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University

Department of CIS

TITLE OF THE PROJECT

Alumbridge

Submitted By

Nazmun Nahar Tamanna

ID: 201-16-510

Supervised By

Mr. Md Sarwar Hossain Mollah

Associate Professor and Head

Department of Computing & Information System (CIS)

Daffodil International University

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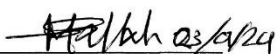
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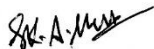
This Thesis titled “**AlumBridge**”, Submitted by **Nazmun Nahar Tamanna**, ID No: **201-16-510**, to the Department of Computing & Information Systems, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computing & Information Systems and approved as to its style and contents. The presentation has been held on 23-01-2024.

BOARD OF EXAMINERS



Md Sarwar Hossain Mollah
Associate Professor and Head
 Department of Computing & Information Systems
 Faculty of Science & Information Technology
 Daffodil International University

Chairman



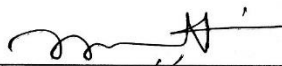
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Assistant Professor
 Department of Computing & Information Systems
 Faculty of Science & Information Technology
 Daffodil International University

Internal Examiner



Md. Nasimul Kader
Assistant Professor
 Department of Computing & Information Systems
 Faculty of Science & Information Technology
 Daffodil International University

Internal Examiner



Prof. Mohammad Shorif Uddin,
Professor
 Department of Computer Science and Engineering
 Jahangirnagar University

External Examiner

Declaration

I hereby declare that; this project has been done by me under supervision of **Mr.Md.Sarwar Hossain Mollah**, department of Computing and Information System (CIS) of Daffodil International University. I am also declaring that this project or any part of there has never been submitted anywhere else for the award of any educational degree like, B.Sc., M.Sc., Diploma or other qualifications.

Supervised By

 23/6/24

Mr.Md.Sarwar Hossain Mollah
Associate Professor and Head
Department of CIS
Daffodil International University

Submitted By



Nazmun Nahar Tamanna
ID: 201-16-510
Department of CIS
Daffodil International University

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Dedication

First of all, I want to thank Allah for empowering me.

I would like to dedicate my project to my parents and my Supervisor Mr. Md Sarwar Hossain Mollah.. I am nothing but imperfect without the courage, support and inspiration of my parents. I want to dedicate to my supervisor because they guided me and encouraged me to do the project. They also helped me a lot and got the courage and emotional support for higher studies.

Abstract

The "Alumbridge" project, titled "Bridging the Educational Journey of Students and Alumni," is a comprehensive initiative aimed at establishing a robust connection between current students and distinguished alumni within an educational institution. The project focuses on fostering a supportive environment for newcomers, providing them with career guidance, industry connections, and confidence in their career choices. The overarching goal is to motivate and assist students in achieving their objectives by showcasing alumni success stories and offering career development resources.

The project's foundation lies in meticulous initial research to identify potential challenges and opportunities, understand the needs and preferences of students and graduates, and develop an effective plan for bridging educational journeys. An alumni database is created, housing details about their professional backgrounds and interests, facilitating networking events and mentorship pairings. The feasibility study examines operational, technical, and financial aspects, ensuring the project's viability and practicality. Market research informs the project's design, ensuring alignment with the needs of students and alumni.

The project's objectives include building a bridge between alumni and students, providing a detailed career path for newcomers, and offering insights into real industries' work culture and facilities. Key aims involve encouraging knowledge sharing, facilitating networking, creating a supportive community, and enhancing career development.

The project's features and requirements include a dashboard, messaging system, timeline profiles, blogging capabilities, alumni panels, Q&A sessions, and job opportunities. Prioritization is done using the MoSCoW method, ensuring essential functionalities are prioritized.

In summary, the "Alumbridge" project aims to create a dynamic and interactive platform that not only connects students with alumni but also provides valuable resources and experiences to facilitate successful educational and professional journeys.

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Chapter 1 - Introduction

1.1 Introduction

In the fast-evolving landscape of education and professional development, the "**Alumbridge**" project emerges as a strategic initiative, encapsulated in the broader vision of "Bridging the Educational Journey of Students and Alumni." The project is a response to the growing need for a seamless connection between current students and accomplished alumni within educational institutions. Recognizing the transformative power of mentorship, industry insights, and community support, Alumbridge aims to cultivate an environment where students can navigate their educational paths with confidence, guided by the experiences and wisdom of those who have successfully traversed similar journeys.

The fundamental premise of the project is to go beyond traditional academic support and empower students with real-world perspectives, networking opportunities, and invaluable insights into diverse professional landscapes. Through this initiative, we aspire to create a continuum of learning that extends beyond the classroom, facilitating meaningful interactions between students and alumni. By fostering a collaborative network, the project endeavors to enrich the educational experience for newcomers, equipping them with the tools, knowledge, and connections necessary for a successful transition into their chosen careers.

1.2 Document Contents in Project Document

The following chapters will be covered in this publication or documentation to chronicle the project's progress.

Chapter 1: Introduction

A brief introduction to the suggested project and system.

Chapter 2: Initial Phase

This chapter covers the preliminary research findings for the proposed system, such as the major goals and objectives, issue area, possible solutions, and project history.

Chapter 3: Literature Review

The issue domain, solutions, evaluation of current solutions, and ultimately suggestion are all discussed in detail in this chapter.

Chapter 4: Methodology

The importance of employing methodology, many methods that may be employed, and the preferred methodology and its application will all be explored in this section.

Chapter 5: Planning

This chapter covers project plans such as project plans, test plans, risk and change management, and so on.

Chapter 6: Feasibility

This is where you'll find the full feasibility study report and cost-benefit analysis.

Chapter 7: Foundation

This chapter will contain information on the issue area identification, general need list, proposed technologies, and reasons.

Chapter 8: Exploration

It includes basic UML diagrams and a need list for both the existing and new systems, as well as a prototype.

Chapter 9: Engineering

This chapter contains the proposed system's logical and behavioral models.

Chapter 10: Deployment

Here, we'll talk about coding samples and how to split down a development challenge based on development priority.

Chapter 11: Testing

This chapter includes a number of test ideas and outcomes.

Chapter 12: Implementation

This section covers the implementation strategy, training model, and other related topics.

Chapter 13: Critical Appraisal and Evaluation

The review of the initial objectives that were reached and those that were not met in great detail.

Chapter 14: Lessons Learned

The learning and obstacles encountered during the project are mostly included in the per-project-closing evaluation.

Chapter 15: Conclusion

Here you will find a summary of the project, as well as its goals, successes, and lessons learned.

Chapter 2 – Initial Study

2.1 Project Proposal

My project, titled "Alumbridge," is an innovative initiative designed to revolutionize the educational experience within our institution. Recognizing the transformative potential of creating a strong link between current students and distinguished alumni, the project aims to bridge the gap between academic knowledge and practical industry insights. My goal is to provide a comprehensive support system for newcomers, offering them career guidance, networking

opportunities, and the confidence to make informed career choices. Through this project, we seek to create a welcoming environment where students can access valuable resources, connect with industry experts, and draw inspiration from the success stories of alumni. The foundation of Alumbridge lies in rigorous research, feasibility assessments, and a commitment to building a dynamic virtual platform that facilitates meaningful interactions between students and alumni.

My approach begins with an initial research phase, where we aim to identify potential challenges and opportunities, understand the needs of students and graduates, and establish a solid plan for bridging their educational journeys. We envision a comprehensive alumni database that not only showcases professional backgrounds but also facilitates networking events and mentorship pairings. The feasibility study addresses operational, technical, and financial aspects, ensuring the viability of our project. Market research will guide our understanding of the target audience, ensuring that our initiative aligns with their needs and preferences.

The foundational objectives of Alumbridge include building a bridge between alumni and students, providing detailed career paths for newcomers, and offering insights into real industries' work culture and facilities. Our aims revolve around encouraging knowledge sharing, facilitating networking, creating a supportive community, and enhancing career development.

Background Study

The landscape of education is undergoing a paradigm shift, marked by the increasing recognition of the importance of holistic learning experiences that extend beyond the traditional classroom setting. In response to this evolving educational ethos, our project, "Alumbridge," emerges as a strategic initiative within our institution. The genesis of this project stems from a deep understanding of the challenges faced by students in translating academic knowledge into real-world success. As students embark on their educational and professional journeys, the lack of a structured connection with alumni, who have successfully navigated similar paths, often results in a disconnect between academia and industry. Recognizing this gap, our project seeks to address

the need for a comprehensive support system that not only imparts academic knowledge but also facilitates practical insights, mentor ship, and networking opportunities.

The background study delves into the transformative potential of creating a bridge between current students and accomplished alumni. By examining the existing educational and professional landscape, we aim to identify the gaps and challenges that hinder a seamless transition for students. Through this study, we seek to explore the nuances of the educational journey, the evolving expectations of the workforce, and the role alumni can play in shaping the career trajectories of the next generation. Additionally, by understanding the broader trends in education and industry, our background study provides the contextual foundation for the Alumbridge project, positioning it as a strategic response to the changing dynamics of learning and career development.

Description of the proposed system

The proposed system, **Alumbridge**, envisions a dynamic and interactive platform that serves as a conduit for meaningful connections and knowledge exchange between current students and distinguished alumni. At its core, the system aims to bridge the gap between academic learning and real-world application by offering a comprehensive suite of features and functionalities. The platform boasts a user-friendly dashboard that serves as the central hub for students and alumni to access a myriad of resources, events, and networking opportunities.

One of the key features of the system is the messaging platform, which facilitates direct communication between students and alumni, fostering mentor ship and knowledge sharing. Timeline profiles allow users to showcase their educational and professional journeys, creating a visual narrative of success stories that inspire and guide newcomers. The inclusion of a blogging feature encourages the sharing of insights and experiences, creating a vibrant community of learners and mentors.

Alumbridge incorporates alumni panels and Q&A sessions, providing a structured avenue for students to engage with industry experts, seek career advice, and gain valuable perspectives on real-world work cultures. The system's job opportunities section serves as a practical resource, connecting graduates with potential employers and internship opportunities. The project also emphasizes the implementation of incentives to encourage active alumni engagement, fostering a supportive community committed to the continuous growth and development of students.

In terms of technology, the system leverages HTML, CSS, and Bootstrap for a visually

Prioritized Features according to MoSCoW

MoSCoW is a strategy for prioritizing requirements that is used during the requirement analysis stage. It aids in comprehending the significance of the criteria.

Timebox	Start Date	End Date	Duration	Tasks/Deliverables
TB1	7/01/2023	7/20/2023	20	Feasibility & Foundation
TB2	7/21/2023	8/5/2023	16	Requirement Analysis & Database design
TB3	8/6/2023	8/31/2023	26	Developing the Alumbridge
TB4	9/1/2023	9/30/2023	30	Implementing the problem solution between alumni & students.
TB5	10/1/2023	10/30/2023	30	Developing Alumbridge like alumni management system Functionalities
TB6	11/1/2023	11/15/2023	15	Implementing information on all previous problems and solutions available to Alumbridge.
TB7	11/16/2023	11/30/2023	15	Use efficiently by including the of the AlimniBridge.
TB8	12/1/2023	12/15/2023	15	Problem & Solution also record keeping system.

TB9	12/15/2023	10/01/2024	26	Testing and Development of the developed application.
TB10	7/1/2023	10/01/2024	193	Project Documentation

Table 1: Prioritized Features

Exploration & Engineering

The final criteria are based on the Prioritized Requirements List (PRL).:

- User Authentication and Profiles
- Networking Events and Workshops
- Career Development Resources
- Alumni Engagement Incentives
- Enhanced Virtual Platform Features
- Job Opportunities
- Timeline Profile

Iterative development – Timeboxing

The tasks must be divided into pieces and a time estimate for each segment in an iterative development process. The feasibility and foundation stages of the project will take 15-20% of total time, genuine development will take 50-60% of total time, and documentation will take 10-15% of total time.

The project has a three-month deadline, which amounts to 280-320 hours of work. The project is broken into seven time periods, each lasting 20-40 hours. I'm going to use the "T-Shirt" estimating method to estimate the time-boxes. Story points will be calculated using t-shirt sizes such as XS, S, M, L, and XL. The larger size will take more time and work than the smaller ones.

Time Boxing

Timebox	Start Date	End Date	Duration	Tasks/Deliverables
TB1	7/01/2023	7/20/2023	20	Feasibility & Foundation

TB2	7/21/2023	8/5/2023	16	Requirement Analysis & Database design
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TB9	12/15/2023	10/01/2024	26	Testing and Development of the developed application.
TB10	7/1/2023	10/01/2024	193	Project Documentation

Table 2: Time box estimation



Figure 1: Gantt Chart of the Proposed Timebox Estimation

2.2 Background of the project

Alumbridge is an innovative concept that aims to develop a strong link between current students and distinguished alumni, creating a bridge that spans newcomers' educational journeys. The effort is motivated by a desire to foster a supportive environment in which freshmen can receive useful job advice, connect with industry leaders, and develop confidence in their career choices. The project strives to motivate and empower new students to achieve their goals by sharing inspiring alumni success stories and providing complete career development resources. Furthermore, Alumbridge provides ongoing support to graduates, including possibilities for reverse mentor ship, access to professional development tools, and job placement aid as needed.

The project's initial research phase consists of gathering insights to identify potential problems and opportunities, analyzing student and graduate preferences, and building the framework for the succeeding development and execution phases. The construction of an alumni database, which includes information about their professional histories and interests in the project, serves as the foundation for organizing networking events and promoting mentor-mentee connections. Additionally, the study investigates the university's current facilities and technology infrastructure to enable seamless virtual interactions between students and alumni.

2.3 Problem Areas

While the Alumbridge project shows great promise in strengthening the bond between students and alumni, there are certain possible obstacles and areas that must be carefully considered. One key issue concerns the project's operational feasibility. Determining the practicality and viability of completing the program rests on the availability of appropriate cash, time, and assistance. Collaborating with real-world enterprises to give students access to actual work culture experiences and facilities may present logistical issues that necessitate careful planning and resource allocation.

Financial feasibility is also a potential issue, as the project's budget requirements must be thoroughly examined. Costs connected with organizing mentor ship programs, developing the virtual platform, hosting networking events, and engaging with industries can add up. It is critical to analyze whether the institution has the financing and resources to sustain the project in the long run and give the required support to students and alumni.

Financial feasibility is also a potential issue, as the project's budget requirements must be thoroughly examined. Costs connected with organizing mentor ship programs, developing the virtual platform, hosting networking events, and engaging with industries can add up. It is critical to analyze whether the institution has the financing and resources to sustain the project in the long run and give the required support to students and alumni.

Identifying and addressing possible problem areas early on will be critical to the Alumbridge project's success, delivering a seamless and impact experience for both current students and alumni.**(Hassan, 2021)**

2.4 Possible Solutions

To address the challenges and potential problem areas highlighted in the Alumbridge project, numerous solutions might be considered to improve the project's overall success. First and foremost, operational feasibility can be enhanced by forming strategic alliances with existing industries. By forming alliances, the project can obtain access to real-world work culture experiences and facilities, giving new students with significant insights and prospects for

advancement. This strategy necessitates careful planning and resource allocation to ensure the seamless integration of industry collaborations into the project's structure.

Technical feasibility requires a thorough assessment of the institution's technical resources and competencies. Investing in resource development or seeking external expertise can help ensure the virtual platform's success. The platform's efficiency depends on whether it is user-friendly, secure, and capable of providing mentor ship, networking, and communication features.

Chapter 3 – Literature Review

The Alumbridge project's literature assessment entails an examination of existing research and relevant studies that help to understand and build efforts that bridge the educational paths of students and alumni. Numerous scholarly articles and publications emphasize the importance of building strong relationships between current students and famous alumni. Research shows that such programs have a positive impact on students' educational and career trajectories.

3.1 Discussion on the Problem Domain (Alumbridge)

The problem domain addressed by the Alumbridge project revolves around the challenges and opportunities associated with bridging the educational journeys of students and alumni. This discussion delves into key aspects of the problem domain and the rationale behind the project's objectives.

- **Lack of Seamless shift:** One major issue in the educational landscape is the often abrupt shift that students make from academia to the working sector. Alumbridge strives to close this gap by building an organized bridge that allows newcomers to make a smooth transfer. The concept understands that graduates who have successfully traveled comparable pathways can provide students with valuable insights and experiences.
- **Limited Career help:** Many students, particularly freshmen, may require thorough career help. The project addresses this by providing a welcome environment in which students may engage with industry leaders and gain vital guidance from alumni. The portal facilitates networking events, mentoring opportunities, and access to professional development tools, allowing students to make more informed decisions regarding their future.

- **Under utilization of Alumni Resources:** Distinguished alumni frequently have a plethora of information, skills, and industry connections that can be extremely beneficial to present students. However, colleges may lack an effective method for utilizing these resources. Alumbridge aims to capitalize on this potential by developing a platform that promotes alumni engagement, information sharing, and a supportive community.
- **Insufficient Networking Opportunities:** Students entering the workforce must develop a professional network. The project addresses the issue of restricted networking possibilities by creating a virtual platform where students and alumni can communicate. Networking events, Q&A sessions, and mentoring programs help to build a strong professional network that goes beyond the academic context.

Finally, the Alumbridge initiative addresses a problem domain defined by the demand for a more coherent educational and career path. By systematically addressing the aforementioned obstacles, the initiative hopes to establish a friendly and dynamic environment that benefits both current students and graduates, encouraging a culture of information sharing, networking, and ongoing career development.

3.2 Discussion on the Problem Solution:

Alumbridge is a pioneering program that adeptly handles difficulties in the educational path while providing significant solutions. By connecting current students with outstanding alumni, the project ensures a smooth transition from academics to the professional world. The establishment of a welcome environment, a complete alumni database, and strategic networking events builds a strong community while optimizing the use of alumni resources. Using technology through a virtual platform increases engagement and fosters a dynamic learning environment. Collaborations with companies not only help students meet economic restraints, but also provide them with vital real-world work culture experiences. Alumbridge, with its holistic approach, emerges as a revolutionary force that connects students and alumni via education. The following issues should be considered in the solution:

- **Safety and security**

Because the system will store sensitive data, including personal information, data security should be a primary priority for the solution. The system should include strong security features, as well as role-based data access limits.

- **Trust**

The Alumbridge project prioritizes trust-building at multiple levels to ensure the initiative's success and sustainability. Trust is essential in connecting current students and graduates, creating a climate in which newcomers feel comfortable seeking career advice. The project's goal is to build trust in the trustworthiness and authenticity of shared experiences by highlighting alumni success stories and developing a complete alumni database.

- **Privacy**

The privacy of the Buyer and Seller, the problem solver in system, the volunteer Alumni, and the transaction of that particular system must be protected. To guarantee privacy, the system should use encrypted data transfer and an encrypted VPN connection for client server answers.

- **Server Down or 24/7 Availability in Alumbridge**

The Alumbridge project's success depends on ensuring 24/7 uptime and dealing with potential server downtimes. The platform's constant availability is critical for providing ongoing support, networking opportunities, and resources to both current students and alumni.

- **Backup**

Because the system handles a considerable amount of data, it must ensure that backups are performed on a regular basis. In the event that the system needs to be backed up, a proxy server and data storage should always be available.

3.3 Comparison among the leading solutions

The environment changes with time, and new technologies emerge to keep up with the times and make life simpler. Because of the Internet, the globe has shrunk to the size of a hamlet these days. There are hundreds of alternative approaches to tackling the same problem. AMS is a one-of-a-kind solution, however there are several other systems in the same area. In this part, I'll compare and contrast some of the most well-known and popular contemporary websites, listing their finest features, strengths, and drawbacks. These are the following:

- <https://www.studocu.com/row/document/dhaka-internationaluniversity/chemistry/alumni-management-system/46008696> (Bangladesh)
- <https://alumni.duetbd.org/register> (Bangladesh)

- <https://gradnet.io/>

Studocu

Studocu is the perfect study software for university and high school students worldwide who want to learn more efficiently. Students who use Studocu excel in their studies because they have access to over 20 million study notes, summaries, essays, and practice examinations created by other students for thousands of courses.

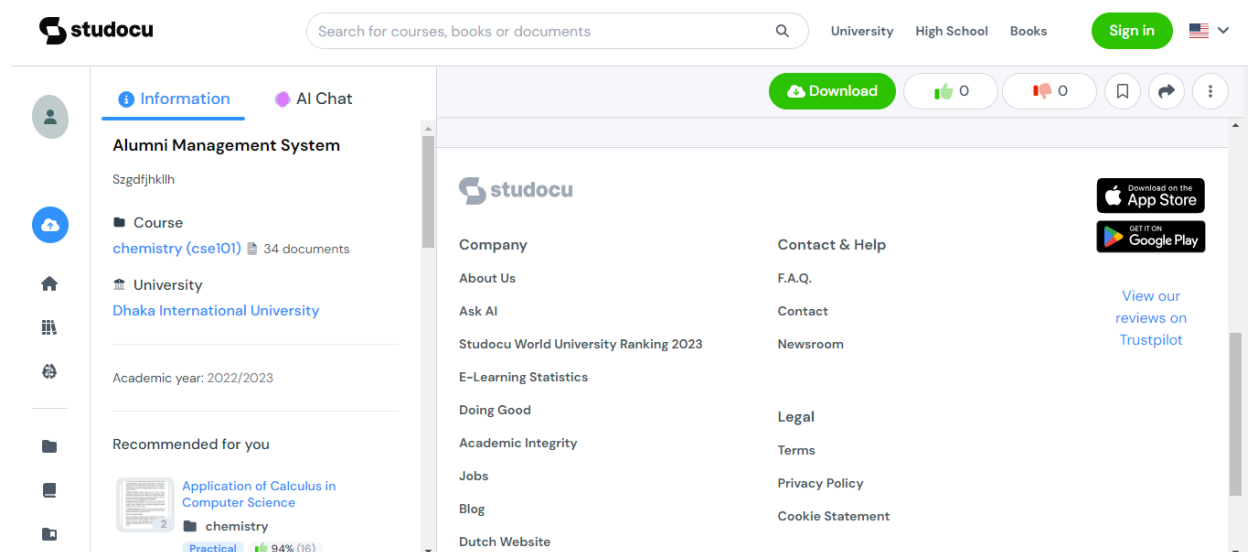


Figure 2: Overview of A Studocu

Best Features

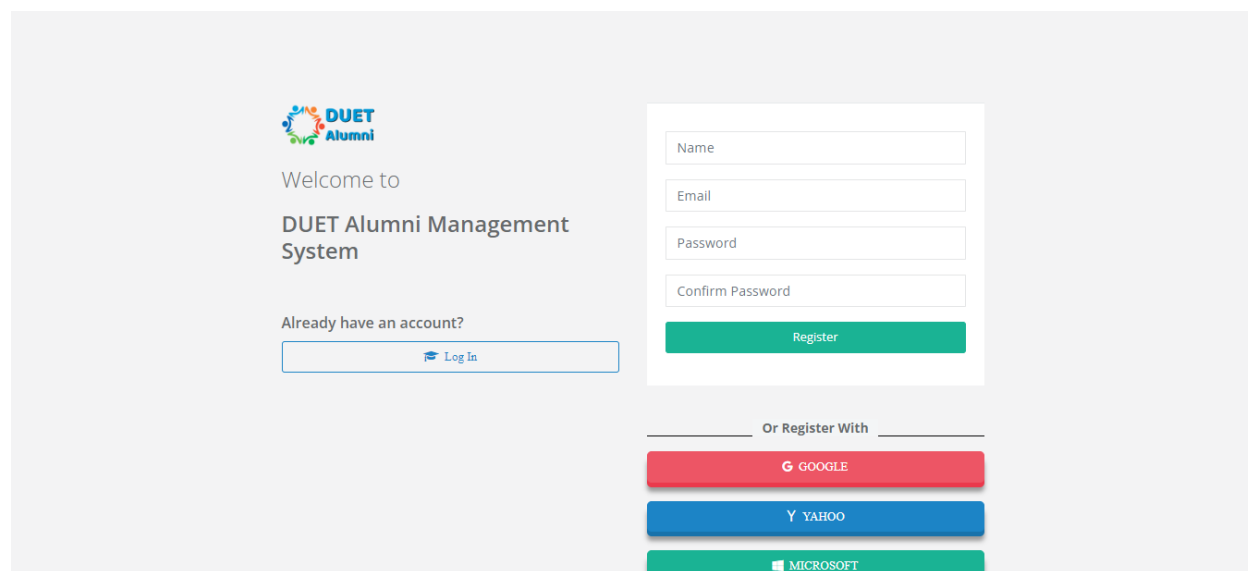
- Comprehensive Alumni Database: Keeps detailed profiles of alumni, including their academic and professional accomplishments.
- Networking Tools: Allows for seamless networking via interactive features such as forums, discussion boards, and interest-based groups.
- Career Development materials: Offers a collection of materials, job postings, and industry insights to assist alumni with their career development.
- Event Management: Effectively organizes and administers alumni events, reunions, and networking opportunities to increase involvement.

