JOB SPHERE

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ABSTRACT

The main aim of developing this project is to streamline the hiring process for employers and job seekers. It provides a centralized platform for posting and searching jobs across various sectors. Employers can create and manage job listings, view applicant profiles, and send direct messages to potential candidates. Job seekers can register, build profiles, upload resumes, and apply for jobs based on their qualifications and interests. The portal supports secure authentication using JWT and role-based access control. Admins oversee platform activities and manage user data. Built using the MERN stack and Spring Boot for authentication, it ensures fast performance and scalability. Real-time messaging enhances employer-applicant communication. Multi-language support improves accessibility for diverse users. Responsive UI ensures smooth user experience on all devices. The database securely stores user, job, and application data. This system aims to bridge the gap between talent and opportunity efficiently.

1. INTRODUCTION

This project aims to develop an intelligent and user-friendly job portal website that enhances the job search and recruitment experience. The platform will integrate advanced filtering, recommendations, real-time application tracking, and direct communication features to create a more efficient, transparent, and engaging hiring process.

Existing System

An existing job portal system allows job seekers to register, upload resumes, search for jobs, and apply online, while employers can post job listings, manage applications, and search for candidates. The system includes features like job alerts, application tracking, and company reviews for better decision-making. Employers benefit from applicant tracking systems (ATS), resume databases, and branding options.

Proposed System

The proposed job portal system will offer advanced features like video resumes, and customizable resume templates to enhance the hiring process. Job seekers can upload or record video resumes to showcase their skills and personality, giving employers a more interactive way to evaluate candidates. The platform will support multiple languages, ensuring accessibility for a diverse user base and improving communication between job seekers and recruiters globally.

2. REQUIREMENT ANALYSIS

Functional Requirements

1. User Module:
   - Registration
   - Login
   - User Profile management
   - Job search and application
   - Logout
2. Employer Module:
   - Registration
   - Login
   - Job posting and applicant management

-Notifying and alerting

-Logout

3. Admin Module:

-Login

-User and Job Post Management

-Reports and Analytics

-Notifications & Alerts

-Backup & Restore

-Logout

Non-Functional Requirements

➤ Performance:

The system should auto-scale and optimize performance under varying loads without manual tuning. Monitoring tools should automatically detect and report performance issues for minimal human oversight.

➤ Security:

Routine security checks and threat detection should run automatically with alerts for critical events. Human intervention is only needed for responding to verified breaches or policy updates.

➤ Reliability:

Automated failover and self-recovery mechanisms should handle most system failures. Admins are only required for handling rare or complex system outages.

Software Requirements

The software requirements document is the specification of the system. It should include both the definition and a specification of the requirements. It is a set of what the system should do rather than how it should do it. The software requirements provide a basis for creating the software requirements specification. It is useful in estimating cost, planning team activities, performing tasks and tracking the team's progress throughout the development activity.

Operating System : Windows 11 DataBase : MongoDB

➤ Frontend : React

➤ Programming Language : TypeScript

Framework :SpringBoot

> IDE :VSCode

Hardware Requirements

➤ Hardware Requirements are the most common set of requirements defined by any operating systems defined by any operating system or software application is the physical computer resources ,also known as hardware.

