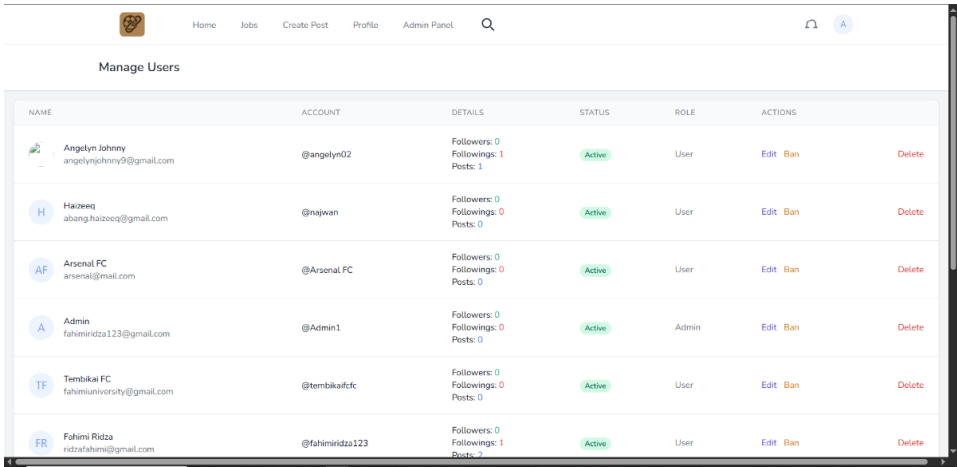


Figure 4.27: Admin Job Timeline

II. Admin Panel

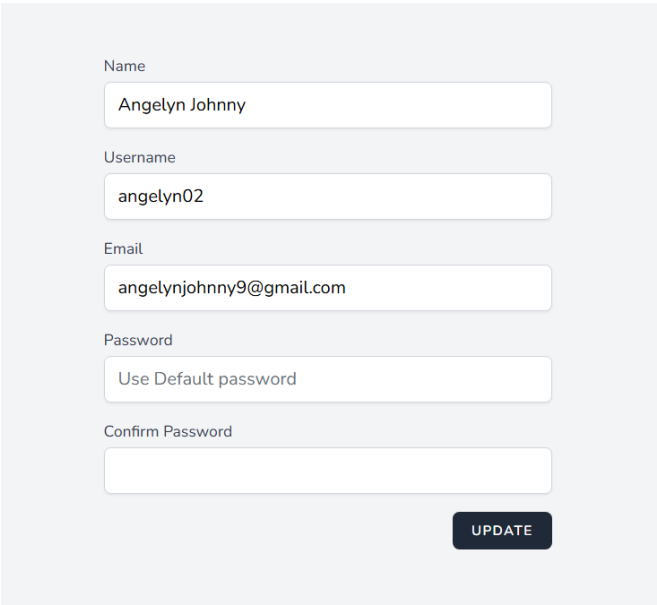
Admin Panel allows the Admin to edit, ban, unban, and delete any account. If the account violates the rules, the admin will take action by banning them for certain

amount of time. The admin can also delete the account that has been inactive for too long or requested to be deleted. The admin can help edit the user's username, name, and password. This can be seen in Figure 4.28.



NAME	ACCOUNT	DETAILS	STATUS	ROLE	ACTIONS
 Angelyn Johnny angelynjohnny9@gmail.com	@angelyn02	Followers: 0 Followings: 1 Posts: 1	Active	User	Edit Ban Delete
 Haizaeq abang.haizaeq@gmail.com	@hajwan	Followers: 0 Followings: 0 Posts: 0	Active	User	Edit Ban Delete
 Arsenal FC arsenal@gmail.com	@Arsenal FC	Followers: 0 Followings: 0 Posts: 0	Active	User	Edit Ban Delete
 Admin fahimiridza123@gmail.com	@Admin1	Followers: 0 Followings: 0 Posts: 0	Active	Admin	Edit Ban Delete
 Tembikai FC fahimiversity@gmail.com	@tembikaifc	Followers: 0 Followings: 0 Posts: 0	Active	User	Edit Ban Delete
 Fahimi Ridza ridzafahimi@gmail.com	@fahimiridza123	Followers: 0 Followings: 1 Posts: 1	Active	User	Edit Ban Delete

Figure 4.28: Admin Panel



Name

Angelyn Johnny

Username

angelyn02

Email

angelynjohnny9@gmail.com

Password

Use Default password

Confirm Password

UPDATE

Figure 4.29: Admin Edit

4.4 Summary

Chapter 4 covers the implementation involves in the proposed social network. There are three modules involves in the implementation which are user module, recruiter module, and admin module. All of the module is presented through the screenshot of the system's interface with description of the flow involves and explained in more detail.

