

“CONNECT” AN ONLINE JOB SEEKING AND POSTING PLATFORM

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

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DAFFODIL INTERNATIONAL UNIVERSITY

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APPROVAL

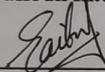
This Project titled "CONNECT , an online job seeking and posting platform, submitted by "Mehrab Hassan" to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of B.Sc. in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 22.01.2024.

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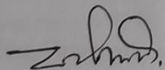
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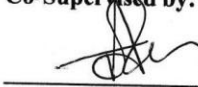
We hereby declare that, this project has been done by us under the supervision of **Mr Amir Sohel**, Lecturer (Senior Scale) , **Department of CSE** Daffodil International University. We also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

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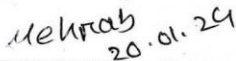
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ABSTRACT

The "CONNECT" initiative is an innovative web application that aims to foster cooperation and support between fresher in job sector or experienced with companies or org. Users are granted the ability to conveniently register, locate jobs by their job posts. Tailored dashboards offer functionalities including all jobs, profile management, and recent job monitoring to accommodate the particular requirements of applicants, and administrators. The primary objective of the platform's dedication to user-centric design is to streamline the job finding procedure and foster a dynamic community where expertise and knowledge collide in order to facilitate the triumph of job seeking community. Through the utilization of technology and the promotion of smooth interactions, "CONNECT" endeavors to serve as a crucial resource for individuals commencing entrepreneurial endeavors by providing a collaborative environment conducive to job placement and advancement within the job seeking ecosystem.

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CHAPTER 1

Introduction

1.1 Introduction

In the dynamic realm of career exploration and professional growth –connect|| emerges as a beacon, a dedicated platform designed to redefine the job seeking experience. With a holistic approach to connecting talented individual with their ideal career paths, connect stands as an innovative solution in the ever evolving employment landscape.

At the heart of connect lies thoughtfully crafted homepage, serving as a gateway to a multitude of features seamlessly integrated to enhance the user experience. From the meticulously –applied jobs|| and –my jobs|| sections providing the real time updates personalized management of job applications to the extensive –All jobs|| marketplace offerings diverse opportunities, connect aims the streamline of job seeking process.

Beyond the practicalities, connect transcends the conventional with its enriching –Blog|| section, offerings insights, trends, and valuable resources to the empower users in their professional journeys. The platform also encourages a sense of community through the –Feedback|| section, fostering a collaborative environment where user experiences contribute to ongoing enhancement.

The "About" section illuminates connects mission, values, and commitment to fostering meaningful connections. Motivated by a deep understanding of the challenges inherent in job seeking, Connect endeavors to not just bridge the gap between talent and opportunity but to create an ecosystem where career aspirations are nurtured and realized. Join us at Connect, where each click signifies a step toward a future where professional fulfillment is not just a goal but a shared reality.

1.2 Motivation

Embarking on a career journey is akin to navigating a vast and uncharted sea, filled with opportunities, challenges, and undiscovered potentials. At Connect, we recognize the inherent aspirations that drive individuals to seek meaningful employment and professional growth. Our motivation stems from a profound understanding of the transformative power that the right career move can wield in one's life.

In the intricate dance between talent and opportunity, we aspire to be the choreographer, orchestrating connections that transcend mere job placements. Connect is driven by the belief that each individual possesses a unique set of skills, dreams, and ambitions that deserve to be not only acknowledged but celebrated. We envision a future where every click on our platform is a catalyst for personal and professional metamorphosis.

The heart of our motivation lies in the unwavering commitment to redefine the job-seeking experience. We aim to empower our users, providing them with a holistic platform that not only facilitates job applications but nurtures their professional journeys. Through the curated content in our "Blog" section, we aspire to enlighten and guide, offering insights that not only inform but inspire.

Connect is more than just a platform; it's a community, a collective endeavor to transform the employment landscape. Our motivation is fueled by the stories of individuals who have found their ideal career paths through our platform, propelling us to continually enhance and innovate. Join us at Connect, where motivation meets opportunity, and every user is a protagonist in their own success story. Together, let's turn aspirations into achievements, one connection at a time.

1.3 Objectives

1. Optimize Consultancy Process:

- Simplify the consultancy process by integrating modern technologies, including React JS, Tailwind CSS, Node JS, and MongoDB, to create an intuitive and efficient platform.

2. Empower Consultants and Users:

- Enable consultants to manage their profiles, track appointments, and contribute to the community through blog posts, fostering an environment of knowledge-sharing.
- Provide users with tools to schedule appointments effortlessly and gain personalized guidance for their entrepreneurial projects.

3. Build a Supportive Community:

- Cultivate a vibrant and supportive community where applicants can thrive through posts, collaboration, and the exchange of knowledge.
- Redefine the consultancy landscape by offering a platform that goes beyond transactional interactions, emphasizing the building of meaningful connections.

4. Contribute to Startup Ecosystem Growth:

- Contribute to the growth of the startup ecosystem by offering a central hub for jobs, guidance, and collaboration.
- Inspire and support in jobs in their journey to drive innovation, shape the future, and contribute positively to the vast career landscape.

5. Ensure Security and Trustworthiness:

- Prioritize the security and trustworthiness of the platform by implementing robust measures for user authentication and secure financial transactions.
- Uphold high standards of data integrity and privacy to build and maintain user confidence in the "CONNECT" community.

6. Adaptability and Agility:

- Embrace adaptability and agility in technology development, staying attuned to emerging trends and ensuring the platform remains responsive to the evolving needs of the job seeking community.

7. Facilitate Effortless Connections:

- Enable aspiring applicants to connect effortlessly with experienced job poster based on specific criteria, such as names, IDs, or specialties.
- Implement a user-friendly google registration process to simplify access to the platform.

8. Enhance User Experience with Tailored Dashboards:

- Develop role-specific dashboards for users, consultants, and administrators, providing customized features to meet their distinct needs.
- Offer transparent and comprehensive functionalities, including profile management, job tracking.

1.4 Problem Statement

1. Absence of a Supportive Community:

- The -CONNECT|| ecosystem lacks a collaborative space where jobs can thrive through knowledge-sharing and meaningful connections, as existing platforms often focus solely on transactional interactions.

2. Challenges in Community Building:

- Building a supportive community within the consultancy space remains a challenge, limiting the potential for job seeking to benefit from the platform and collaborative initiatives.

3. Lack of User-Centric Design:

- Existing solutions often lack user-centric design, resulting in a fragmented user experience that hinders seamless interactions between users and job poster.

4. Transparency Issues:

- The current job seekers may suffer from transparency issues, making it difficult for users to track appointments, manage profiles.

The "CONNECT|| initiative endeavors to develop a secure, transparent, and user-friendly platform that not only resolves these challenges but also cultivates a dynamic community where applicants and job poster can flourish in unison.

1.5 Proposed System

Understanding the value of a welcoming community, "CONNECT" seeks to foster an atmosphere where candidates can prosper by getting jobs and making genuine connections. Encourage community-driven support via features like blog posts and collaborative efforts.

To make sure the platform can adapt and be agile, modern technologies like React JS, Tailwind CSS, Node JS, and MongoDB will be smoothly integrated. The system can adapt to the changing needs of the job seeking community if it stays abreast of current trends.

With the help of the planned system, applicants will be able to keep tabs on their profiles, schedule appointments, and even write blog pieces to share with the community. At the same time, job poster will have access to user-friendly scheduling tools that provide tailored assistance for their business endeavors.

A thorough and user-centric platform to serve the specific needs of aspiring candidates and experienced employee is proposed by the "CONNECT" initiative in response to the issues recognized in the current job vacancy field.

The plan's key platform, "CONNECT," would link up-and-coming applicants with seasoned job poster in an efficient and effective manner. In order to address the drawbacks of dispersed jobs, this job seeking is being implemented to make sure that users can easily get jobs easily.

Improving the user experience is the primary goal of the suggested system's user-centric design. We will optimize functionality and ensure that each user type can navigate the platform with ease by developing tailored dashboards for users, consultants, and administrators. Features like appointment tracking, profile management will be available on these dashboards, tailored to each function.

1.7 Expected Outcome

Upon the successful implementation of the "CONNECT" project, the anticipated outcomes encompass a transformative and empowering experience for both aspiring entrepreneurs and experienced consultants within the job seeking ecosystem.

1. **Empowered employee:** Consultants will benefit from comprehensive tools to manage profiles, track appointments, and contribute to the community through blog posts, enhancing their ability to provide valuable guidance.