➤ Processor: Intel Core i5 , 1.1GHZ

➤ RAM: 8GB

➤ Hard Disk: 512GB

3. DESIGN

Project architecture represents number of components we are using as a part of our project and the flow of request processing i.e. what components in processing the request and in which order. An architecture description is a formal description and representation of a system organized in a way that supports reasoning about the structure of the system.
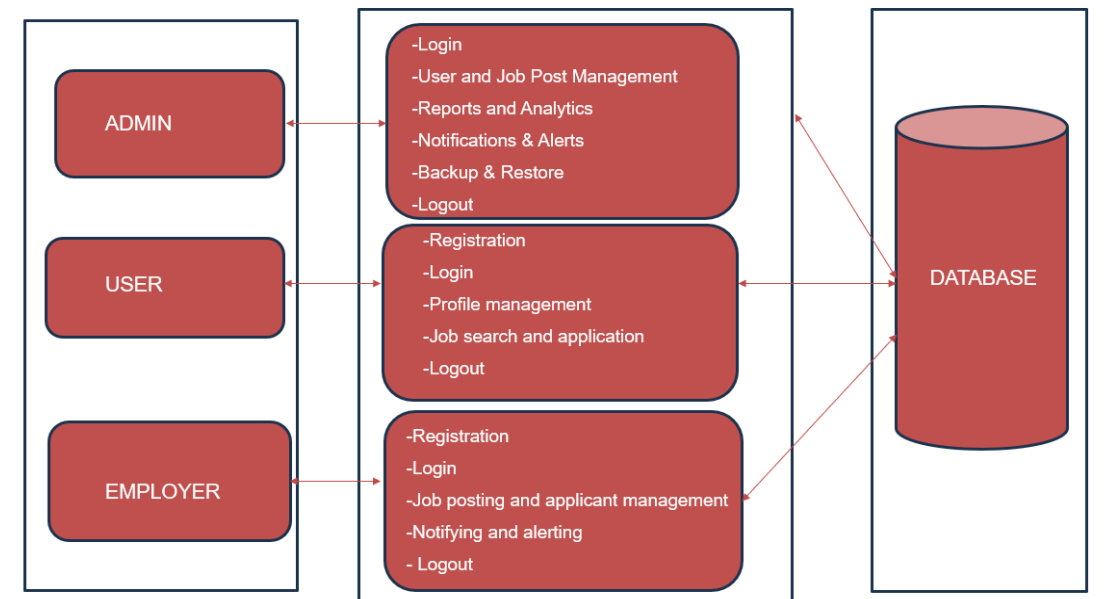
Software Architecture

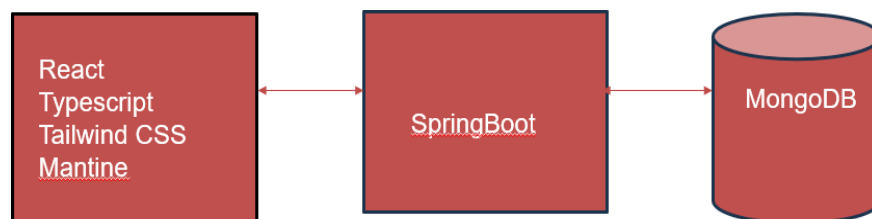Fig3.1Software Architecture

Technical Architecture

Fig3.2TechnicalArchitecture

4-TESTING

Software testing is a process, to evaluate the functionality of a software application with an intent to find whether the developed software met the specified requirements or not and to identify the defects to ensure that the product is defect free in order to produce the quality product.

As per the current trend, due to constant change and development in digitization, our lives are improving in all areas. The way we work is also changed. We access our bank online, we do shop online; we order food online and many more. We rely on software's and systems. What if these systems turnout to be defective? We all know that one small bug shows huge impact on business in terms of financial loss and goodwill. To deliver a quality produce we need to have Software Testing in the Software Development Process..

Unit Testing

During This first round of testing ,the program is submitted to assessments that focus on specific units.

or components of the software to determine whether each one is fully functional. The main aim of this end ours is to determine whether the application functions as designed In this phase, a unit can refer to a function, in dividual program or even a procedure, and White box testing method is usually used to get the job done. One of the biggest benefits

of this testing phase is that it can be run every time a piece of code is changed, allowing issues to be resolved as quickly as possible. It quite common for software developers to perform unit tests before delivering software to testers for formal testing.