Chapter 5 : Testing

5.1 Introduction

Testing is the most important and crucial phrase where the system is being tested by the users before it is ready to be released for actual user to utilize the system. There are two types of users which are lecturer and student for the testing phrase. During testing phrase, all the bugs, errors, flaws, and mistakes will be detected and fixed based on the feedback get from the user who test the system. In this project, the testing phrase is divided into functional testing and non-functional testing which both are crucial for ensuring the system's quality. Functional testing will focus on the system's functionality through unit testing while non-functional testing will focus on the system's usability through acceptance testing with a group of actual users. Unit testing will be done using a test case table, and acceptance testing will be done using a usability testing questionnaire.

5.2 Functional Test

Functional testing is a testing method conducted to ensures that software meets defined criteria, with a focus on user-facing features and overall system behaviour. In this project, unit testing was used to evaluate the system's functionality and reliability. For example, a functional test case may include determining if the login functionality works properly with both valid and incorrect credentials.

5.3 Unit Testing

Unit testing is a testing technique to check if small parts of a software, like individual functions or methods work correctly on their own to achieve the system requirements. These tests are written and executed by developers to ensure that each module performs as expected. If results do not meet the expectations, the test must be repeated until the results meet the expectations. Besides, this testing clarifies a class's behaviour and identifies cases where tiny system changes might lead to unexpected failures or losses.

5.3.1 Test Cases

Table 5.1: Login Test Case

Module Name: Login					
Test Objective: To verify the user authentication functionality					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail

Valid User Login	TC-LOGIN-01	Valid Email and Password	Redirect to user homepage	User redirected	Pass
Invalid Password	TC-LOGIN-02	Valid Email but Invalid Password	Show error: "These credentials do not match our records."	Error Shown	Pass
Invalid Email Format	TC-LOGIN-03	Invalid Email format but valid password	Show validation error for email	Validation error shown	Pass
Missing Password	TC-LOGIN-04	Blank password submitted	Show validation error for password	Validation error shown	Pass
Missing Email	TC-LOGIN-05	Blank Email submitted	Show validation error for email	Validation error shown	Pass
Banned Users	TC-LOGIN-06	Valid Email and Password but account banned	Show message: "This account has been banned"	Message shown	Pass
Remember Me Checked	TC-LOGIN-07	Tick the Remember Me checkbox	Login persists across sessions	Login persists	Pass
Forgot Password Link	TC-LOGIN-08	Click on "Forgot your password?"	Redirect to password reset page	Redirect successful	Pass
User Registration Link	TC-LOGIN-09	Click on "Sign up now." under "Don't have an account yet?"	Redirect to user registration page	Redirect successful	Pass
Club Registration Link	TC-LOGIN-10	Click on "Register now!" under "Are you a club?"	Redirect to club registration page	Redirect successful	Pass

Table 5.2: User Registration Test Case

Module Name: Registration for User					
Test Objective: To verify that user registration validates input and creates an account successfully.					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Register with valid data	TC-US_REG-01	All details are entered correctly	Redirect to user homepage, user created, logged in	User registered successfully, redirected to user homepage and is logged in	Pass
Missing name field	TC-US_REG-02	All details entered correctly but blank on name	Validation error shown: "The name field is required."	Registration page reloads with red validation error under name field	Pass
Invalid Email Format	TC-US_REG-03	Invalid Email format was filled	Show validation error for email	Registration page reloads with error below email field	Pass
Passwords do not match	TC-US_REG-04	All details entered correctly but the passwords are different	Show validation error for password unmatched	Password confirmation error appears below field	Pass
Username already taken	TC-US_REG-05	All details entered correctly but the username has been registered	Show validation error for username has already been taken	Form reloads with error about duplicate username	Pass
Email already taken	TC-US_REG-06	All details entered correctly but the email has been registered	Show validation error for username has already been taken	Form reloads with error message below email	Pass
Password does not	TC-US_REG-07	All details entered correctly	Show validation error for	Password field shows	Pass

follow format		except the password	password format	validation error	
Missing all fields	TC-US_REG-08	All details left blank	Validation errors for each required field	Multiple validation errors shown below each field	Pass

Table 5.3: Club Registration Test Case

Module Name: Registration for Recruiter					
Test Objective: To verify that club registration validates input and creates an account successfully.					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Register club with valid data	TC-CL_REG-01	All details are entered correctly	Redirect to recruiter homepage, user created, logged in	User registered successfully, redirected to recruiter homepage and is logged in	Pass
Missing club name field	TC-CL_REG-02	All details entered correctly but blank on name	Validation error shown: "The name field is required."	Registration page reloads with red validation error under name field	Pass
Invalid Email Format	TC-CL_REG-03	Invalid Email format was filled	Show validation error for email	Registration page reloads with error below email field	Pass
Passwords do not match	TC-CL_REG-04	All details entered correctly but the passwords are different	Show validation error for password unmatched	Password confirmation error appears below field	Pass
Username already taken	TC-CL_REG-05	All details entered correctly but the username has been registered	Show validation error for username has already been taken	Form reloads with error about duplicate username	Pass
Email already taken	TC-CL_REG-06	All details entered correctly but	Show validation error for	Form reloads with error	Pass

		the email has been registered	username has already been taken	message below email	
Password does not follow format	TC-CL_REG-07	All details entered correctly except the password	Show validation error for password format	Password field shows validation error	Pass
Missing all fields	TC-CL_REG-08	All details left blank	Validation errors for each required field	Multiple validation errors shown below each field	Pass
Location not selected	TC-CL_REG-09	Not select any location	Error or default to first valid location	N/A	Pass