2. **Growth of the job solution ecosystem:** The anticipated outcome includes contributing to the growth of the job solution ecosystem by offering a central hub for jobs, guidance, and collaboration, fostering innovation and positive contributions to the career landscape.
3. **Enhanced Accessibility:** Users will enjoy increased access to tailored guidance and jobs through a centralized platform, fostering a more inclusive and supportive job solution community.
4. **Seamless User Experience:** The user-centric design and role-specific dashboards will contribute to a seamless and intuitive user experience, ensuring that users, consultants, and administrators can navigate the platform effortlessly.
5. **Transparent Interaction Management:** The introduction of transparent functionalities, including profile management, appointment tracking will empower users to actively manage their interactions on the platform.
6. **Vibrant and Collaborative Community:** The platform's focus on community building, knowledge-sharing, and collaborative initiatives is expected to cultivate a vibrant environment where job solution thrive through meaningful connections and shared insights.
7. **Adaptive Technological Evolution:** With the integration of modern technologies, the platform will remain adaptable and agile, evolving in response to emerging trends and ensuring it stays at the forefront of the dynamic job solution landscape.
8. **Building Trust and Confidence:** Upholding high standards of security and transparency is expected to build trust and confidence among users, applicants, and administrators, establishing "CONNECT" as a reliable and reputable platform within the -CONNECT community.

1.8 Report Layout

The project report is distributed into below layout:

1. The project's instructions, motivation, objectives, Problem statement, Proposed system, expected outcomes, and an overview are all included in chapter one.
2. Background analysis, Terminology, Related work, Scope of the problem and Challenges of the project are covered in chapter two.
3. In Chapter 3, the project's general description, requirements, the design, the requirement prosperity, and model diagrams are all introduced.

4. The design specification, as well as its implementation, application is covered in Chapter 4.
5. The project Implementation including database, frontend design and testing are discussed in chapter 5.
6. The impact on society and environment included in chapter six.
7. Chapter 7 includes conclusion and future scope.
8. The sources used for the project are listed in the references section.

CHAPTER 2

Background

2.1 Introduction

In the dynamic landscape of career exploration and professional advancement, "Connect" emerges as a guiding light, a purpose-built platform poised to redefine the entire job-seeking experience. It stands as an innovative solution, designed with a comprehensive approach to connect talented individuals seamlessly with their ideal career paths. In the ever-evolving employment terrain, Connect is a beacon of efficiency and effectiveness.

At the core of Connect is a meticulously crafted homepage, serving as the gateway to a plethora of seamlessly integrated features aimed at enhancing the user experience. The platform boasts thoughtfully organized sections such as "Applied Jobs" and "My Jobs," providing real-time updates and personalized management of job applications. Complementing this is the expansive "All Jobs" marketplace, offering a diverse array of opportunities, illustrating Connect's commitment to streamlining the job-seeking process.

Beyond the practical functionalities, Connect breaks away from convention with its enriching "Blog" section. Here, users can access insights, trends, and valuable resources that empower them in their professional journeys. The platform further fosters a sense of community through its "Feedback" section, creating a collaborative environment where user experiences actively contribute to ongoing enhancements.

Delving into the "About" section illuminates Connect's mission, values, and unwavering commitment to fostering meaningful connections. Driven by a profound understanding of the challenges inherent in job seeking, Connect seeks not only to bridge the gap between talent and opportunity but also to create an ecosystem where career aspirations are not merely acknowledged but nurtured into reality. Join us at Connect, where every click signifies a stride toward a future where professional fulfillment is not just a goal but a shared reality.

2.2 Terminology

To facilitate a clear understanding of the "CONNECT" project, the following key terminology is essential:

- i. **Centralized Vacancy Hub:** A unified platform serving as the epicenter for job applicants and job poster to connect, collaborate, and exchange knowledge seamlessly.
- ii. **User-Centric Design:** An approach focused on optimizing the platform's design and features to enhance the overall experience for users, consultants, and administrators.
- iii. **Transparent Functionality:** The implementation of open and clear features, such as profile management, job tracking ensuring users have full visibility into their interactions.
- iv. **Community Building:** The intentional effort to cultivate a vibrant and supportive community where companies, applicants, and viewer can engage in meaningful interactions and share insights.
- v. **Adaptive Technology Integration:** The incorporation of modern technologies, including React JS, Tailwind CSS, Node JS, and MongoDB, to ensure the platform remains adaptable and responsive to emerging trends.
- vi. **Mass Employment:** Mass employment is made possible through Connect's expansive "All Jobs" marketplace, offering a diverse array of opportunities for individuals with varying skill sets and aspirations. The platform's user-friendly interface, coupled with real-time updates and personalized management features, ensures seamless engagement for a large pool of job seekers. Connect's commitment to streamlining the job-seeking process and fostering meaningful connections creates an environment conducive to mass employment, where both employers and talents find optimal matches efficiently.
- vii. **Growth of the Connect Ecosystem:** The growth of the Connect ecosystem will be propelled by its continuous innovation, expanding features, and an ever-increasing user base. As more employers and talented individuals join the platform, the network effect will amplify, creating a robust ecosystem where meaningful connections flourish, leading to sustained and organic growth
- viii. **Building Trust and Confidence:** Upholding high standards of security and transparency to instill trust and confidence among applicants, job poster, and administrators, establishing the platform as a reliable and reputable space within the –CONNECT‖ community

2.3 Related Work

In the realm of online job platforms, various initiatives have aimed to bridge the gap between job seekers and employers, each contributing unique features to enhance the user experience. Platforms like LinkedIn have excelled in creating professional networks, emphasizing personal branding and connections within industries. Similarly, Indeed and Glassdoor have focused on aggregating job listings and providing company insights to aid users in making informed career decisions.

Connect distinguishes itself by amalgamating the best aspects of existing platforms while introducing innovative features to streamline and enrich the job-seeking experience. Unlike traditional job boards, Connect's "All Jobs" marketplace caters to a diverse array of industries and skill sets, offering a comprehensive platform for a wide range of users. The thoughtfully organized "Applied Jobs" and "My Jobs" sections provide real-time updates and personalized management, enhancing user engagement and efficiency.

Furthermore, Connect's commitment to community-building sets it apart. The "Blog" section goes beyond job listings, offering valuable insights, trends, and resources to empower users in their professional journeys. The "Feedback" section fosters an interactive environment, where user experiences contribute to ongoing platform enhancements, creating a dynamic ecosystem responsive to the evolving needs of both job seekers and employers.

In summary, Connect builds upon the successes of existing platforms by integrating a holistic approach, user-centric features, and a commitment to community engagement, thereby redefining the landscape of online job-seeking platforms.

2.4 Scope of the Problem

The "CONNECT" project addresses several challenges prevalent in the contemporary job solution platform, offering a comprehensive solution that extends its scope across multiple dimensions:

- **Versatile Job Finding Ecosystem:** The job finding solution often suffers from fragmentation, with applicants seeking guidance dispersed across various platforms. The "CONNECT" project aims to centralize this ecosystem, providing a unified platform for applicants and job poster to connect, collaborate, and share knowledge seamlessly.

- **Lack of Transparent Platforms:** Transparency is a crucial factor in building trust within consultancy relationships. Many existing platforms lack transparent functionalities, hindering the ability of startups and consultants to make informed decisions. The "CONNECT" project addresses this by incorporating features that provide visibility into applicants' profiles, expertise, and success stories.
- **Limited Community Engagement:** Successful startups often attribute their growth to community engagement and collaborative environments. The project aims to foster a vibrant community where applicants, companies, and job poster can engage in meaningful interactions, share insights, and contribute to the collective growth of the entrepreneurial ecosystem.
- **Technology-Driven Innovation:** The evolving technological landscape presents opportunities for innovative solutions. The "CONNECT" project leverages modern technologies such as React JS, Tailwind CSS, Node JS, and MongoDB to create an adaptive and responsive platform, aligning with the expectations and preferences of tech-savvy users.
- **Gaps in Job Findings and Knowledge Sharing:** Many applicants face challenges in accessing jobs and tailored guidance. The project seeks to bridge this gap by providing a platform where applicants can apply personalized jobs and share valuable insights through blogs. This enhances the overall mentorship experience for aspiring applicants.
- **Community-Driven Data Insights:** The project's integration of data-driven insights contributes to a dynamic consultancy environment. By facilitating the exchange of data-driven information and strategic advice, "CONNECT" empowers applicants and job poster with actionable insights, fostering informed decision-making.

2.5 Challenges

While the "CONNECT" project endeavors to revolutionize the startup job finding landscape, several challenges must be acknowledged and strategically addressed to ensure the project's success and sustained impact:

1. **User Adoption and Engagement:** Encouraging applicants and job poster to adopt the platform and actively engage in its community poses a significant challenge. Overcoming resistance to change and effectively communicating the platform's benefits will be crucial in building a vibrant and active user base.

2. **Quality Assurance and Expertise Validation:** Maintaining the quality of consultancy services is paramount. Implementing effective mechanisms to validate the expertise of consultants and ensuring the authenticity of shared knowledge will be an ongoing challenge. Rigorous vetting processes and user reviews may play a critical role in establishing credibility.
3. **Security and Data Privacy:** Given the sensitive nature of business information and financial transactions, ensuring robust security measures and stringent data privacy protocols is imperative. Safeguarding user data from potential breaches and unauthorized access will be an ongoing priority to establish and maintain trust.
4. **Balancing Technology Integration:** While leveraging modern technologies enhances the user experience, striking a balance is essential. Avoiding technology overload and ensuring that the platform remains user-friendly, accessible, and adaptable to a diverse user base will be a persistent challenge.
5. **Monetization Strategy:** Developing a sustainable monetization strategy that aligns with the platform's value proposition without hindering user adoption is a delicate balancing act. Identifying revenue streams, such as transaction fees or premium features, while keeping the platform accessible to startups and consultants of varying financial capacities, will require careful consideration.
6. **Regulatory Compliance:** Navigating the complex landscape of regulatory requirements, particularly in the context of financial transactions and user data, presents a significant challenge. Staying abreast of evolving regulations and ensuring full compliance will be crucial to avoid legal pitfalls.
7. **Competition from Established Platforms:** Established consultancy and freelance platforms may already have a substantial user base. Differentiating the "CONNECT" platform and offering unique value propositions will be essential to attract users away from entrenched competitors.
8. **Maintaining Community Culture:** As the platform scales, preserving the sense of community and collaboration may become challenging. Implementing strategies to foster meaningful interactions, facilitate knowledge sharing, and prevent the emergence of impersonal transactional relationships will be an ongoing effort.

Addressing these challenges requires a strategic and adaptive approach, involving continuous user feedback, iterative improvements, and a commitment to the project's core values. By

proactively tackling these obstacles, the "CONNECT" project can position itself as a transformative force in the job solution arena.

CHAPTER 3

Requirement Specification

3.1 Introduction

The requirement specification functions as the fundamental blueprint for the "CONNECT" project, outlining the critical features and functionalities that are indispensable for the development of the platform. By integrating user registration and authentication procedures, the specification ensures a secure onboarding situation. Utilizing filters for accurate matches, the consultant search and find functionality seeks to facilitate an easy relationship between applicants and job poster. The fundamental function of the platform is to facilitate effective collaboration between applicants and job poster through scheduling. By adhering to these stipulations, the endeavor aims to establish a vibrant and user-focused setting, thereby guaranteeing a strong groundwork for the conceptualized revolutionary job solution platform.

3.2 Business Process Model

The Agile Business Process Model, which was implemented for the "CONNECT" initiative, represents an iterative and dynamic approach that emphasizes collaboration, adaptability, and ongoing enhancement. The procedure commences with collaborative sessions in which stakeholders from diverse domains participate and aid in the development of a comprehensive product backlog and prioritized user stories. Sprint planning sessions ensue, during which user stories are methodically decomposed into feasible tasks, effort estimation is conducted, and priorities are established for the forthcoming sprints.

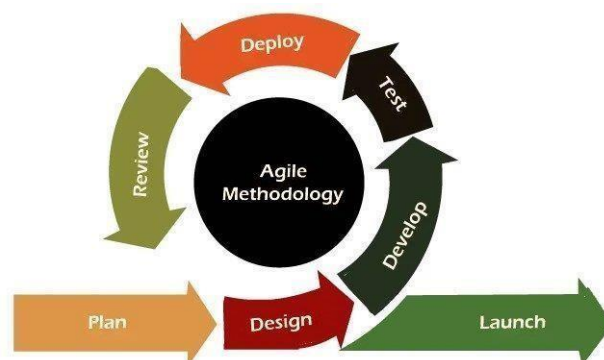


Figure 3.2.1: Business Process Model Diagram

A primary focus is placed on iterative cycles, commonly referred to as two-week sprints, during which cross-functional teams work together in collaboration to accomplish the development tasks. By facilitating issue resolution and promoting timely communication, daily stand-up meetings foster a unified and productive team atmosphere. Consisting of user acceptance testing and automated testing, continuous testing is an essential component of every iteration, guaranteeing the functionality and dependability of features that have been implemented.

Sprint evaluations and retrospectives are routinely carried out, serving as an occasion to exhibit fully developed functionalities, collect feedback, and engage in team performance reflection. The feedback cycle facilitates ongoing improvement by allowing the team to adjust to evolving priorities, new demands, and user anticipations.

Implementation takes place in stages following the completion of each iteration, providing stakeholders with observable advancements. The implementation of continuous integration/deployment pipelines guarantees dependability and efficiency by streamlining and automating the deployment procedure. Once the model has been deployed, it incorporates surveillance mechanisms, including user analytics, which empower the team to extract valuable insights regarding user interactions and behavior. In order to preserve the platform's integrity, bug resolution and monitoring are approached methodically. The implementation of collaborative documentation practices, which encompass living documentation that records iteration outcomes, design decisions, and user stories, guarantees clarity and openness at every stage of the development process.

In anticipation of forthcoming iterations and expansion endeavors, the model incorporates user feedback, market dynamics, and the ever-changing startup consulting landscape as guiding factors. By adopting this comprehensive strategy, the project can effectively achieve its objectives of providing a dependable, adaptable, and client-focused consulting platform. Continuous and incremental development is a key principle of the Agile methodology, wherein every sprint signifies a targeted iteration. Daily impromptu meetings play a critical role in facilitating communication, promoting openness, and resolving any issues that may arise. To maintain a stable and dependable codebase, development activities prioritize

continuous integration, ensuring that code modifications are routinely tested and seamlessly integrated.

A sprint review and demonstration occurs at the conclusion of each sprint, affording the development team the chance to present the finished features to stakeholders, collect feedback, and implement any required modifications. The flexibility and adaptability afforded by this iterative process enable the "CONNECT" initiative to effectively address evolving market trends, user feedback, and shifting requirements. The Agile business process model functions as a flexible structure that encourages cooperation, adaptability, and the gradual provision of a resilient agricultural e-commerce platform.

3.3 Requirement Collection and Analysis

The Requirement Collection and Analysis phase for "CONNECT" is crucial, recognizing and recording stakeholder needs to guide the project. This phase lays the groundwork for the agricultural ecommerce platform's development with collaborative workshops, user stories, and use cases. Identifying important stakeholders and having comprehensive discussions helps create a user-centric and functionally robust platform that fits user, consultant, and administrators' expectations.

3.4 Hardware Requirements

TABLE 3.4.1: HARDWARE REQUIREMENTS TABLE

Processor	RYZEN 5 Processor
Motherboard	ASUS d570dd
RAM	Minimum storage of ram is 8GB
Internet Card	Whatever kind of internet card
Graphics Card	Any
Hard Disk	Minimum 50GB

3.5 Software Requirements

TABLE 3.5.1: SOFTWARE REQUIREMENTS TABLE

Visual Studio Code	Minimum 1.0.0
NodeJS	15.0.1

Operating System	Windows/Mac
Browser	Google Chrome

3.6 Use-Case Diagram

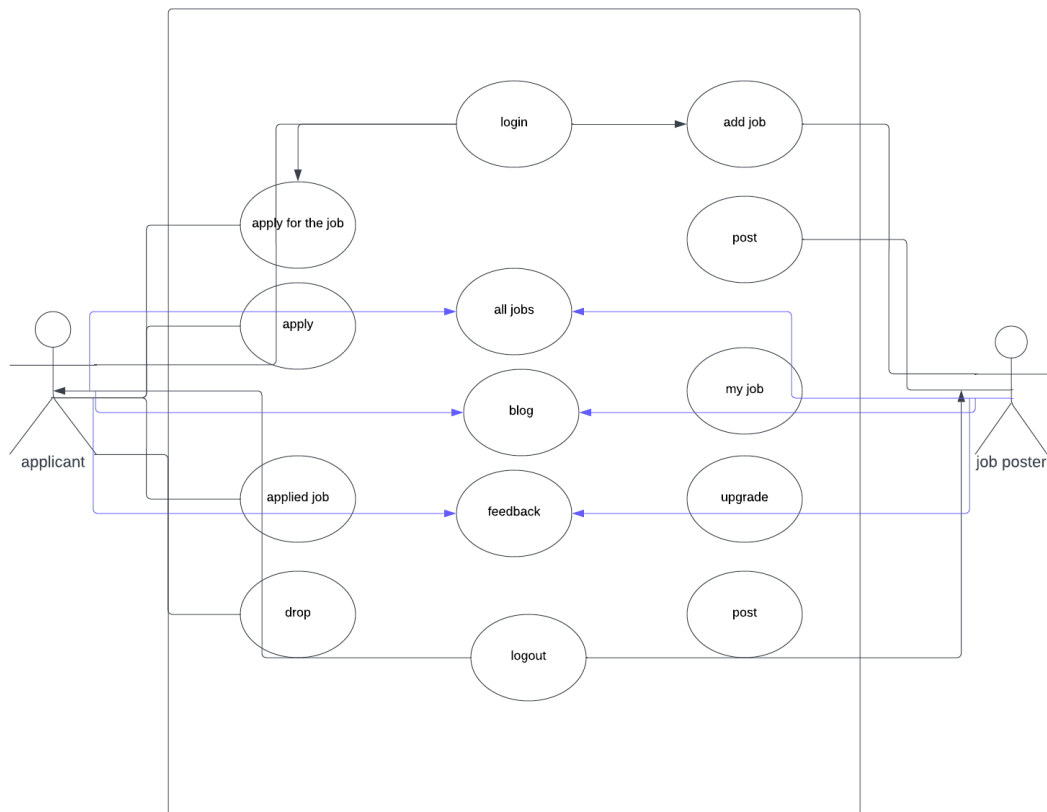


Figure 3.6.1: Use-Case Diagram

3.7 Activity Diagrams

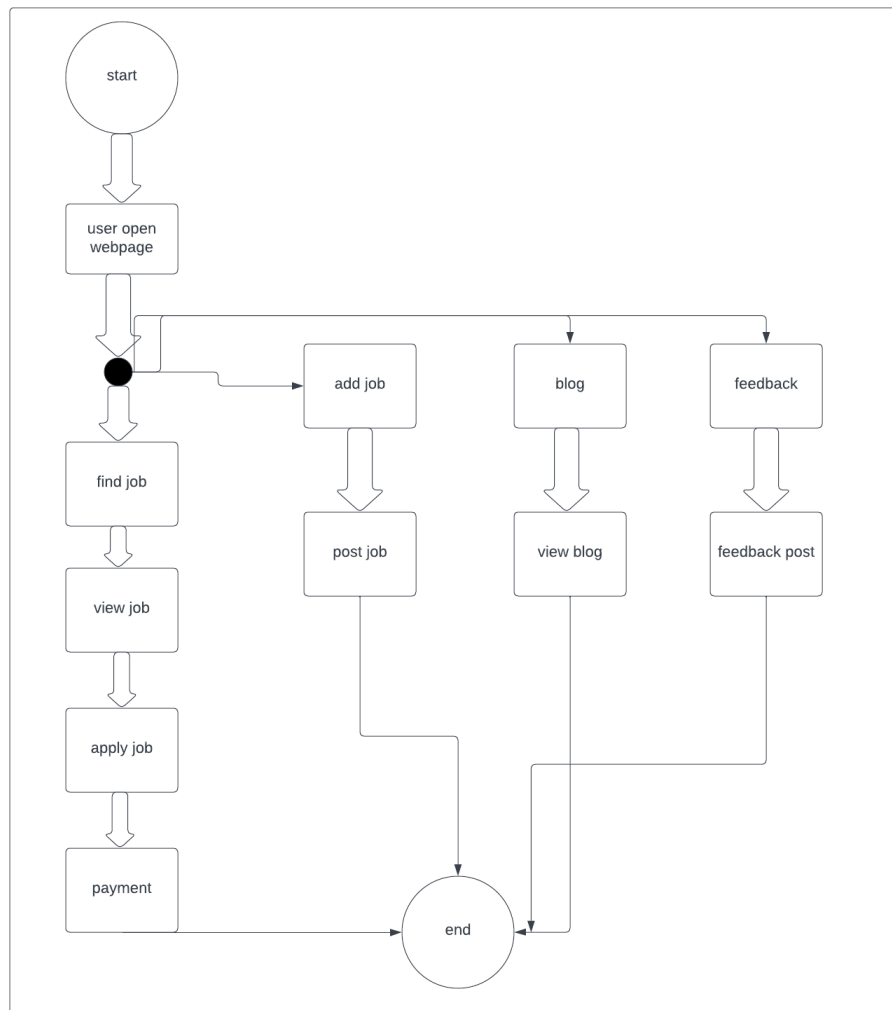


Figure 3.7.1: Activity Diagram

3.8 Entity-Relationship Diagram

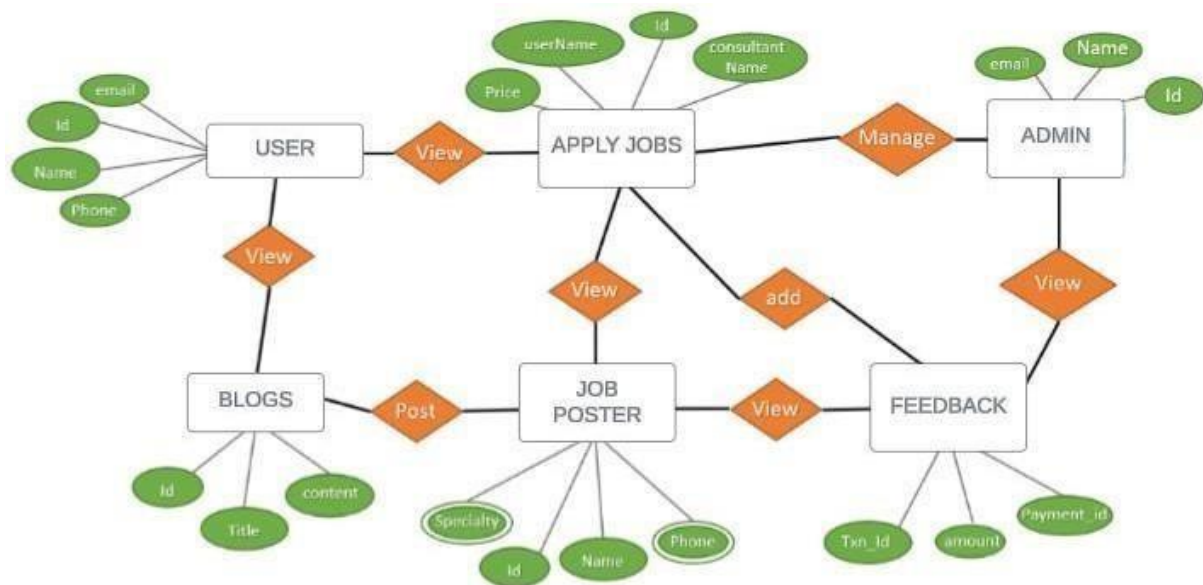


Figure 3.8.1: Entity-Relationship Diagram

3.9 Class diagram

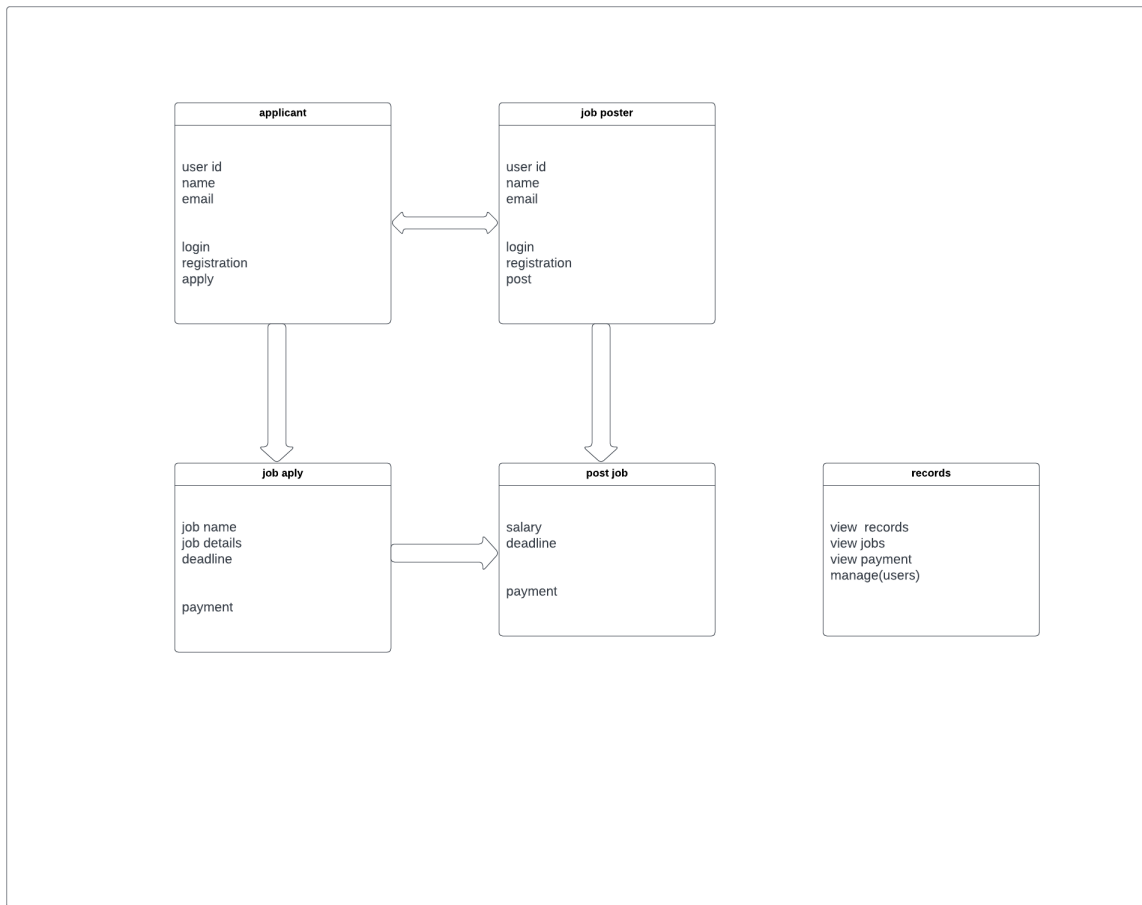


Figure 3.9.1: Class Diagram

CHAPTER 4

Design Specification

4.1 Front-End Design

The "CONNECT" project's front-end design has been meticulously constructed to provide users with a smooth and straightforward experience. By adhering to the tenets of user-centric design, the interface showcases an aesthetically pleasing and uncluttered design, which guarantees effortless navigation for administrators, job poster, and applicants equally. By increasing accessibility across a range of devices, responsive design elements promote a consistent and engaging user experience. Key functionalities, including user registration, job search, job date scheduling, and dashboard administration, are guided by intuitive user interfaces. The deliberate integration of the React JS library enables the seamless and contemporary presentation of content, whereas Tailwind CSS enhances the overall sophistication. The front-end design places equal emphasis on functionality and aesthetics, creating a visually appealing and user-friendly environment that supports the project's objective of enabling smooth collaboration among startup consultancy ecosystem participants.

4.2 Back-End Design

The back-end design of the "CONNECT" project has been carefully crafted to establish a resilient and expandable framework for the operation of the platform. By utilizing Node.js and Express.js, the back-end architecture guarantees streamlined integration with the MongoDB database, effective management of data interactions, and user authentication. RESTful API endpoints are purposefully engineered to facilitate seamless communication between the front-end and back-end components. These endpoints provide support for critical functionalities including consultant profiles, payment processing, user administration, and appointment scheduling. Security measures are strengthened through the use of JWT, which enables secure user authentication and authorization. By meticulously evaluating server-side logic and data structures, the back-end design establishes a foundation for a dependable and adaptable consulting platform by giving precedence to performance, scalability, and maintainability. Technology used-

- NodeJS
- Express JS
- MongoDB

4.3 Implementation Requirements

Front-End Implementation:

1. User Interface Development:

- Utilize React.js to create dynamic and responsive user interfaces that align with the design specifications.
- Implement components for user registration, consultant search, appointment scheduling, and user dashboards.

2. Interactivity and State Management:

- Leverage React state and props to manage the dynamic content and interactivity of the user interface.
- Implement state management solutions, such as Redux or Context API, to ensure efficient data flow and updates.

3. API Integration:

- Connect the front-end to the back-end through RESTful API endpoints, enabling seamless data exchange.
- Implement asynchronous requests using tools like axios to fetch and send data between the client and server.

4. User Authentication:

- Integrate JWT-based user authentication for secure login and registration processes.
- Implement private routes and authorization mechanisms to control access to specific features based on user roles.

Back-End Implementation:

1. Server-Side Logic:

- Develop server-side logic using Node.js and Express.js to handle incoming requests and execute the necessary operations.
- Implement middleware functions for tasks like authentication, error handling, and request parsing.

2. Database Integration:

- Utilize MongoDB for data storage and retrieval, creating collections and documents that align with the defined data models.
- Implement CRUD (Create, Read, Update, Delete) operations to manage user profiles, consultant information, appointments, and payments.

3. RESTful API Endpoints:

- Design and implement RESTful API endpoints for each major feature, ensuring a standardized and scalable approach to data interaction.
- Include endpoints for user management, consultant profiles, appointment scheduling, and payment processing.

4. Security Measures:

- Implement security measures such as data validation, sanitation, and encryption to protect against common vulnerabilities.
- Integrate HTTPS for secure data transmission and implement best practices for secure coding.

5. Testing and Debugging:

- Conduct thorough testing of both front-end and back-end components to identify and address bugs, ensuring the reliability of the entire system.
- Use testing frameworks like Jest and Super test for automated testing of server-side logic and API endpoints.

6. Deployment:

- Deploy the application on a hosting platform, ensuring proper configuration of server environments and database connections.
- Implement continuous integration and deployment (CI/CD) pipelines for streamlined and automated deployment processes.

CHAPTER 5

Implementation and Testing

5.1 Implementation of Database

The database implementation for the "CONNECT" project entails the establishment of 'CONNECT' MongoDB database, which will function as the primary repository for a variety of data entities. The designated collections for representing user profiles, blog content, appointment details, and respectively, are **-usersCollection**||, **-blogsCollection**||, **-applicantsCollection**||, and **-paymentsCollection**||. In accordance with the specifications of the project, the data models are rigorously defined with respect to fields, data types, and relationships. Priority is given to the implementation of query optimization and efficient indexing in order to improve the efficacy of data retrieval. Systematically establishing CRUD operations for each collection guarantees the smooth administration of data interactions.

The integration of robust validation and sanitization mechanisms ensures the preservation of data integrity and security. A secure connection is established between the Node.js server and the MongoDB database. This connection is configured with authentication credentials and connection parameters. Integration and unit tests, in addition to other exhaustive error management and testing procedures, serve to bolster the dependability of database interactions. In the final stage, factors such as backup and deployment strategies are taken into account to guarantee a scalable and resilient database environment during the production phase.

There are 3 collections in the -CONNECT|| database. These are list

1. applicantsCollection
2. usersCollection
3. blogsCollection

5.2 Implementation of Front-End Design

5.2.1 Home Page

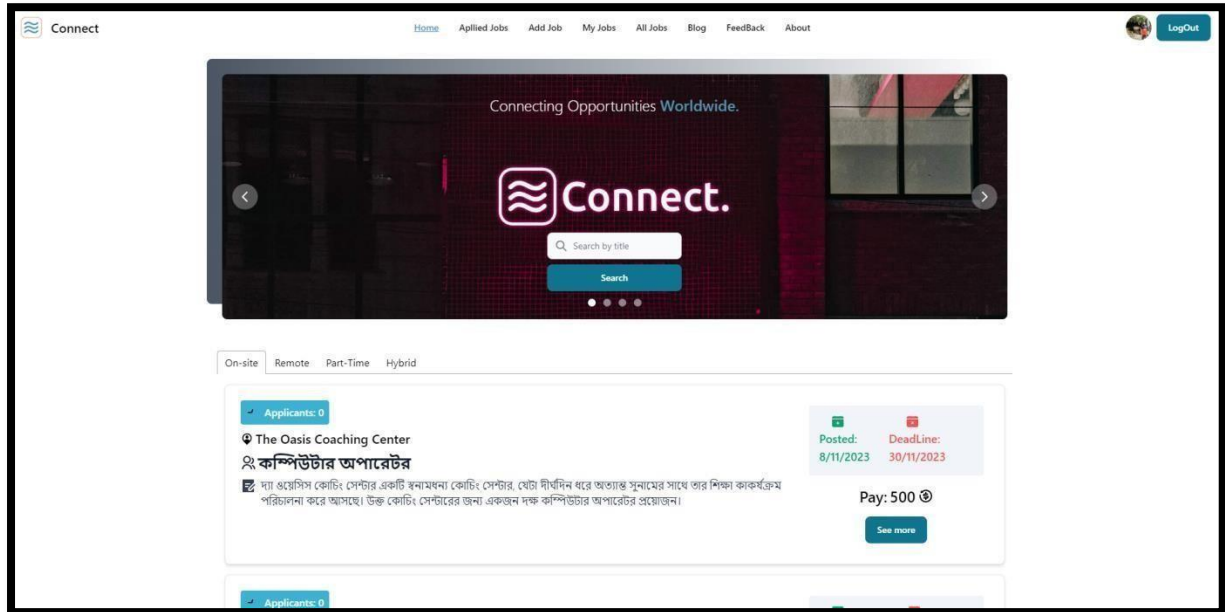


Figure 5.2.1.1: Home Page

In the landing page or home page, a user will see the beautiful user interface of -CONNECT. In the banner section there is a welcoming picture and some navigation option in navigation bar at the top.

5.2.2 Applied job page

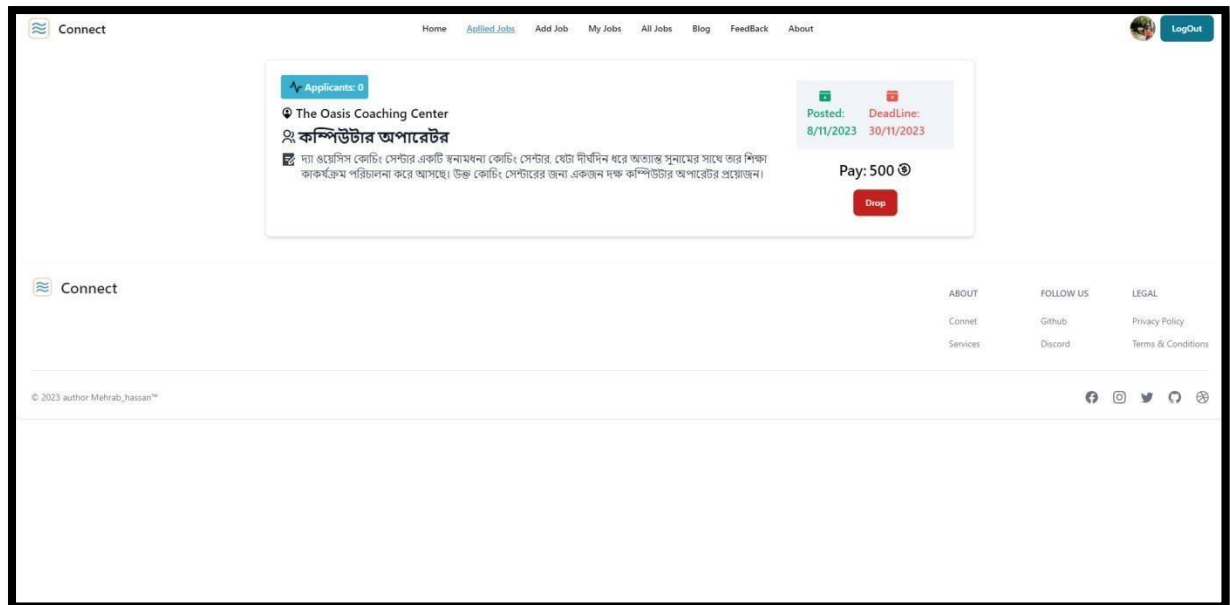


Figure 5.2.2.1: Applied Job Page

In -All jobs|| page is for applicants who have applied for jobs. Here they can see those applied jobs in which they have applied .Here also they can see the date of applied and the deadline of the job. Here is also the payment option and also drop option by which applicants can delete the job from applied section.

5.2.3 Add jobs page

Connect

Home Applied Jobs [Add Job](#) My Jobs All Jobs Blog FeedBack About

Logout

Post Your Job To JobFeed

Username
Bonnie Green

Job Title

Job Description

Job Description

Salary Range
\$ Salary Range

Job Banner

URL

Category: on-site

Deadline:

Post

Connect

ABOUT
Connet
Services

FOLLOW US
Github
Discord

LEGAL
Privacy Policy
Terms & Conditions

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Figure 5.2.3.1: Add jobs Page

In -Add jobsll page job poster can post job. After fulfilling all the details someone can apply for the job according to the vacancy. Job poster will set every requirement for the job for applicant.

5.2.4 My jobs page

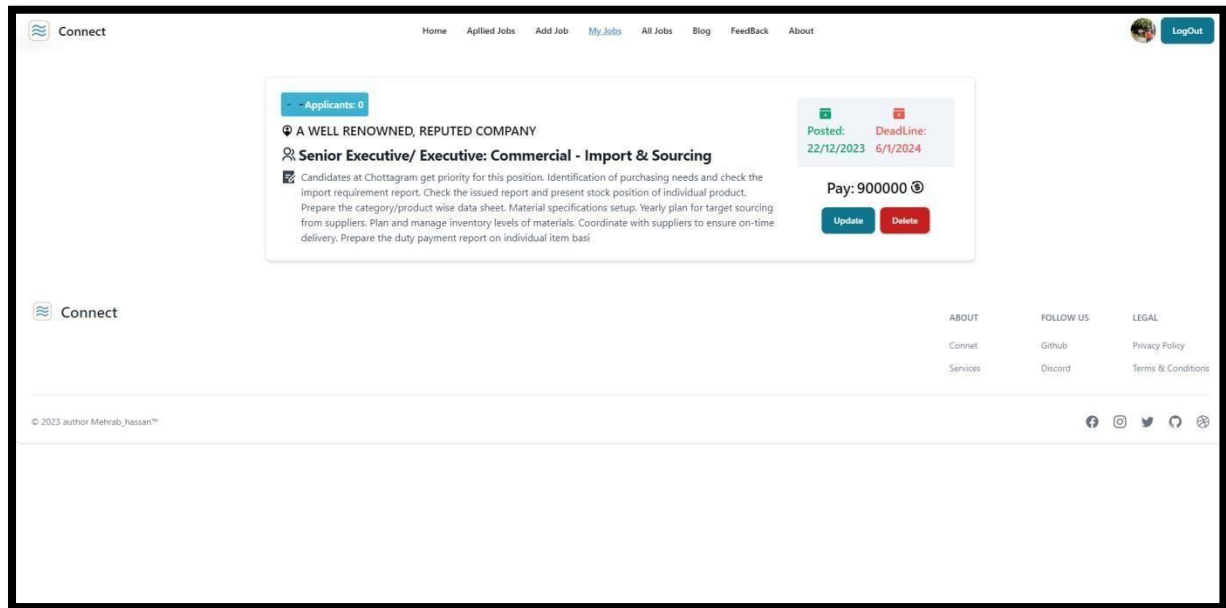


Figure 5.2.4.1: My job Page

–My Jobll page contains all the jobs which an applicant applied for.

5.2.4 All jobs Page

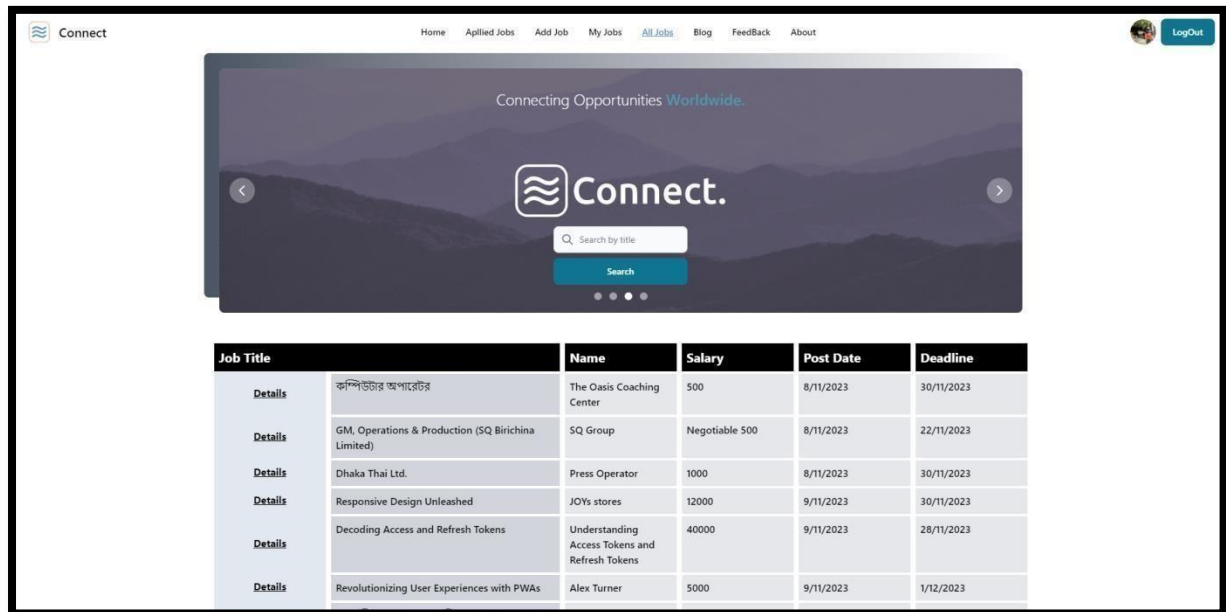


Figure 5.2.6.1: Add job Page

Here in this page user can find the details of –All Jobs|| teams and authority. One can all jobs here.

5.2.5 Blogs Page

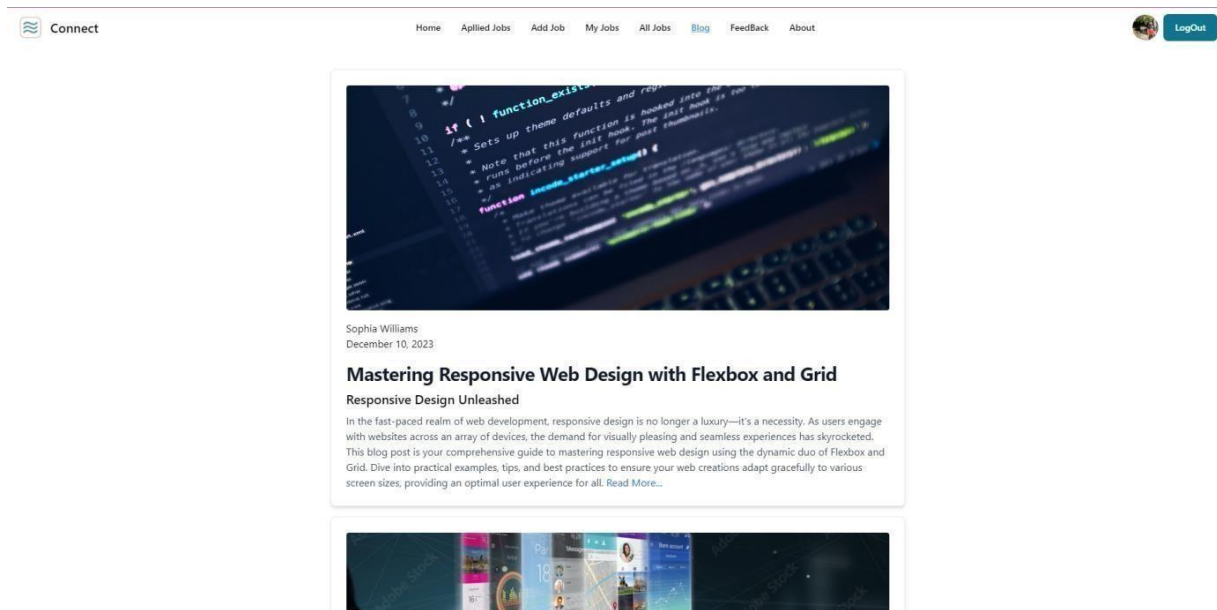


Figure 5.2.7.1: Blog Page

Here in this page user can find the Blogs and post for more knowledge.

5.2.6 Feedback Page

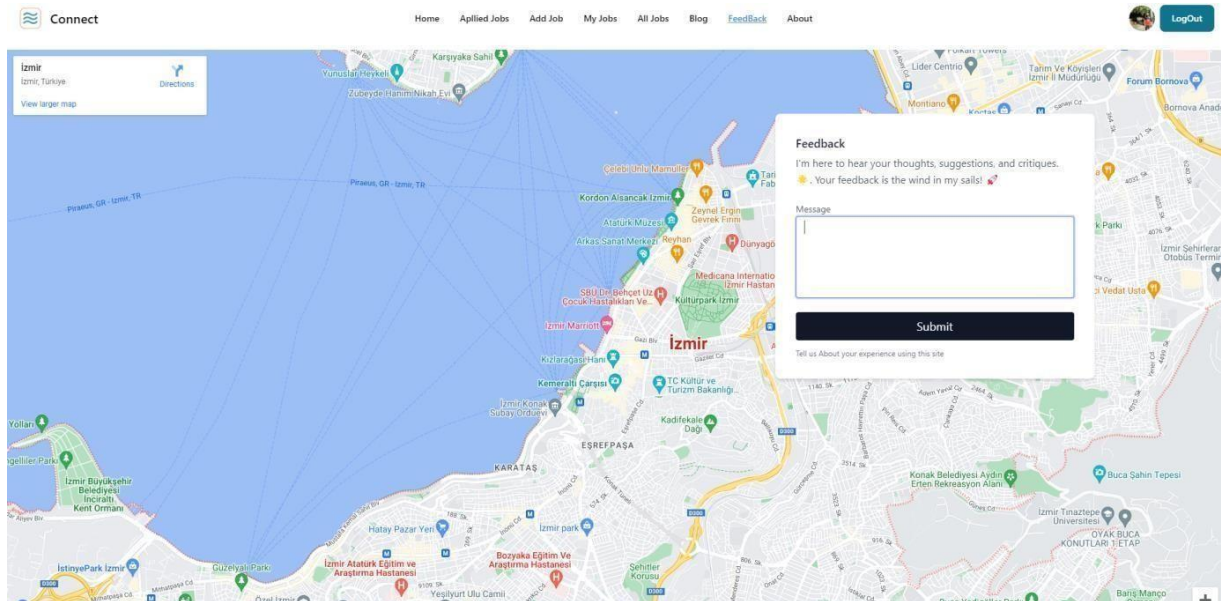


Figure 5.2.8.1: Feedback Page

Here in this page user can send feedback of their user experience through this feedback option.

5.2.6 About Page

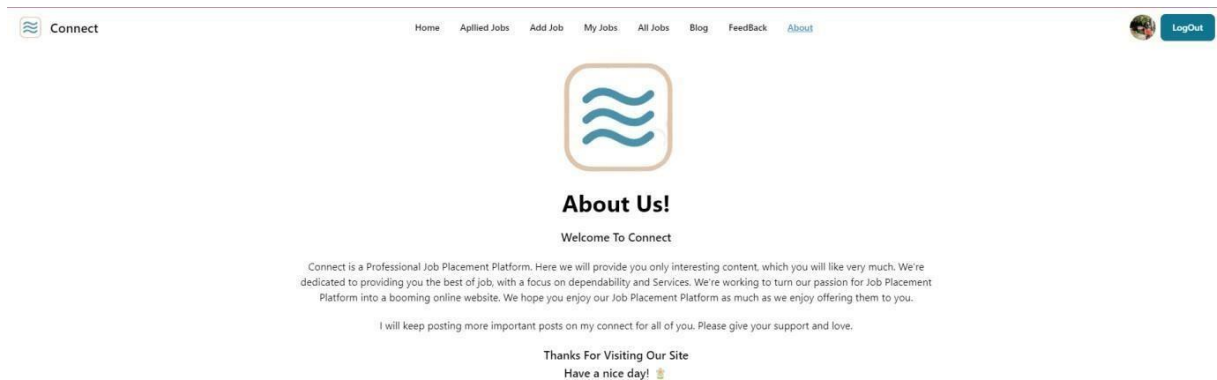


Figure 5.2.9.1: About Page

Here in this page user can see about the website and basic info of working procedure. When our area of work will increase here will be added those info.

5.3 Testing Implementation

The phase of testing implementation holds significant importance in the "CONNECT" project as it serves to verify the overall system's dependability, functionality, and security. This comprehensive methodology incorporates evaluation of both the front-end and back-end, utilizing an assortment of frameworks and tools to analyze distinct facets of the application. The principal objective is to detect and resolve potential concerns, thereby guaranteeing a smooth and flawless user experience. Front-end testing focuses on the visual and interactive elements, as well as the responsiveness, of the user interface. It employs comprehensive coverage through the use of tools such as Jest, React Testing Library, Selenium, or Cypress.

Back-end testing is concerned with the verification of database interactions, API endpoints, and server-side logic. To ensure thorough testing, Mocha, Chai, and Super test are utilized. End-to-end testing evaluates the overall functionality of a system by simulating real-world user scenarios. By incorporating rigorous testing procedures, the "Startup Repair" platform not only improves its overall quality but also fosters user trust in its functionality and security.

5.4 Test Results and Reports

TABLE 5.4.1: TEST RESULTS AND REPORTS

SL.	Test Name	Expected Result	Result
01	User Registration	User created successfully	Successful
02	User Login	User Authentication ok	Ok
03	User Authorization	Can determine admin and normal user	Successful
04	Dashboard authorization for each user	successful	Successful
05	Updating user info	updated	Successful
06	APIs integration	Fetching Data	Fetching
07	Payment method	Pay to SSLcommerze	Successful

CHAPTER 6

Impact on Society and Environment

6.1 Impact on society

The "CONNECT" project has the potential to make a substantial impact on society by addressing critical needs within the job solution ecosystem. The platform's multifaceted features and functionalities contribute to fostering collaboration and support among applicants, job poster, and administrators. Here are several ways in which the project could positively impact society:

- **Applicants Support:** The platform offers a centralized hub where aspiring applicants can seek guidance and support from experienced employee. This support can significantly enhance the success rate of applicants, fostering innovation and economic growth.
- **Career Opportunities for Fresher:** Fresher, particularly those with expertise in various domains, can leverage the platform to expand their reach and connect with a diverse clientele. This not only benefits individual posts but also contributes to the growth of the job industry.
- **Knowledge Sharing and Learning:** The incorporation of features such as blogs and user profiles encourage knowledge sharing and continuous learning within the startup community. This collaborative environment helps disseminate valuable insights and best practices.
- **Enhanced Access to Application Services:** The platform facilitates streamlined access to job finding services, breaking down geographical barriers. Users from various locations can connect with companies relevant to their needs, democratizing access to expertise.
- **Economic Development:** By supporting job applicants and job poster, the "CONNECT" project contributes to economic development. Successful jobs can generate employment opportunities, stimulate local economies, and drive innovation.

- **Efficient job Management:** The job application scheduling system streamlines the consultancy process, ensuring efficient time management for both applicants and job poster. This can lead to improved productivity and more effective utilization of resources.
- **Transparent Payment Processes:** The integration of a secure payment system enhances transparency in financial transactions between users and consultants. This reliability fosters trust and contributes to the overall credibility of the platform.
- **Educational Impact:** The platform's emphasis on blogs and knowledge-sharing features can serve as an educational resource for individuals interested in easy job solution. It provides insights into real-world experiences and industry trends.
- **Technological Advancement:** Leveraging modern technologies such as React.js, Node.js, and MongoDB, the project contributes to the technological advancement of the job solution sector. This adoption of innovative technologies can inspire similar advancements in related industries.
- **Community Building:** The creation of applicant, job poster and dashboards fosters a sense of community among platform users. This community-building aspect can lead to collaborative initiatives, networking opportunities, and the formation of valuable professional connections.

6.2 Impact on environment

While the direct impact of the "CONNECT" project on the environment may be indirect compared to projects with explicit environmental goals, there are several aspects where its implementation can contribute to sustainability and environmental responsibility:

- **Reduced Physical Meetings:** By facilitating online consultations and appointments, the platform reduces the need for physical meetings and travel. This can result in a decrease in carbon emissions associated with commuting, contributing to a more sustainable approach to business interactions.
- **Paperless Transactions:** The integration of secure online payment methods eliminates the need for paper-based transactions. This reduction in paper usage aligns with environmentally friendly practices by minimizing resource consumption and lowering the environmental impact associated with paper production and waste.
- **Encouraging Green Practices:** The platform can incorporate features or information encouraging consultants and users to adopt environmentally friendly practices within their businesses. This might include guidance on sustainable business operations or eco-friendly initiatives.
- **Digital Knowledge Sharing:** The emphasis on blogs and knowledge-sharing features promotes the exchange of information in a digital format. This reduces reliance on printed materials and encourages the dissemination of knowledge in an eco-friendly manner.
- **Energy-Efficient Technologies:** The project's use of modern and energy-efficient technologies, such as serverless architecture, can contribute to a reduction in overall energy consumption. Leveraging cloud services effectively can lead to more sustainable hosting solutions.
- **Remote Work Opportunities:** By supporting remote work for consultants and users, the platform indirectly contributes to reducing the carbon footprint associated with commuting. This aligns with global trends toward more flexible and sustainable work arrangements.
- **Green Hosting Practices:** The choice of hosting providers and their commitment to green and sustainable practices can further influence the

environmental impact of the project. Opting for hosting solutions with renewable energy sources can contribute to an eco-friendlier footprint.

- **Environmental Awareness:** The platform can include features or campaigns that promote environmental awareness and responsibility within the job solution community. This may include highlighting the importance of sustainable business practices or partnering with environmentally focused organizations.

CHAPTER 7

Conclusion and Future Scope

7.1 Conclusion

The "CONNECT" initiative signifies an all-encompassing and groundbreaking resolution with the purpose of fundamentally transforming the job solution domain. By incorporating state-of-the-art technologies and prioritizing user needs, the platform effectively tackles significant obstacles encountered by administrators, applicants, and job poster. The project's achievements are emphasized by its extensive range of features, which include user authentication and registration, consultant identification and scheduling, and user, and administrator interfaces that are exceptionally robust.

The platform's influence transcends technological boundaries and encompasses societal and economic aspects as well. By promoting cooperation, the exchange of information, and assistance among members of the job solution community, "CONNECT" serves as a catalyst for unemployment removal achievement. The accessibility and user experience are improved through the utilization of user-friendly interfaces powered by React.js and Tailwind CSS. Additionally, the back-end infrastructure, constructed with Node.js and MongoDB, ensures scalability, efficiency, and security.

By judiciously integrating SSLCommerz to facilitate secure online payments, the platform enhances its credibility and fosters user confidence. The project's dedication to environmental stewardship is apparent in its implementation of electronic transactions, reduced reliance on in-person meetings, and promotion of environmentally sustainable practices.

Upon its culmination, the project imparts a lasting impact on the job solution sector, exemplifying the fundamental values of collaboration, sustainability, and innovation. "CONNECT" exemplifies the potential that emerges from the convergence of cutting-edge technology and an in-depth comprehension of user requirements. By virtue of its capacity to enable job applicants, generate economic prospects, and promote environmental awareness, the undertaking establishes a standard for forthcoming startup support platforms. The progression from conception to execution highlights the importance of adopting a comprehensive perspective, in which technology functions as a facilitator for beneficial

transformations in society and the economy. In summary, "CONNEC" not only achieves its technical goals but also presents a vision of a future in which applicants prosper, employment flourish, and innovation is limitless.

7.2 Future Scope

The future scope of the "CONNECT" project holds promising opportunities for expansion, enhancement, and continued impact in the dynamic landscape of job solution. Several avenues for growth and development can be explored to ensure the project remains relevant and responsive to emerging trends and user needs. Here are key areas of future scope for the "CONNECT" platform:

1. **Diversification of Job Solution Services:** Explore opportunities to broaden the range of job solution services offered on the platform. Introduce specialized categories or industry-specific expertise to cater to a more diverse set of applicant needs.
2. **Integration of Real-time Communication Tools:** Enhance the job solution experience by integrating real-time communication tools. Consider incorporating features like video calls and instant messaging to facilitate seamless and immediate interactions between applicants and job poster.
3. **Implementing a Ratings and Reviews System:** Introduce a robust ratings and reviews system for both applicants and job poster. This will not only provide valuable feedback but also establish a reputation mechanism, aiding users in selecting the most suitable consultants for their specific requirements.
4. **Incorporation of AI-driven Chatbots:** Leverage artificial intelligence to implement chatbots that can assist users in navigating the platform, scheduling appointments, and accessing relevant information. This AI-driven support can enhance user engagement and satisfaction.
5. **Enhanced Data Security Measures:** Strengthen data security protocols to safeguard user information and transaction details. Consider implementing advanced encryption techniques and regular security audits to ensure a secure environment for all platform users.
6. **Introduction of a Referral Program:** Implement a referral program to incentivize users and consultants to bring in new members to the platform. This can help in organically growing the user base while rewarding those who contribute to the platform's expansion.

7. **Integration with External APIs:** Explore partnerships and integrations with external APIs to enrich the platform's features. This could involve integrating with popular project management tools, communication platforms, or financial software to provide a comprehensive user experience.
8. **Development of a Mobile Application:** Create dedicated mobile applications for iOS and Android platforms to ensure a seamless user experience on mobile devices. A mobile app can enhance accessibility and convenience for users and consultants on the go.
9. **Collaboration with Industry Influencers:** Establish job solution with industry influencers and thought leaders in job solution ecosystems. Their involvement can add credibility to the platform and attract a broader audience of applicants and job poster.
10. **Regular User Feedback Surveys:** Conduct regular user feedback surveys to gather insights into user preferences, pain points, and suggestions for improvement. Use this feedback to iteratively enhance the platform based on the evolving needs of the community.
11. **Inclusion of Legal Consultancy Services:** Consider expanding the scope of consultancy services to include legal expertise. This can address legal challenges commonly faced by startups and provide users with valuable insights into navigating legal complexities.
12. **Development of a Knowledge Repository:** Create a comprehensive knowledge repository within the platform, housing articles, whitepapers, and resources relevant to job finding challenges. This repository can serve as a valuable self-help resource for applicants and job poster.
13. **Implementation of a Loyalty Program:** Introduce a loyalty program to reward frequent users and consultants. Loyalty points, discounts, or exclusive benefits can incentivize continued engagement and foster a sense of community within the platform.

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