Limitations

- **Costly Implementation:** Some educational institutions may struggle financially due to the high initial setup and integration costs.
- **Learning Curve:** Users may encounter a learning curve, particularly if the system delivers new functions or a dramatically altered interface.
- **Dependence on Alumni engagement:** The system's performance is strongly reliant on active engagement from alumni, which can be difficult to obtain consistently.

DUET Alumni Management:

An Alumni Management System (AMS) is a software application or platform that manages and maintains an alumni database for a school, college, or university. The fundamental purpose of an Alumni Management System is to strengthen the institution's relationship with its former students by providing a forum for communication, interaction, and networking.



The screenshot displays the DUET Alumni Management System interface. On the left, the DUET Alumni logo is shown above the text 'Welcome to DUET Alumni Management System'. Below this, a link for 'Already have an account?' leads to a 'Log In' button. On the right, a registration form is visible with fields for 'Name', 'Email', 'Password', and 'Confirm Password', followed by a 'Register' button. Below the registration form, there is a section titled 'Or Register With' featuring three social media login buttons: 'GOOGLE' (red), 'YAHOO' (blue), and 'MICROSOFT' (green).

Figure 3: Overview of Duet Alumni

Best Features

- **Advanced Alumni Profiles:** Offers detailed and dynamic alumni profiles that highlight academic and professional achievements.

- Customization Networking Platform: Provides a versatile networking platform with customization features for personalized interactions.
- Career Guidance and Resources: Offers career development resources, job advertising, and mentorship opportunities to alumni.

Limitations

- Data Privacy issues: Despite security precautions, issues concerning data privacy may arise, especially with sensitive alumni information.
- Integration Complexity: Integrating with existing university systems may be difficult and time-consuming, sometimes generating interruptions..

Gradnet

Alumni are your biggest asset. Engage alumni effectively. Treat them like a picnic party. Currently, most educational institutions approach them this way. They plan one or two events per year, such as a reunion or a picnic.

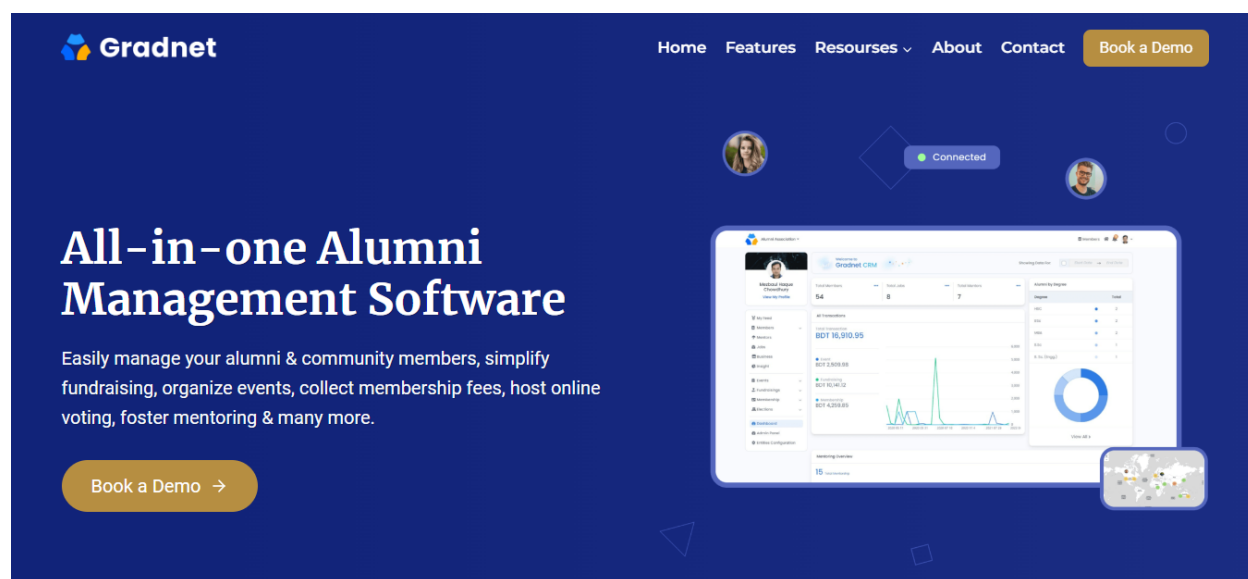


Figure 4: Overview of Gradnet

Best Features

- Comprehensive Alumni Profiles: Provides detailed alumni profiles that include academic accomplishments, career milestones, and personal updates.
- Dynamic Networking Platform: Offers a dynamic and interactive networking platform where alumni may connect, share thoughts, and collaborate on professional prospects.

Limitations

- Not user friendly.
- No real-time searching options.

3.4 Recommended Approach

When examining the recommended method for the Alumbridge project, it stands out as a comprehensive and strategic solution for connecting students and alumni through their educational experiences. The emphasis on preliminary research, including the establishment of a complete alumni database, provides a solid foundation for knowing the requirements and preferences of both students and graduates. The feasibility study provides a detailed examination of operational, technical, financial, and market elements, resulting in a well-informed execution plan. The emphasis on building a supportive community through elements such as networking events, mentoring programs, and a dynamic virtual platform is consistent with the project's overall goals. The new system should include the following features:

- The system's design is user-friendly and appealing.
- The approach promotes in-depth initial research, with a focus on building a large alumni database.
- This initial phase ensures a thorough awareness of the needs and preferences of both students and alumni.
- A comprehensive feasibility analysis considers operational, technological, financial, and market factors. This detailed research guarantees that the project is not only sustainable, but also in sync with available resources and market trends.
- The method emphasizes building a supportive community through networking events, mentoring programs, and a dynamic virtual platform.

- A dynamic virtual platform, networking events, and mentoring programs demonstrate a user-centered approach. The project is intended not just to meet technical requirements, but also to improve the overall experience for students and alumni.

Chapter 4 – Methodology

The software team that works for the best of the project selects software development techniques to ensure project success and good management. A project management methodology is a collection of concepts, methods, and processes developed by specialists in a specific industry. Not only are the top techniques built differently, but they also require distinct outputs, procedures, and even the creation of project management software (Asana, 2021). With adequate research and knowledge, this chapter will thoroughly explore the chosen methodology and the appropriate reason for implementing the strategy.

4.1 What to Use

Software methods are critical strategies used in the design, construction, and development of systems within the software development life cycle. They play a critical role in directing the entire software development process. There are various techniques available, each bringing a unique approach to the development process. Examples include the waterfall model, the prototype model, agile software development, rapid application development, dynamic systems development model, spiral model, and collaborative application development. I'll go through the benefits and drawbacks of three approaches below:

Dynamic System Development Method (DSDM)

DSDM, unlike the Waterfall methodology, uses an iterative and incremental approach. It promotes active user interaction throughout the development process, allowing for greater adaptability to changing requirements. DSDM is ideal for projects where flexibility and response to changing needs are critical.

The Dynamic Systems Development Technique (DSDM) is an Agile approach that takes into account all stages of the project life cycle. Project alignment with the organization's strategic goals

is an important aspect of the DSDM methodology. The purpose of a DSDM project is to address business needs while simultaneously generating concrete economic benefits. Before starting a project, DSDM ensures that the benefits are clear, the solution is feasible, and the necessary foundations are in place. DSDM is a strong and adaptable Agile approach that can respond to changing business needs. It simultaneously delivers the necessary project management and governance mechanisms.(Study.com, 2020)

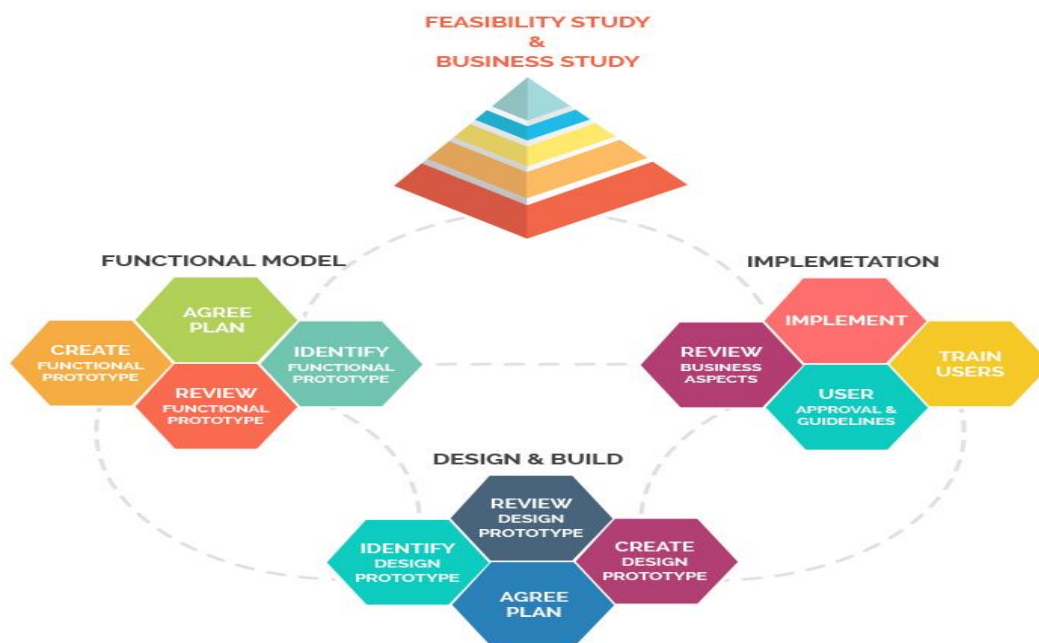


Figure 5:DSDM Methodology

Benefits of DSDM

- DSDM is inherently adaptable, allowing for changes in project requirements even late in the development cycle. This adaptability is critical in dynamic contexts where requirements may shift over time.
- The model stresses end-user interaction at all stages of development. This guarantees that the supplied solution closely matches user expectations and requirements.
- DSDM uses an incremental development methodology, allowing for the delivery of partial solutions in the early stages. This leads to the rapid realization of actual commercial value, allowing stakeholders to perceive progress sooner.

- Stakeholders participate in the development process.
- Each project team should have at least one tester because testing is critical.
- Has a distinct mechanism for determining the importance of each repeat required.
- By integrating users early and frequently, DSDM decreases the likelihood of misunderstandings and misalignment between the delivered system and user expectations. This proactive strategy helps to ensure project success. **(Ltd}, 2021)**
- Allow changes and response quickly.
- Developers can easily access their end-users.

Drawbacks of DSDM

- It involves steady accumulation of wants.
- DSDM is ideal for projects with well-defined needs and business objectives. In cases where requirements are highly unknown or prone to frequent modifications, DSDM may confront difficulties.
- Focusing on RAD can reduce code robustness, but it requires complete commitment to the DSDM process, strong user involvement, and a professional development team with expertise in both business and technology.
- Likely the most important initiative in our survey.**(Ltd}, 2021)**

Waterfall Model or Structured System Analysis and Design Method (SSADM)

The Waterfall technique, also known as the Waterfall model, is a sequential development process that involves completing each stage of a project (such as analysis, design, programming, and testing) before moving on to the next. The waterfall technique is a project management approach that emphasizes the project's linear movement from beginning to end. Engineers typically use this front-loaded strategy, which is built on meticulous planning, extensive documentation, and consistent execution. **(Anon., 2021).**

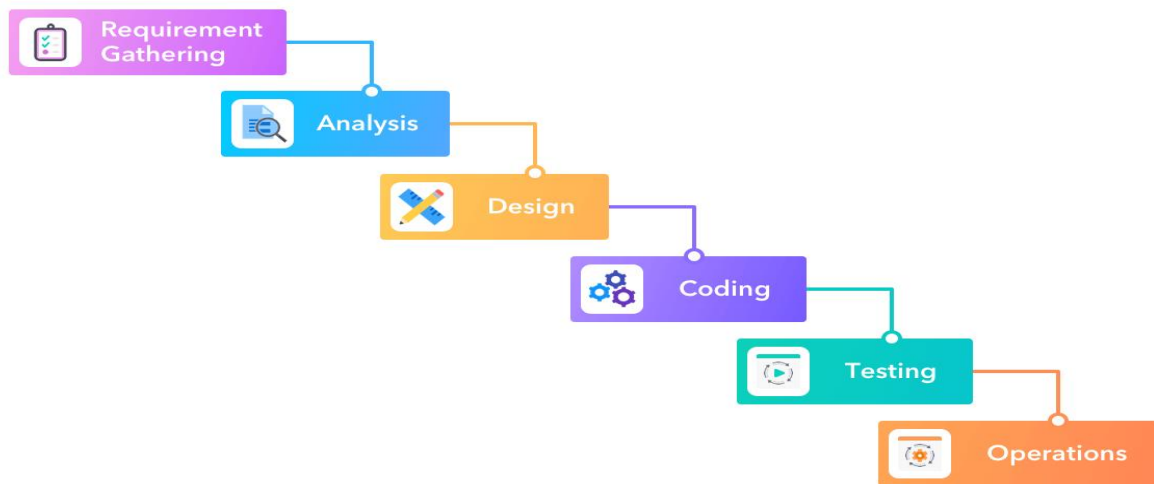


Figure 6: Waterfall methodology

Benefits of Waterfall

- Developers can detect design faults during the analysis and design stages, preventing them from writing incorrect code during the implementation phase.
- The Waterfall paradigm is intuitive and simple to understand. Its sequential structure creates a clear path from requirements to deployment, making it a straightforward and logical approach.
- The project is divided into several phases, each with its own set of activities. This methodical approach enhances project management and control.
- New developers will have little issue catching up on a current project because the requirements document should contain everything they need to know.

Drawbacks of Waterfall

- Using this historical technique may result in longer project completion times than iterative plans like Agile.
- The Waterfall methodology is rigid, and any modifications to the project scope, requirements, or design are difficult to incorporate once the development process begins.
- Clients frequently request adjustments and new features later in the process, making it difficult to achieve their expectations.

- Clients cannot participate in design or implementation stages.
- When one stage of a process is delayed, the other stages are also delayed.

Rapid Application Development

The Rapid Application Development (RAD) paradigm prioritizes prototype and iteration above detailed planning. In general, the RAD method to software development prioritizes development and prototyping over planning. Unlike the waterfall paradigm, which emphasizes strict specification and planning, the RAD technique focuses on constantly changing demands as development progresses.(Anon., 2021)

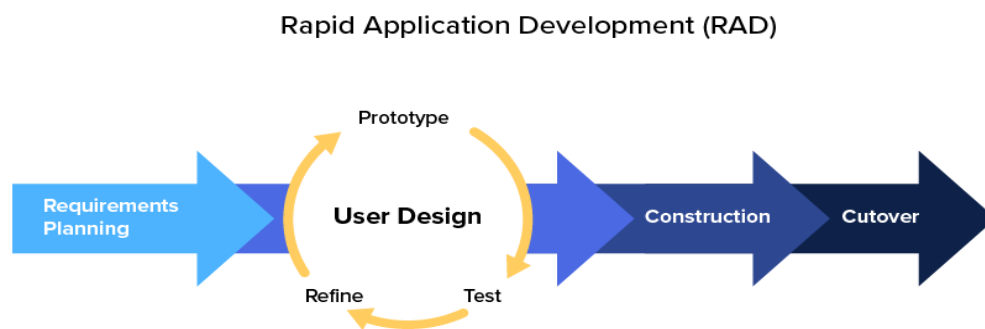


Figure 7:Rapid Application Development methodology

Benefits of RAD

- It is adaptable and versatile, and it can help you lower overall project risk.
- Flexibility and adaptability.
- Scripts, high-level abstractions, and intermediary programs make it simple to transfer deliverables.
- Manual coding has decreased as a result of code generators and reuse, and prototyping is expected to reduce errors.(Martin, 2021)

Drawbacks of RAD

- Strong collaboration is essential.
- I cannot work in large groups.
- Highly skilled developers are needed.
- Rapid application development can only be utilized to create systems that can be modularized across the product's life cycle.(Martin, 2021)

Choosing Methodology

The offered material describes the "Alumbridge" project, which aims to bridge the educational journeys of students and alumni. It describes the project's original research, feasibility study, and foundational aspects, with an emphasis on objectives, goals, and essential features. The MoSCoW prioritizing and iterative development-timeboxing approaches are also discussed.

The following paragraph discusses software development approaches for a Alumni management system. While acknowledging the waterfall model's occasional use, it claims the superiority of the Dynamic Systems Development Method (DSDM). The DSDM technique is acclaimed for continuously providing product and project quality on schedule, making it the best option for the project. Furthermore, it emphasizes the methodology's adaptability to various companies and organizations. The final paragraph emphasizes the versatility of DSDM, which allows clients to change their needs during the development period.

Choosing a methodology is an important decision in project development, and the article proposes that the DSDM approach is superior due to its dependability, timeliness, adaptability, and client-centric flexibility.

4.2 Why to Use Methodology

A disciplined technique is critical to the success of the "Alumbridge" project. A methodology offers a methodical approach to project management, guiding the team through each stage, from early research and feasibility studies to implementation and deployment. In the context of this project, the technique adopted will be critical in guaranteeing work efficiency and attaining project objectives within specified restrictions. With the complexities of duties like developing an alumni

database, organizing networking events, and implementing a virtual platform, a methodology acts as a road map, providing a clear path to go. It helps to mitigate potential obstacles, promote teamwork, and keep the project's overall aims in mind.

4.3 (Alumbridge) Sections of Methodology

The development team must follow some known features of the DSDM methodology. These include the following:

Phase one of the project

This phase creates the initial project concept, as well as the timeline, budget, and basic needs.

Feasibility Study Phase

This phase supports the business case, business strategy, technical solutions, and project budget.

Requirement Gathering Phase

This section employs a variety of methodologies for identifying both functional and non-functional project needs.

Requirement Analysis and Prioritization Phase

This stage analyses and prioritizes the acquired needs using a prioritization approach such as MoSCoW.

Using MoSCow prioritization:

MoSCoW has developed a prioritization tool to assist with system development. There are a few parts listed below:

Must have:

This section is critical for determining the major functions that the system must perform; otherwise, the system will be useless to the users.

Should have:

This section helps with the identification of crucial criteria and the development of a key that benefits everyone.

Could Have:

This section aids in identifying a few needs that are unimportant and have no bearing on the system.

Won't Have:

This system component helps to identify needs that are not met by the system.

Exploration and Engineering Phase

Engineering: The engineering process includes iterative testing, system increments, system design, and ensuring that user needs are met in accordance with system requirements.

Exploration: This phase uses MoSCoW prioritization to identify the system's functional and non-functional requirements.

The methodology's main iterative component was used to iteratively analyze the requirements and design the solution.

Post- project:

This phase helps to determine the project's predicted benefit and create the system's final intended solution.

Review Phase

This step involves testing the developed deliverables with users, and if changes are needed, they are returned to the previous phase.

4.4 Implementation Plans

The project is nearing completion, with complex apps being accessible for use. If there are any issues with this identification and solution, make the new system available for use. This section specifies the release criteria, configuration, and planning. If everything checks out, the new system is launched.

Chapter 5 – Planning

5.1 Project Plan

This section covers the project's completion planning process. Essentially, the project is divided into multiple independent segments, and if everything goes as planned, all of the work will be completed within a specified time range.

5.1.1 Work Breakdown Structure

This phase comprises breaking down the project into smaller parts so that it can be completed in the allotted time period and more efficiently and effectively. This framework provides us with time and task estimates. Without this structure, the project may be more difficult to complete. As a result, the proposed system has been separated into groups and subcategories in the WBC, as illustrated in the chart below:

No.	Task Name	Start Date	Finish Date	Duration
1	Introduction	01/07/2023	05/07/2023	5 days
2	Initial Study	06/07/2023	20/07/2023	15 days
3	Literature Review	21/07/2023	30/07/2023	10 days
4	Methodology	31/07/2023	15/08/2023	16 days
5	Planning	16/08/2023	25/08/2023	10 days
6	Feasibility Study	26/08/2023	05/09/2023	11 days
7	Foundation	06/09/2023	15/09/2023	10 days
8	Exploration & Engineering	16/09/2023	30/09/2023	15 days
9	Deployment	01/10/2023	05/10/2023	5 days
10	Testing	06/10/2023	15/10/2023	10 days
11	Implementation	16/10/2023	25/10/2023	10 days
12	Critical Appraisal & Evaluation	26/10/2023	05/11/2023	11 days
13	Lesson Learned	06/11/2023	15/11/2023	10 days
14	Conclusion	16/11/2023	25/11/2023	10 days
15	Total	-	-	164 days

Figure 8: Alumbridge Work Breakdown Structure of the

5.1.2 Alumbridge Resource Allocation

To guarantee that the project is completed in a timely and efficient manner, all assets and resources are assigned and managed. One of the most important parts of project management is resource allocation. Because this is an intellectual undertaking, I will fill various roles at different times because there is no team. The Alumbridge project's resource allocation is as follows in order to meet the scheduled job delivery date.

Task Name	Duration	Resource
Introduction	5 days	Analyst
Initial Study	15 days	Analyst
Literature Review	10 days	Analyst
Methodology	16 days	Analyst
Planning	10 days	Analyst
Feasibility Study	11 days	Analyst
Foundation	10 days	Designer
Exploration & Engineering	15 days	Developer
Deployment	5 days	Developer
Testing	10 days	Tester
Implementation	10 days	Developer
Critical Appraisal & Evaluation	11 days	Analyst
Lesson Learned	10 days	Analyst
Conclusion	10 days	Analyst

Table 3: Alumbridge Resource allocation list

5.1.3 Time Boxing

Another important part of DSDM project planning is the separation of tasks into time boxes to ensure that the goals are met by the deadline. This section organizes all jobs into time boxes with set duration. These tasks must be done within the time limits set by the iterative technique.

Time Box	Task Name	Duration	Resources
TB1	Introduction	5 days	Analyst
TB1	Initial Study	15 days	Analyst
TB1	Literature Review	10 days	Analyst
TB2	Methodology	16 days	Analyst
TB2	Planning	10 days	Analyst
TB2	Feasibility Study	11 days	Analyst
TB3	Foundation	10 days	Designer
TB4	Exploration & Engineering	15 days	Developer
TB5	Deployment	5 days	Developer
TB5	Testing	10 days	Tester
TB6	Implementation	10 days	Developer
TB6	Critical Appraisal & Evaluation	11 days	Analyst
TB7	Lesson Learned	10 days	Analyst
TB7	Conclusion	10 days	Analyst

Table 4: Alumbridge List of the Time Boxes

5.1.4 Gantt Chart of Alumbridge Working

A Gantt chart is a graphical representation of the project's activity schedule. It shows the length as a progress bar from the beginning to the end date, rather than in days. A Gantt chart of the Alumni Management System is provided below:

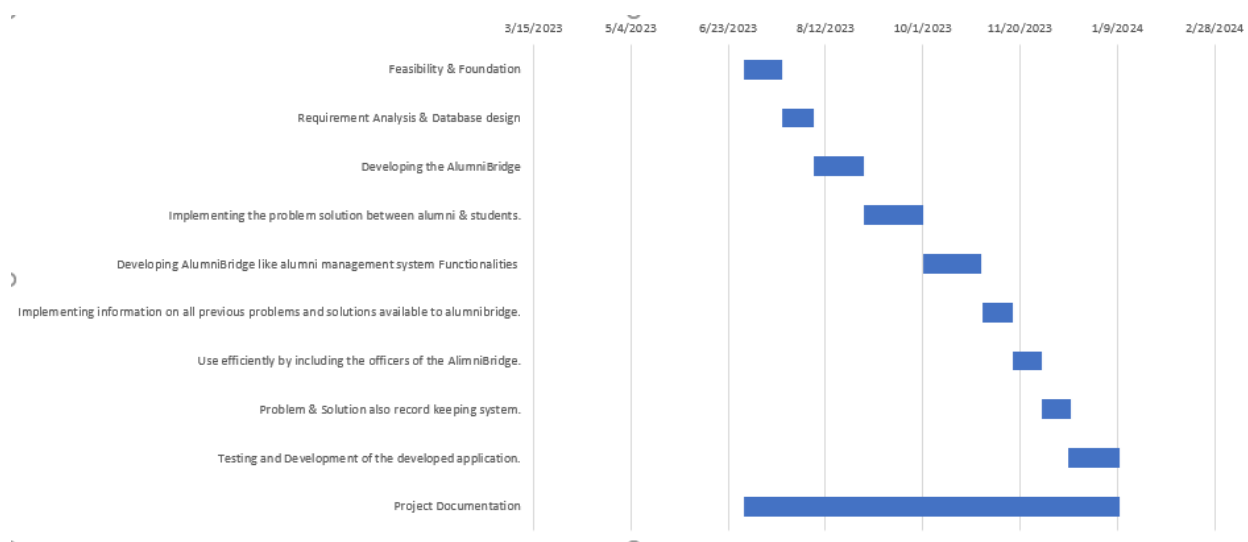


Figure 9: Alumbridge Project File cycle Gantt Chart

5.2 Test Plan

A Test Plan is a detailed document outlining the test strategy, objectives, timeline, estimates, deadlines, and resources needed to complete a project. Consider it a template for conducting the tests required to confirm that the software is operational, with test managers in charge. The test plan was created in response to differences between the provided input and the system's expected output. Testing, which includes verification and validation, occurred during the software development process.