Table 5.4: Homepage Test Case

Module Name: Homepage (Timeline)					
Test Objective: To verify that club registration validates input and creates an account successfully.					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Load timeline posts	TC-HOME-01	Visit homepage	All posts from followed users or global timeline are shown	Posts loaded correctly	Pass
Show "No posts found" when timeline is empty	TC-HOME-02	No posts exist	Display "No Posts found" message with placeholder image	Shown correctly	Pass
Like a post	TC-HOME-03	Click the Like button	Like count increases by 1, button changes to "Unlike"	Working	Pass
Unlike a post	TC-HOME-04	Click the Unlike button	Like count decreases by 1, button changes to "Like"	Working	Pass
Add comment to post	TC-HOME-05	Enter comment and submit	Comment is saved, displayed under post	Working	Pass

Delete own comment	TC-HOME-06	Click Delete on own comment	Comment is removed	Working	Pass
Video in post plays properly using Plyr	TC-HOME-07	Play video	Only one video plays at a time (others pause), playback works	Working	Pass

Table 5.5: Profile Update Test Case

Module Name: Profile Update					
Test Objective: To verify that users are able to successfully update their profile information					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Update all fields with valid data	TC-PRF-01	Entered the details with valid data	Profile is updated successfully and message "Saved." is shown	Form updates, user info changes in DB, success message appears	Pass
Leave description empty	TC-PRF-02	Leave the description with blank	Profile still updates successfully	Form updates, no error shown for optional field	Pass
Upload invalid photo type	TC-PRF-03	Submit an pdf into the profile photo	Validation error: "The photo must be an image."	Error appears below photo upload input	Pass
Submit without changing anything	TC-PRF-04	No fields modified	Nothing updates but "Saved." message may still show	No change in DB, but UI still shows "Saved."	Pass
Enter invalid email format	TC-PRF-05	Entered invalid email format	Validation error: "The email must be a valid email address."	Error appears below email field	Pass
Leave required name field empty	TC-PRF-06	Leave name field blank	Validation error: "The name field is required."	Page shows red error message under name	Pass

Change to username/email that's already used	TC-PRF-07	Entered valid email and name but it's already taken	Validation error: "The username has already been taken."/"The email has already been taken."	Error shown if uniqueness is enforced	Pass
Upload valid profile picture (PNG)	TC-PRF-08	Upload a PNG	Image preview shown before submit; photo updates after save	Preview shown, then updated profile photo shown on next reload	Pass
Remove existing photo	TC-PRF-09	Click "Remove Photo" button	Profile photo removed and default avatar shown	Default avatar appears	Pass

Table 5.6: Password Update Test Case

Module Name: Password Update					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Successful password update	TC-PWD-01	Entered current password, new password and confirmed password correctly	Password updated successfully with confirmation message	Password updated	Pass
Incorrect current password	TC-PWD-02	Entered current password wrong	Error: "The provided password does not match your current password."	Error shown	Pass
New password doesn't meet the format	TC-PWD-03	Entered the password too short	Validation error: password	Error shown	Pass

			doesn't meet rules		
New password and confirmation mismatch	TC-PWD-04	Entered different new password and confirmation password	Validation error: confirmation does not match	Error shown	Pass
Missing current password	TC-PWD-05	Leave blank on the current password	Validation error: current password required	Error shown	Pass
Missing new password	TC-PWD-06	Leave blank on the new password	Validation error: new password required	Error shown	Pass
New password same as current	TC-PWD-07	Entered the new password using the old password	Accepted (no rule preventing same password, unless added manually)	Password updated	Pass
All fields empty	TC-PWD-08	Leave blank on all fields	Validation errors for all fields	Error shown	Pass

Table 5.7: Account Deletion Test Case

Module Name: Account Deletion					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Successful account deletion	TC-DEL-01	Entered correct password	User account is deleted, and user is logged out	Account deleted	Pass
Incorrect password	TC-DEL-02	Entered password wrong	Error message: "Password does not match."	Error shown	Pass
Empty password field	TC-DEL-03	Leave the field blank	Validation error: Password is required	Error shown	Pass

