Modern Application Development

(Java Spring Boot)

Project Title: House Rent Web Application

College: VIT, Vellore

Team Members:

Name	Reg No	Email Id
Aarushi Talwar	20BBS0047	aarushi.talwar2020@vitstudent.ac.in
Harshit Jaiswal	20BCE2157	harshit.jaiswal2020@vitstudent.ac.in
Mayur Gupta	20BCE2172	mayur.gupta2020@vitstudent.ac.in
Mayank Dhankar	20BCE2221	mayank.dhankar2020@vitstudent.ac.in

1 INTRODUCTION

1.1 OVERVIEW

A user-friendly online tool called Rent sure has been created to speed up the process of looking for and renting residential homes. It offers a wide variety of features and services to help landlords and tenants with their housing needs. Users of the app can use it to look for available rental properties based on criteria such as location, price range, and amenities. It offers thorough property listings with descriptions and essential data to assist consumers in making judgements.
The application provides tenants with a customized dashboard where they can store their favorite listings, arrange property visits, and get in touch with landlords.
The web application allows landlords to manage tenant queries, list their properties, and upload property information. Through the portal, they can keep tabs on the availability of properties, receive and respond to rental applications, and organize leases and payments. Overall, the House Rent Web Application offers a simple and effective way to

look for, rent, and manage residential homes. It acts as a central center for both tenants and landlords.

1.2 PURPOSE

The Rent sure Application is a comprehensive online solution that aims to revolutionize both tenants' and landlords' rental experiences. The platform seeks to simplify and streamline the entire renting process by utilizing cutting-edge technology. Its main objectives include giving tenants an easy-to-use property search interface and a wide selection of rental listings that are suited to their needs and tastes. Additionally, it enables open lines of communication between tenants and landlords, enabling them to work together effectively, learn about listings, plan visits to properties, and discuss rental arrangements. By automating administrative tasks including rental applications, lease agreements, and rent collecting, the application seeks to improve property management for landlords.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM

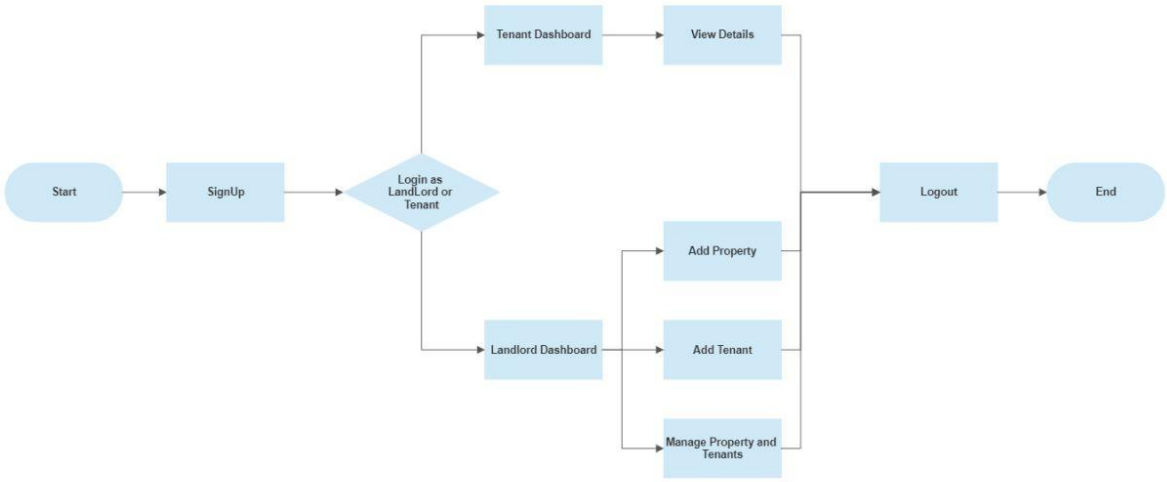
The existence of numerous issues with the conventional leasing process served as motivation for the development of the Rent sure. To solve these issues and enhance the overall experience for both tenants and landlords, a digital solution was required. Lack of a centralized platform for property postings was a prevalent problem that made it difficult for tenants to quickly identify suitable rental possibilities. The method frequently entailed searching via numerous websites, classified ads, or relying on recommendations from others, which resulted in time-consuming and fragmented searches. The process was further hampered by communication problems and hold-ups between tenants and landlords, which frustrated and lost opportunities. Manual paperwork, protracted application procedures, the requirement for in-person meetings and negotiations all presented challenges and required a significant amount of time and effort from both parties. Additionally, the lack of efficient methods for managing maintenance requests and collecting rent added to inefficiencies and complicated property management. The need for a thorough and user-friendly House Rent Web Application that would centralize property listings, facilitate effective communication, automate administrative duties, and offer a smooth renting experience for tenants and landlords was emphasized by these current challenges.