5.2.1 Alumbridge Testing Against the Time Boxes

The time box method was used to estimate a fixed and maximum unit of time for a certain segment. Time limits are being tested-

User Name for testing purpose	Example for testing	Role for testing	Example for testing
-------------------------------	---------------------	------------------	---------------------

ID of the Time Box			
Content of the Time Box			

Type of test	Steps for testing	Expected outcome	Actual outcomes	Comment
Unit testing				
Integration testing				
System testing				
Acceptance testing				
Security testing				
Usability testing				
Reliability testing				

Figure 10: Alumbridge Sample of Testing Against the Timebox

5.2.2 Required Test

There are numerous testing modules available, however the two most popular types of system testing are functional and non-functional testing:

Functional Testing:

- Unit Testing: Individual software units, such as collections of computer program modules, usage processes, and operational procedures, are evaluated to determine their suitability for unit testing. It is a testing method in which the developer examines each individual

module to determine whether there are any issues. It depends on the functional integrity of the various modules. **(GeeksforGeeks, 2019).**

- **Integration Testing:** The process of examining how two software modules or components interact with one another is called integration testing. Its main goal is to check if the interface is operating correctly. Integrity testing is a tool used to find gaps in the communication between integrated elements. Integration testing is carried out following unit testing of every module. **(GeeksforGeeks, 2018)**
- **System Testing:** Software tested on an integrated system as a whole to see whether it satisfies the necessary requirements is called system testing. System testing uses components as input that pass integration testing. The purpose of integration testing is to identify any discrepancies between the connected components. System testing looks for issues with the system as a whole as well as its separate parts. The observable behavior of a system or component during testing is the result of system testing. **(GeeksforGeeks, 2019)**
- **Acceptance Testing:** This type of formal testing is carried out in accordance with user demands, requirements, and business procedures to determine whether a system satisfies the acceptance criteria and to give users, customers, or other authorized organizations the choice of whether or not to accept the system. **(GeeksforGeeks, 2019)**

Non-Functional Testing:

- **Security Testing:** In addition to external security testing, web application security testing is carried out. Through the validation of illegal users or access, it guards against threats that come from both the inside and the outside, like SQL injections.
- **Usability Testing:** The primary benefit of usability testing is its capacity to help designers find usability problems with a design early on, allowing them to be fixed before the design is approved or implemented into production. Because of this, prototypes—with varied degrees of fidelity depending on the stage of production—are usually used for usability testing rather than finished objects. **(GeeksforGeeks, 2019)**

Reliability Testing: This testing allows users to directly engage with it. It guarantees dependable system operation. It evaluates and confirms the many kinds of system malfunctions.

5.2.3 Test Case of Alumbridge

The test case number, test type, test description, and test procedures were all contained in the test case.

No. of Test Case			
Type of Test			
Description of the test			
Steps of testing	Expected outcome	Actual outcome	Comment

Table 5: Sample Test case

5.2.4 User Acceptance Test Plan

User acceptance is the final step of testing segment. It refers and check testing performance by the involved user.

No. of Test Case
Type of Test
Description of the test
Preparation for testing
Name of the User
Assume the role of

Steps of testing	Expected outcome	Actual outcome	Comment

Table 6: Alumbridge User Acceptance Test Plan

5.3 Risk Management of Alumbridge

Risk management is the process of identifying, assessing, and responding to any risks that may exist during the project development life cycle. It is used to track projects and make sure that their goals and objectives are met. Project performance, budget, and schedule are a few examples of variables that could be at risk. Risk can be managed in many different ways.

- Identification of risks
- Evaluation of risks
- Precautionary measures and action plan
- Precautions made for potential hazards

5.3.1 Risk Identification

Risk identification is one of the most crucial components and duties of risk management strategy. The first step in risk identification is to make sure that any risks that might materialize and have an influence on the project are identified, documented, and their components are identified and documented. The following criteria for risk identification will be regarded as reasonable in light of this study:

- Recognition of possible hazards and recording of those risks.
- The highlighted dangers were formulated by taking into account the actual causes.
- Future ramifications and impacts, along with the impact of the risk.

Elaboration of potential risk identification and monitoring of the project's risks, as listed below:

Types of dangers	Causes	Consequences & Impact
Operational Risks	➤ Lack of collaboration from	➤ Students receive little real-

	alumni or industry partners ➤ Not enough resources (money, time, help)	world experience and few networking chances.
Technical Risks	➤ Insufficient technical capabilities or resources within the establishment ➤ Bugs or technical problems with the virtual platform	➤ Difficulties with the virtual platform's implementation, resulting in a less than ideal user experience.
Market Research Risks	➤ Inaccurate perception of the needs of the intended audience ➤ Inability to determine the need for mentorship programs	➤ User happiness is reduced when project features are not aligned with user expectations.
System Technical Problem ➤ Hardware	➤ Not moving at the necessary speed ➤ Because of a deficiency in critical performance ➤ Not having the required setup.	➤ There's a chance that the goods delivery will go wrong.
Project Backup for Security	➤ The project is not backed up on GitHub or any other similar platform.	➤ Cost implications ➤ The entire project is lost.

Failure of the Network	➤ Internet access is necessary for some integrated API and email management features.	➤ Sending emails to students and alumni is not allowed.
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Table 7: Risk Identification of Alumbridge Table

5.3.2 Risk Assessment of Alumbridge

Risk assessment involves with quantitative or qualitative value of risks included threats of a project

Type of risks	Likelihood	Impact	Restore time
Operational Risks	5	6	8
Technical Risks	5	5	5
Market Research Risks	6	6	6
System Technical Problem ➤ Hardware	4	5	5
Project Backup for Security	5	6	4
Failure of the Network	4	4	8

Table 8: Risk Assessment of Alumbridge

5.3.3 Risk Precaution / Action Plan

After identifying and assessing risks, a risk action plan was created. It is possible to prepare for risk in a variety of ways.

- Avoid taking chances that have already happened or might happen in the future.
- To lessen the dangers that have already happened and those that could happen in the future
- To address the issues that have surfaced and any possible hazards

Type of risks	Action	Taking Action	Action Required
Operational Risks	Make accurate time estimates using a Gantt chart and other available resources. Making use of technology: Microsoft Excel and Asana	A developer who actively participates in	Ensure that everything we require is here before we begin working on the project.
Technical Risks	➤ In order to finish the necessary normalization ➤ In order to create the precise relationship that is needed on the table,	A developer who actively participates in	In relation to the insertion, editing, and deletion of data,
Market Research Risks	➤ to write programming while maintaining a pleasant scent. ➤ For this project, provide a	A developer who actively participates in	After the authentication components are configured

	multi-authentication mechanism.		
System Technical Problem ➤ Hardware			
Project Backup for Security	You can use any cloud service, such as GitHub, to backup your projects.	A developer who actively participates in	Update often
Failure of the Network	To engage in fruitful discussions with network service specialists.	A developer who actively participates in	In a timely manner to complete the task.

Table 9: Alumbridge Risk Precaution

5.3.4 Steps Taken for Possible Risks of Alumbridge

The responsible person adheres to the necessary procedures after identifying and evaluating any potential dangers. They are listed in the following order:

Type of risks	Description	Likelihood	Impact	Taking Step
Operational Risks	Not completing the task by the deadline is one of the largest hazards.	Rare	High	In addition to creating the work breakdown structure and Gantt chart, the project time boxing was finished.

Technical Risks	There is a potential that duplicate entries will occur.	Likely	High	The data dictionary was created using the entity relationship diagram and third normal form normalization.
Market Research Risks	Access into the forbidden system.	Unlikely	High	Created a workable mechanism for authentication and access permission.
System Technical Problem ➤ Hardware	It's possible that something will go wrong with our equipment.	Frequent	Medium	There is guaranteed backup in addition to ongoing upkeep and supervision.
Project Backup for Security	Every project file needs to be backed up using Git Hub.	Rare	High	keeping an eye on the project file safely.
Failure of the Network	A problem with the internet or a malfunctioning connection.	Frequent	Low	The proxy server has been set up and high-bandwidth access has been authorized.

Table 10: Risk dealing steps for Alumbridge

5.4 Change Management

5.4.1 Factors that Might Cause Change

There are several types of changes needed for this system which are included:

- The provided parts are different.

- Modifications to the functional requirements
- Adjustments made to other UI modules.
- Changes in the Alumni and Student job opportunities sectors' rating and review segments.
- Security handling has changed in some ways.

5.4.2 DSDM Welcome Change of Alumbridge

The project requirements should determine any necessary modifications to the project development life cycle. These factors lead us to select a method that, given the constraints of the system, can handle a broad variety of issues. 'DSDM' is therefore among the approaches that is current, reliable, and simple to use. This method is employed in this system to manage and carry out development time adjustments.

It operates in a variety of ways:

- The project's main goal is to forge strong bonds between eminent alumni and present pupils.
- Emphasizes creating a welcoming environment for guests.
- Gives pupils real-world examples of prosperous career paths and achievements to motivate them on their route.
- Offers resources for career development to assist students in successfully navigating their academic and professional pathways.
- Focuses on evaluating the project's viability and practicality while taking resources, time, and help into account.
- It provides scalability as well as reliability.

5.4.3 Considering Business Priority

In order to achieve the intended aim and vision of the company, modifications have been looked into. For this reason, we need to pay close attention to functional and requirement adjustments that will benefit customers greatly.

Priorities were as follows:

Topical Area	Priority Level
Delivering Segments	6
Functional requirements	8
Non-Functional requirements	6
Segments for opportunities and collaboration	5
Segments for security handling	8

5.4.4 Change Workshop

The Alumbridge project's "Change Workshop" is a crucial stage intended to modify and enhance the project's course in response to changing requirements and new information. The purpose of this workshop is to provide a dynamic platform for project stakeholders to assess project progress, identify obstacles, and initiate improvements aimed at improving overall effectiveness.

The project team collaborates to evaluate the results of earlier stages, including the Feasibility Study, Initial Research, and Exploration & Engineering phases, at the Change Workshop. This assessment makes it possible to determine what changes might need to be made in order to keep up with the changing demands of the workplace and educational environment.

- It offers a venue where interested parties can work together to evaluate the results of previous project stages, with a special emphasis on initial research, feasibility studies, and exploration and engineering.
- In order to ensure the project's continued sustainability, the workshop seeks to identify and resolve any operational, technical, or financial issues that may have surfaced during project execution.

5.4.5 Changes That are Allowed

"Changes That are Allowed" showcases the project's flexibility and reactivity to changing conditions, guaranteeing the Alumbridge program's continued efficacy and alignment with its

objectives. This method recognises that the environment of education and the workforce is constantly changing and that adapting to these changes is necessary to successfully serve the requirements of both students and alumni. The project welcomes change in response to fresh perspectives, new developments, and input from stakeholders.

5.4.6 Key Decision Taker of Change

Change agents will receive guidance from a range of subject-matter experts. In this project, distinct decision makers for modifications were integrated.

- System Requirements Analyst
- System Developer
- System Tester

If necessary, the analyst can alter the functional requirement, and the developer can alter the applicable code.

5.5 Quality Management

Maintaining the standard that the user agreed to accept during the project's inception is what quality management is all about. Quality management is based on a number of factors, including

- Provide unambiguous project standards and procedures to guarantee that every element—from networking events to the virtual platform—meets predetermined quality criteria. This covers adherence to best practices and industry standards.
- Encourage a continuous improvement culture by routinely evaluating and reevaluating procedures, techniques, and results. Use stakeholder feedback loops to pinpoint areas that need improvement.
- Keep the alumni database's data accurate and up to date at all times.

5.5.1 Rules Applied to Maintain Quality

The rules pertaining to the preservation of quality differ between systems and users. Two ideas must be adhered to in order to preserve quality: quality assurance and control.

Product buyer and seller service quality control has been maintained as a result of assessing Current Students' problems.

- Set and uphold standards for design, documentation, and coding. Make sure that throughout the development process, every member of the team adheres to these criteria consistently.

Quality Assurance: By examining the justifications for both appropriate and incorrect approaches, quality assurance has been preserved.

- Create a thorough testing plan that incorporates user acceptability testing, system testing, integration testing, and unit testing. This guarantees that every part of the system is checked for accuracy and operation in great detail.

- To expedite the testing process, put automated testing tools and frameworks into place.

5.5.2 DSDM Standard Quality Measures

Solution quality: By monitoring user requirements, solution quality has been guaranteed based on anticipated business demands and user expectations. Two different kinds of prioritizations were applied to finish this procedure.

- Time Boxing

- MoScow

Both of these methods have been completed, and the schedule has been kept.

The chosen organisation has guaranteed the quality of the process. Two strategies have been developed and put into practice to guarantee the calibre of these procedures.

- CMMI

- DSDM

5.5.3 Quality Plan and Measuring Meter

As of right now, a number of high-quality plans have been maintained, including

- The project's quality criteria and benchmarks should be clearly defined and communicated.
- Throughout the course of the project, make sure the development team complies with coding standards, industry best practices, and design principles.
- Establish a system of continuous monitoring to keep tabs on and evaluate the system's performance, user experience, and code quality.

Chapter 6 – Feasibility

6.1 All Possible Types of Feasibility Alumbridge

Several aspects of feasibility are taken into account in the thorough assessment of the Alumbridge project in order to guarantee its effective execution. Operational feasibility emphasises working with genuine industries to give new students authentic work culture experiences and concentrates on how feasible the project is to execute. In order to create a virtual platform for networking and mentoring, technological feasibility necessitates a thorough evaluation of the institution's technical capabilities. Examining the project's financial needs and the organization's funding potential is vital for setting up mentorship programmes and maintaining the online platform. This process is known as financial feasibility. In order to effectively meet the expectations of students and alumni, market research analysis examines the needs of the target audience and rival activity.

Technical Feasibility:

Some aspects of technical feasibility are:

One important factor for the successful execution of the suggested initiatives is the technological viability of the Alumbridge project. An extensive assessment of the institution's technical resources and competencies is crucial, as the project centres on developing a virtual platform for student-alumni mentorship, networking, and communication. To ensure that the platform and its features are implemented seamlessly, this assessment is necessary. The use of HTML, CSS, Bootstrap, React.js, and Node.js highlights a modern and strong technology stack that makes it possible to create a dynamic and interactive application. Additionally, data integrity and system

validity are guaranteed by the backend code's integration of JavaScript and a well-designed database.

So, clearly in this project perspectives the technical aspects are given below:

Hardware:

- HP laptop (Configuration)
- Wi-fi Router(Tp-link)

Software:

- Xampp
- Microsoft office(MS)
- Microsoft Excel
- Google chrome browser
- Windows 10 Pro (operating system)
- VS Code
- Brackets

Database:

- MongoDB

Technology:

Design Slide:

- Html
- CSS
- React

- NodeJS

Server Side:

- PHP
- Laravel 8.6

Economic Feasibility:

The suggested system can be developed in a number of ways, including desktop and web-based apps.

➤ Web based application cost:

The entire programmed and all of the data are kept on a distant server that is always and everywhere accessible over the Internet.

Equipment	Cost per unit	Cost
VPN enabled extranet network	₹2000 per/m	₹2,000
Laptop (core i5, 2.50-271 GHz processor, 4 GB DDR4 RAM, 1 TB HDD)	₹ 85,000	₹ 85,000
Web, File and Email servers	₹17,000 per/m	₹17,000
Total		₹ 1,04,000

➤ Desktop Application cost:

Equipment	Cost per unit	Cost
Laptop (core i5, 2.50-271 GHz processor, 4 GB DDR4 RAM, 1 TB HDD)	₹ 85,000	₹ 85,000
Web, File and Email servers	₹17,000 per month	₹17,000
Total		₹ 1,02,000

You will require a domain name and hosting company in order for the system to function. Because the system needs to continuously solve problems and track the position of the items in order to meet the requirements of the problem solver and delivery search. A web application will be created for the remainder of the system.

Market Research Analysis Based on the Feasibility Factors:

An essential first stage in assessing the viability elements that will determine the initiative's outcome is the market research analysis for the "Alumbridge" project. grasp the dynamic environment in which the project will operate requires a grasp of this analysis. The project team can ensure that the planned features meet the expectations of both students and alumni by doing comprehensive market research to obtain insights into their needs and preferences. Additionally, by examining the activity of competitors, the project is able to pinpoint gaps in the market and improve its strategy for differentiation.

The analysis takes into account operational, technological, financial, and market issues while determining viability. Operational viability will evaluate how feasible it is to form partnerships with actual businesses in order to give students invaluable exposure to professional cultures. The proposed virtual platform must match the institution's technological capabilities in order to be considered technically feasible. A thorough budget analysis is required to ascertain whether the organization has the resources and money necessary to support the project through to its completion. Ultimately, the examination of market research delves into comprehending the intended audience, the need for mentorship initiatives, and possible partnerships with businesses.

6.2 Cost Benefit Analysis for Alumni Management

A cost-benefit analysis's main objective is to ascertain the spending and profits assumptions. The benefit is calculated by comparing the total cost and earnings. For this project, the cost-benefit analysis is as follows:

Total cost:

Serial No.	Equipment	First Year	Second Year	Third Year	Fourth Year	Five Year	Total
1	Web based application cost	₹ 1,04,000	-	-	-	-	₹ 1,04,000
2	Desktop Application cost	₹ 1,02,000	-	-	-	-	₹ 1,02,000
3	The cost of a domain plus hosting	₹25,000	₹25,000	₹25,000	₹25,000	₹25,000	₹ 125,000
4	Expenses for Employees	₹40,000	₹40,000	₹40,000	₹40,000	₹40,000	₹2,00,000
5	Other Cost	₹20,000	₹20,000	₹20,000	₹20,000	₹20,000	₹1,00,000
6	Total Cost	₹ 2,91,000	₹ 85,000	₹ 85,000	₹ 85,000	₹ 85,000	₹ 6,31,000

Table 11: Total Cost Estimation for the project Alumbridge

Total Earning:

SL No.	Earn Sector	First Year	Second Year	Third Year	Fourth Year	Five Year	Total
1	Govt. Tax one	₳1,50,000	₳1,80,000	₳2,10,000	₳2,40,000	₳2,70,000	₳1,050,000
2	Govt. Tax two	₳2,00,000	₳2,10,000	₳2,40,000	₳2,60,000	₳3,00,000	₳1,210,000
	Total	₳3,50,000	₳3,90,000	₳4,50,000	₳5,00,000	₳5,70,000	₳2,260,000

Table 12: Earning estimation for the project Alumbridge

Total Revenue of project:

SL No.	Sectors	First Year	Second Year	Third Year	Fourth Year	Five Year	Total
1	Total Earning	₳3,50,000	₳3,90,000	₳4,50,000	₳5,00,000	₳5,70,000	₳2,260,000
2	Total Equipment Cost	₳4,02,000	₳80,000	₳80,000	₳80,000	₳80,000	₳7,22,000
	Total Revenue	₳4,02,000	₳3,10,000	₳3,70,000	₳4,20,000	₳4,90,000	₳1,538,000

Table 13: Alumbridge Estimated Revenue on a Five-year scale

It follows that by promoting this approach, the Institute would be able to get a lot of takas in yearly revenue from several Alumni Departments, including Current Student. The money will be raised annually. Therefore, this initiative will be advantageous to the public as well as the Institute.

6.3 Explain DSDM Good or Bad for this Project

The "Alumbridge" project would benefit from using the DSDM (Dynamic Systems Development Method) paradigm because of its emphasis on adaptability, teamwork, and producing measurable outcomes. Iterative development and frequent delivery of functional increments are the main goals of the agile project management and delivery system known as DSDM. This fits in nicely with the "Alumbridge" project's iterative and phased structure, which is described in the timeboxing technique used during the engineering and exploratory phases.

The effort might potentially reap significant benefits from DSDM's emphasis on user interaction and collaboration throughout the project lifecycle. It is possible to make sure that the finished product closely satisfies the needs and expectations of both students and alumni by involving them in the creation process, getting their feedback, and incorporating iteratively. For a project with clearly defined phases, such as "Alumbridge," the framework's timeboxing technique is very helpful because it allows the team to set aside specific time slots for each development step.

Chapter 7 – Foundation

7.1 The Problem Area Identification

Finding the issue is the best way to make any project better. The user is the one who can control that component because they will be the ones using the system the most. As a consequence, the user informed us of the following few sections that appear to be problematic:

7.1.1 Interview

An interview is the best method if you want to gather information, identify the issue, or determine the goal. Finding the issue could lead to the real solution. Consequently, in order to engage in the subsequent interviews, a number of user-generated questions have been established for the proposed system:

1. Current Student:
 - Do you know anything about the Alumbridge project's aims and objectives, if you are aware of it?
 - What are your expectations from a platform that aims to bridge the gap between students and alumni?

- How important do you think it is for students to connect with alumni for career guidance and development?
- In what ways do you believe interacting with alumni could benefit your career choices?

2. Alumni:

- Are you aware of the Alumbridge project, and if so, what aspects of the project are most interesting or important to you?
- How engaged would you be in participating or contributing to a platform that connects alumni with current students?
- Reflecting on your educational and professional journey, do you believe a platform like Alumbridge would have been beneficial during your time as a student?

3. Admin:

- What motivated the initiation of the Alumbridge project, and what specific objectives does the administration aim to achieve through it?
- How do you envision the project contributing to the overall educational and career development goals of the institution?

7.1.2 Observations

One technique and strategy used in the PMBOK's Collect Requirements method is observation, which is often referred to as job shadowing. The process of gathering requirements identifies and records the demands of the stakeholders in connection with the objectives of the project. This tactic is observing people while they perform their duties. (**Pmimidnebraska.org, 2021**)

Finding the real issue and assembling user demands are two other benefits of using observations. The main purpose of observation methods is to visit the business and determine how to accept the users. The main things to think about are as follows:

- The project ambitiously aims to bridge the educational journeys of students and alumni, emphasizing the creation of a supportive environment for newcomers.
- Clear objectives include providing career guidance, connecting students with industry experts, and fostering confidence in career choices.
- The emphasis on preliminary research showcases a commitment to understanding the needs and preferences of students and graduates.
- The creation of an alumni database is a strategic move, enabling effective networking events and mentorship programs.
- Operational feasibility considerations highlight the importance of collaboration with actual industries to provide real-world experiences.
- Technical feasibility acknowledges the necessity of a virtual platform and emphasizes the evaluation of the institution's technical resources.