Table 5.8: Post Creation Test Case

Module Name: Post Creation					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Create post with valid text and media	TC-POS-01	Entered the details with valid data and valid format	Post successfully created and appears in feed	Post saved, media preview works	Pass
Submit without media	TC-POS-02	No Media attach to the post, only text	Post successfully created without media	Post saved	Pass
Submit with invalid media format	TC-POS-03	Submit a .exe file	Error: "Invalid File selected. You can only upload..."	Validation error shown	Pass
Missing required title	TC-POS-04	Leave the title blank	Validation error: "The title field is required."	Error shown	Pass
Missing requires location	TC-POS-05	Leave the location blank	Validation error: "The location field is required." email address."	Error shown	Pass
Missing required body	TC-POS-06	Leave the body blank	Validation error: "The description field is required."	Error shown	Pass
Upload large video file	TC-POS-07	Upload large .mp4 files (1.5GB)	Upload fails or browser error handling triggered	Upload fail	Pass
Preview media before submission	TC-POS-08	Upload image or video	Preview shown	Preview displays correctly	Pass
Upload multiple times quickly	TC-POS-09	Repeatedly select and reselect different files	Last valid file should be kept, older cleared	Last valid file should be kept, older cleared	Pass

Table 5.9: Job Creation Test Case

Module Name: Job Creation					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Submit valid job with media	TC-JOB_CRE-01	Entered the details with valid data and valid format	Job saved, media stored, redirect with success message	Job created and media uploaded	Pass
Submit valid job without media	TC-JOB_CRE-02	No Media attach to the job post, only text	Job saved successfully without media	Job created	Pass
Submit with invalid media format	TC-JOB_CRE-03	Submit a .exe file	Validation error: only certain file types allowed	Validation error shown	Pass
Missing job title	TC-JOB_CRE-04	Leave the title blank	Validation error: "job_title is required"	Error shown	Pass
Missing requires location	TC-JOB_CRE-05	Leave the location blank	Validation error: "The location field is required." email address."	Error shown	Pass
Missing required description	TC-JOB_CRE-06	Leave the body blank	Validation error: "The description field is required."	Error shown	Pass
Upload large video file	TC-JOB_CRE-07	Upload large .mp4 files (1.5GB)	Upload fails or browser error handling triggered	Upload fail	Pass
Preview media before submission	TC-JOB_CRE-08	Upload image or video	Preview shown	Preview displays correctly	Pass
Upload and cancel before submit	TC-JOB_CRE-09	Upload file, then reload page	File not saved	Unsaved as expected	Pass

Table 5.10: Job Apply Test Case

Module Name: Apply for Job					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Apply for a job successfully	TC-ALY-JOB-01	Authenticated user clicks Apply on a job post	Job application is saved, sent to the recruiter's email, confirmation shown	Success message displayed	Pass
Apply for same job twice	TC-ALY-JOB-02	User applies again for a job already applied to	Application prevented, error or warning displayed	Error shown	Pass
Club tries to apply for job	TC-ALY-JOB-03	Club account clicks Apply	Application blocked (role restricted)	Error shown	Pass
Job already deleted	TC-ALY-JOB-04	User applies to a job that was just deleted	Application fails, job not found	Error shown	Pass
Cover Letter is missing	TC-ALY-JOB-05	Leave the cover letter field blank	Job application is saved, sent to the recruiter's email, confirmation shown	Error shown	Pass
Send application without resume	TC-ALY-JOB-06	Send the application without the resume attached	Job application is saved, sent to the recruiter's email, confirmation shown	Error shown	Pass

Table 5.11: Job Application Test Case

Module Name: Job Application					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Update application status to accepted	TC-JOB-APP-01	Change status to "accepted" and submit	Application updates successfully, email sent to the applicants and label turns green	Success message	Pass
Update application status to rejected	TC-JOB-APP-02	Change status to "rejected" and submit	Application updates, email sent to the applicants and label turns red	Success message	Pass
Attempt invalid status update	TC-JOB-APP-03	Submit form with missing/invalid status	Validation fails, error shown	Error shown	Pass
Recruiter with no applications	TC-JOB-APP-04	Recruiter with no job applications visits page	Page shows "No applications found."	Message shown	Pass
Unauthorized user tries access	TC-JOB-APP-05	Normal user (not recruiter) visits page	403 forbidden or redirect	Blocked access	Pass

Table 5.12: Profile Page Test Case

Module Name: Profile Page					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
View user profile info	TC-PROFIL E-01	Visit /profile/{username}	User profile is displayed with name, username, photo, description, stats	Displayed correctly	Pass
View follower/following/posts counts	TC-PROFIL E-02	Valid user ID	Follower, following, and post counts are shown	Accurate display	Pass

Follow user	TC-PROFIL E-03	Click Follow button	Button changes to Unfollow, follower count increases by 1	Button & count updated	Pass
Unfollow user	TC-PROFIL E-04	Click Unfollow button	Button changes to Follow, follower count decreases by 1	Button & count updated	Pass
Prevent following own profile	TC-PROFIL E-05	Visit own profile	Follow/Unfollow button not shown	Not visible	Pass
Show “Jobs by [Club Name]” button for clubs only	TC-PROFIL E-06	Visit club profile	"Jobs by [Club]" button is shown and links correctly	Button visible	Pass
Load user posts on profile	TC-PROFIL E-07	View page	Posts associated with the user are displayed	Posts shown	Pass
Guest view profile page	TC-PROFIL E-08	Guest user visits page	Profile view is accessible, but Follow button not functional (or requires login)	Proper guest handling	Pass