2.2 PROPOSED SOLUTION

The Rent sure Application provides a suggestion for an answer to the issues now affecting the rental procedure. It simplifies the rental search process for tenants by offering a centralized platform for property listings, enabling them to quickly browse and sift through available rental possibilities in accordance with their preferences. The programme also makes it easier for tenants and landlords to communicate directly and effectively, enabling smooth communication, prompt responses to questions, and timely queries. By adding automatic tools like rent reminders and maintenance request management, it further improves convenience by making sure that property management activities are completed quickly and efficiently. The solution put out by the House Rent Web Application is to develop a more effective, open, and user-friendly rental procedure, ultimately resulting in a seamless and positive rental experience for both tenants and landlords.

3 THEORETICAL ANALYSIS

3.1 BLOCK DIAGRAM



3.2 HARDWARE / SOFTWARE REQUIREMENTS

HARDWARE REQUIREMENTS

- Processor -i3/i5
- Hard Disk - 5 GB
- Memory - 1GB RAM

SOFTWARE REQUIREMENTS

- Java 17
- Node JS
- IntelliJ
- VsCode

TECH STACK USED -

- Front-end - ReactJS
- Backend - Java with Spring Boot
- Database - MongoDB

4. EXPERIMENTAL INVESTIGATIONS

While working on a Rent sure Application Spring Boot project, you would typically conduct analysis and investigation in several areas. Here are some key aspects to consider during the development process:

1. Define the objective: Clearly define the goals of your experimental analysis. For example, you might want to test the usability of the web application, evaluate user satisfaction, or measure the effectiveness of specific features.

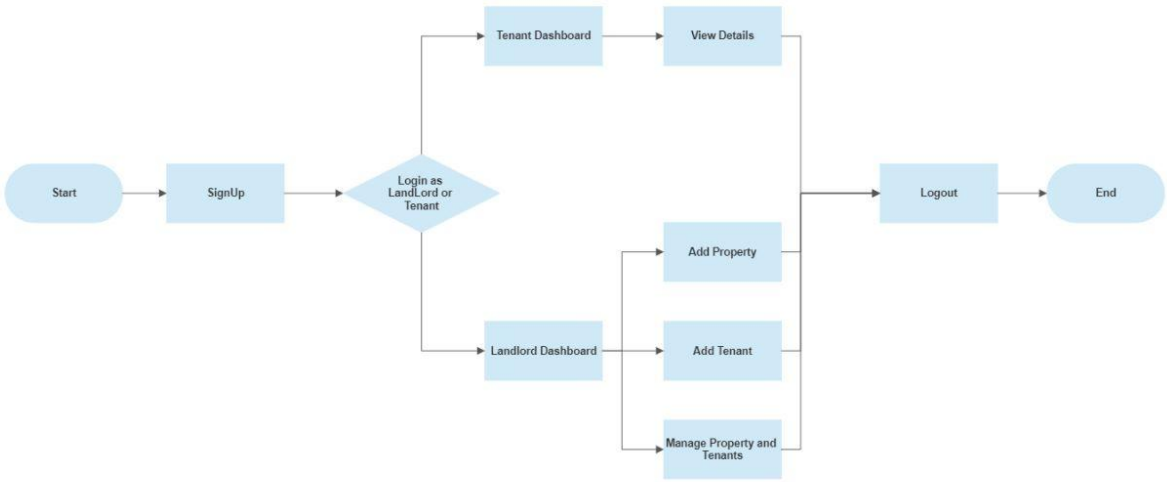
2. Identify metrics: Determine the metrics that will help you assess the performance and success of the web application. This could include metrics like user engagement, conversion rates, user satisfaction scores, or time spent on different tasks.

3. Design experiments: Plan the experiments you will conduct to gather data for your analysis. Consider using techniques like A/B testing, where you compare two or more versions of the web application to see which performs better. Ensure that the experiments are properly randomized and controlled to minimize biases.