7.1.3 Questionnaires

Information gathering is essential to project management decision-making success. There are numerous ways to collect data from different types of people. Project managers frequently employ observation, focus groups, aided seminars, and benchmarking as strategies. **(knowledge, 2016)**

One of the best ways to collect information and ask consumers and other stakeholders questions is through the usage of questionnaires. Short questions or multiple-choice questions (MCQs) will be posed to the user. Thus, the following inquiries are offered:

Identification of Problems Questions			
Name		Age	
General User	Alumni	Opportunities	
Question-one	How frequently do you currently engage with the Alumbridge platform?		
Answer			

Question-two	Are there specific features or aspects of the platform that encourage or discourage your engagement?
Answer	
Question-three	Have you participated in networking events or workshops facilitated by the platform?
Answer	
Question-four	What has been your experience with the effectiveness of these events in fostering connections or providing valuable insights?
Answer	

Identification of Problems Questions			
Name		Age	
General User	Current Student	Communication	
Question-one	How aware are you of the Alumbridge platform, and have you actively engaged with it?		
Answer			
Question-two	What features of the platform, if any, do you find most useful or lacking in terms of engagement?		
Answer			
Question-three	Have you sought career guidance or advice from alumni through the platform?		
Answer			

Identification of Problems Questions			
Name		Age	
General User	Admin	Managing System	
Question-one	How would you assess the overall engagement level of alumni and current students on the platform?		
Answer			
Question-two	Are there specific features or areas of the platform that see higher or lower engagement?		
Answer			
Question-three	What challenges have you faced in managing and updating the alumni database?		
Answer			
Question-four	How seamless is the process of planning and executing networking events and workshops?		
Answer			

7.2 Rich Picture

A top-down or bird's-eye perspective of user activity on a system is called a rich picture. It also illustrates the conflicts between difficulties in communicating and corporate practices. Here is a close-up photo of the Alumbridge: -

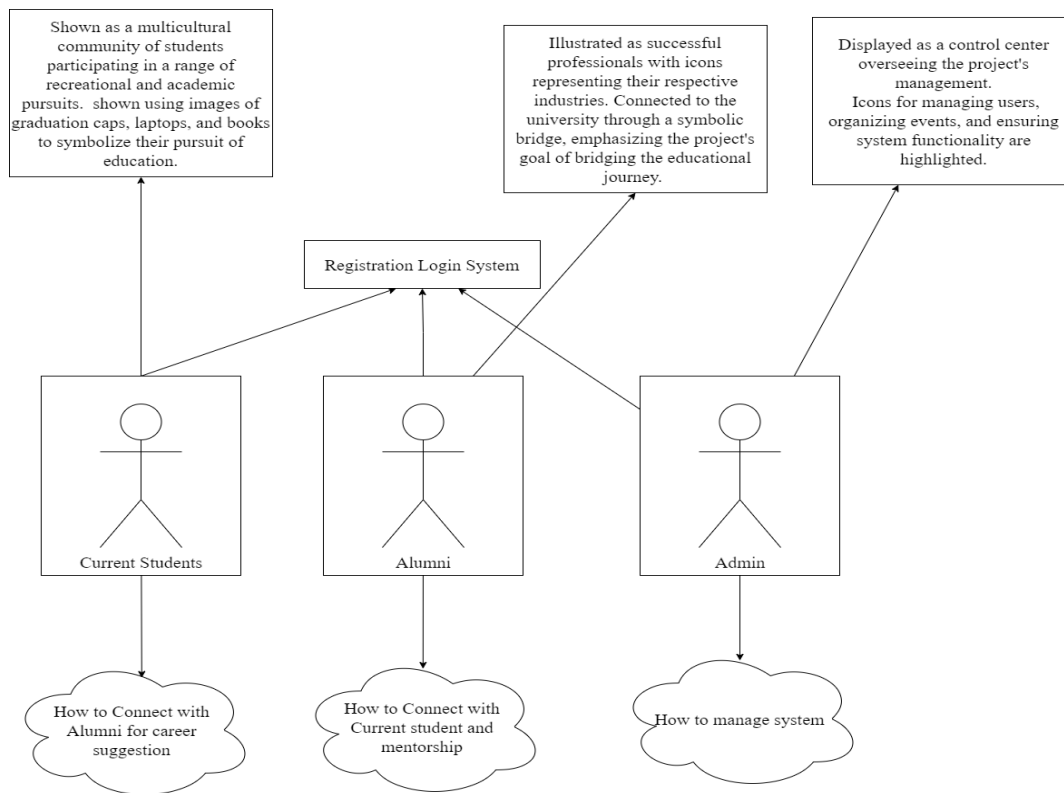


Figure 11: Rich Picture of the Alumbridge

Alumbridge The legends of rich picture

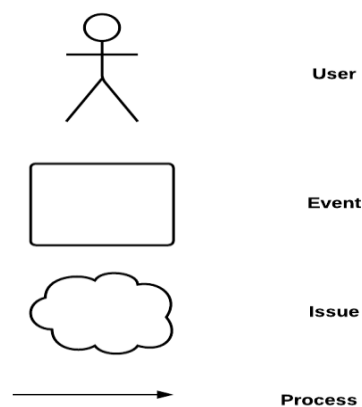


Figure 12: Alumbridge Legends of the rich picture

Key actors

In the Alumbridge system, there are five different sorts of actors.

- Alumni
- Current Students
- Admin

The picture shows that admin can monitor and manage every process and manage conflicts.

7.3 Specific Problem Area Identification

Using information gathering techniques, a range of problems are found in the problem area identification section. A detailed picture shows the Alumbridge's entire system of operations. Through analysis, I was able to pinpoint a few particular problems, such as:

- New students may lack exposure to real-world work cultures and industries.
- The institution may lack the necessary technical resources and competencies to implement the virtual platform successfully.
- The project may face budget constraints, affecting the implementation of essential components like the mentorship program, virtual platform, and networking events.
- There may be challenges in maximizing alumni participation, which is crucial for the success of the project.
- Networking events and workshops may not be well-planned or may not align with the needs of students and alumni.
- The absence of adequate career development resources may hinder students' and alumni's professional growth.
- The management of the admin panel could pose challenges, affecting the overall efficiency of the system.
- Users may face challenges in engaging with the platform, including issues with the dashboard, messaging, and other features.

7.4 Possible Solutions

The following are the recommended remedies to the highlighted issues:

- Collaborate with actual industries to provide students with access to work culture experiences.

- Evaluate and upgrade the institution's technical infrastructure to support mentoring, networking, and communication.
- Conduct a thorough financial feasibility analysis and explore alternative funding sources or partnerships.
- Perform a comprehensive market research analysis to understand alumni preferences and needs, ensuring that the project meets their expectations.

7.5 Overall Requirement List

The following is the final list of requirements:

Functional Requirement

- Alumni and current students should have secure login functionality to access the system.
- Users should be able to create and manage their profiles with details such as education, professional background, and interests.
- A personalized dashboard for each user, displaying relevant information, updates, and notifications.
- An integrated messaging feature allowing communication between alumni and students.
- A timeline feature where users can showcase their educational and professional journey.
- A space for users to create and share blog posts related to their experiences and insights.
- Functionality to organize, promote, and participate in networking events, fostering connections between students and alumni.
- Capability to match mentors with mentees based on their profiles, interests, and career goals.
- A job board or section displaying relevant job opportunities for students and graduates.

Non-functional Requirements

- The system should be scalable to accommodate a growing number of users, both alumni and students.

- Robust security measures to protect user data and ensure the confidentiality of personal and professional information.
- The platform should have optimal performance to provide a seamless user experience, even during peak usage times.
- Intuitive user interfaces and designs to ensure ease of use for both alumni and students.
- The system should be reliable and available, minimizing downtime and disruptions.
- Compatibility with various devices and browsers to ensure accessibility for a diverse user base.

7.6 Technology to be Implemented

There are a lot of technological choices available to put the suggested system into practice. Selecting the appropriate technology is critical to success. Additional choices include:

Client-Server Application Technology

A computer network connects clients and servers that function independently under the idea of client-server computing. Any instance of a client can contact an online server with a request and watch for a response. **(ApacheBooster, 2020)**

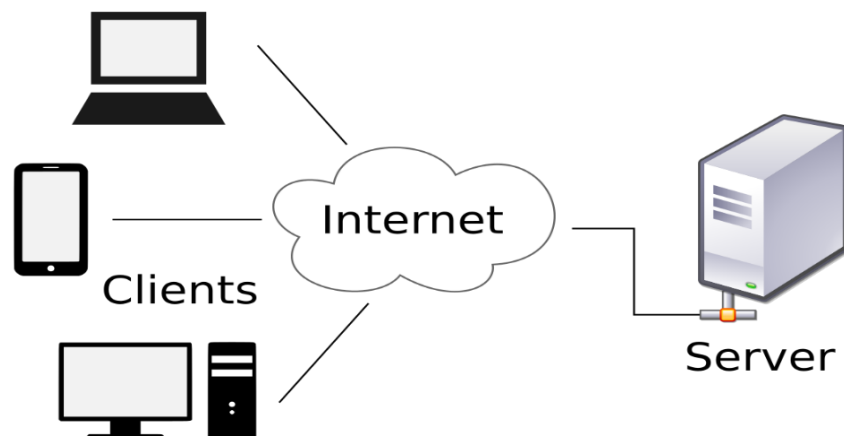


Figure 13: Client Server Application Model (Wikimedia.org, 2019)

The following are the basic features of a client-server application:

- The application must be physically installed.
- Updates must be made to the client and server's programs.
- Users must pay for the programmed, which is quite costly.
- It is not portable and is not constantly available.

Web Application

Web applications, or web apps, are application programs that run on a web server as opposed to computer-based software programs that run locally on the operating system (OS) of the device. To access web applications, the user must be using an internet-connected web browser. **(contributors, 2021)**



Figure 14: Web Application

Main features of a web-based application are-

- Installation is not required.
- The cloud can be accessed online with a web browser.

- It's not too pricey.
- Obtainable at any time and from any location.

7.7 Recommendation and Justification

The proposed Alumbridge Alumni Management System needs to be reachable from every location in the nation at all times. The system needs to be accessible from any internet-enabled device, including tablets, laptops, desktop computers, and smartphones. It should also have the capacity to manage lots of users at once. This is not possible with client-server application technology; hence a web application is the best option for the proposed system.

Chapter 8 – Exploration

8.1 Alumni Sector Old System Use Case

The flow of a system's business processes is depicted in a use case diagram. As an example of an earlier system, I'll utilize the .

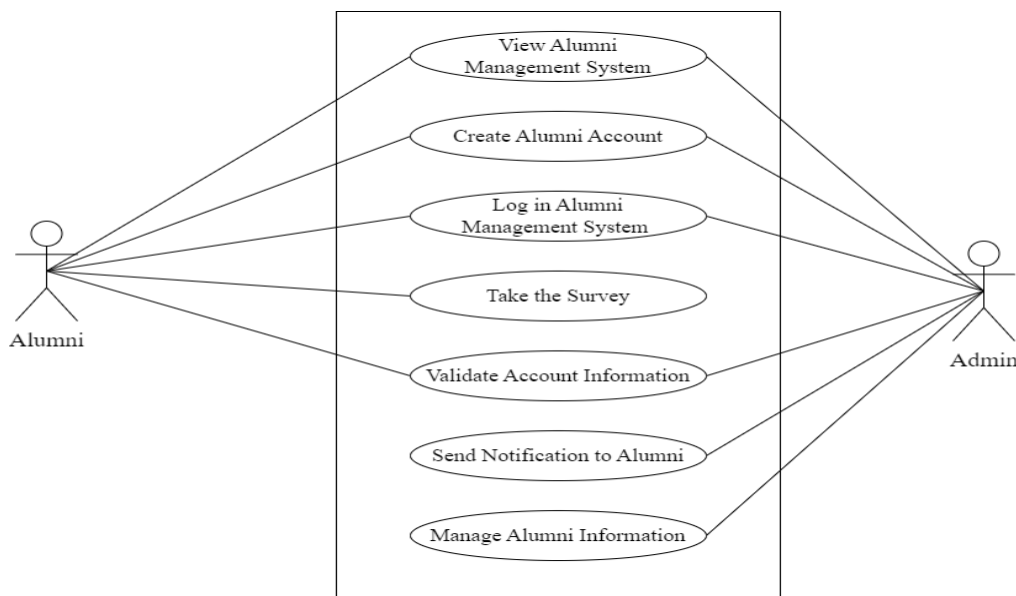


Figure 15: Use Case Diagram of Duet Alumni Management System

8.2 Activity Diagram

Alumni Activity Diagram

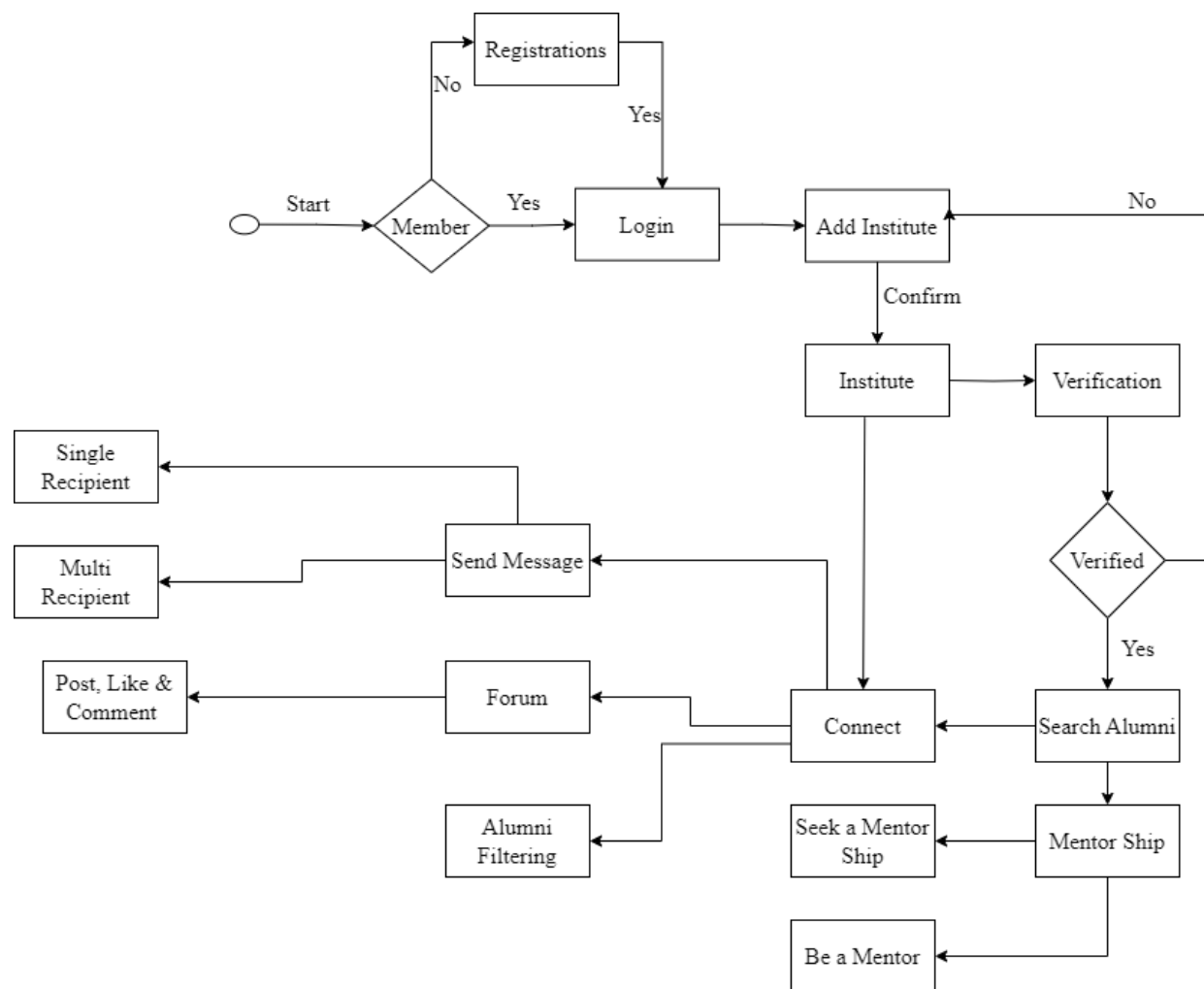


Figure 16: Alumni Activity Diagram of Alumbridge

8.3 Full System Use Case

The following is a use case diagram for the proposed Alumbridge:

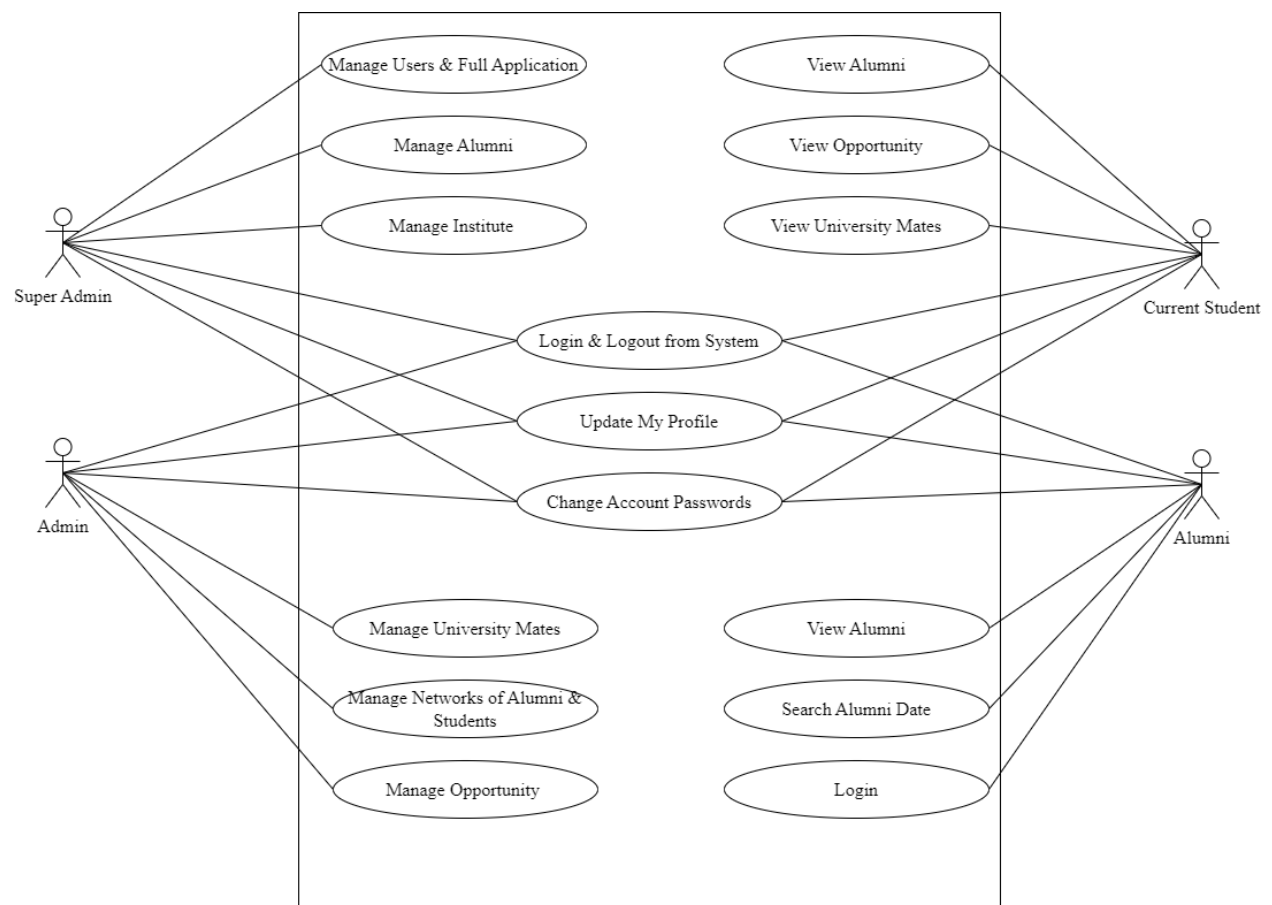


Figure 17: Use Case of the Propose Alumbridge System

8.4 Full System Activity Diagram

There are a variety of users in the planned Alumbridge system, each with their unique workflow. The activity diagrams for various work processes are shown below.

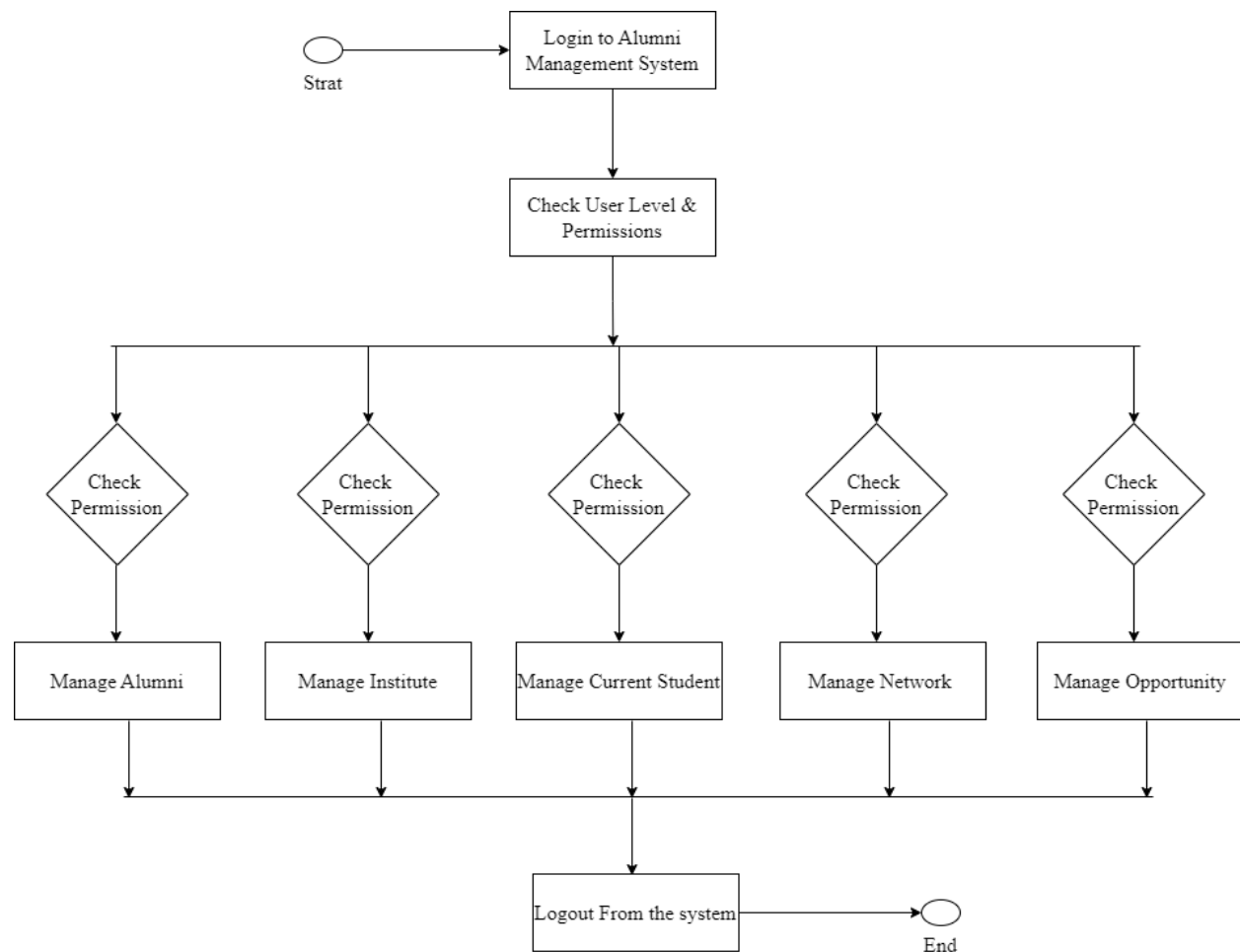


Figure 18:Admin Activity Diagram Alumbridge System

8.5 Alumni Admin Activity Diagram

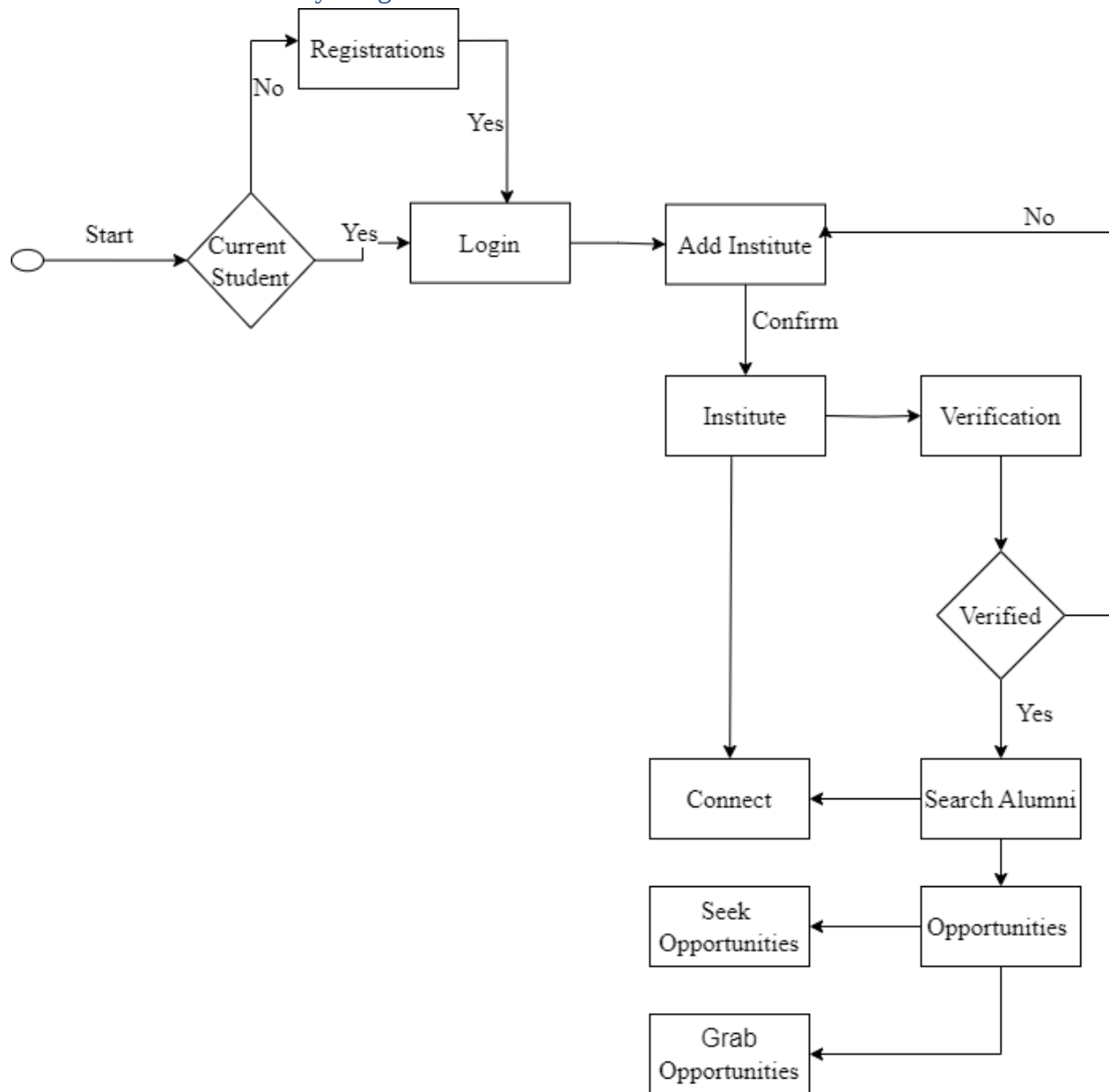


Figure 19: Current Student Activity Diagram Alumni Bridge System

8.5 Catalogue of Requirements

A requirement catalogue is a list that contains all of the identified needs for a project in the Alumni management system. Now I'll enter the identified needs into the requirement catalog using the usual format.