Table 5.13: Admin Panel Test Case

Module Name: Admin Panel					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Admin panel loads correctly	TC-ADMIN-01	Navigate to admin panel route	Table of users is displayed with all relevant columns	Table loads	Pass
User profile photo displays correctly	TC-ADMIN-02	View user list	Profile images are shown	No photos display	Fail
Username links to profile	TC-ADMIN-03	View user row	Followers, followings, and posts count display accurately	Counts shown	Pass
Stats show correct counts	TC-ADMIN-04	Search for name or jobs	Matching users or jobs displayed with links to them	Link works	Pass

Status badge shows 'Active' or 'Banned'	TC-ADMIN-05	View users with both statuses	Green badge for active, red for banned	Badges correct	Pass
Role shows	TC-ADMIN-06	View role_id	role_id = 2 = "Admin", role_id = 1 = "User" role_id = 3 = "Club"	Role accurate	Pass
Ban user action	TC-ADMIN-07	Click "Ban" on active user	Button changes to "Unban"; badge switches to red "Banned"	Works correctly	Pass
Unban user action	TC-ADMIN-08	Click "Unban" on banned user	Button changes to "Ban"; badge switches to green "Active"	Works correctly	Pass
Edit user info	TC-ADMIN-09	Click "Edit"	Redirects to edit form	Form shows	Pass
Delete user action	TC-ADMIN-10	Click "Delete" → Confirm	User is removed from table	User deleted	Pass
Delete a single comment	TC-ADMIN-11	clicks "Delete" on any comment	Comment is removed from the post	Comment removed	Pass
Delete post	TC-ADMIN-12	Clicks "Delete" on user post	Post is removed from timeline	Post removed	Pass
Delete job listing	TC-ADMIN-13	Deletes any job post	Job removed from listings	Job removed	Pass

Table 5.14: Search Test Case

Module Name: Search					
Test Objective:					
Test Title	Test ID	Input Data	Expected Result	Actual Result	Pass/Fail
Search page loads	TC-SEAR H-01	Visit search page	Header shows Search Bar	Shown correctly	Pass
Search page loads with results title	TC-SEAR H-02	Visit search page with query=penang	Header shows Search Results for "penang"	Pre-filled	Pass

Search bar validation	TC-SEARC H-03	Submit empty input	Page should show required error or not submit	Validated	Pass
Search returns matching users or jobs	TC-SEARC H-04	Search for name or jobs	Matching users or jobs displayed with links to them	Link works	Pass
No results handling	TC-SEARC H-05	Search keyword returns no jobs	“No jobs found.” message shown	Message appear	Pass
User profile links work	TC-SEARC H-06	Click on a user result	Redirects to user’s profile	Link works	Pass
Job detail links work	TC-SEARC H-07	Click on “Read More” job button	Redirects to job detail page	Posts shown	Pass

5.4 Non-Functional Testing

Non-functional testing focuses on evaluating how effectively a software system operates rather than what specific tasks it performs. It assesses qualities such as performance speed, ease of use, reliability, and data security. For instance, it examines how quickly a website loads, how user-friendly the interface is, how frequently the system encounters errors, and how securely it handles user information. This type of testing is essential to ensure the software runs efficiently and meets user expectations for quality. In this project, a usability test is chosen to assess how well the system performs from the user's perspective.

5.4.1 Usability and Functional Testing

Usability testing is a method used in order to evaluate how the system is easy to use and user-friendly. It involves observing real users as they interact with the system to identify any problems, confusion, or areas for improvement. The goal is to ensure that users can navigate and use the system efficiently, effectively, and with satisfaction. This type of testing helps improve the overall user experience by highlighting issues that may not be obvious during development.

Functional testing is a type of software testing that focuses on verifying that the system behaves as expected and performs all its intended functions correctly. It checks each feature against the requirements by providing input and examining the output. This includes testing user

interactions, data processing, and system behavior to ensure everything works according to the specifications. The main goal is to ensure the software does what it is supposed to do.

A total of 30 participants were involved in testing the FutbolLink platform to assess its functionality and usability. The participants consisted of 10 administrators, 5 recruiters, and 15 regular users, including players and coaches as shown in Figure 5.1. Administrators focused on testing backend management features such as user control, content moderation, and system settings. Recruiters evaluated functions related to job postings, managing applications, and viewing user profiles. Meanwhile, regular users tested core features like registration, profile setup, creating posts, applying for jobs, and interacting with others. This diverse group provided well-rounded feedback, helping ensure the platform meets the needs of all its intended users.