Integration Testing

Integration testing allows individuals the opportunity to combine all of the units within a program and test them as a group. This testing level is designed to find interface defects between the modules/functions. This is particularly beneficial because it determines how efficiently the units are running to gather. Keep in mind that no matter how efficiently each unit is running, if they properly integrated, it will affect the functionality of the software program. In order to run these types of tests, individuals can make use of various testing methods, but the specific method that will be used to get the job done will depend greatly on the way in which the units are defined.

System Testing

System testing is the first level in which the complete application is tested as a whole.The goal at this level is to evaluate whether the system has complied with all of the outlined requirements and to see that it meets Quality Standards. System testing is under taken by independent testers who haven't played a role in developing the program. This testing is performed in an environment that closely mirrors production. System Testing is very important because it verifies that the application meets the technical, functional, and business requirements that were set by the customer.

5-SCREENSHOTS
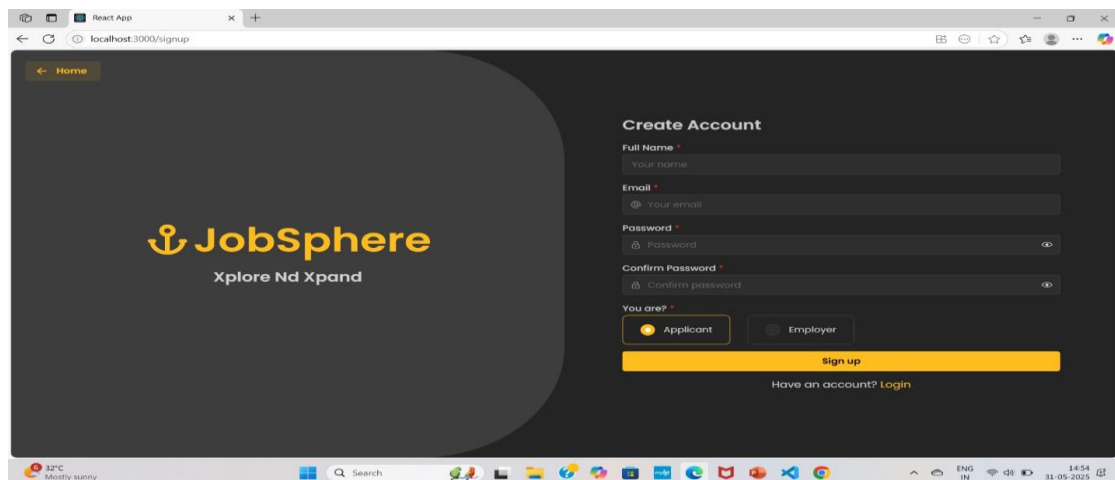
Fig 1.: SignUp
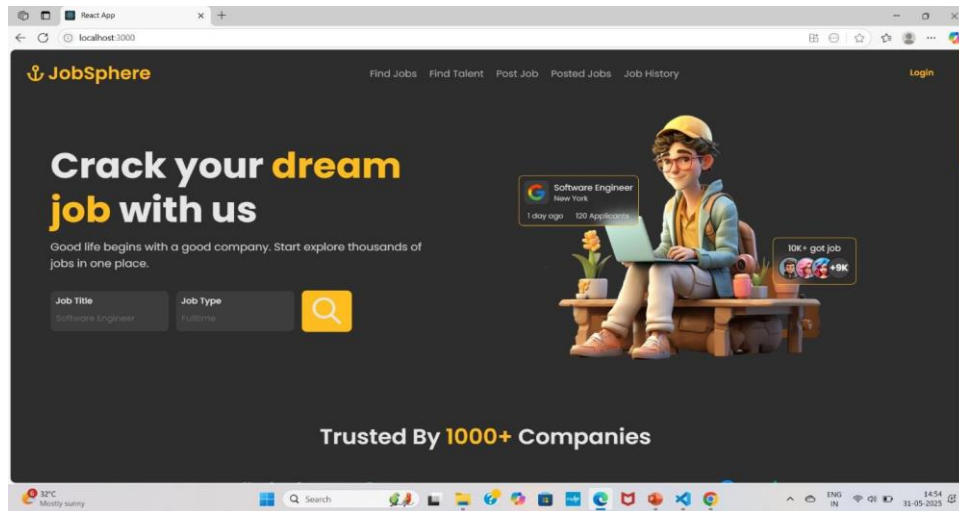
Fig2 : HomePage
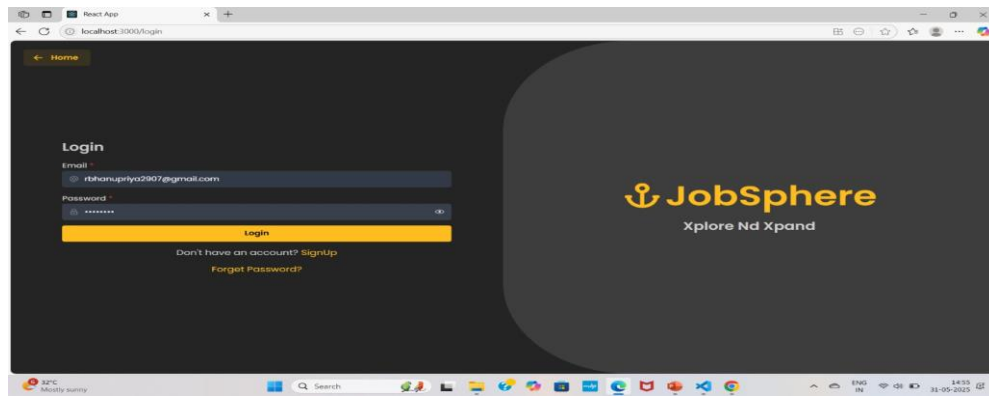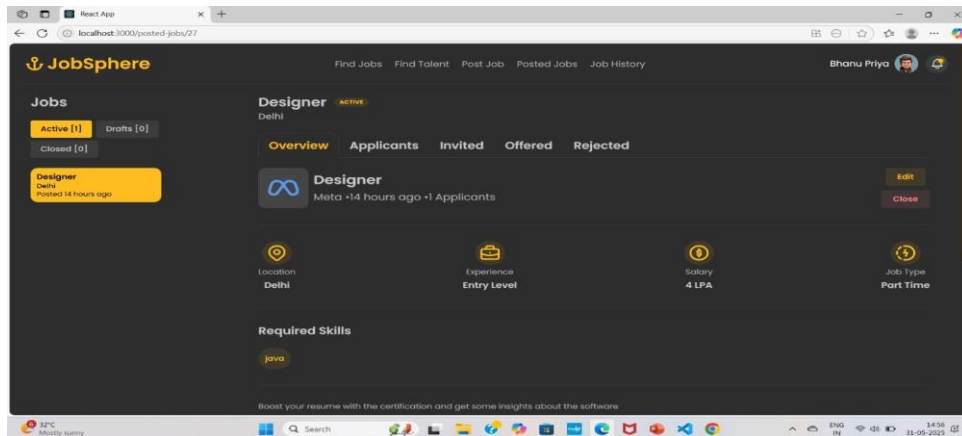

Fig3 : LoginPage
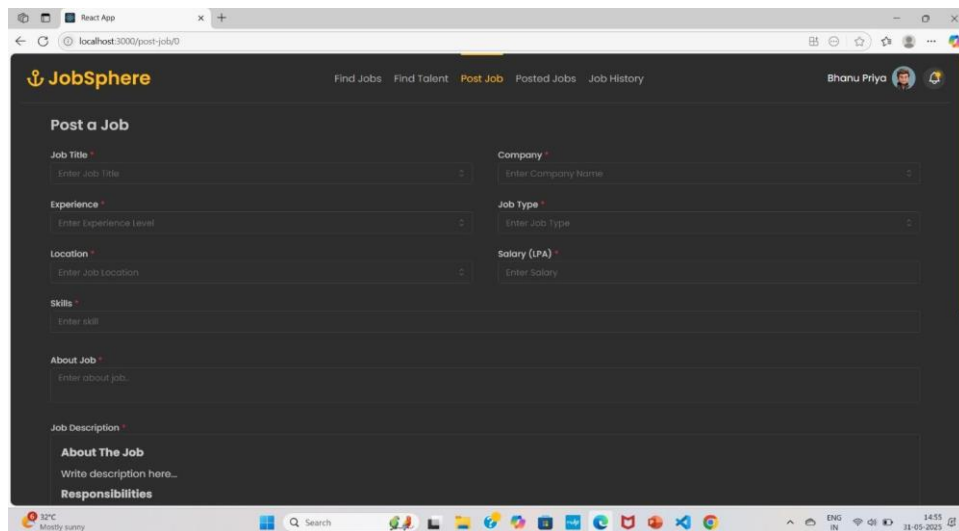
Fig4: JobPosting Page
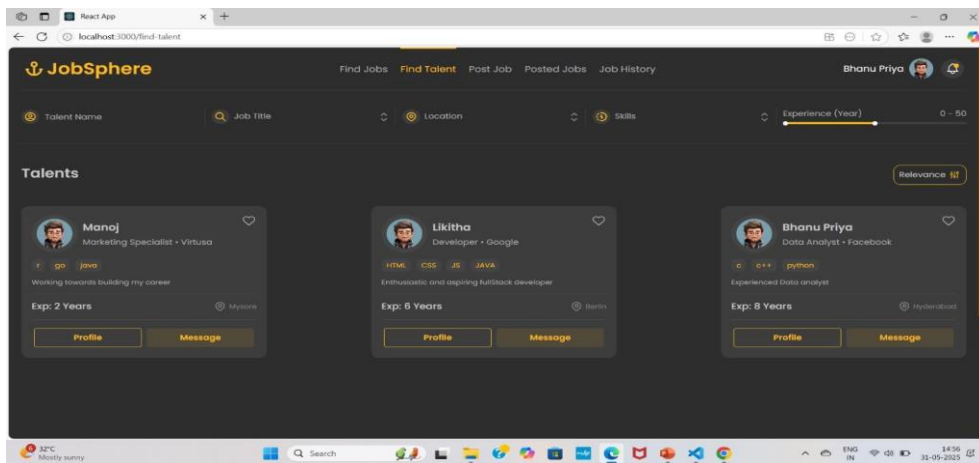
Fig5 :PostedJob Page

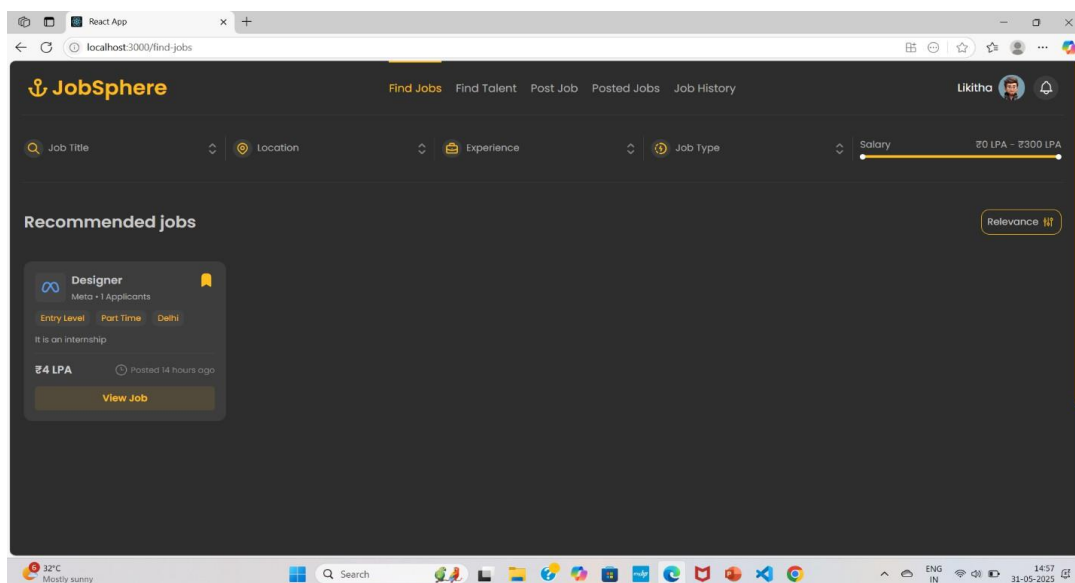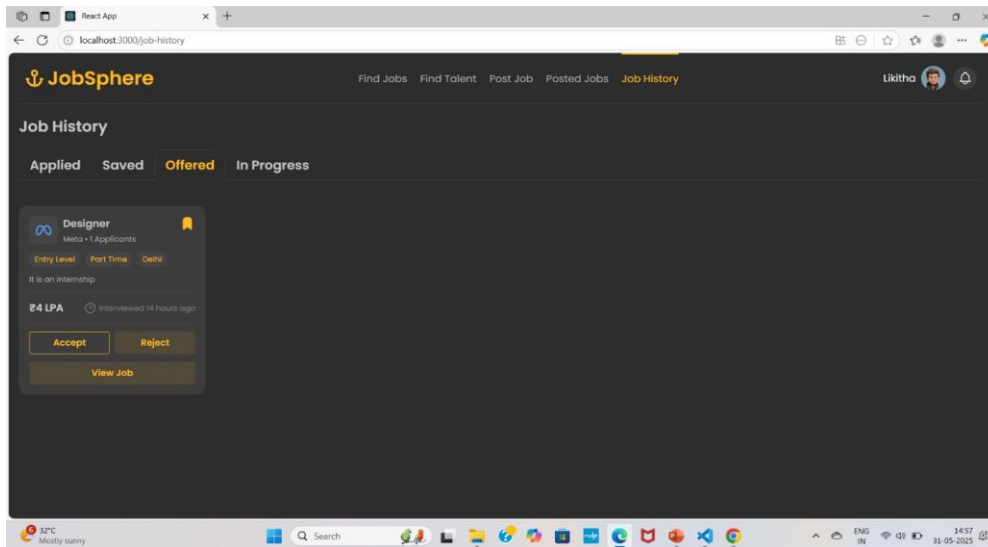
Fig 6: FindTalent Page
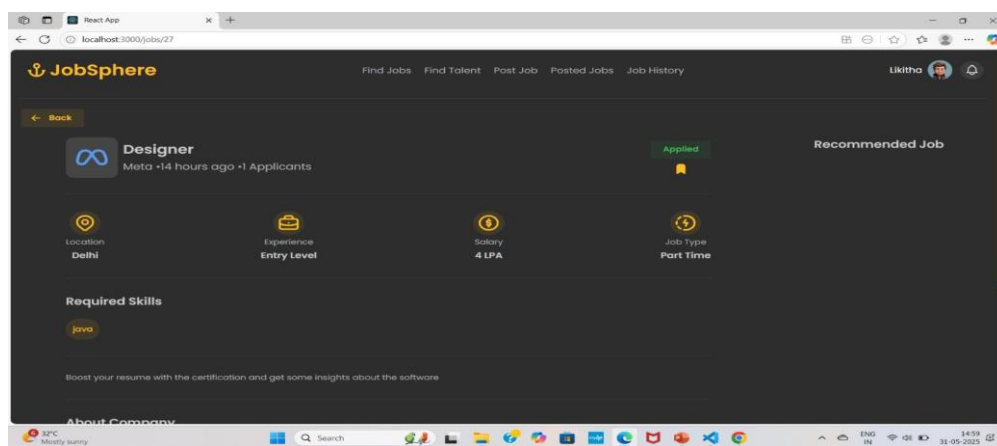
Fig .7: FindJobs Page

Fig 8 : JobHistory Page
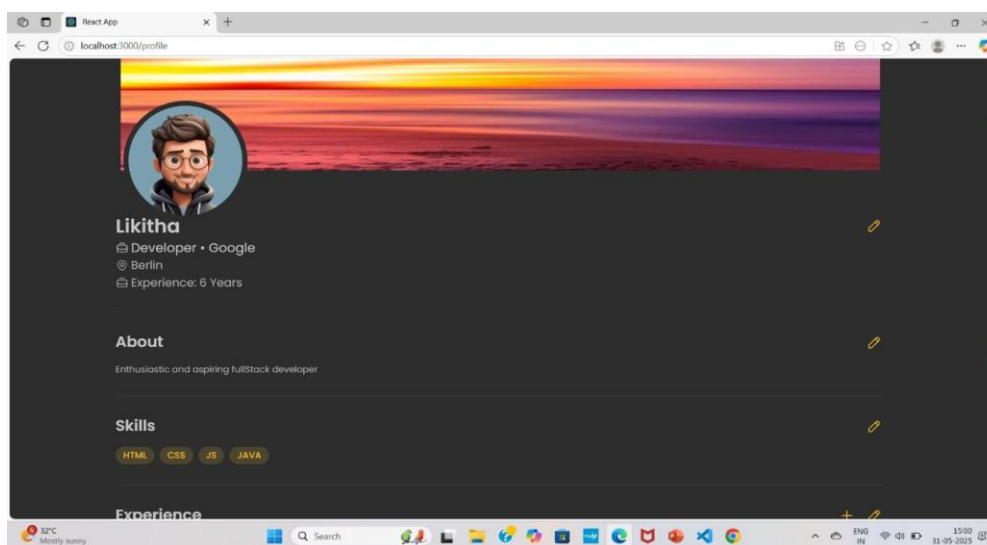

Fig.9 : AppliedJob Page
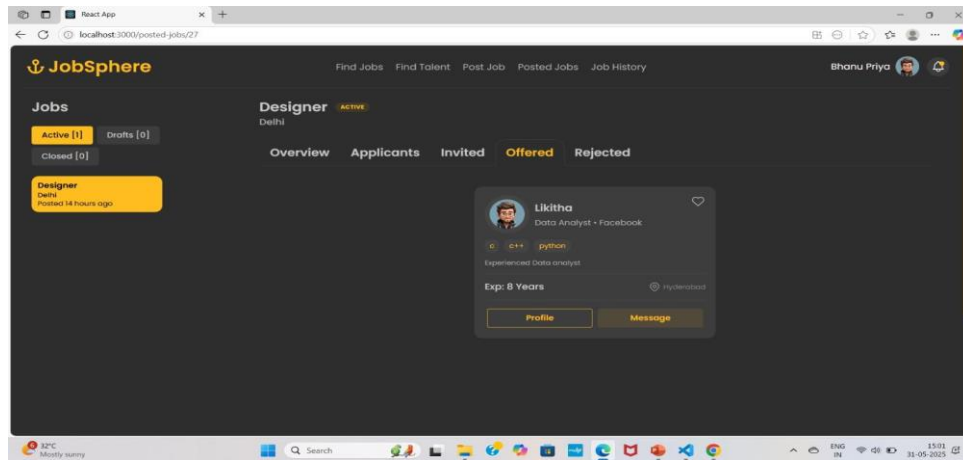
Fig.10 : Profile Page

Fig 11: OfferedJob page

Fig 12:Starting the server

Fig 13:Starting Springboot

6-CONCLUSION

The Job Sphere project overcomes traditional job search platform limitations with real-time tracking, recruitment workflows, and strong security features.It enhances accessibility for both job seekers

and employers. The platform promotes transparency, efficiency, and trust in recruitment.

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