Admin Manage System

Source	Sing Off	Priority	Requirement
Admin	All Users	Must Have	M-01
Functional Requirement Admin requirement catalogue: Admin can manage all user using Alumbridge system.			
Non-functional requirement			
Description	Target Value	Acceptance Value	Comment
User (per/day)	12000 (per/day.)	9500	

Table 14: Requirement Catalogue for Manage system

Registration and login requirement catalogue

Source	Sing Off	Priority	Requirement
Admin/Alumni/Students	All Users	Must Have	M-02
Functional Requirement Registration and login requirement catalogue: Users of all kinds of the system are required to register before they may log in. Nobody is able to carry out an activity without the proper authentication.			
Non-functional requirement			
Description	Target Value	Acceptance Value	Comment
Registration and login requirement (Per/day)	10000 (per/day.)	7500	

Table 15: Requirement Catalogue for User Registration & Login

Alumni Mentorship requirement catalogue

Source	Sing Off	Priority	Requirement
Alumni	Mentorship	Must Have	M-03
Functional Requirement Mentorship requirement catalogue: All alumni can mentoring current student using Alumbridge System			
Non-functional requirement			
Description	Target Value	Acceptance Value	Comment
Mentorship (per/day)	5000 (per/day.)	3500	

Table 16:Requirement Catalogue for Mentorship

Current Student engage with alumni requirement catalogue

Source	Sing Off	Priority	Requirement
Student engage with Alumni	Current Students	Must Have	M-04
Functional Requirement Current students engage with alumni requirement catalogue: All current student can engage with their alumni and can attached with them			
Non-functional requirement			
Description	Target Value	Acceptance Value	Comment
Student Engage (per/day)	3000 (per/day.)	2000	

Table 17:Requirement Catalogue for Student Engage

Job Opportunity requirement catalogue

Source	Sing Off	Priority	Requirement
Job Opportunity	All Users	Must Have	M-05
Functional Requirement Job Opportunity requirement catalogue: Students & Alumni can find job opportunity			
Non-functional requirement			
Description	Target Value	Acceptance Value	Comment
Job Opportunity (per day)	1000 (per day.)	500	

Table 18: Requirement Catalogue for Job Opportunity

8.6 Prioritized Requirements List (PRL)

To create a priority list of recognized requirements, I used the MoSCoW prioritizing approach. The Alumni Management System's priority requirements are shown below.

Must Have requirements-

SL	Requirement	Priority
1.	Enable users to access the platform, ensuring participation from both alumni and current students.	Must Have
2.	Facilitate opportunities for students and alumni to connect, fostering knowledge sharing and networking.	Must Have

3.	Provide essential resources for career growth, including guidance, information, and tools.	Must Have
4.	Provide essential resources for career growth, including guidance, information, and tools.	Must Have
5.	Enable direct communication between alumni and students for mentorship and networking.	Must Have
6.	Allow users to showcase their educational and professional journey over time.	Must Have
7.	Provide a platform for sharing experiences, insights, and success stories.	Must Have
8.	Organize sessions where alumni share insights, answer questions, and engage with students.	Must Have
9.	Feature a section dedicated to job postings and opportunities.	Must Have

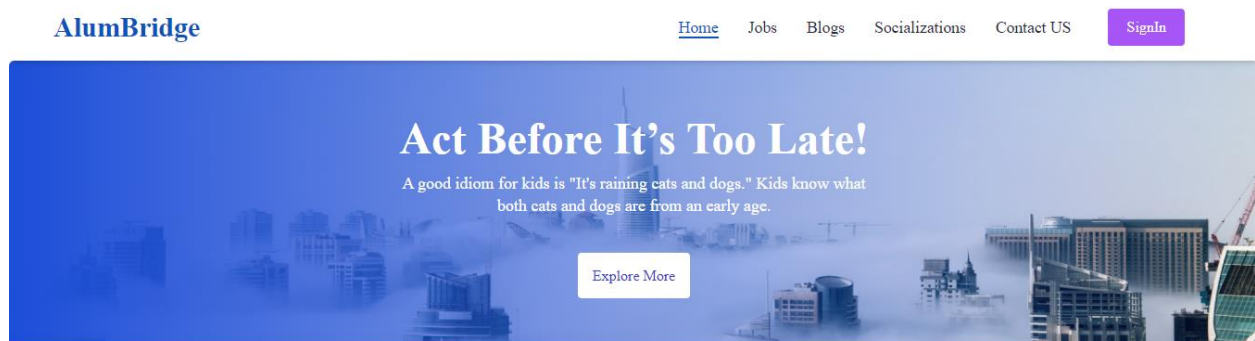
Should Have Requirements-

SL	Requirement	Priority
1.	Implement incentives to encourage active participation and engagement from alumni.	Should Have

Could Have Requirements-

SL	Requirement	Priority
1.	Develop an administrative panel to oversee and manage the platform.	Could Have
2.	Consider additional features to enhance the virtual interaction experience.	Could Have

8.7 Home Page Alumbridge



Our Popular Blogs



Figure 20: Alumbridge Home

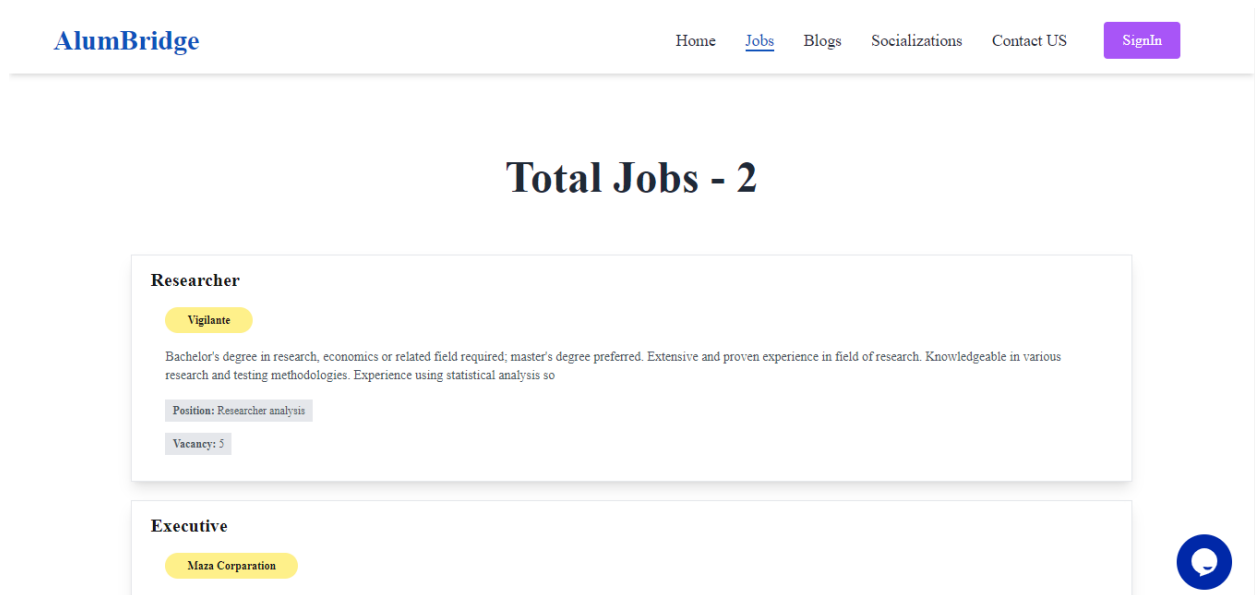


Figure 21: Job in Alumbridge

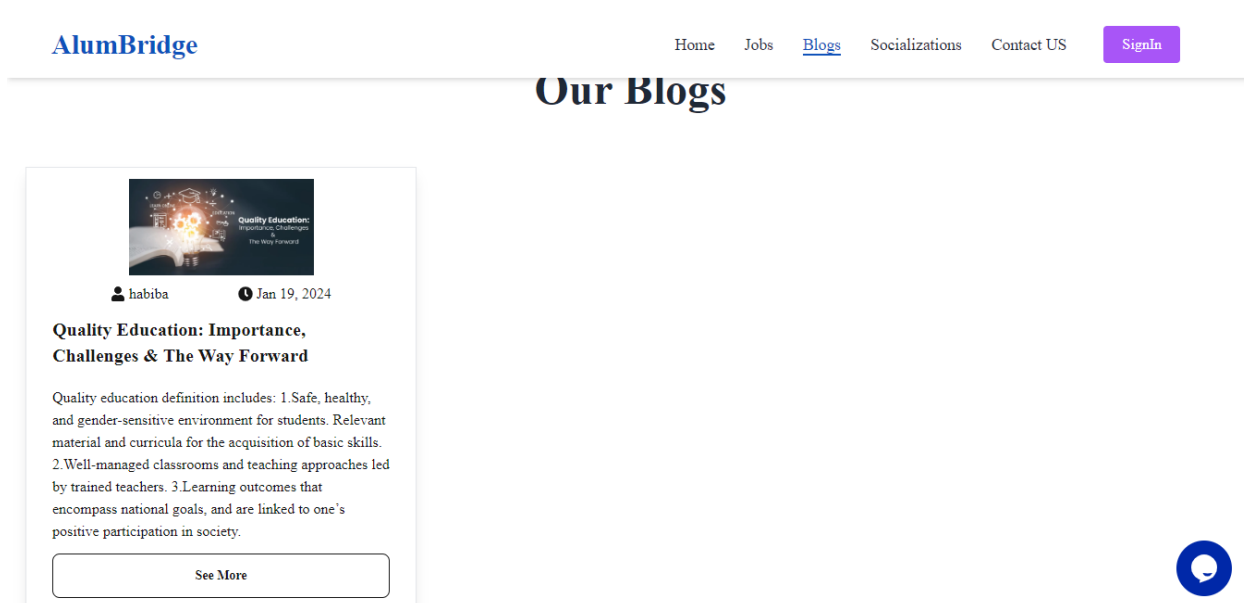


Figure 22:Blog Prototype

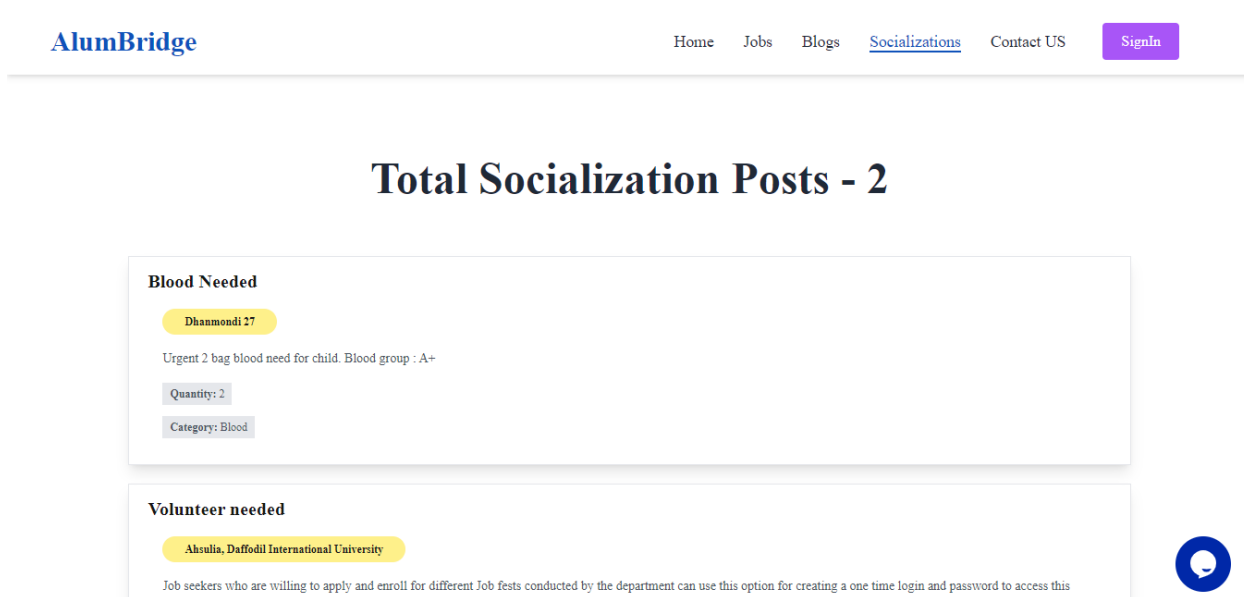


Figure 23:Socializaation Posts Prototype

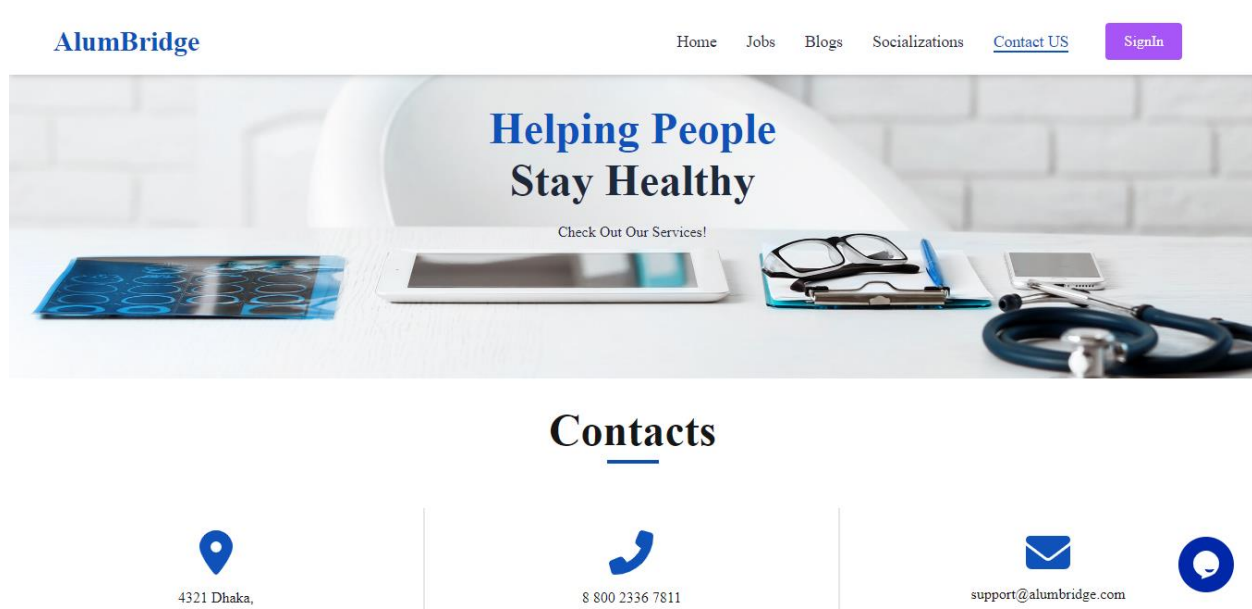


Figure 24:Contact Us Prototype

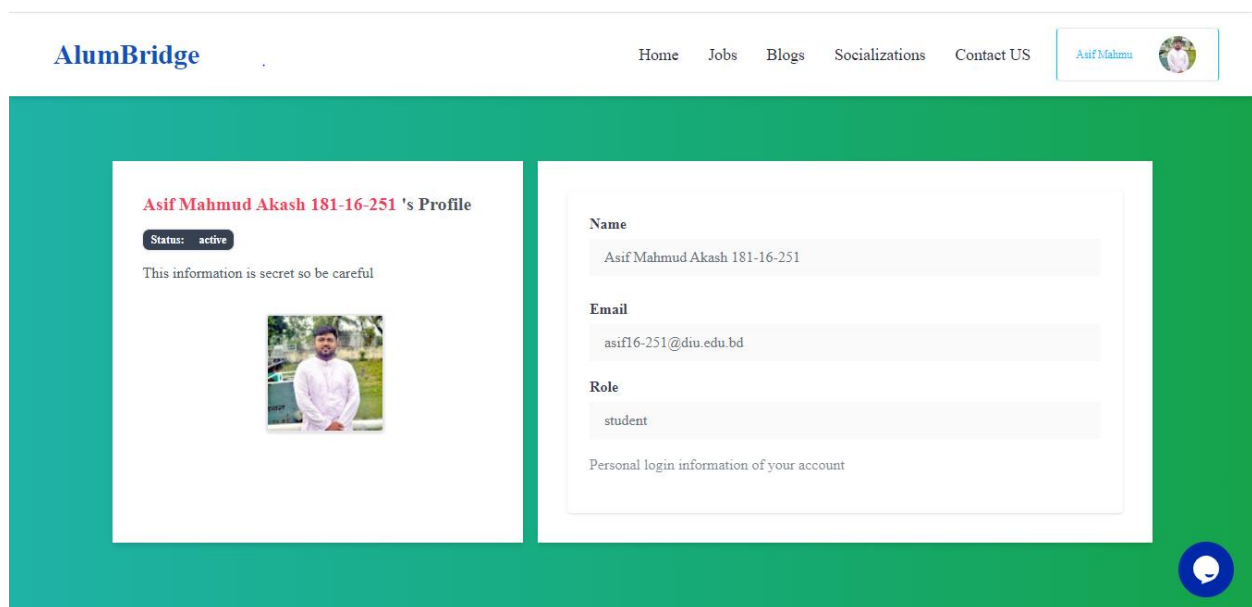


Figure 25:Profile Prototype

Chapter 9 – Engineering

9.1 Approach New System Modules:

My project, the new Alumbridge system, consists of multiple parts. After that, a description of some of the essential elements and the process by which my project Alumbridge operates can be found below.

User Authentication Module

Serial No.	Action of User	Serial No.	Action of System
1.	Users will enter their credentials to access the system.	1.	Verifies user credentials and grants access based on role (alumni or student).

Table 19:Module for logging in

Admin Panel Management Module.

Serial No.	Action of Admin PAnel	Serial No.	Action of System
1.	Admins can manage system settings and configurations.	1.	Provides a user-friendly interface for administrators to oversee and control the system.

Table 20: Admin Panel Management Module

Networking Events and Workshops Module

Serial No.	Action of Networking Events & Workshops	Serial No.	Action of System
1.	Users can view, register, and participate in networking events and workshops.	1.	Manages event details, registrations, and communication for successful event coordination.

Table 21: Networking Events and Workshops Module

Alumni Engagement Incentives Module

Serial No.	Action of Alumni Engagement Incentives Module	Serial No.	Action of System
1.	Alumni can participate in the system actively and may receive incentives.	1.	Tracks alumni engagement and rewards, encouraging sustained participation.

Table 22: Alumni Engagement Incentives Module.

Career Development Resources Module

Serial No.	Career Development Resources Module	Serial No.	Action of System
1.	Users can access resources such as articles, videos, and guides for career development.	1.	Organizes and presents career-related content, providing valuable resources for users.