Section A: Usability Testing

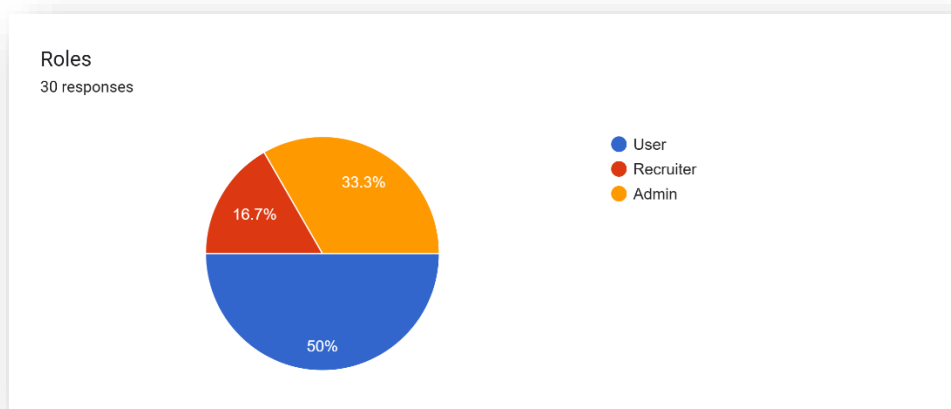


Figure 5.1: Roles of Participants

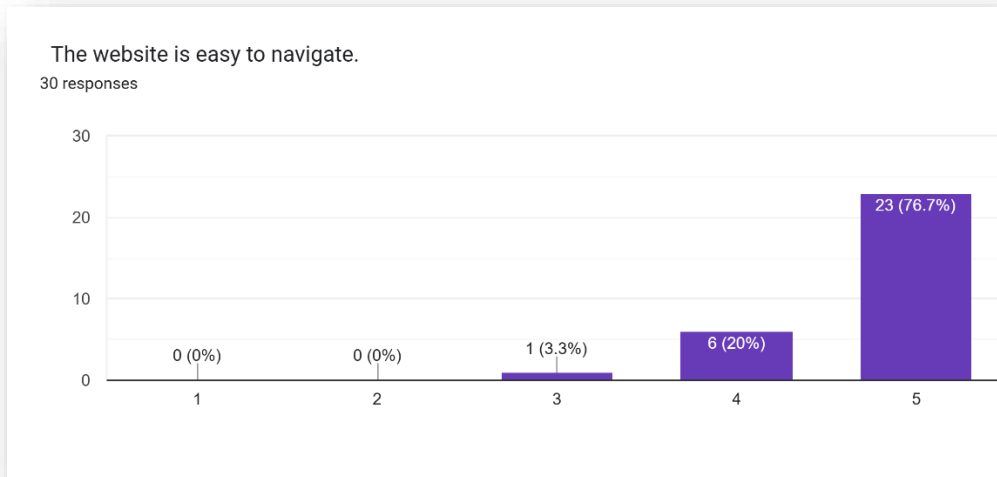


Figure 5.2: Easy to Navigate Form

Figure 5.2 above provides the percentage of participants that think the website is easy to navigate. Majority of participants think FutbolLink website easy to navigate. Out of 30 respondents, 23 participants (76.7%) strongly agreed that the website is easy to use, while 6 participants (20%) agreed. Only 1 participant (3.3%) gave a neutral response, and none of the users rated the navigation experience as poor or very poor. These findings indicate that the platform's navigation is well-designed and user-friendly, with nearly all users reporting a positive experience.

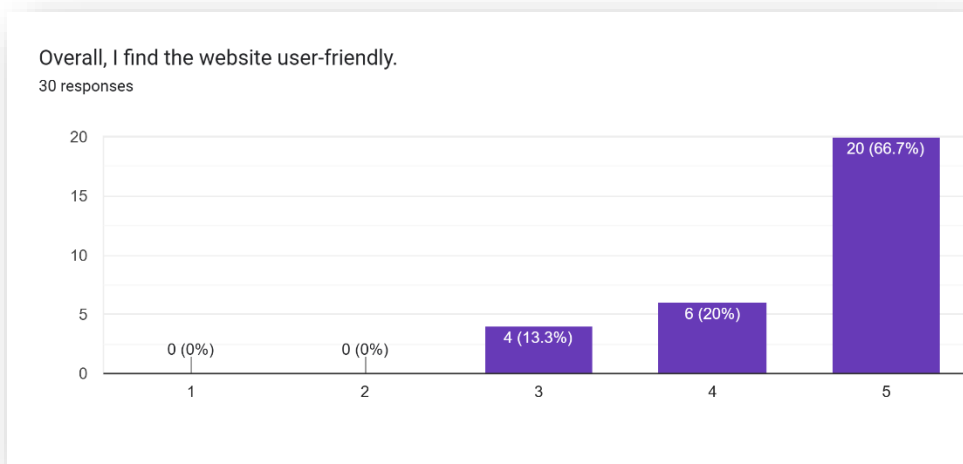


Figure 5.3: User-Friendly Form

The Figure 5.3 also shows that majority of the participants agree that the website is overall a user-friendly website. With only 4 people give neutral response (13.3%), while the others agree on FutbolLink being a user-friendly website.