4. Select participants: Identify the target audience for your web application and recruit participants who fit that demographic. Consider factors like age, location, and rental needs. You can use various methods to recruit participants, such as online advertisements, social media, or user testing platforms.

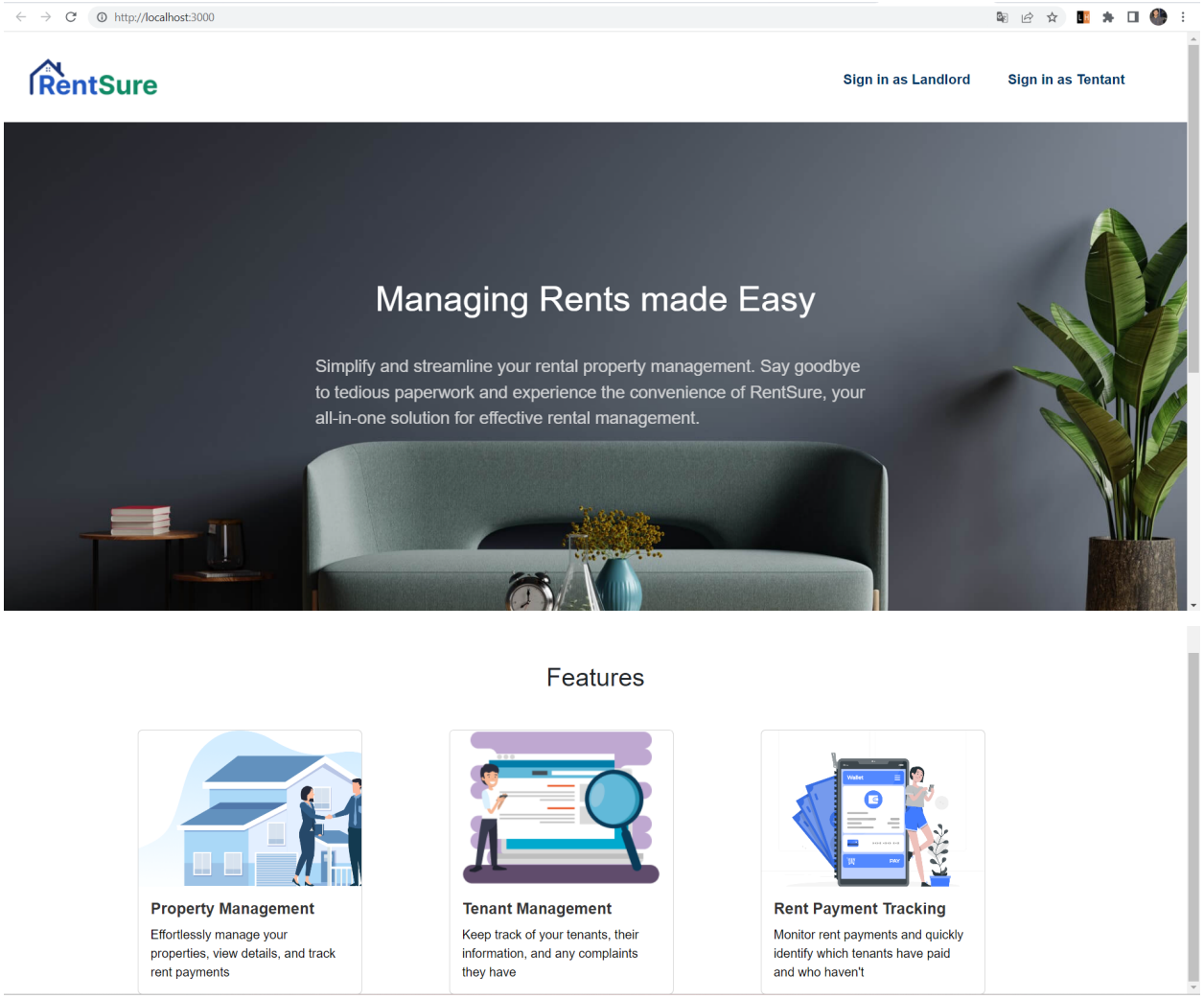
5. Conduct experiments: Implement your experimental design and collect data from the participants. Monitor and record relevant metrics, and ensure that the participants have a realistic and unbiased experience using the web application.