Table 23: Career Development Resources Module

9.2 Use Case Diagram of the Alumbridge

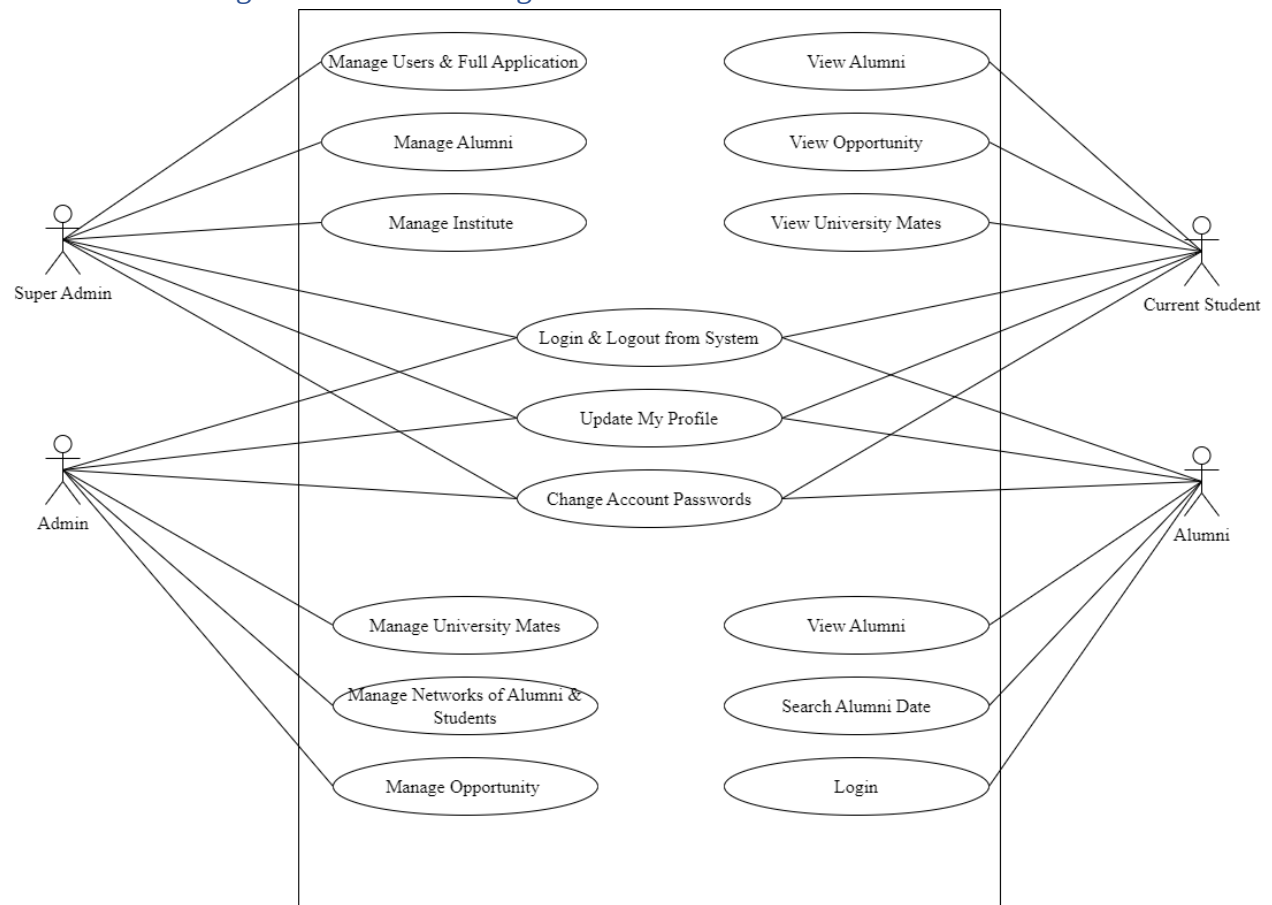


Figure 26:Alumni Bridge Use Case

9.3 The Alumbridge's Class Diagram

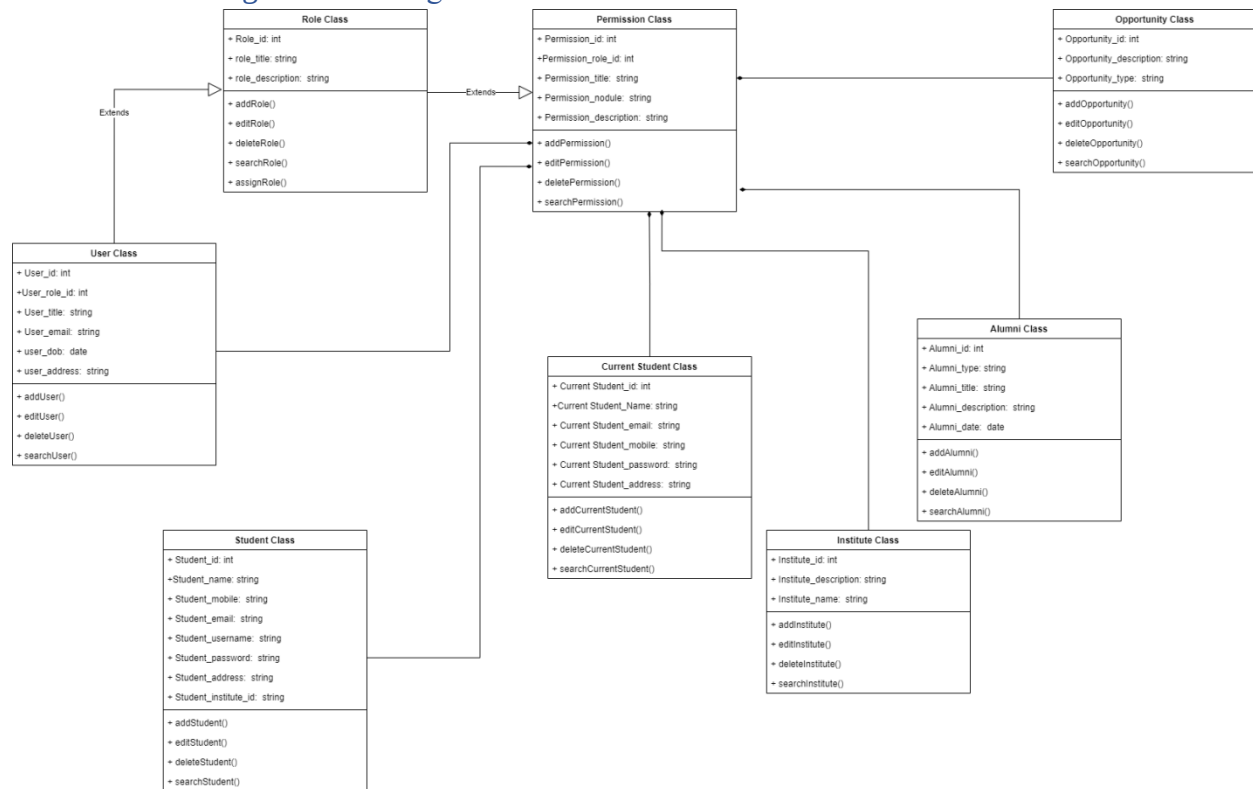


Figure 27:Alumbridge Class Diagram

9.4 Entity Relationship Diagram

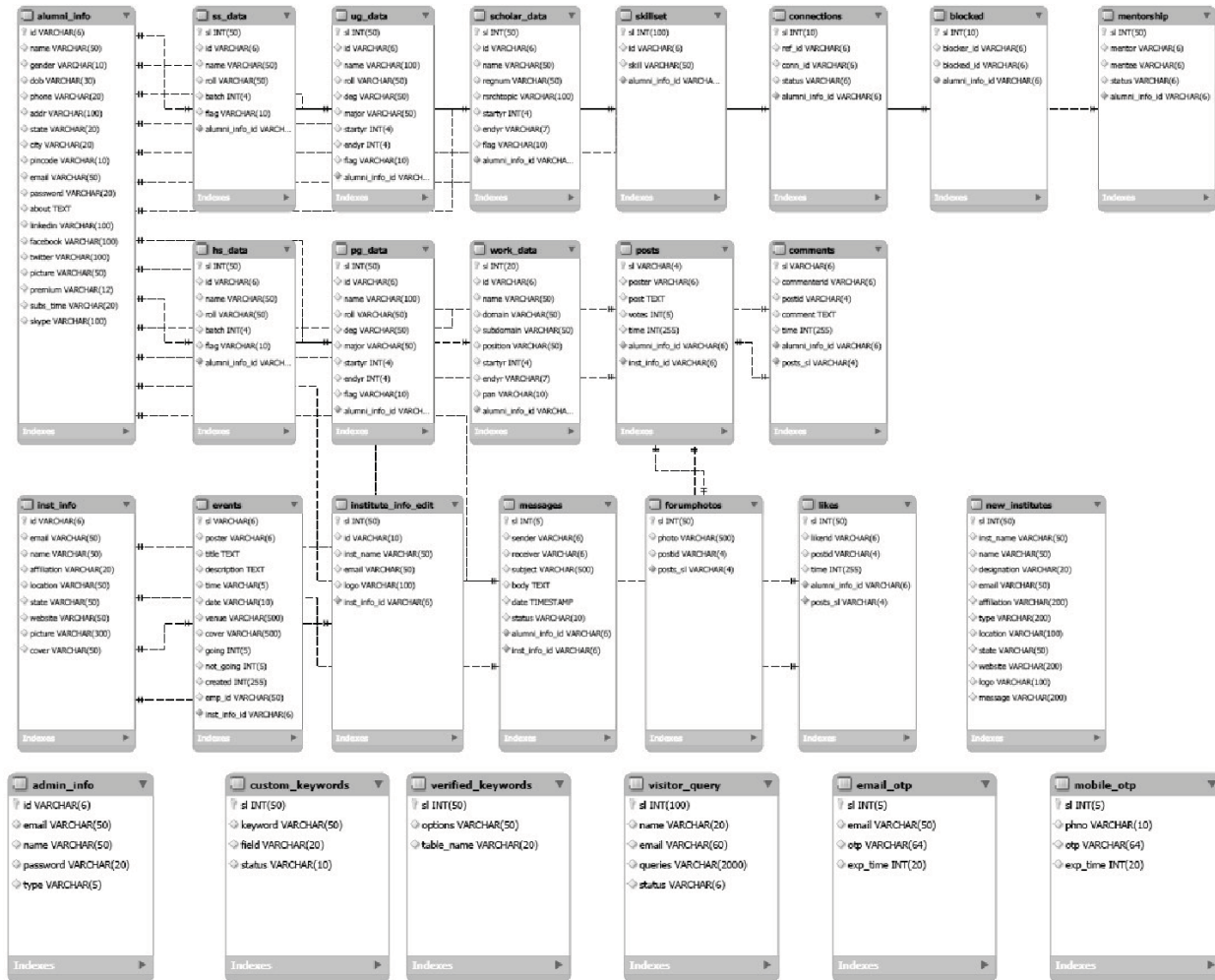


Figure 28: Alumbridge ERD

9.5 Alumbridge Sequence Diagram

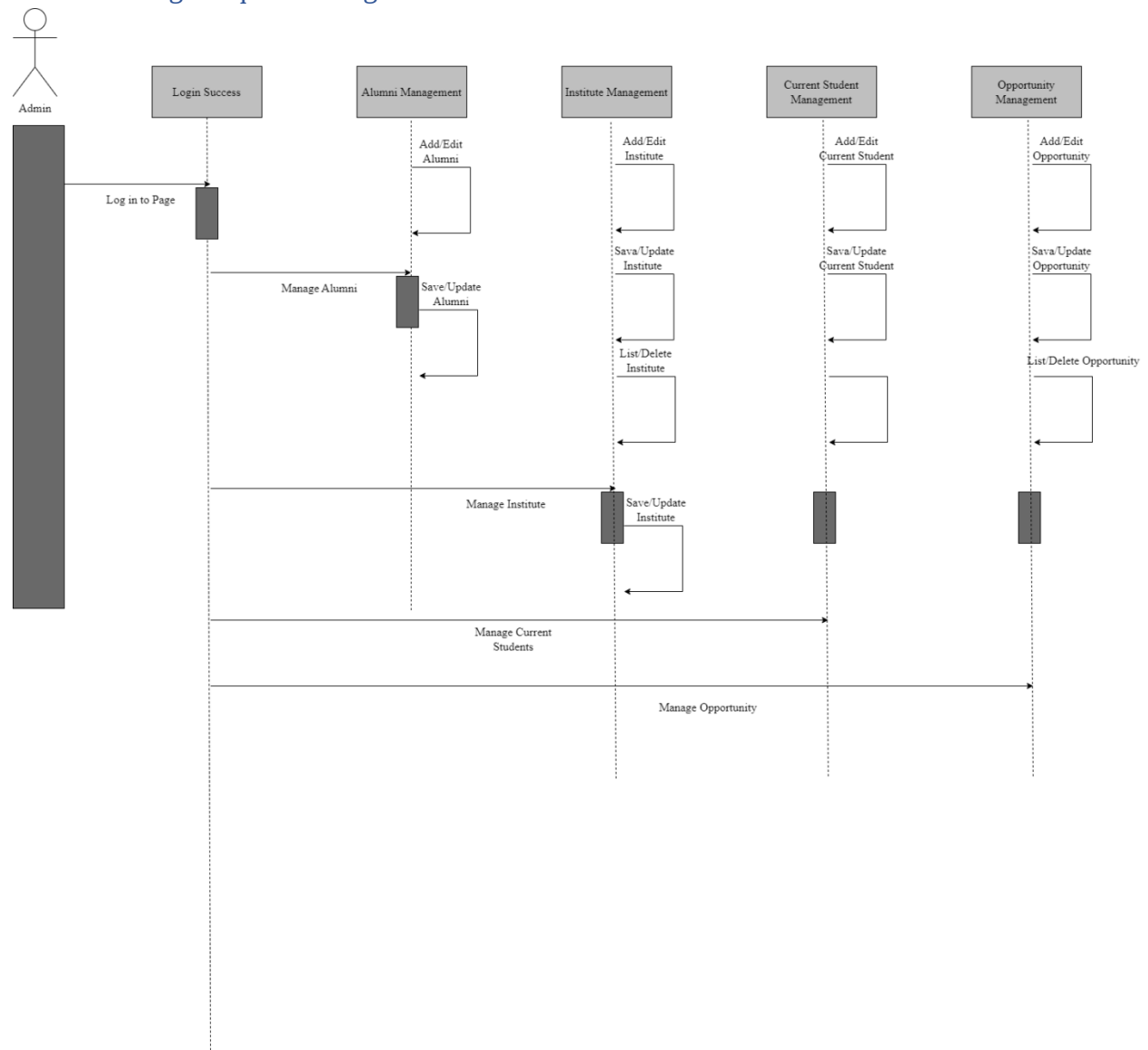


Figure 29:Alumbridge Sequence Diagram

9.6 The Alumbridge component diagram

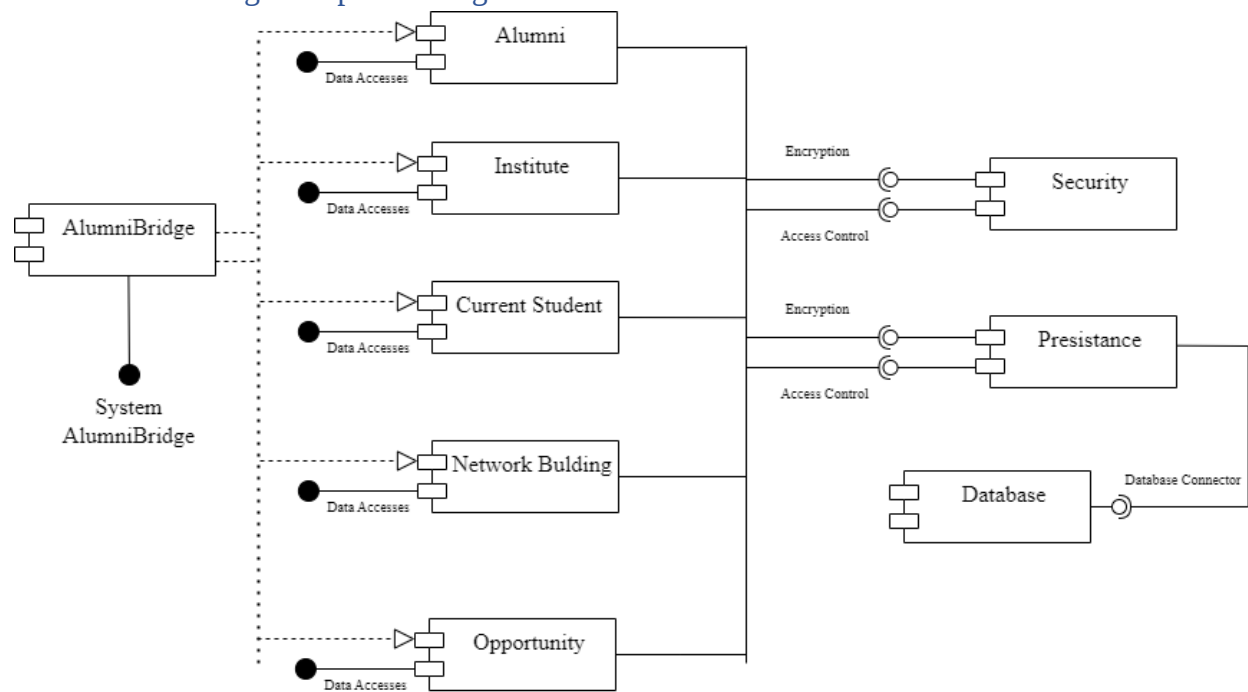


Figure 30:Component Diagram of Alumbridge

9.7 Deployment Diagram of Alumbridge

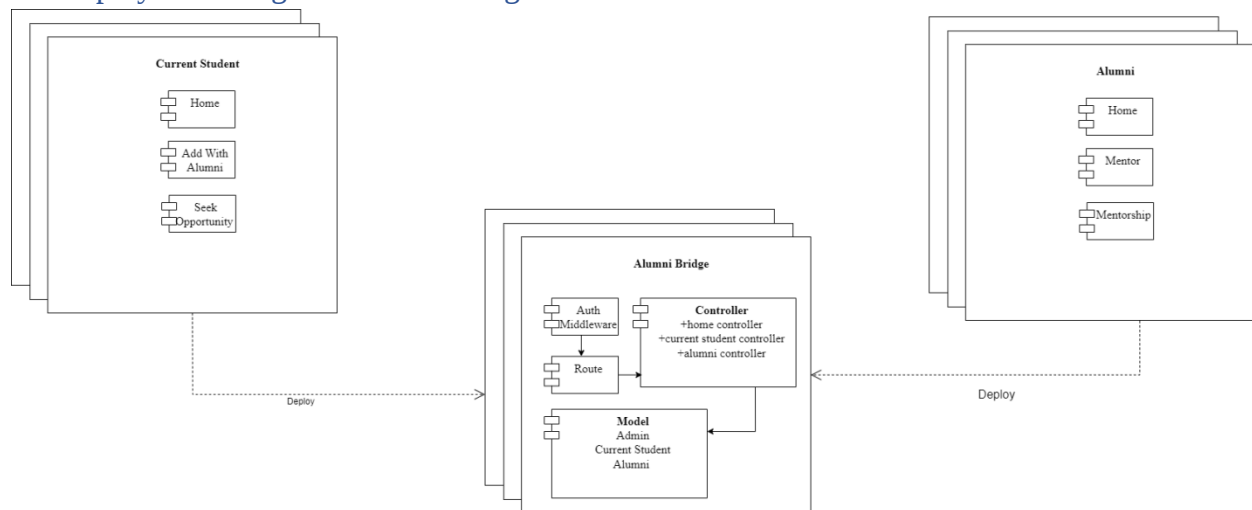


Figure 31:Deployment Diagram of Alumbridge

9.8 System Interface Design

Home page Interface Design

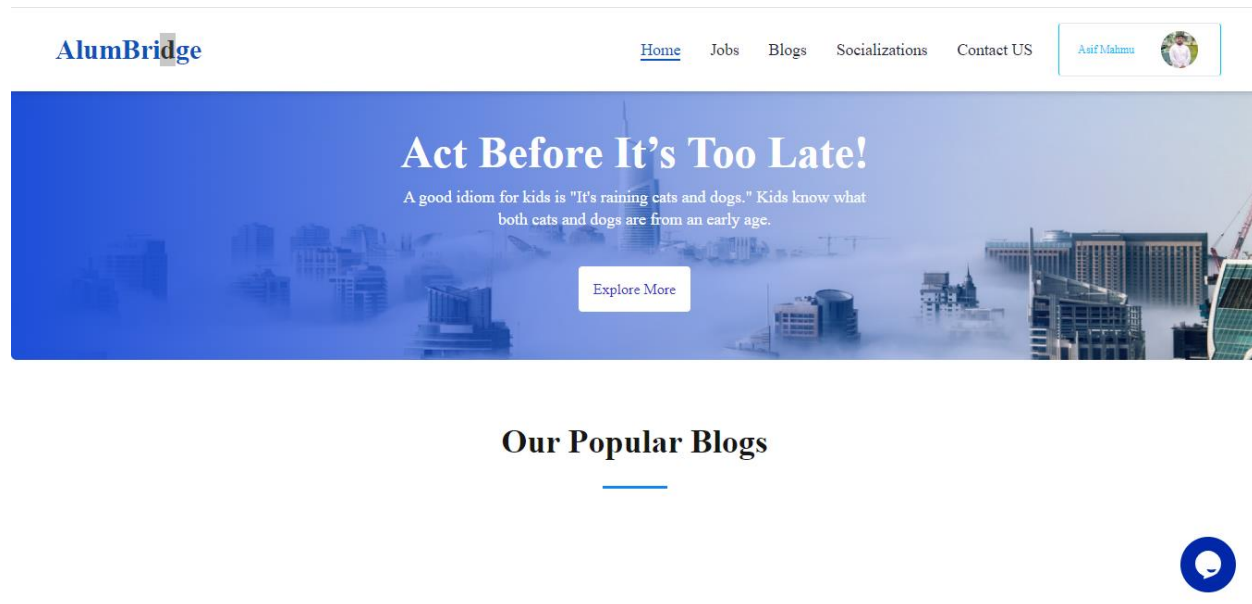


Figure 32:Interface design home page

Jobs Page interface

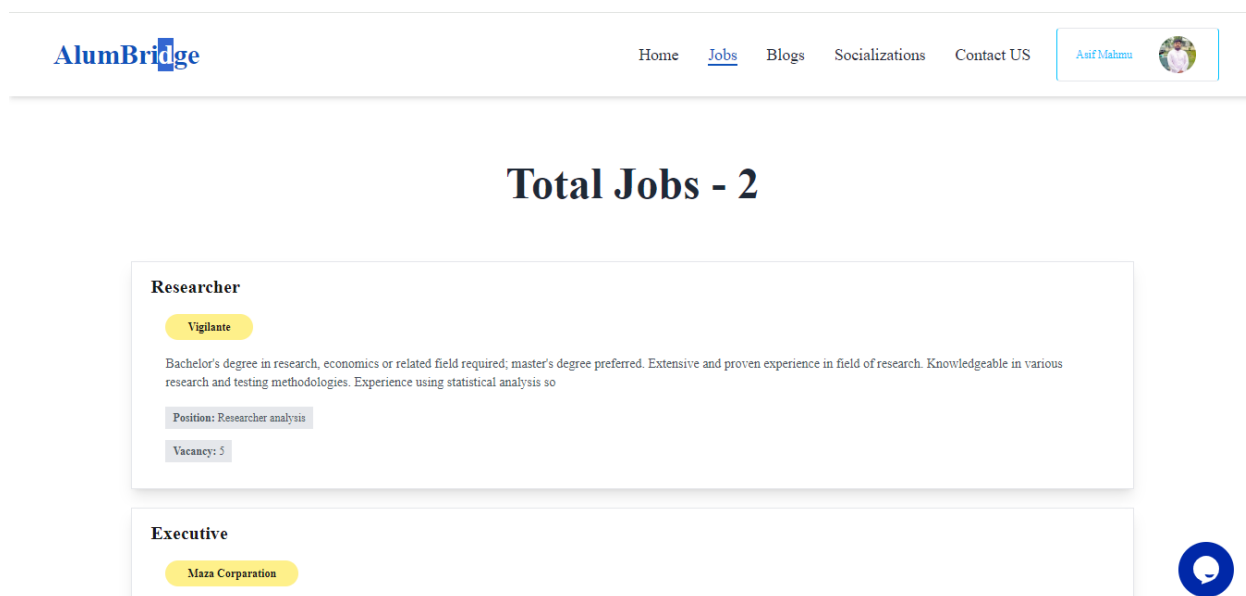


Figure 33: Job Page interface

Blog Page interface

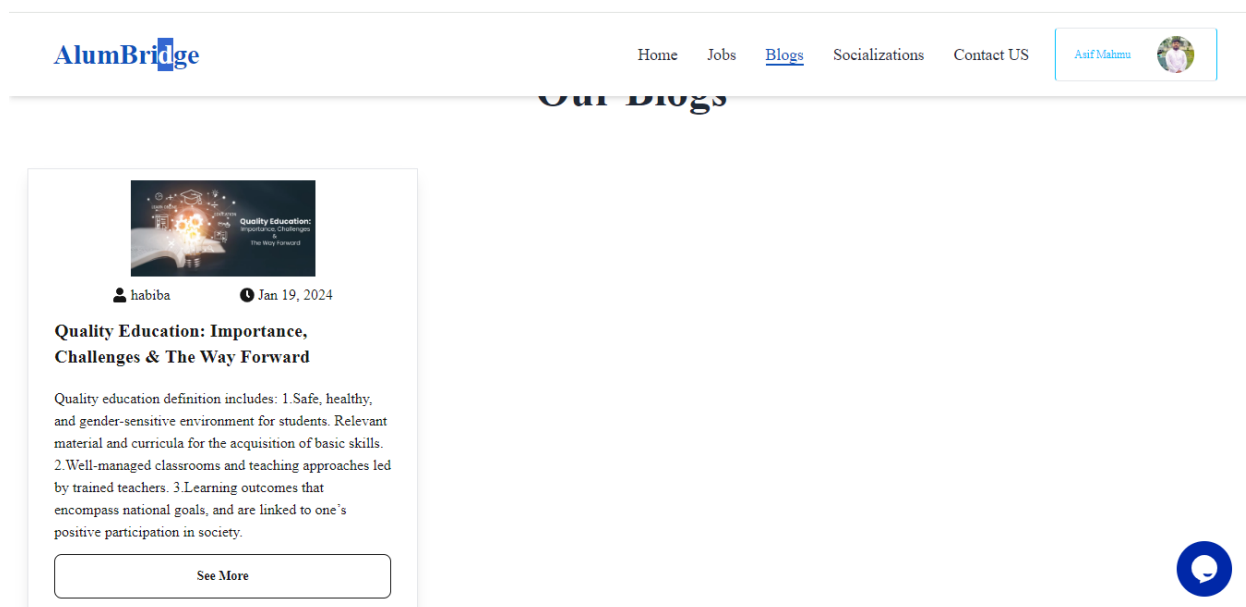


Figure 34: Blogs Page interface

Socializations interface

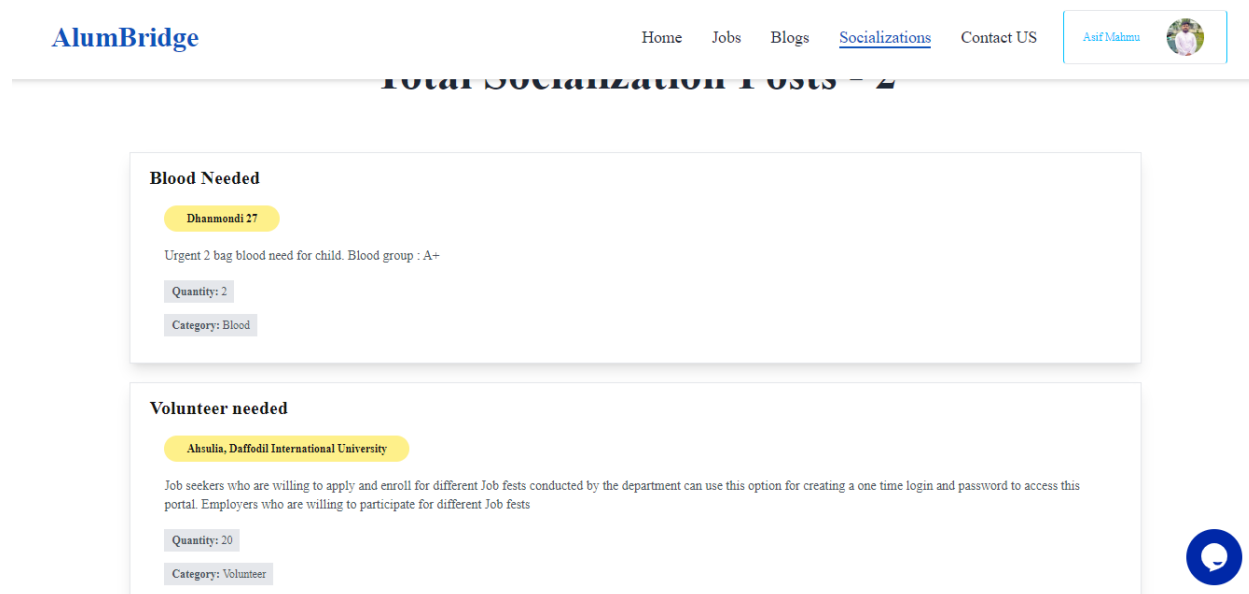


Figure 35: Socialization Posts interface

Contact Us interface

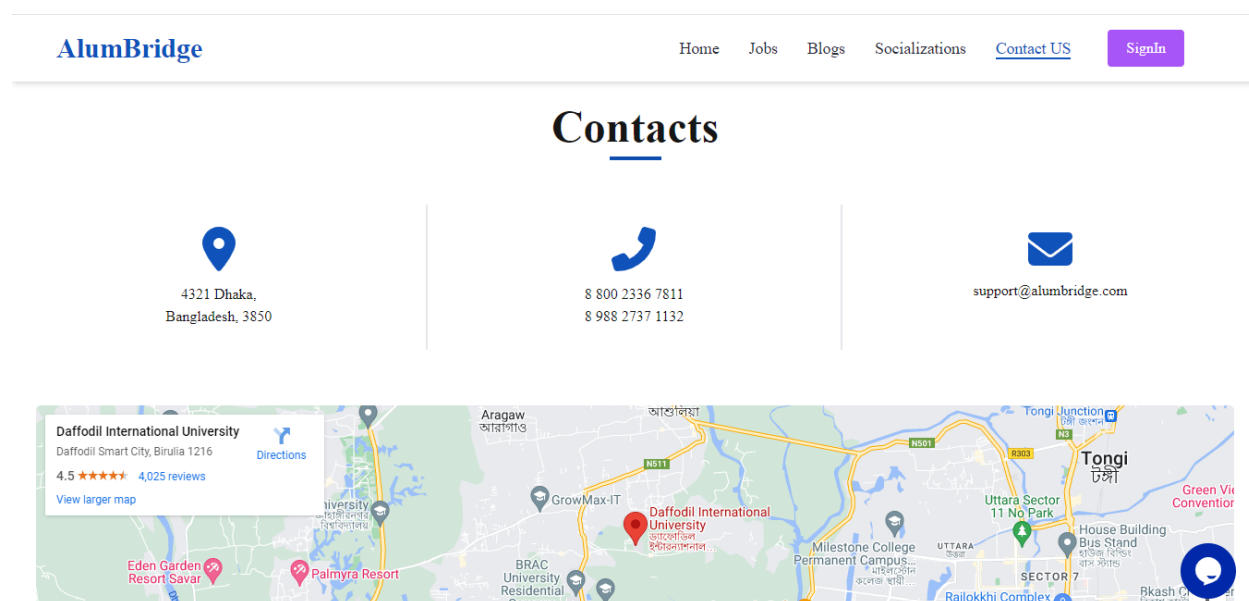


Figure 36: Contact Us Page interface

Footer Page Interface

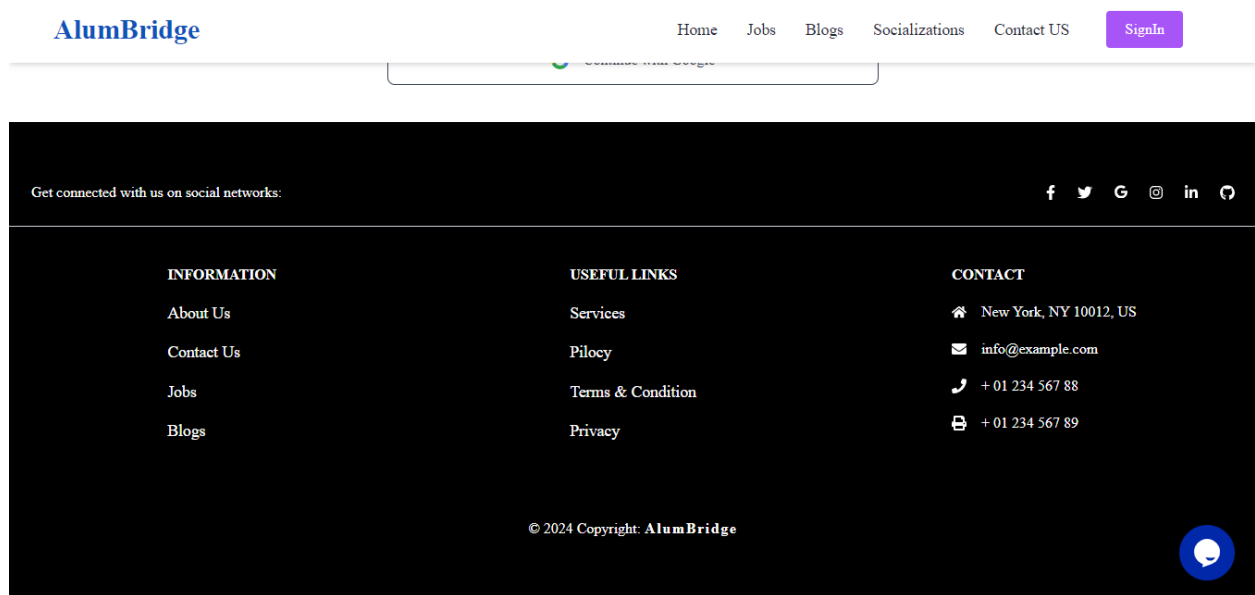


Figure 37:Footer Interface

Live Chats Page Interface

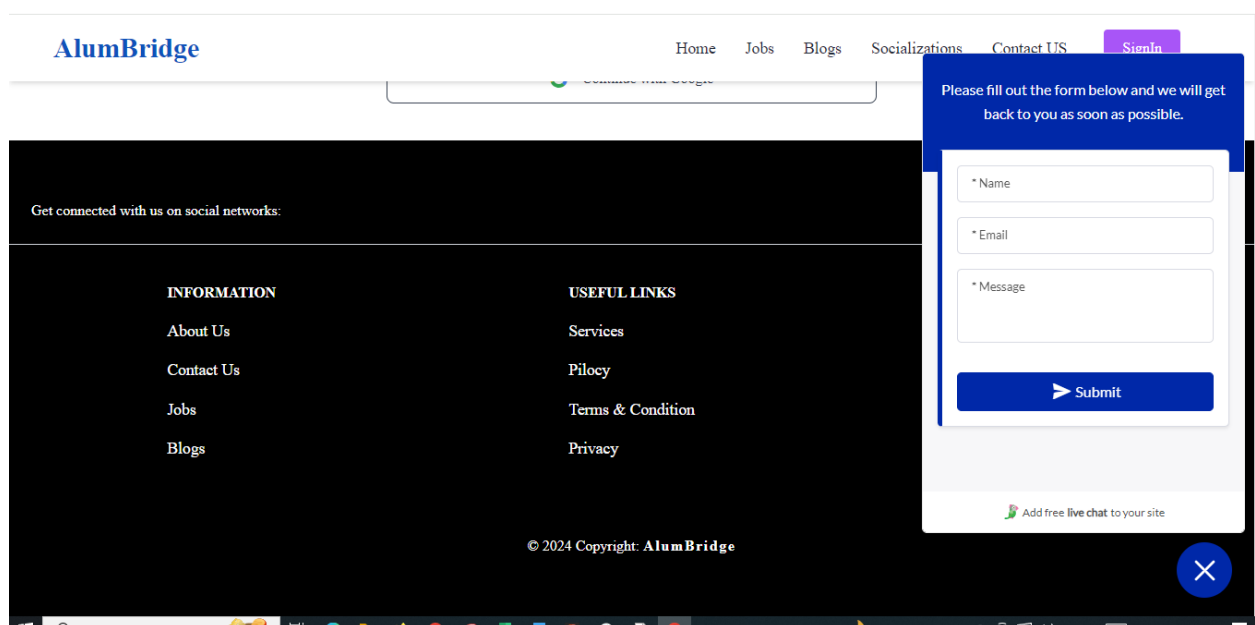
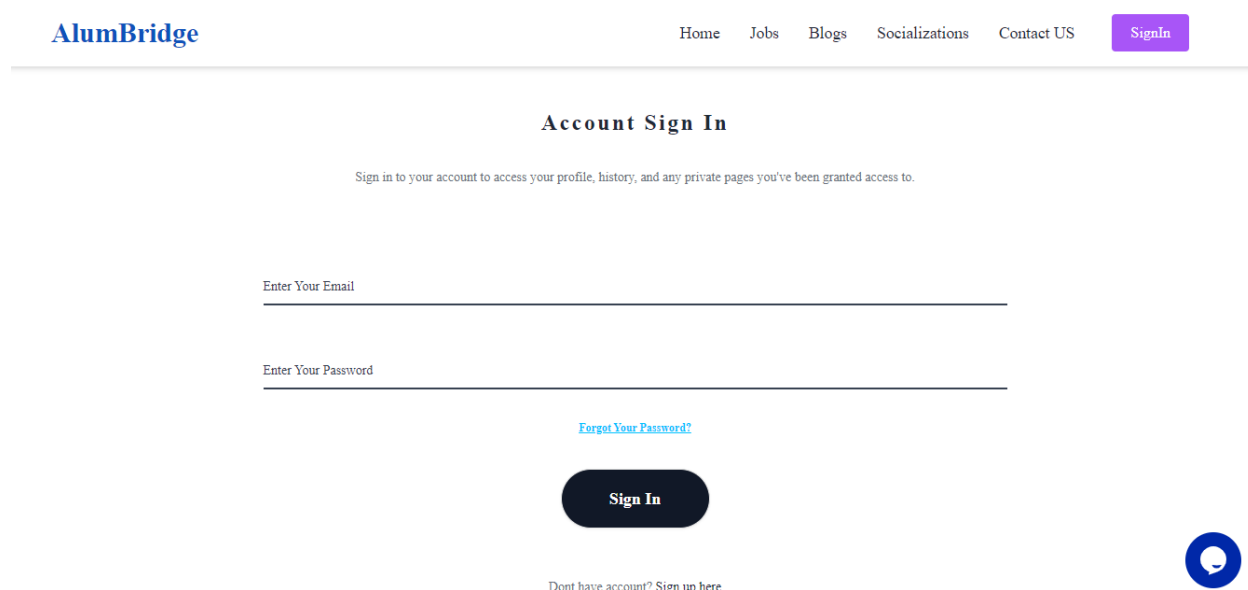


Figure 38:Live Chats Page Interface

Signin Page Interface



The image shows the Signin Page Interface of AlumBridge. At the top, there is a navigation bar with the AlumBridge logo on the left and links for Home, Jobs, Blogs, Socializations, Contact US, and a SignIn button on the right. Below the navigation bar, the page title "Account Sign In" is centered. Underneath the title, a message states: "Sign in to your account to access your profile, history, and any private pages you've been granted access to." There are two input fields: "Enter Your Email" and "Enter Your Password". Below the password field is a link for "Forgot Your Password?". A large "Sign In" button is centered below the input fields. At the bottom, there is a link for "Dont have account? Sign up here" and a circular profile picture placeholder on the right.

Figure 39:Signin Page Interface

Chapter 10 – Deployment

10.1 Core Module Coding Sample:

For the front-end development of the Alumbridge, I used HTML5, CSS, and JavaScript, Nodejs. And for back-end development, I utilized MongoDB as a database management. Here are some of the most crucial portion code examples.

```

JS verifyAdmin.js X
v1 > Middlewares > JS verifyAdmin.js > ...
1  const jwt = require("jsonwebtoken");
2  require('dotenv').config();
3
4  exports.verifyAdmin = async (req, res, next) => {
5    const requester = req.decoded.email;
6    const requesterAccount = await usersCollection.findOne({ email: requester });
7    if (requesterAccount.role === 'admin') {
8      next();
9    }
10   else {
11     res.status(403).send({ message: 'forbidden' });
12   }
13 }
14

```

Figure 40:Admin Verify

```

JS users.controller.js X
v1 > Controllers > JS users.controller.js > ...
1  const express = require("express");
2  const Users = require('../Models/users.model');
3  const jwt = require("jsonwebtoken");
4  require('dotenv').config();
5
6  // post user by email
7  exports.postAnUser = async (req, res) => {
8      try {
9          const email = req.params.email;
10         const user = req.body;
11         console.log(user);
12         const filter = { email: email };
13         const options = { upsert: true };
14         const updateDoc = {
15             $set: user
16         };
17         const result = await Users.updateOne(filter, updateDoc, options);
18         const token = jwt.sign({ email: email }, process.env.ACCESS_TOKEN_SECRET, { expiresIn: '1d' });
19         // res.send({ result, accessToken: token });
20         // console.log(token);
21         res.status(200).json({
22             status: "success",
23             message: "Successfully logged in",
24             data: {
25                 user: result,
26                 accessToken: token,
27             },
28         });
29     } catch (err) {
30         res.status(404).json(err);
31     }
}

```

Figure 41:Users Controller

```

JS jobApplications.route.js X
v1 > Routes > JS jobApplications.route.js > ...
1  const express = require("express");
2  const jobApplicationController = require("../Controllers/jobApplications.controller");
3  const verifyToken = require("../Middlewares/verifyToken");
4  const router = express.Router();
5
6  // add a job application
7  router.post("/", verifyToken, jobApplicationController.AddAJobApplication);
8
9  // get all job application
10 router.get("/", jobApplicationController.getAllJobApplications);
11
12 // get single job application
13 router.get("/:id", verifyToken, jobApplicationController.getSingleJobApplication);
14
15 // delete a job application
16 router.delete("/:id", verifyToken, jobApplicationController.deleteAJobApplication);
17
18 module.exports = router;
19

```

Figure 42: Job Applications

```

useJobs.jsx X
src > Hooks > useJobs.jsx > ...
1  import { useEffect, useState } from 'react';
2
3  const useJobs = () => {
4    const [jobs, setJobs] = useState([]);
5
6    useEffect(() => {
7      fetch(`https://alumbridge-server.vercel.app/api/v1/jobs`, {
8        method: "GET",
9        headers: {
10          authorization: `bearer ${localStorage.getItem("accessToken")}`,
11        }
12      })
13        .then(res => res.json())
14        .then(data => setJobs(data?.data?.result))
15    }, []);
16
17    // console.log(jobs);
18
19    return [jobs];
20  };
21
22  export default useJobs;

```

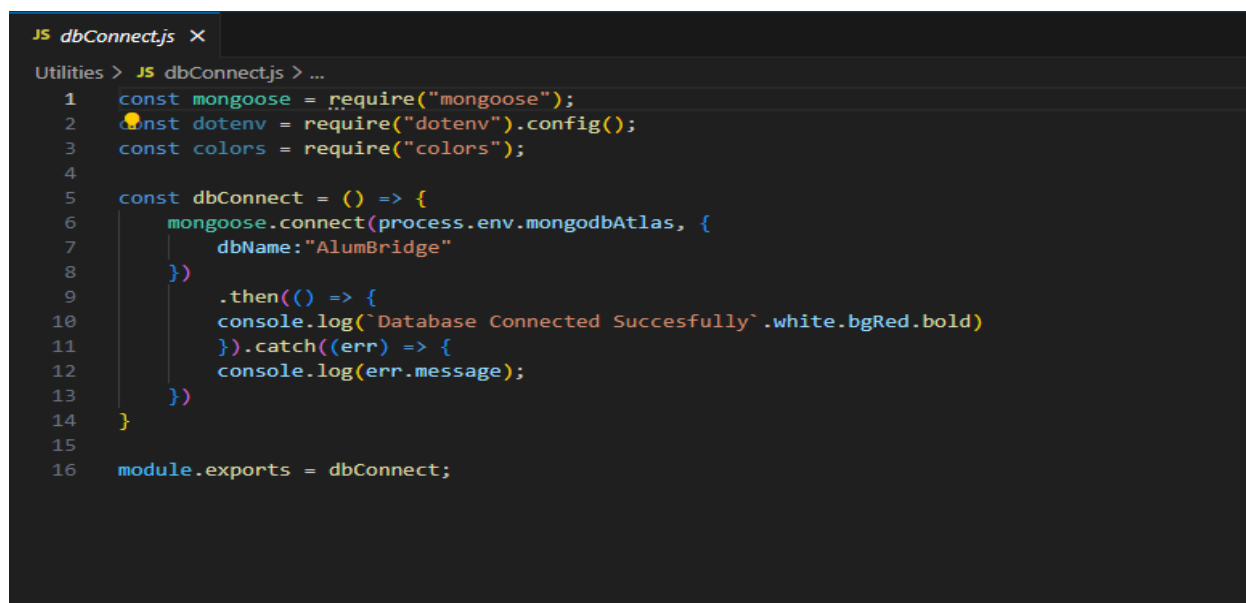
Figure 43: Use Jobs

```

useProfile.jsx X
src > Hooks > useProfile.jsx > ...
1  import { useEffect, useState } from 'react';
2  import { useAuthState } from 'react-firebase-hooks/auth';
3  import auth from '../firebase.init';
4
5  const useProfile = () => {
6    const [user] = useAuthState(auth);
7    const [profile, setProfile] = useState([]);
8    const email = user?.email;
9
10    useEffect(() => {
11      fetch(`https://alumbridge-server.vercel.app/api/v1/users/${email}`, {
12        method: "GET",
13        headers: {
14          authorization: `bearer ${localStorage.getItem("accessToken")}`,
15        }
16      })
17        .then(res => res.json())
18        .then(data => setProfile(data))
19    }, [email]);
20
21    // console.log(profile);
22
23    return [profile];
24  };
25
26  export default useProfile;

```

Figure 44: Profile



```

1  const mongoose = require("mongoose");
2  const dotenv = require("dotenv").config();
3  const colors = require("colors");
4
5  const dbConnect = () => {
6      mongoose.connect(process.env.mongodbAtlas, {
7          dbName: "AlumBridge"
8      })
9      .then(() => {
10         console.log(`Database Connected Successfully`.white.bgRed.bold)
11     }).catch((err) => {
12         console.log(err.message);
13     })
14 }
15
16 module.exports = dbConnect;

```

Figure 45:Database

10.2 Possible Problem Breakdown

System development will be simpler and more efficient if the project is broken down into distinct jobs. The proposed project's potential breakdowns are shown in the following breakdowns:

- Database design and analysis
- Admin panel management development

Limited Alumni Participation

Encouraging alumni to actively participate in mentoring and networking events may be challenging.

Technical Challenges in Platform Development

Creating a virtual platform for mentoring and networking may face technical difficulties, and the existing technology infrastructure may need upgrades.

Financial Constraints

The project budget may not be sufficient to cover all aspects, including mentorship programs, virtual platform development, and industry collaborations.

Low Student Engagement

Students may not fully utilize the resources provided, leading to a lack of engagement and a limited impact on their educational paths.

Mismatch Between Alumni and Student Expectations

There might be a disconnect between what alumni are willing to offer and what students expect from the program.

Resistance to Change

Faculty, staff, or alumni may resist the introduction of new technologies and methodologies.

10.3 Prioritization while Developing the Solution

We've previously ranked the criteria list in order to evaluate how well the system is working. Prioritizing tasks throughout the development phase is crucial since haphazard development could leave certain important capabilities unexplored. This is the right time to do this. A prioritized list of development tasks is provided below:

- Implement strategies such as alumni engagement incentives, recognition programs, and showcasing the benefits of mentoring for both alumni and students.
- Conduct a thorough technical feasibility study, collaborate with IT experts, and allocate resources for platform development. Regular testing and feedback sessions during development can address potential issues.
- Prioritize project components using the MoSCoW method, explore external funding options, and seek partnerships with industries willing to contribute resources.
- Implement interactive features like a user-friendly dashboard, messaging, and job opportunities.
- Conduct surveys and focus groups to understand the expectations of both alumni and students.
- Implement a change management strategy, conduct training sessions, and communicate the benefits of the project to all stakeholders.

- Implement robust security measures, comply with data protection regulations, and clearly communicate the steps taken to ensure data privacy.
- Use advanced algorithms or manual matching processes to ensure compatibility.

Chapter 11 – Testing

11.1 Test Plan Acceptance

A successful software product's creation requires testing. It is important to develop a testing plan during the analytical stage. This solution needs to be approved by the developer as well as the user. The project's test plan will ensure that the requirements for testing and acceptance criteria are fulfilled by the user. Testing comes in two flavors: internal and external.

Functional Testing

The three forms of functional testing are as follows:

Unit Testing

- Identify and define the individual units or components within the Alumbridge project. This could include functions, modules, or classes that perform specific tasks.
- Ensure that each unit is tested in isolation, meaning that dependencies are either eliminated or mocked to isolate the specific unit being tested.
- Develop a comprehensive set of test cases for each unit. These test cases should cover various scenarios, including normal use cases, edge cases, and potential error conditions.

Module Testing

- Completing the login and signup forms with no data entered
- Inaccurate data entered on the registration form.
- By filling out a form accurately and completely

Integration Testing

I'm going to use four different sorts of non-functional testing in this project:

- Verify that the alumni database is seamlessly integrated into the application.
- Ensure that the data retrieval and storage processes are functioning correctly.

Non-functional Testing

I'll use four sorts of non-functional testing in this project:

Acceptance Testing

- Verify that the login functionality for alumni and current students works as expected.
- Ensure that users can access the system securely and with the appropriate permissions.

Security Testing

- Role-based dashboard and page access.
- Trying to log in with the wrong credentials.

Accessibility Testing

- Conducting user-friendliness tests.
- A user who is colour blind tests for colour and contrast.

Usability Testing

- Evaluate the overall design of the user interface to ensure it is intuitive and user-friendly.
- Check for consistency in layout, color schemes, and typography across different sections.

11.2 Test Case

Following the completion of the test acceptance plan, test cases must be developed. The following are the test cases for the Alumbridge system:

Unit test – test case:

Name of the test case	Unit testing		
Test Class			
Description of the test			
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome

Module Test – test case:

Name of the test case	Module Test		
Test Class			
Description of the test			
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome

Integration Testing – test case:

Name of the test case	Integration Testing		
Test Class			
Description of the test			
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome

11.3 Unit Testing

Unit Test one

Test Case

Name of the test case	Unit testing		
Test Class	UserLoginTest		
Description of the test	Verify that users (both alumni and current students) can log in successfully.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
	Provide valid login credentials for an alumni account. Attempt to log in.	Users should be able to log in without errors, and access to the appropriate	The login functionality worked as expected for both alumni and current students. No login

	Check if the system allows access to the alumni dashboard. Repeat the process for a current student account.	dashboard should be granted.	errors were encountered.
--	--	------------------------------	--------------------------

Figure 46:unit test one test case

User name validation

AlumBridge Home Jobs Blogs Socializations Contact US [Signin](#)

Account Sign In

Sign in to your account to access your profile, history, and any private pages you've been granted access to.

Enter Your Email

Enter Your Password

[Forgot Your Password?](#)

Sign In

Dont have account? [Sign up here](#)

Figure 47:Unit test one result

Unit Test two

Test Case

Name of the test case	Unit testing		
Test Class	RegistrationTest		
Description of the test	Ensure that users can successfully register for networking events and workshops.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
Test Class	Navigate to the events section. Select a specific event. Complete the registration form. Submit the registration form	The user should receive a confirmation message, and the event should be added to their schedule.	Users were able to register for events successfully, and confirmation messages were received. The events were added to the user's schedule as expected.

Registration

AlumBridge
Home
Jobs
Blogs
Socializations
Contact US
Signin

Account Sign Up

Sign up to your account to access your profile, history, and any private pages you've been granted access to.



Figure 48:Unit Test two

Unit Test three

Test Case

Name of the test case	Unit test		
Test Class	Blog Post		
Description of the test	Test the ability to create and publish blog posts on the platform.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
	Navigate to the blogging section.	The blog post should be published, and users should be able	Blog posts were successfully created and published. The published posts were

	Create a new blog post.	to view it in the blogging section.	visible in the blogging section.
	Add content and multimedia elements to the post.		
	Publish the blog post.		

Blogs

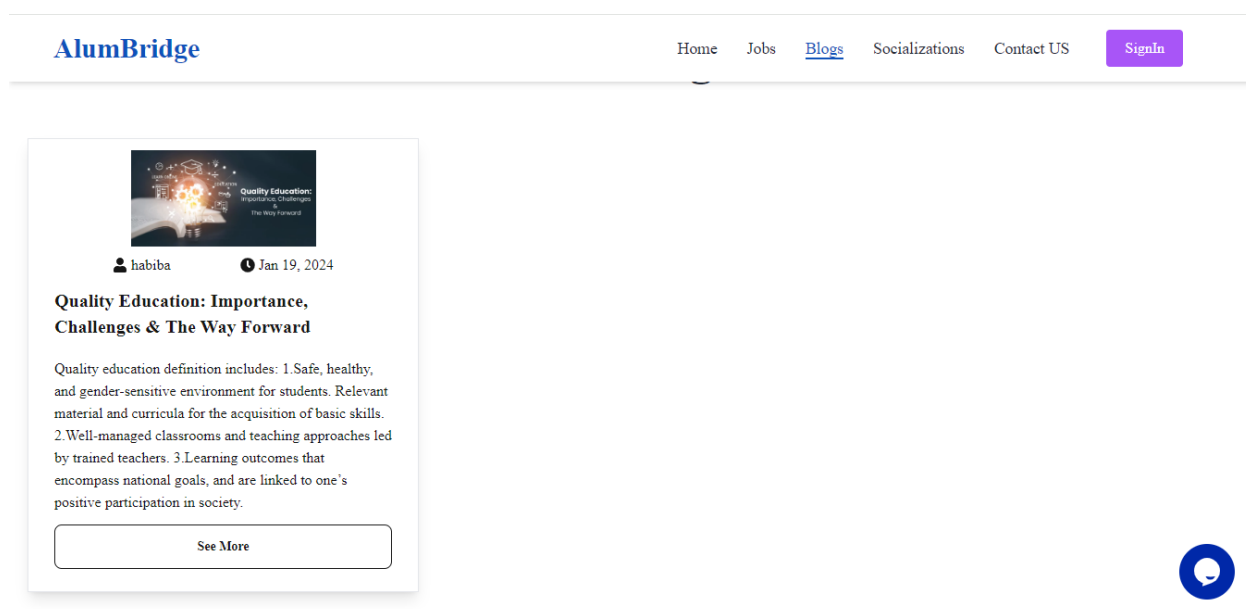


Figure 49:Unit Test three

11.4 Module Testing

Module Test one

Test Case

Name of the test case	Module Test
Test Class	UserAuthenticationTest

Description of the test	Verify the functionality of the user authentication module, ensuring that users can log in and access the system securely.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
	Provide valid credentials for an alumni account. Attempt to log in. Check if the system grants access to the alumni dashboard. Repeat the process for a current student account.	Users should be able to log in without errors, and the appropriate dashboard should be accessible based on user type.	The user authentication module worked as expected. Users successfully logged in, and access to the respective dashboards was granted based on their account type.

User Authentication

AlumBridge

Home Jobs Blogs Socializations Contact US Sign In

Enter Your Email

Enter Your Password

[Forgot Your Password?](#)

Sign In

Don't have account? [Sign up here](#)

OR

Continue with Google

Figure 50:Module Test one

Module Test two

Test Case

Name of the test case	Module Test		
Test Class	EventManagerTest		
Description of the test	The Alumni of a separate division can input the current prices of agricultural products in that division		
	Test the functionality of the event management module, ensuring that events can be created, edited, and displayed on the platform.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
Test Class	Create a new networking event. Edit the details of an existing event. Display the list of events on the platform.	Events should be created and edited successfully, and users should be able to view and register for events.	Events should be created and edited successfully, and users should be able to view and register for events.

	Check if users can register for events.		
--	---	--	--

Socialization Events

AlumBridge	Home	Jobs	Blogs	Socializations	Contact US	SignIn
------------	------	------	-------	--------------------------------	------------	--------

Total Socialization Posts - 2

Blood Needed

Dhanmondi 27

Urgent 2 bag blood need for child. Blood group : A+

Quantity: 2

Category: Blood

Volunteer needed

Ahulia, Daffodil International University

Job seekers who are willing to apply and enroll for different Job fests conducted by the department can use this option for creating a one time login and password to access this portal. Employers who are willing to participate for different Job fests



Figure 51:Module Test two

11.5 Integration Testing

Integration Test one

Test Case

Name of the test case	Integration Testing
Test Class	Login Controller
Description of the test	The login attempt was successful, and the dashboard was redirected.

Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
	1. Please go to the login page. 2. Provide proper identification. 3. Click the Login button.	The Alumni/Current Student should be authorized and routed to their home after successful login.	It's a sign that the email address is wrong.

Login system integration test

AlumBridge Home Jobs Blogs Socializations Contact US [Sign In](#)

Account Sign In

Sign in to your account to access your profile, history, and any private pages you've been granted access to.

Enter Your Email

Enter Your Password

[Forgot Your Password?](#)

Sign In

Dont have account? [Sign up here](#)

Figure 52: Integration Test one

Integration Test two

Test Case

Name of the test case	Integration Testing
-----------------------	---------------------

Test Class	Bloggng Module and Timeline Profile		
Description of the test	Confirm that blog posts are displayed in the timeline profile.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
	Verify that user interactions with blog posts (likes, comments) are correctly recorded in the timeline. Ensure that the timeline profile is dynamically updated based on blogging activities.	Blog posts should appear in the timeline profile, and user interactions should be reflected in real-time. The timeline profile should dynamically update.	Integration between the blogging module and timeline profile was successful. Blog posts appeared in the timeline, and user interactions were accurately recorded and updated.

Blog & Profile Timeline integration testing

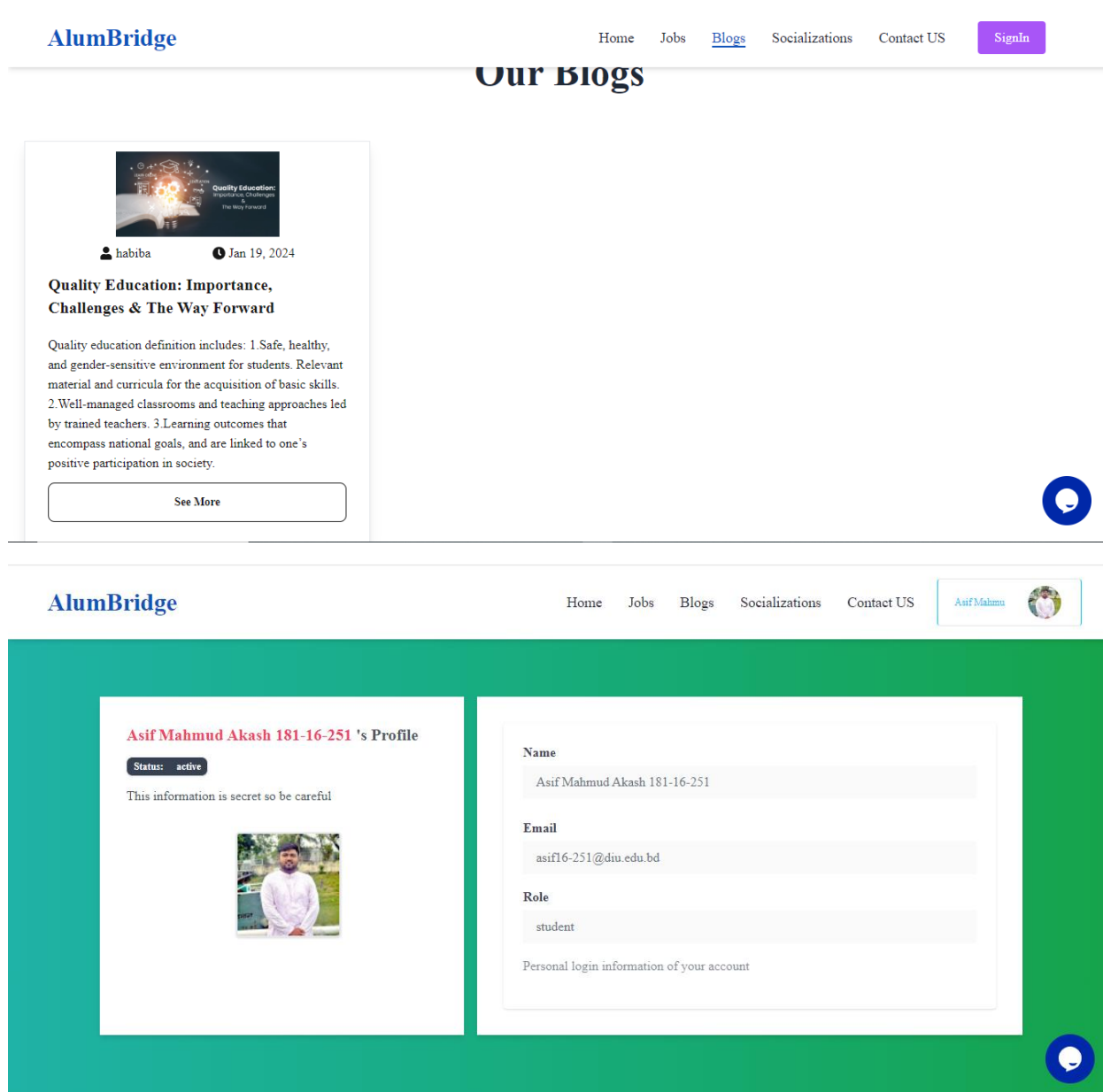


Figure 53: Integration Test two

11.6 Acceptance Testing

Acceptance Test one

Test Case

Name of the test case	Acceptance Testing
-----------------------	--------------------

Test Class	User Authentication and Login		
Description of the test	Test the alumni and current student login functionalities.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
	Ensure that authentication is secure and reliable.	Users should be able to log in successfully with appropriate access based on their roles.	User authentication and login worked as expected, providing secure access for both alumni and current students.

Sign In acceptance testing

AlumBridge

[Home](#)
[Jobs](#)
[Blogs](#)
[Socializations](#)
[Contact US](#)
[SignIn](#)

Account Sign In

Sign in to your account to access your profile, history, and any private pages you've been granted access to.

Enter Your Email

Enter Your Password

[Forgot Your Password?](#)

Sign In

Dont have account? [Sign up here](#)

Figure 54:Acceptance Test

11.7 Security Testing

Security Test

Test Case

Name of the test case	Security Testing		
Test Class	Authentication and Authorization		
Description of the test	This test class focuses on ensuring that the authentication and authorization mechanisms of the Alumbridge platform are robust and secure. It aims to verify that only authorized users can access specific features, and unauthorized access is appropriately restricted.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
	Provide valid alumni and current student credentials.	Users with valid credentials should be granted access.	Successful login for valid credentials.
	Verify that the system grants access to the respective dashboards.	Unauthorized users should be denied access.	Unauthorized access is appropriately restricted.

The screenshot shows the AlumBridge website's login page. At the top, there is a navigation bar with links for Home, Jobs, Blogs, Socializations, and Contact US, along with a Sign In button. Below the navigation bar, the page title is 'Account Sign In'. A message states: 'Sign in to your account to access your profile, history, and any private pages you've been granted access to.' The main form area has two input fields: 'Enter Your Email' and 'Enter Your Password'. A 'Reset Your Password' modal is open, featuring a close button (X), an input field for 'Enter Your Email Address', and a 'Reset' button. Below the modal is a 'Sign In' button. At the bottom, there is a link for 'Don't have account? Sign up here' and a chat icon in the bottom right corner.

Figure 55: Security Testing

11.8 Accessibility Testing

Accessibility Test

Test Case

Name of the test case	Accessibility Testing		
Test Class	Admin Controller		
Description of the test	Testing for user friendliness.		
Source of Data	Steps in the Testing Process	Expected Outcome	Actual Outcome
	Granting the system's administrator access.	It is easy to utilize the system.	The outcome matches expectations.

Table 24:Accessibility Testing

Chapter 12 – Implementation

12.1 Training

To acquaint users with the recently designed system, training is necessary. When the system is completely operational, the team must ensure that users or operators can handle tasks through it. A chart showing the training techniques is provided below.

SL	User	Training Scope	Time Period	Comment
1	Alumni	Understanding the platform, navigating the dashboard, creating and managing profiles, participating in networking events, contributing to Q&A sessions, utilizing the blogging feature.	2 Hours	Provide a comprehensive overview of the platform's features, emphasizing the importance of alumni engagement and knowledge sharing.
2	Current Student	Learning to use the dashboard, connecting with alumni, exploring career development resources, participating in networking events, utilizing job opportunities.	3 Hours	Emphasize the benefits of connecting with alumni, utilizing career development resources, and actively participating in networking events.
3	Admin	Managing the admin panel, overseeing networking events, moderating Q&A sessions, monitoring job opportunities, and incentivizing alumni engagement.	1 hours	Provide detailed training on platform management, moderation, and ensuring the smooth execution of networking events and career development initiatives.

Table 25:User training

12.2 Implementation Scheme

Big Bang

Big Bang operates by instantly turning on the new system and shutting down the old one. This method is significantly faster than the others because it uses the new system right away after the test is over. The data transfer from the previous system may cause data loss and system instability because data may be lost and the new system may malfunction. It is carried out using personnel from that location on a single site.

12.3 Scaling

No arrangements were made to consider application scalability because this is an academic study.

12.4 Load Balancing

Load balancing is the optimizing of a system against the impact of its users. The number of users struck indicates both the total number of concurrent users and the duration of system use. We call this load balancing and load equalization. It maintains the system functioning well by distributing the demand among several servers. With six various types of users and a high number of hits each day, an efficient load balancing mechanism must be put up.

Chapter 13 – Critical Appraisal and Evaluation

13.1 Objective Could be Met

The goals that were announced at the outset are given below.

- The project successfully facilitates connections between alumni and current students, creating a bridge for knowledge sharing and mentorship.
- The project effectively provides a detailed career path for newcomers.
- Emphasizing the value of a welcoming environment, the project focuses on making freshmen feel supported through alumni engagement, knowledge sharing, and access to real-world industry experiences.

- The project intends to motivate and assist newcomers in achieving their objectives by not only displaying success stories but also providing ongoing support, including reverse mentoring, professional growth resources, and assistance with job placements.
- By establishing collaborations with actual industries, the project aims to make work culture experiences and facilities accessible to new students, ensuring the operational viability and practicality of the initiative.

Objective-1

Achievement rate and others

The achievement rate of the first objective, which is to establish a robust connection between alumni and current students through the Alumbridge project, can be assessed through various key performance indicators (KPIs). One crucial metric would be the participation rate of both alumni and students on the virtual platform. High engagement levels, indicated by frequent logins, interactions, and contributions, would signify the successful establishment of this connection. Additionally, tracking the number of networking events and workshops attended by students and alumni would provide insights into the initiative's effectiveness. Evaluating the quantity and quality of knowledge shared on the platform, measured through features like blogging and Q&A sessions, can further gauge the achievement of the knowledge-sharing aspect.

Objective-2

Achievement rate and others:

The success of the second objective, focused on creating a welcoming environment for freshmen to receive career guidance, connect with industry experts, and develop confidence in their career choices, can be gauged through a set of key performance indicators. One crucial metric is the level of participation and engagement of freshmen in networking events, workshops, and mentorship programs. A high attendance rate would indicate the effectiveness of the project in providing opportunities for career exploration and guidance. Additionally, tracking the utilization of career

development resources, such as the dashboard, timeline profile, and job opportunities section, will offer insights into how well the project assists newcomers in making informed career decisions.

Objective-3

Achievement rate and others:

Focusing on providing ongoing support for graduates through opportunities like reverse mentoring, access to professional growth resources, and assistance with job placements, can be assessed through several key indicators. Monitoring the participation rate of graduates in reverse mentoring programs and their engagement with career development resources, such as the timeline profile and job opportunities section, will provide insights into the ongoing support provided by the Alumbridge project.

Objective-4

Achievement rate and others:

Centered around creating an effective virtual platform to facilitate networking, mentoring, and communication between students and alumni, can be evaluated through a comprehensive set of criteria. Firstly, the successful implementation of the login system for alumni and current students is paramount, ensuring secure access to the platform. The management of the admin panel, while classified as a 'could have' priority, contributes to the efficient oversight of platform operations.

Critical to the success of the project is the execution of networking events and workshops, providing tangible opportunities for students and alumni to connect. Monitoring the utilization of the virtual platform features, such as the dashboard, messaging system, and timeline profiles, will offer insights into the platform's effectiveness in fostering interactions.

13.2 Objective that totally don't meet of touched

Nearly the entire article is consulted for the activities. In any case, there's just one goal left to do.

The reasons why it could not be touch

There is not enough time to complete the prescribed tasks, which is the main reason for the goal's non-communication. It would be extremely difficult due to the limited time limit, and the task would become even more difficult due to the requirement for a continual facilitating server.

Without a live server, the programme cannot progress because it cannot run.

What could have been done

If the time frame needs to be rescheduled in order to achieve the highlights, the component will take longer to complete. It must also master the art of creating hybrid applications.

Chapter 14 Lessons Learned

14.1 Pre-Project-Review-closing

Alumbridge, an innovative project, aims to forge a robust connection between students and alumni, fostering a supportive environment for career growth. Preliminary research, including an alumni database and facility assessment, lays the groundwork. The feasibility study scrutinizes operational, technical, financial aspects, and market dynamics, ensuring a solid foundation. With clear objectives and feature prioritization, the iterative development plan promises a dynamic platform, connecting users seamlessly. The proposed system's use of HTML, CSS, Bootstrap, React.js, and Node.js signals a tech-savvy approach, promising an interactive and effective tool for bridging educational journeys.

14.2 What I have Learnt

Through the Alumbridge project, I have gained insights into the crucial aspects of initiating a bridge between students and alumni. The importance of meticulous initial research, including alumni database creation and facility assessment, has been highlighted for effective project development. The feasibility study underscored operational, technical, and financial considerations, emphasizing the need for strategic collaborations with industries. Market research

analysis illuminated the significance of understanding audience needs and optimizing alumni participation. The project's foundations, objectives, and aims clarified the mission to create a supportive community fostering knowledge sharing and career development. The MoSCoW prioritization and iterative development approach provided a structured roadmap, and the exploration of technologies like HTML, CSS, Bootstrap, React.js, and Node.js showcased a tech-savvy strategy for implementation.

14.3 The problems I have faced

In the course of developing the Alumbridge project, I encountered several challenges. One significant issue was ensuring operational feasibility, requiring careful consideration of available funds and resources to successfully execute the project within the specified timeframe. Technical feasibility posed another hurdle, as the creation of a virtual platform demanded an evaluation of the institution's technological capabilities. Financial feasibility required meticulous budget analysis to cover mentorship programs, virtual platform creation, and industry engagements. Market research complexities included understanding diverse audience needs, reviewing competitor activities, and fostering collaborations with new industries. Lastly, aligning the project's design with the insights gained from these challenges was crucial for a robust educational bridge between students and alumni.

14.4 What Solution Occurred

The solution to bridging the educational journeys of students and alumni was a comprehensive and well-thought-out approach. By conducting initial research, creating a detailed alumni database, and emphasizing operational, technical, and financial feasibility, the project laid a robust foundation. The strategic use of market research insights guided the design and implementation phases, ensuring alignment with the needs of students and alumni.

Chapter 15 – Conclusion

15.1 Summary of the Project

Alumbridge is a visionary project dedicated to fostering a robust connection between students and alumni, facilitating a seamless transition from education to the professional world. By emphasizing a welcoming environment, career guidance, and industry connections, the project aims to inspire and guide newcomers. The extensive initial research, including alumni database creation and feasibility studies, forms a solid foundation. The system's features, prioritized through MoSCoW, promise an interactive platform for networking, career development, and knowledge sharing. The iterative development approach ensures a well-structured, user-friendly application, utilizing HTML, CSS, Bootstrap, React.js, and Node.js. This project represents a holistic solution to bridge educational paths, providing invaluable support for students' career aspirations and professional growth.

15.2 Goal of the project

Building a centralised system that would provide a quick, secure, and dependable response to agricultural problems was the project's main goal. The project's primary objectives are as follows:

- Establishing a robust connection between current students and distinguished alumni to facilitate knowledge sharing and mentorship.
- Emphasizing the importance of a welcoming atmosphere for newcomers, providing career guidance, and facilitating interactions with industry experts.
- Providing opportunities for reverse mentoring, access to resources for professional growth, and assistance with job placements for graduates.
- Encouraging networking through events, workshops, and a virtual platform, and creating a database to match mentors with mentees.
- Ensuring the practicality and viability of the project through operational, technical, and financial feasibility studies, including collaborations with actual industries.

15.3 Success of the Project

The success of the Alumbridge project hinges on its ability to seamlessly connect students and alumni, fostering a dynamic and supportive educational community. The project's foundation lies in thorough initial research, including the creation of an alumni database and the evaluation of existing facilities and technology infrastructure. The feasibility study ensures practicality, exploring operational, technical, and financial aspects, while market research informs the project's design, maximizing its efficacy.

15.4 What I have done in the documentation

In the comprehensive documentation for the Alumbridge project, several crucial aspects have been meticulously addressed. The initiation involves a clear articulation of the project's purpose, focusing on bridging the educational journeys of students and alumni. The emphasis on creating a supportive environment for newcomers, offering career guidance, and showcasing alumni success stories underscores the project's commitment to facilitating a seamless transition for students into the professional realm.

The initial research phase is well-structured, aiming to identify potential challenges and opportunities, understand the preferences of students and graduates, and establish a robust plan for the project's development.

15.5 Value of the Project

The Alumbridge project holds immense value in fostering a seamless transition for students embarking on their educational and professional journeys. By focusing on bridging the educational gap between students and distinguished alumni, the project seeks to create a dynamic connection that goes beyond academic realms. The emphasis on cultivating a welcoming environment underscores the significance of providing newcomers with not just academic guidance but also real-world insights.

15.6 My Experience

Alumbridge project has been an enriching and rewarding experience, driven by the passion to bridge the educational journey for students and alumni alike. The initial phase, characterized by comprehensive research, laid the groundwork for understanding the intricacies of student and graduate needs, paving the way for a robust plan to bridge their educational paths.

The feasibility study delved into the operational, technical, and financial aspects, ensuring that the envisioned project aligns with the practicalities of execution. Collaborations with real industries emerged as a key operational strategy, underscoring the commitment to providing students with tangible work culture experiences.

Appendices:

Test Scripts:

User guide:

1. Alumbridge User Guide
Brief Description: The Alumbridge User Guide is designed to assist users, including alumni and current students, in navigating and utilizing the features of the platform efficiently.
Actors: Alumni, Current Students, Admin
Preconditions: Users must have a registered account on Alumbridge, and the system should be accessible through a compatible web browser. Admin credentials are required for managing the platform.
Basic Flow of Events: ➤ Alumni and current students log in using their respective credentials. ➤ Users explore the dashboard to access key features. ➤ Users set up and update their profiles, including personal details, professional background, and interests. ➤ Users participate in networking events and workshops.
Post-Conditions: Users should have successfully navigated and engaged with the Alumbridge platform, utilizing its features effectively for networking, career development, and community building.

2. Login Functionality Test
Brief Description: This test case verifies the login functionality for both students and alumni users.
Actors: Student, Alumni
Preconditions: The user has an active account on the Alumbridge platform. The user has internet access and a web browser.
Basic Flow of Events: ➤ The user opens the Alumbridge website or app. ➤ The user clicks on the "Login" button. ➤ The user enters their email address and password in the login form.
Post-Conditions: The student or alumni user is successfully logged in and can access their dashboard.

3. Strategies for Maximizing Alumni Participation in Alumbridge
Brief Description: This appendix outlines specific strategies to attract and retain alumni participation in the Alumbridge project.
Actors: Project Team, Alumni
Preconditions: Alumni database established, initial outreach conducted.
Basic Flow of Events: ➤ Clearly communicate the benefits of participating in Alumbridge, emphasizing how it helps them stay connected, give back, and advance their careers through reverse mentoring.

- Segment alumni based on interests, demographics, and graduation years, then tailor communication channels and messages accordingly. Utilize email, phone calls, and social media outreach targeted to each segment.

Post-Conditions: Increased alumni participation in mentoring, networking events, and platform usage.

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