Section B Functionality Test

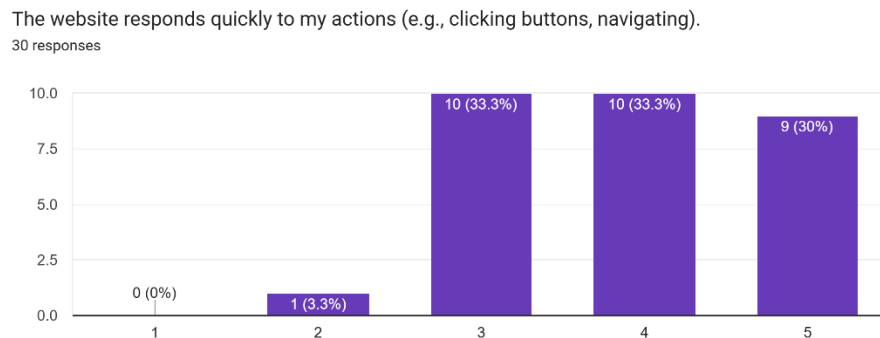


Figure 5.4: Response of website

Figure 5.4 above reflect generally positive user feedback. Out of 30 respondents, 9 participants (30%) rated the website with a 5, indicating they strongly agreed that it is responsive. 10 participants (33.3%) gave a rating of 4, and another 10 participants (33.3%) selected 3, suggesting moderate satisfaction. Only 1 participant (3.3%) rated it a 2, and none rated it a 1, meaning there were no strong negative responses. But this shows that the website does not respond fast enough to some actions. This probably happened during submitting job application as it sometimes take too long to send out the application. But overall, it is still responding to the actions just took some time from the users.

Overall, I am satisfied with the website's functionality.
30 responses

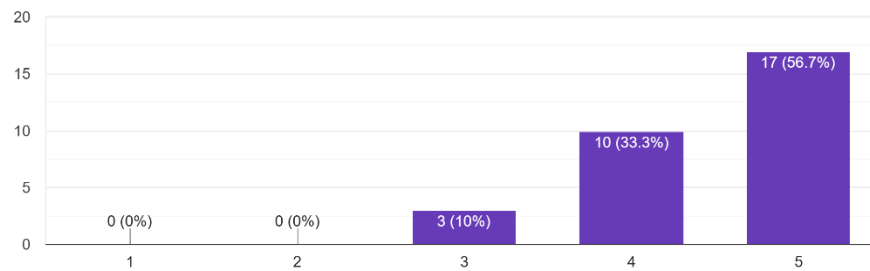


Figure 5.5: User satisfaction

Figure 5.5 above shows strong satisfaction with the website's functionality, with 90% of users giving ratings of 4 or 5 out of 5. Only 10% were neutral (rating 3), and none gave negative feedback. The high scores suggest the site works well for most users, but the follow-up question about confusing or broken elements shows the team is looking for areas to improve.

Good functionality is crucial because it keeps users engaged, builds trust, and helps achieve business goals. A smooth, error-free experience makes visitors more likely to stay, return, and complete desired actions. While these results are positive, continuous testing and refinement are key to maintaining high performance.

5.5 Summary

The usability and functionality testing of the FutbolLink platform yielded highly positive results, indicating a well-designed and effective system. Usability testing revealed that 96.7% of participants found the website easy to navigate, with 76.7% strongly agreeing on its user-friendliness. Additionally, the majority of users rated the platform as intuitive, with only a small fraction (13.3%) providing neutral feedback. These findings confirm that the interface is accessible and efficient for administrators, recruiters, and regular users alike.

In terms of functionality, 90% of participants rated the system positively (4 or 5 out of 5), demonstrating that core features—such as job applications, profile management, and content posting—work as intended. However, minor delays in responsiveness (particularly during job applications) were noted, suggesting an area for optimization.

Overall, the platform successfully meets user expectations in both usability and functionality. The overwhelmingly positive feedback highlights its strong foundation, while the minor issues identified provide clear directions for further refinement. Continuous testing and iterative improvements will ensure that FutbolLink maintains high performance, enhances user satisfaction, and achieves its business objectives effectively.

Chapter 6 : Conclusion and Future Work

6.1 Introduction

This chapter provides an overview of the achievements and limitations that have been encountered during the development of the FutbolLink Social Network. It highlights the objectives that has been achieved, analyse the challenges that has been faced and changes made throughout the development. This chapter also includes the future work that might improve FutbolLink to compete with future social networks.

The development of the FutbolLink project successfully achieved its main goals by delivering a dependable platform for managing and tracking football-related activities and progress. The system offers valuable benefits to players, coaches, and recruiters by enhancing the overall user experience through features such as performance tracking, achievement sharing, and streamlined data management. Despite the challenges and limitations encountered during development, FutbolLink demonstrates strong potential in improving the way football talent and opportunities are managed. The experience gained from this project emphasizes the need for continuous improvement and adaptation to overcome limitations and further strengthen the platform's functionality.

6.2 Objective Achievements

The FutbolLink project has achieved their objective after developing the social network. The table below shows how the FutbolLink social network achieved the objectives and the achievements made from the objectives.

