Design and Development of Job Board

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This work was supported by the Acropolis Institute of Technology

ABSTRACT

It is quite challenging task for the job seekers to find jobs that best suits the interests and skill set they have. The difficulties arise from not having proper knowledge on the organization's objective, their work culture and current job openings. In addition, it is also an important task for the recruiters of any organization to find the right candidate with desired qualifications for their current job openings. Online Job Boards have certainly made job seeking convenient on both sides. Job Board is the solution where recruiter as well as the job seeker meet aiming at fulfilling their individual requirement. Reaching wide range of audience on just a single click irrespective of their geographical distance is the cheapest as well as the fastest source of communication. "Job Board" is the web application which provides an easy and convenient search application for the job seekers to find their desired jobs and for the recruiters to find the right candidate. Job seekers from any background can search for the current job openings. Also, they can register with the application and update their details and skill set. They can search for available jobs and apply for their desired locations. Employer can register with the application and posts their current openings. They can view the Job applicants and can screen them according to the best fit. Users can provide a review about an organization and share their interview experience, which can be viewed by the Employers. Job seekers can easily browse and apply for job openings, while recruiters can post job listings, manage applications, and communicate with job seekers through a built-in chat system. Job Talk is a user-friendly job Board designed to streamline the job search process for both job seekers and recruiters. The objective of this application aims to develop a system enabling interaction between employers and applicants. Job seekers can easily browse and apply for job openings, while recruiters can post job listings, manage applications, and communicate with job seekers through a built-in chat system.

Introduction

Job Board is a web application, which serves jobseekers to find available job vacancies and Employers to identify eligible job seekers with the prospect of selecting the most qualified candidates. The only way to select best-qualified candidate is to have a pool of eligible applicants, which is possible by drawing the interest of individuals in the market. Job Boards best serve this purpose. E-recruitment has become the standard means for employers and job seekers to meet their respective objectives. The traditional methods for recruitment include Job fairs, University career employment services, Employee referrals, advertising in the newspapers,televisions etc. With the advancement in technology and growth of internet usage, the e- recruitment has revolutionized the way organizations hire and candidates search for jobs. With the Online Job Boards, the recruitment process is speeded up at every stage from job postings, to receiving applications from candidates, interviewing process. The cost of searching/posting jobs will be much less compared to the traditional way of advertising. Job Board stands as an effective means for Employers to outline the job vacancies, responsibilities and qualifications to attract jobseekers. Using the portal jobseekers can extensively search for jobs in companies, organizations and regions they may otherwise have not learnt.candidates/Employers can write a review about an organization, which might help them to change the way things are done.

Problem Statement

In today's competitive job market, finding the right job or the right candidate can be a daunting task. Traditional job Board often lack transparency and fail to provide job seekers and recruiters with a comprehensive understanding of the job opportunity or the company culture. This results in frustration, wasted time, and misaligned expectations for both parties.

Related Study

- Naukri.com: - Naukri.com is a popular job Board , but it lacks a built-in chat system that enables job seekers to communicate directly with recruiters. It also does not offer a feature that allows current and past employees to share their experiences and insights about a company's culture and work environment.

- Sarkari Naukri: Sarkari Naukri is a job Board run by the Indian government that focuses on government jobs. While it offers job listings, it lacks a built-in chat system that enables job seekers to communicate directly with recruiters. It also does not offer any features related to company culture or the work environment.

- Freshers world: Freshers world is a job Board that focuses on entry-level job opportunities for fresh graduates. While it offers job listings and the ability to apply for jobs directly through the portal, it lacks a built-in chat system that enables job seekers to communicate directly with recruiters. It also does not offer any features related to company culture or the work environment.

These portals lack the comprehensive features offered by **JobBoard**, such as a built-in chat system that enables open and transparent communication between job seekers and recruiters, and a feature that allows current and past employees to share their experiences and insights about a company's culture and work environment.

Methodology and Solution

Online Job Board project is web application built using MongoDB, as backend and HTML, JavaScript, and React as Frontend technologies. This web-based system has many stakeholders including job provider, job seekers and companies. It helps the user to access information about vacancies available from any location, thus saving time and money for visiting job consultancies. In this system the job seeker should register in the application using their name, address, contact number and email, educational qualifications, additional skills acquired, previous working experience etc. then only he/she can become part of this application. Email id becomes the username and the user can set a password to login into a session to upload resume, search and apply for jobs. The job seeker is presented with a web-based interface. All the users can see the general contents of the software system. The company (Job Provider) can register in the site as a job provider using company details like company name, address, representative name, contact phone/mail etc. Later on, after login he can post jobs, refresh jobs, update jobs, remove a job, manage job applicants and shortlist the applicants. Our proposed system is developed using MongoDB as backend and HTML, React, JavaScript technologies as front end. The system is web based so that the user can easily login to it, only requirement is an internet connection.

Security: MERN stack is secure, with built-in security features in MongoDB and Express.js.

Socket.IO API: -

It provides a powerful and versatile tool for real-time communication, making it a popular choice for building interactive web applications and mobile applications.

Real-time communication: Socket.IO API enables real-time bidirectional communication between the server and the client, allowing for quick updates and data transfer.

Cross-platform support: Socket.IO API works on various platforms, including desktop and mobile browsers, as well as native mobile applications.

Scalability: Socket.IO API is highly scalable and can handle many simultaneous connections without compromising performance.

Automatic reconnection: Socket.IO API provides automatic reconnection, ensuring that users can stay connected even if there is a temporary network disruption.

It provides a powerful and versatile tool for real-time communication, making it a popular choice for building web and mobile applications that require high-quality audio and video.

System Architecture:

The project has three main parts: the database, the frontend, and the backend.
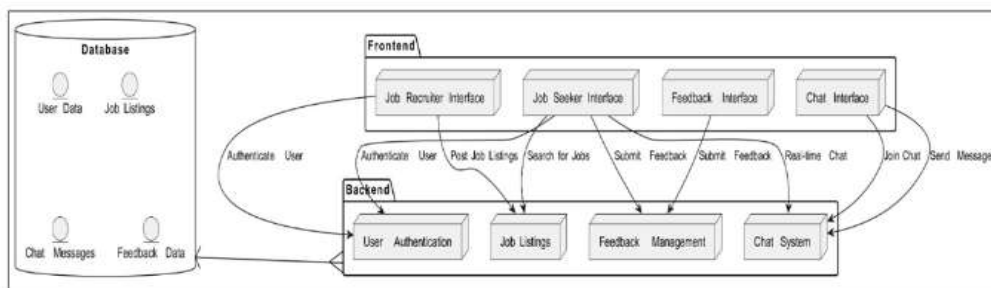
Database: This is where the user data and the job listings are stored. The database is a cylinder on the left side of the diagram. It has two components: User Data and Job Listings. User Data contains the information about the users, such as their name, email, password, resume, etc. Job Listings contains the information about the jobs, such as the title, description, salary, location, etc.

Frontend: This is what the users see and interact with when they visit the website. The frontend is a rectangle on the right side of the diagram. It has five components: Job Reseller Interface, Job Seeker Interface, Feedbacks, Chat Interface, and Data Chart. Job Reseller Interface allows the users to post and

manage their own job listings. Job Seeker Interface allows the users to search and apply for jobs. Feedbacks allows the users to rate and review the jobs and the employers. Chat Interface allows the users to communicate with each other. Data Chart shows the statistics and trends of the job market.

Backend: This is what handles the logic and functionality of the website. The backend is a rectangle on the bottom of the diagram. It has four components: User Authentication, Job Listings Management, Feedbacks Management, and Chat System. User Authentication verifies the identity and credentials of the users. Job Listings Management creates, updates, deletes, and retrieves the job listings from the database. Feedbacks Management creates, updates, deletes, and retrieves the feedbacks from the database. Chat System enables the real-time messaging between the users.

Outcomes

The overall purpose of this system is to computerize the whole process and thus prevent the intervening errors. We also tried to follow the holistic design principle so that the interface of the system is simple. Here are some of the results of Job Board .

1. One of The Most Cost-Effective and Affordable Solutions Creating your own Job Board is one of the most cost- effective and affordable web or mobile app development solutions in the market. That's why you can allow the application user to app for all those jobs without paying any cost. This will help you to attract more and more applications to your portal and rely on your services as well.

2. Regular Job Updates This is one of the best benefits that any Job Board provide to their users. Once you join a job Board , you will get regular job updates. This will always keep you motivated and make your search and apply for jobs better in your career.

3. Notification On New Jobs or Job Alerts As soon as any job becomes available in the market, the portals are capable enough to provide you with job availability information through notification, mails, and SMS. You can just click on the notification and go through the whole job description and apply for it.

4. Classified If you sign up with a job Board , they will keep your personal details classified from the other applicants. Only the recruiting company is allowed to see your full resume during the screening process. This helps the user to search for better job opportunities and keep it secret from the current working company.

5. Resourceful As a user, you will be able to browse a number of jobs that fit your profile. With help of the latest technologies such as AI and enhanced search features. You don't have to even search job; you just have to upload your resume and then wait for the AI to work to find a desirable job for you. Just scroll through those results and apps on the companies that you liked the most**.**

Conclusion

It can be concluded that this project of Online Job Board was a real learning experience. The principles of software production were well implemented throughout the system. The project has been made as per as the given specifications. The Online Job Board developed by us is purely based on MERN. A Job Board provides an efficient search for online information on job vacancies for Job Seekers. The main goal of this portal is to attempt to produce the right graduates based on the industry needs. However, it is important that be aware the Job Board can never fulfill all the problems of jobless graduates.
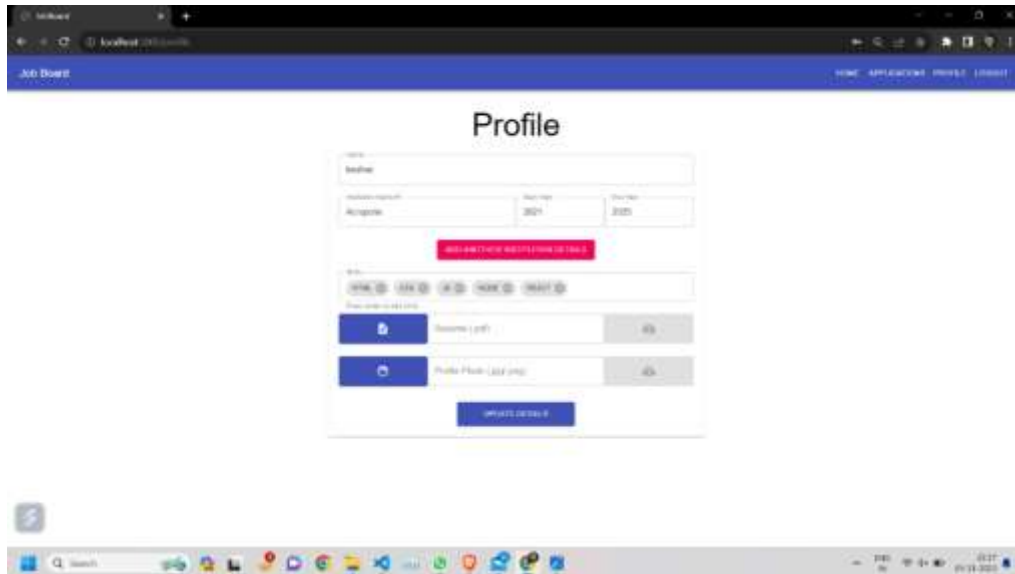
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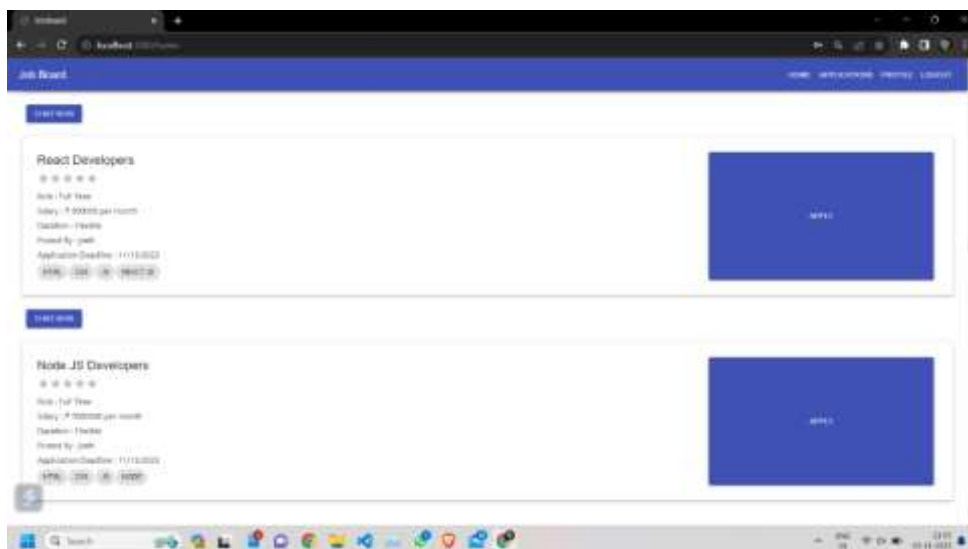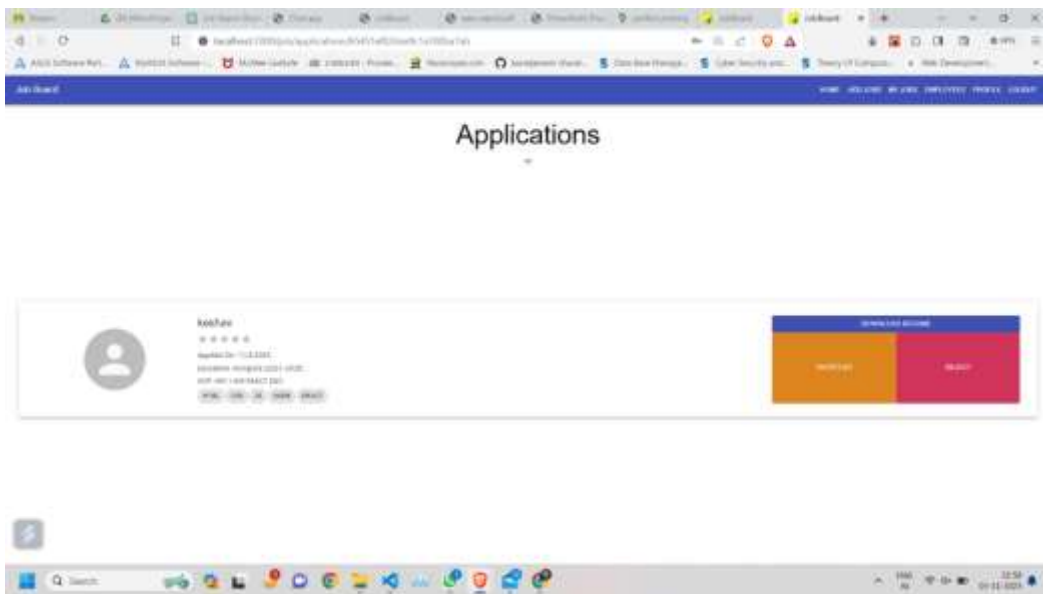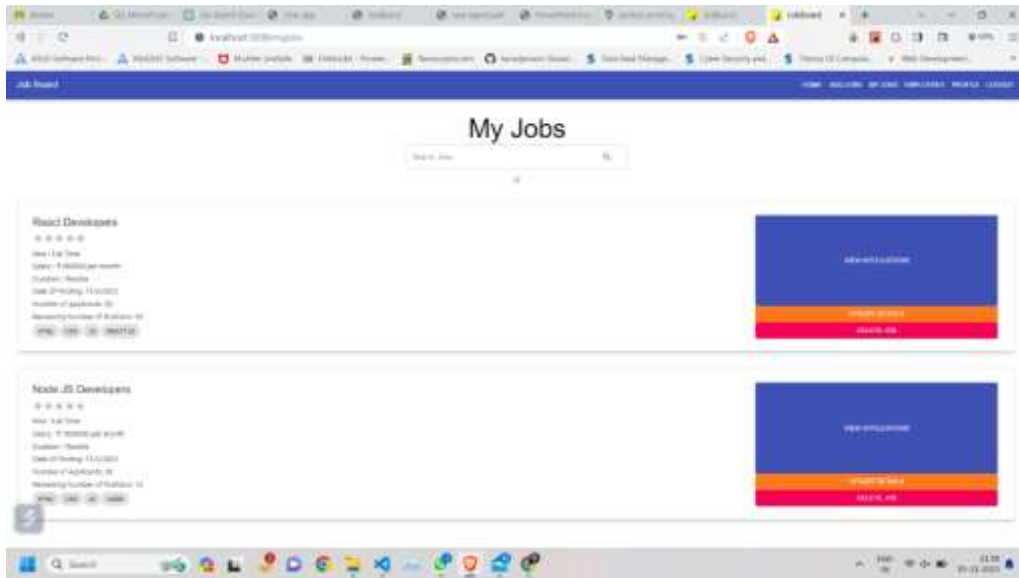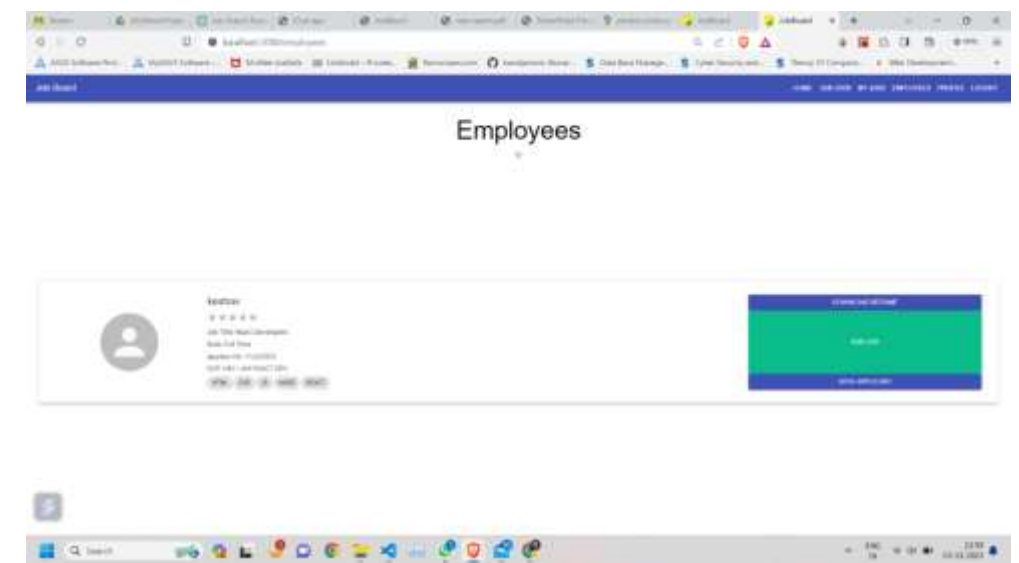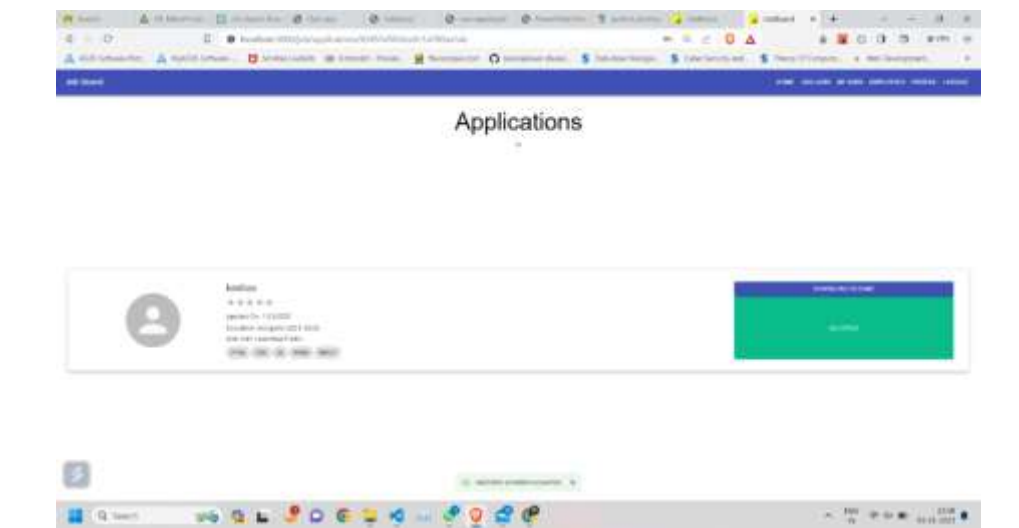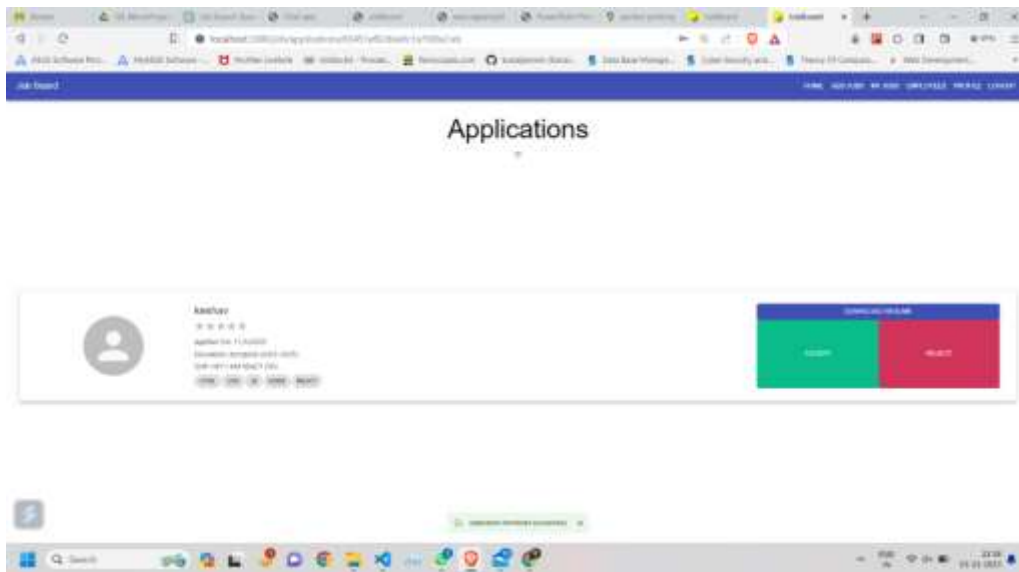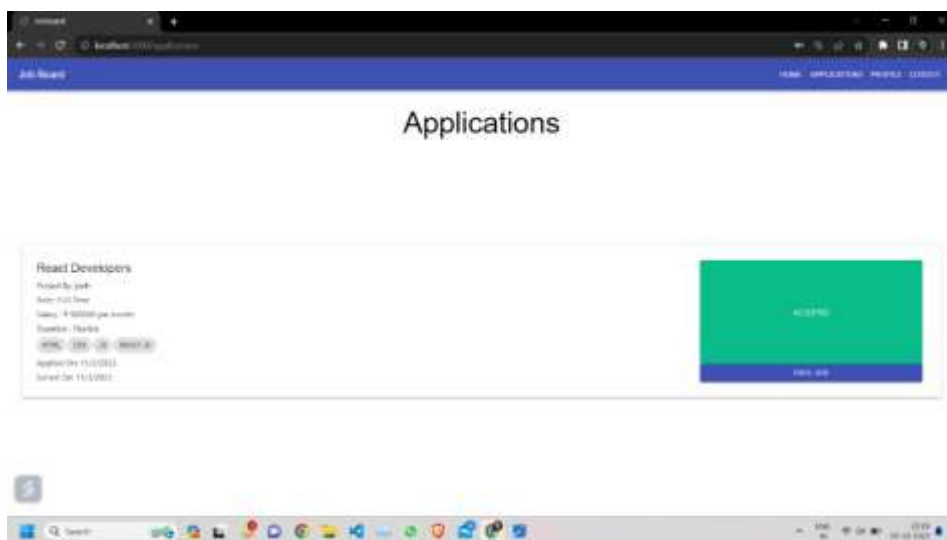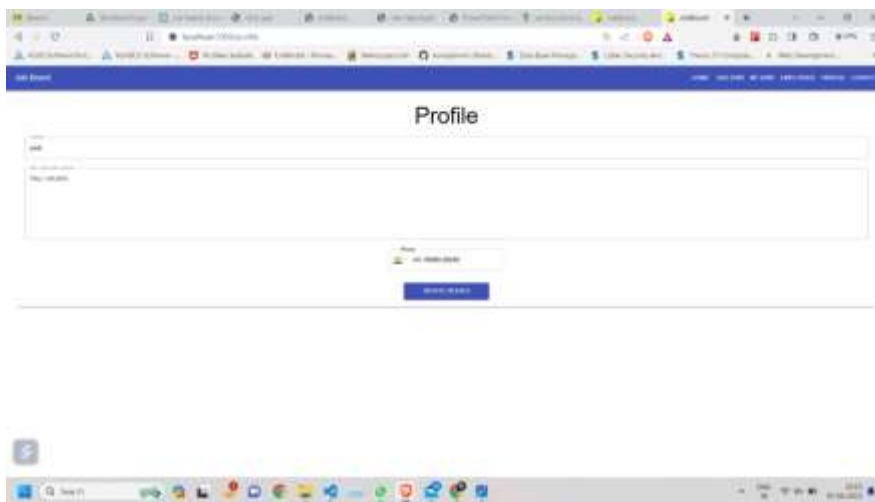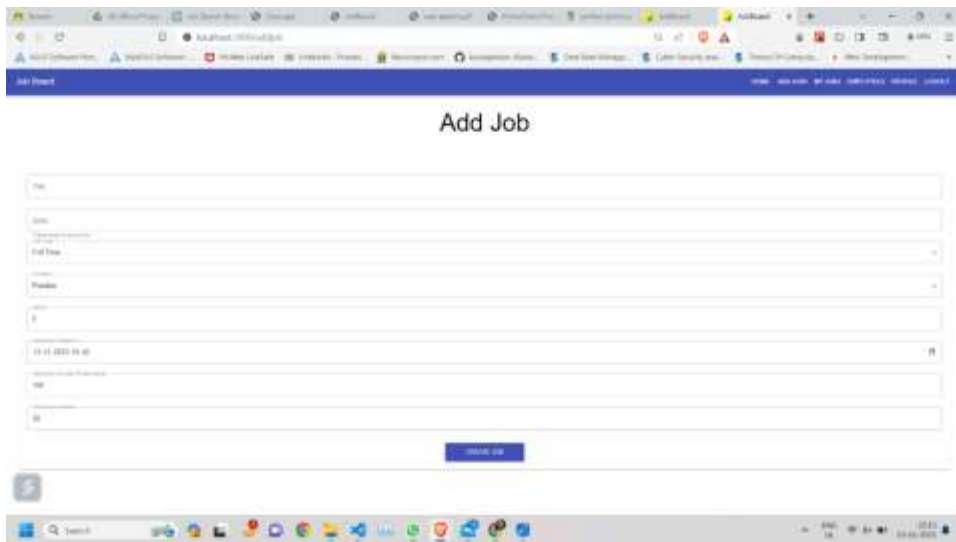
Block Diagram:

- **User Interface**: This is the part of the system that the users see and use on their devices. It has two types of users: employees and recruiters. Employees are the people who are looking for jobs. Recruiters are the people who are offering jobs.

- **Employee**: An employee can use the user interface to filter jobs based on their preferences, such as location, salary, skills, etc. They can also apply for the jobs that they are interested in. They can also use the global chat system to ask questions and get advice from other users.

- **Recruiter**: A recruiter can use the user interface to post job listings that describe the requirements and benefits of the jobs they are offering. They can also accept applications from the employees who applied for their jobs. They can also use the global chat system to answer questions and give advice to other users.

- **Global Chat System**: This is a feature of the user interface that allows all the users to communicate with each other in real time. They can use it to ask questions and get advice about the job market, the company insights, and other topics related to the job listing system.

- **Backend Server**: This is the part of the system that handles the logic and functionality of the user interface. It connects to the database and performs operations on the data.

- **Database**: This is where the data of the system is stored. It contains the information about the users, such as their name, email, password, resume, etc. It also contains the information about the job listings, such as the title, description, salary, location, etc.
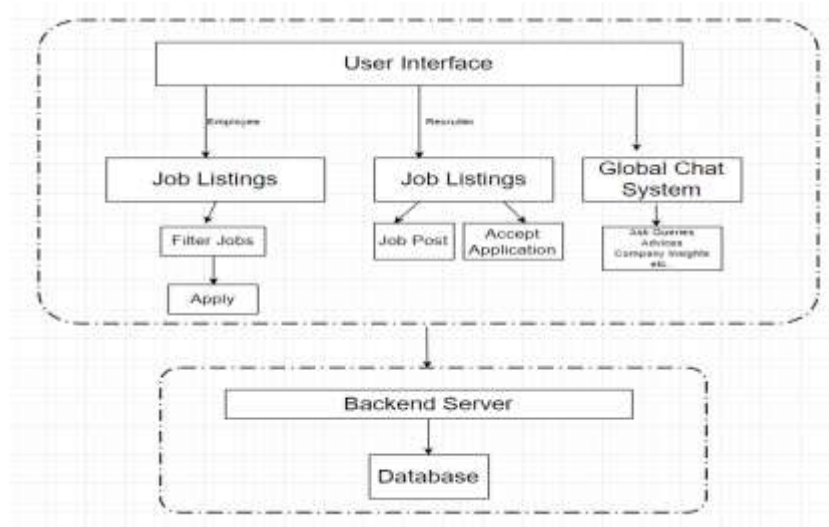
Limitations:

1.Limited Initial User Base: Launching a new job Board may face difficulties in attracting users initially, especially when competing with established platforms. Building a user base takes time and requires effective marketing and user acquisition strategies.

2.Data Privacy Compliance: Adhering to data privacy laws, such as the General Data Protection Regulation (GDPR), is essential. Ensuring that user data is handled securely and in compliance with regulations is crucial for legal reasons and to establish trust among users.

3.Technical Scalability: As the platform grows, it needs to scale technically to accommodate an increasing number of users and job listings. Ensuring that the infrastructure is scalable is critical to providing a smooth and responsive user experience.

4.Competition with Established Platforms: Established job search platforms like LinkedIn, Glassdoor, and Indeed already have a large user base. Competing with them requires offering unique features, a compelling user experience, and effective marketing strategies.

5.Monetization Strategy: Determining how the platform will generate revenue, such as charging employers for job listings, while remaining attractive to both job seekers and recruiters. Striking the right balance is crucial for the sustainability of the platform.

Future scopes

1. AI-driven Job Matching: Explore the integration of artificial intelligence to enhance job matching algorithms, providing more accurate and personalized job recommendations for users.

2. Mobile Application Development: Consider developing a mobile application to make the job search and application process more convenient for users on smartphones.

3. Global Expansion and Localization: Evaluate opportunities for global expansion, adapting the platform to different languages and cultures to reach a broader international audience.

4. Blockchain for Credential Verification: Investigate the use of blockchain technology for secure and transparent verification of candidate credentials, ensuring the authenticity of qualifications and experiences.

5. Strategic Partnerships and Industry Collaborations: Form strategic partnerships with educational institutions, companies, and industry associations to enhance the platform's credibility, broaden its user base, and stay aligned with industry trends.

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