5. FLOWCHART

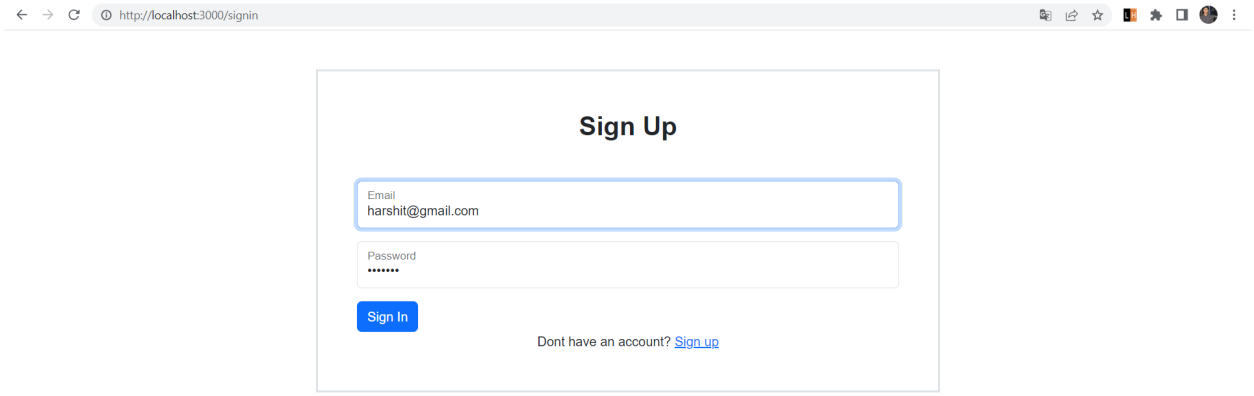


6. RESULT

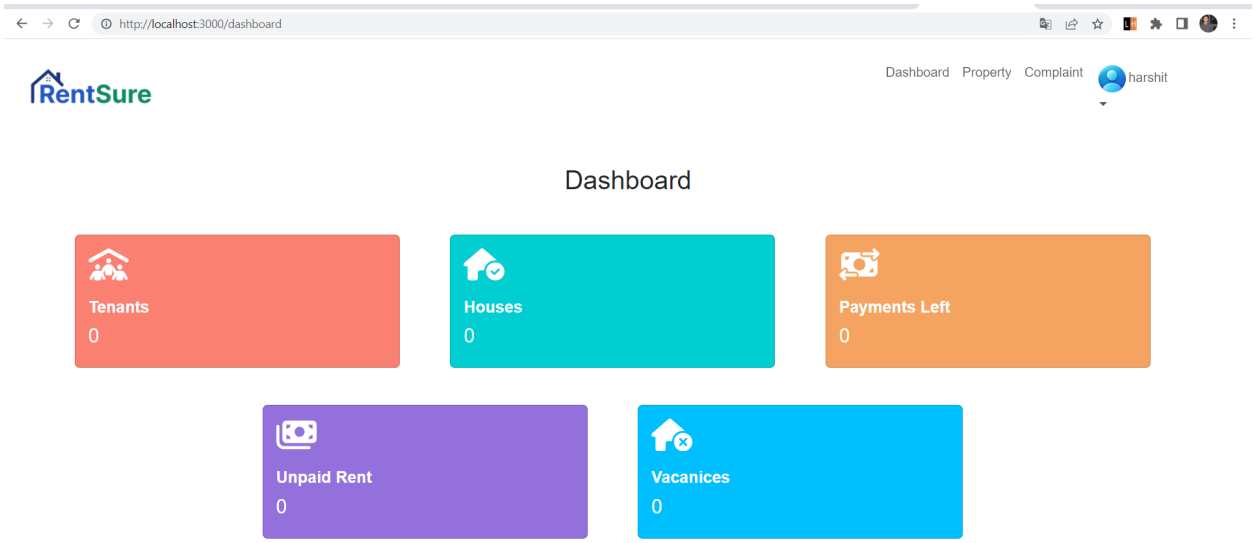
After executing the project , the application first will be viewed as shown below.



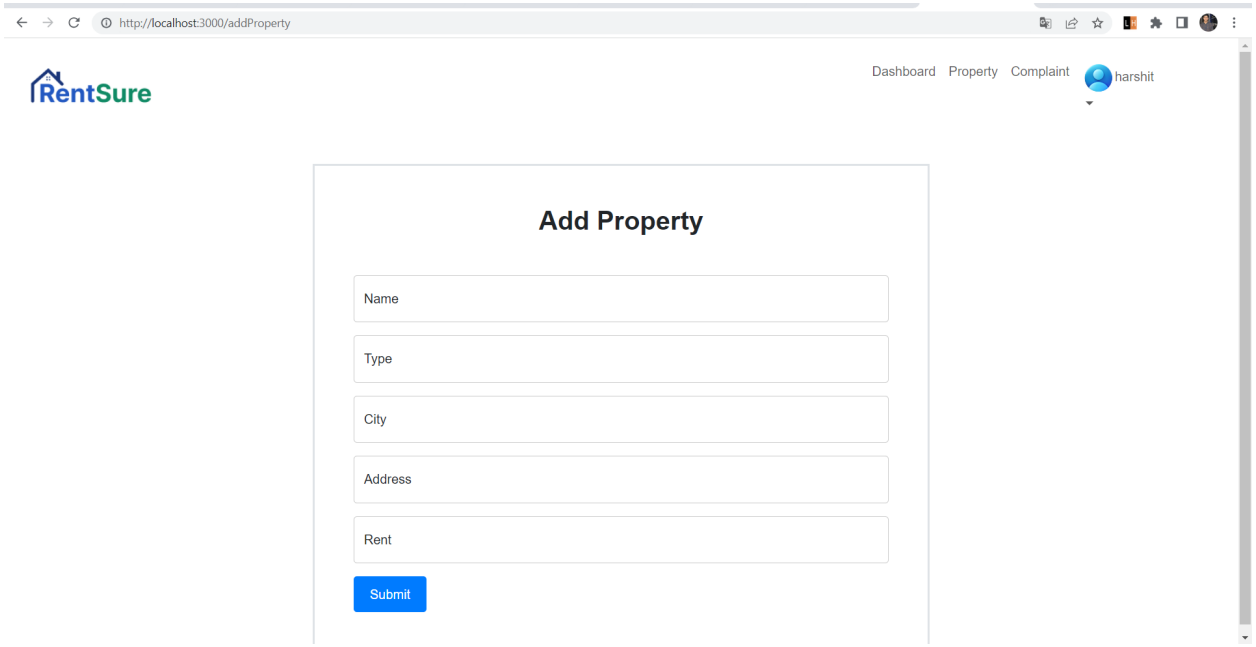
Then the user can sign in as Landlord or Tenant. The user needs to give the username and password. Then the user will be directed to his account.



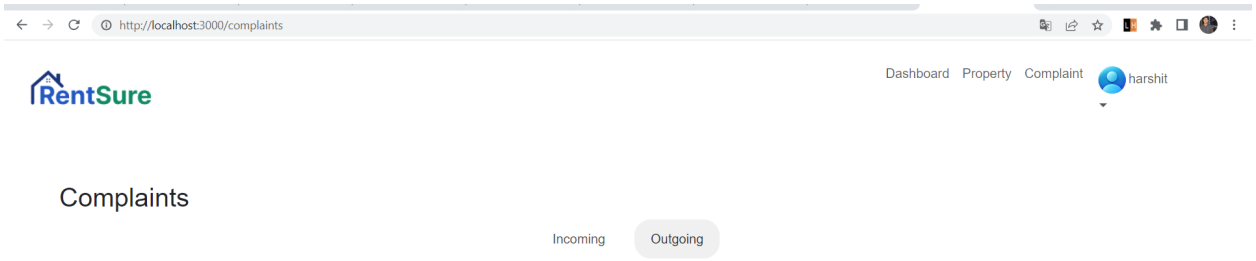
This is the Dashboard view.



Properties can be easily added by filling the details.



Complaints can be easily monitored.



7. ADVANTAGES AND DISADVANTAGES

The Rent sure Application has a few benefits that improve the leasing process, but it also has some drawbacks. Convenience is among the main benefits. The programme offers a user-friendly platform that enables renters to look for rental homes from the convenience of their homes, obviating the need for travel to various areas. Additionally, it makes it possible for landlords and tenants to speak directly with one another, which speeds up responses and streamlines negotiations. Additionally, the application's digital nature streamlines administrative chores like lease agreements and rental applications, saving time and paper. The availability of additional resources, such as neighborhood data and ratings/reviews, which aid tenants in making better educated decisions, is another benefit. There are certain disadvantages, though. The potential absence of a human touch is one drawback. Although the programme simplifies the procedure, it might not provide the same level of in-person connection and individualized support as conventional approaches. Furthermore, technical difficulties or connectivity failures could degrade the user experience. The potential for false listings or erroneous real estate data is another worry. Users must use caution and double-check information to confirm that listings are legitimate. The House Rent Web Application offers convenience, effectiveness, and extra resources overall, but it could lack the personalized touch of conventional techniques and calls for users to be watchful of potential problems like false listings.

8. APPLICATIONS

The Rent sure Application can be used in a variety of scenarios where renting is an issue. Several potential uses include:

Residential real estate, including apartments, homes and townhomes can be rented using this programme. It provides housing for single people and families looking for a place to reside.The platform can be configured to specifically serve college students looking for rental housing close to academic institutions. It can offer amenities like flatmate matching, close access to university, and resources geared towards students. The software can make it easier to rent out vacation homes like beach cottages, chalets, or villas. To help vacationers identify and book acceptable lodging, it may contain features like availability calendars, booking management, and reviews.

The platform can expand its offerings to include commercial real estate, enabling companies to look for and lease warehouses, retail stores, or office space. It can provide specialized filters and features made to suit the requirements of business properties.The application can be used for short-term rentals like room rentals or subletting in shared housing. Features like adaptable lease lengths, safe payment processing, and tenant verification may be available.Property management firms can use the web application to streamline their rental operations. It can be used as a comprehensive platform to handle tenant inquiries, maintain and advertise their rental properties, and automate office procedures.The application can be included into real estate agencies' offerings to give their clients access to an online renting platform. By allowing customers to look for and rent houses through the agency's website, it can improve its options.

9. CONCLUSION

In conclusion, the Rent sure Application is a significant development for the rental market, providing a thorough answer to the problems and inefficiencies that still exist. The way rental properties are found, accessed, and managed is revolutionized by utilizing technology and offering a user-friendly platform. Renters may easily identify their preferred rental properties thanks to the benefits of convenience, streamlined communication, and automated administrative procedures, while landlords can effectively maintain their listings and engage with potential tenants. Beyond residential rentals, the app's possible uses also include student housing, vacation rentals, business rentals, and assisting property management firms and real estate agencies. The House Rent Web Application offers a promising future for the rental market, driving efficiency, transparency, and general satisfaction for all stakeholders involved. However, it is important to be cautious of potential drawbacks such as the diminished personal touch and the need for careful evaluation of listings.

10. FUTURE SCOPE

The Rent sure Application's potential is bright as it develops and changes to meet the shifting demands of the rental industry. Potential areas for growth and development in the future include:

Enhanced User Experience: By adding powerful search filters, tailored recommendations, and interactive map-based user interfaces, the programme can further enhance the user experience. Tenants might also enjoy immersive explorations of rental properties by incorporating virtual tours or augmented reality technologies.

Integration of Smart Home Technology: The programme can interface with IoT devices to provide capabilities like remote property access, energy management, and security systems as smart home technology becomes more widely used. The convenience and attraction of rental houses for tenants would be improved by this integration.

Social and Community Features: To encourage communication and networking among residents, the application may include social and community-focused features. In order to foster a feeling of community and improve the overall rental experience, this could include tenant forums, community event notifications, and shared resources or facilities.

Advanced Analytics and Market Insights: The programme may offer insightful market information, rental trend analysis, and pricing suggestions by utilizing data analytics. Both tenants and landlords would be helped by this knowledge in making wise choices and getting the most out of their renting experience.

Integration of Blockchain Technology: The application can incorporate blockchain technology to increase the security, transparency, and effectiveness of rental transactions. By automating rental agreements, payments, and security deposits, smart contracts might reduce disputes by doing away with middlemen.

Global Market Expansion: The application can look into ways to extend its rental services to other countries' rental markets, serving tenants and landlords everywhere. This growth would meet the demands of an increasingly international rental industry and enable smooth cross-border rental transactions.

Integration with Property Management Software: By working in conjunction with current property management software platforms, seamless integration and data synchronization would be made possible, allowing landlords and property managers to effectively manage their rental properties and renters from a single platform.

11. BIBLIOGRAPHY

I. https://docs.spring.io/spring-boot/docs/current/reference/htmlsingle/

II. https://legacy.reactjs.org/docs/getting-started.html

III. https://www.youtube.com/watch?v=kYiLzIiHVY8&t=2s

IV. https://www.youtube.com/watch?v=5PdEmeopJVQ

Appendix:-

Source code

https://github.com/harshitub2/Modern_App_springboot-House_rental_management