Objectives	Achievements
To design an Intuitive User Interface (UI) and User Experience (UX)	The FutbolLink platform features a clean and user-friendly interface with intuitive navigation, making it accessible to users of all technical backgrounds. User feedback from usability testing showed that 96.7% of users agreed the website is easy to navigate, and 93.3% found the website responsive to their actions. These results confirm the successful implementation of a smooth and

	accessible user experience, enabling users to easily register, manage profiles, and share media.
To develop a web-based social network platform where users can interact with other football fans and clubs	FutbolLink was successfully developed as a football-focused social networking platform that allows users to connect, share updates, post achievements, and apply for opportunities. Players and coaches can interact with clubs, while clubs (recruiters) can browse user profiles and manage job postings. The platform has laid a strong foundation for building a football community by enabling talent discovery and engagement among individuals with shared interests in football.
To evaluate the social network platform functionalities based on the account's roles	The system effectively differentiates functionalities based on user roles (e.g., regular users vs. recruiters). Role-based access control was implemented, ensuring that each user type can only access features relevant to their role. For example, recruiters can post job opportunities and review applications, while players and coaches can apply for jobs and showcase their profiles. This confirms that role-specific functionality aligns well with the intended design.

6.3 Limitation and Constraints

Despite the successful development of FutbolLink, several limitations and constraints were encountered throughout the project. These challenges impacted certain features and decisions, and are outlined below to provide transparency and context for future improvements.

6.3.1 Technical Constraints

- **Limited Hosting Resources:** Due to the use of shared or budget VPS hosting (Hostinger), system performance such as media uploads, storage, and real-time features were limited compared to high-end hosting environments.
- **File Upload Restrictions:** Upload limits and server-side constraints (e.g. PHP upload size limit) affected the ability to handle large media files such as long videos or high-resolution images, which are essential for football highlight sharing.
- **Limited Real-Time Interactivity:** Features like live chat or real-time notifications were simplified due to the absence of technologies like WebSockets or third-party services such as Pusher.

6.3.2 Time and Scope Constraints

- **Time-Bound Development:** The project timeline was limited to a semester-based academic calendar, which restricted the full implementation of advanced features such as AI-based talent recommendations or analytics.
- **Single Developer Limitation:** As the project was developed individually, complex collaborative or large-scale features (e.g. advanced admin dashboards, moderation tools, or content filtering) were scaled down to manageable levels.

6.3.3 User Testing Limitation

- **Limited User Base for Testing:** User testing was limited to a small sample size of football players, coaches, and recruiters. This may not fully represent the wider football community in Malaysia.
- **Simulated Data:** In some parts of testing, simulated user accounts and sample posts were used in place of actual large-scale user engagement due to time and participation limitations.

6.3.4 Summary of Limitations and Constraints

While these limitations impacted the scale and depth of some features, they do not diminish the core value and functionality of the FutbolLink platform. Instead, they highlight potential areas for future development and optimization, especially when time, resources, or collaboration opportunities are increased in future iterations.

6.4 Future Works

To address the limitations and constraints identified in the current FutbolLink platform, several improvements and new features are planned for future development. A key focus will be the implementation of an in-app messaging system to allow seamless communication between users and recruiters, enhancing interaction and networking opportunities. Additionally, efforts will be made to optimize the platform's performance across different devices by introducing a dedicated mobile application for better accessibility. To improve the talent discovery process, advanced filtering and search options will be developed, enabling users to find specific players, clubs, or opportunities more efficiently. The platform will also explore the integration of video-based skill showcases and AI-powered match recommendations to increase engagement and improve the recruitment process. Furthermore, future updates will include multilingual support and improved user verification features to expand the platform's reach and build trust among users. These enhancements aim to make FutbolLink a more robust, inclusive, and user-friendly platform for all football enthusiasts.

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Appendix A

Section 1 of 3

 **Usability & Functionality Evaluation
Form for Futbolink Website**

B **I** **U**  

This survey is designed to gather feedback on the overall usability and functionality of the **Futbolink social media platform**, helping us improve user experience and ensure core features are working smoothly.

Gender *

☐ Male

☐ Female

☐ Other...

Roles *

☐ User

☐ Recruiter

☐ Admin

After section 1

Continue to next section



Section 2 of 3

Usability Evaluation



Please rate the following statements based on your experience using the website.

The website is easy to navigate. *



	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

The layout and design are visually appealing. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

I can easily find and connect with other users. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

It was easy to find how to register or log in. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

The features (e.g., like, comment, share) are intuitive to use. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

I understand how to change my profile settings. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

Overall, I find the website user-friendly. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

Section 3 of 3

Functionality Evaluation



Please rate the following statements based on your experience using the website.

The overall functions of the website work smoothly and without errors. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

The website responds quickly to my actions (e.g., clicking buttons, navigating). *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

I did not encounter any broken links, buttons, or pages. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

All the features I expected from the social media platform are available. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

I understand how the core functions of the website are supposed to work. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

The website behaves consistently across different sections. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

Overall, I am satisfied with the website's functionality. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree