MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

Deemed to be University
(Declared under Distinct Category by Ministry of Education, Govt. of India)
NAAC Accredited with A++ Grade

Project Report

on

Development of Room Rental Management System

Submitted By

Shivam Lodhi

0901CA221061

Industry Mentor

Mr. Himanshu Gupta

(Project Guide, Techieshubhdeep IT Solutions Pvt. Ltd)

Faculty Mentor

Dr.Parul Saxena

(Assistant Professor)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE

GWALIOR – 474005 (MP) Estd. 1957

Jan – June 2024

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A project report submitted in partial fulfilment of the requirement for the degree of

MASTER IN COMPUTER APPLICATION

in

COMPUTER SCIENCE AND ENGINEERIN

Submitted By
Shivam Lodhi
0901CA221061

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TECHIES SHUBH DEEP
IT SOLUTIONS (P) Ltd.

CERTIFICATE OF PROJECT

CIN: U72900MP2014PTC032827 *Date: 23/04/2024*

Ref. No: 002024/E-247

This is to certify that Mr. Shivam Lodhi has successfully completed a Project on Development of Room rental management system with 4-month internship as a MERN Stack Developer with TechieShubhdeep IT Solutions Pvt Ltd.

He is good with communication, effectively conveying ideas and collaborating with team members to achieve common goals.

We value his contribution to TechieShubhDeep IT Solutions Pvt Ltd.

TechieShubhDeep IT Solutions (P) Ltd.

Rajul Jain
General Manager

Sandeep Gupta
Sandeep Gupta
CEO & Director

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CERTIFICATE

This is certified that **Shivam Lodhi** (0901CA221061) has submitted the project report titled **Room Rental Management System** under the mentorship of **Mr. Himanshu Gupta** (Project Guide, Techieshubhdeep IT Solutions Pvt. Ltd.) in partial fulfilment of the requirement for the award of degree of **Master in Computer Application** in Computer Science and Engineering from **Madhav Institute of Technology and Science, Gwalior.**

Saxena 25/4/24

Dr. Parul Saxena
Assistant Professor
Computer Science and Engineering

25/4/24

Dr. Manish Dixit
Professor and Head
Computer Science and Engineering

Dr. Manish Dixit
Professor & HOD
Department of CSE
M.I.T.S. Gwalior

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE
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DECLARATION

I hereby declare that the work being presented in this project report, for the partial fulfilment of requirement for the award of the degree of **Master in Computer Application** in Computer Science and Engineering at **Madhav Institute of Technology & Science, Gwalior** is an authenticated and original record of my work under the mentorship of **Mr. Himanshu Gupta** (Project Guide, Techieshubhdeep IT Solutions Pvt. Ltd.)

I declare that I have not submitted the matter embodied in this report for the award of any degree or diploma anywhere else.

Shivam

Shivam Lodhi
0901CA221061
2nd Year
Master in Computer Application
Computer Science and Engineering

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE
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(Declared under Distinct Category by Ministry of Education, Govt. of India)
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I would sincerely like to thank my department, **Department of Computer Science and Engineering**, for allowing me to explore this project. I humbly thank **Dr. Manish Dixit**, Assistant Professor and Head, Department of Computer Science and Engineering, for his continued support during the course of this engagement, which eased the process and formalities involved.

I am sincerely thankful to my faculty coordinator. I am grateful to the guidance of **Dr. Parul Saxena** (Assistant Professor), Computer Science and Engineering, for her continued support and guidance throughout the project. I am also very thankful to the faculty and staff of the department.

Shivam Lodhi
0901CA221061
2nd Year
Master in Computer Application
Computer Science and Engineering

ABSTRACT

The Room Rental Management System (RRMS) is a comprehensive software solution designed to streamline the process of managing rental properties, specifically focusing on rooms for rent. In an increasingly digital age, the demand for efficient and user-friendly property management tools is paramount. RRMS addresses this need by offering a centralized platform that automates various aspects of room rental management, from property listing and tenant screening to lease management and payment processing.

Key features of RRMS include a robust property listing module, where landlords can easily create detailed listings complete with descriptions, photos. The system also incorporates tenant screening functionality, enabling landlords to efficiently vet prospective tenants through background checks, credit history reviews, and references.

Once tenants are selected, RRMS facilitates the leasing process by generating digital lease agreements that can be signed electronically, eliminating the need for paper documentation. Throughout the tenancy, the system provides tools for rent collection, tracking payments, and managing maintenance requests.

Furthermore, RRMS incorporates communication tools to facilitate seamless interaction between landlords and tenants, reducing misunderstandings and enhancing overall satisfaction. Additionally, the system offers reporting capabilities, allowing landlords to gain insights into rental performance, occupancy rates, and financial metrics.

In summary, the Room Rental Management System offers a comprehensive solution for landlords seeking to streamline their property management processes, improve tenant experiences, and maximize rental income. By leveraging technology to automate routine tasks and enhance communication, RRMS empowers landlords to effectively manage their rental properties with ease and efficiency.

सार

रूम रेंटल मैनेजमेंट सिस्टम (आरआरएमएस) एक व्यापक सॉफ्टवेयर समाधान है जिसे किराये की संपत्तियों के प्रबंधन की प्रक्रिया को सुव्यवस्थित करने के लिए डिज़ाइन किया गया है, विशेष रूप से किराए के कमरों पर ध्यान केंद्रित करने के लिए। तेजी से बढ़ते डिजिटल युग में, कुशल और उपयोगकर्ता के अनुकूल संपत्ति प्रबंधन उपकरणों की मांग सर्वोपरि है।आरआरएमएस एक केंद्रीकृत मंच की पेशकश करके इस आवश्यकता को पूरा करता है जो संपत्ति लिस्टिंग और किरायेदार स्क्रीनिंग से लेकर पट्टा प्रबंधन और भुगतान प्रसंस्करण तक कमरे के किराये के प्रबंधन के विभिन्न पहलुओं को स्वचालित करता है।

आरआरएमएस की मुख्य विशेषताओं में एक मजबूत संपत्ति लिस्टिंग मॉड्यूल शामिल है, जहां मकान मालिक आसानी से विवरण, फोटो और सुविधाओं के साथ विस्तृत लिस्टिंग बना सकते हैं।

सिस्टम में किरायेदार स्क्रीनिंग कार्यक्षमता भी शामिल है, जो मकान मालिकों को पृष्ठभूमि जांच, क्रेडिट इतिहास समीक्षा और संदर्भों के माध्यम से संभावित किरायेदारों की कुशलतापूर्वक जांच करने में सक्षम बनाती है।

एक बार किरायेदारों का चयन हो जाने के बाद, आरआरएमएस डिजिटल पट्टा समझौते तैयार करके पट्टे की प्रक्रिया को सुविधाजनक बनाता है, जिस पर इलेक्ट्रॉनिक रूप से हस्ताक्षर किए जा सकते हैं, जिससे कागजी दस्तावेज की आवश्यकता समाप्त हो जाती है। पूरे किरायेदारी के दौरान, सिस्टम किराया संग्रहण, भुगतान पर नज़र रखने और रखरखाव अनुरोधों के प्रबंधन के लिए उपकरण प्रदान करता है।

इसके अलावा, आरआरएमएस में मकान मालिकों और किरायेदारों के बीच सहज बातचीत की सुविधा, गलतफहमी को कम करने और समग्र संतुष्टि को बढ़ाने के लिए संचार उपकरण शामिल हैं। इसके अतिरिक्त, सिस्टम रिपोर्टिंग क्षमताएं प्रदान करता है, जिससे मकान मालिकों को किराये के प्रदर्शन, अधिभोग दरों और वित्तीय मैट्रिक्स में अंतर्दृष्टि प्राप्त करने की अनुमति मिलती है।

संक्षेप में, रूम रेंटल मैनेजमेंट सिस्टम उन मकान मालिकों के लिए एक व्यापक समाधान प्रदान करता है जो अपनी संपत्ति प्रबंधन प्रक्रियाओं को सुव्यवस्थित करना चाहते हैं, किरायेदारों के अनुभवों में सुधार करना चाहते हैं और किराये की आय को अधिकतम करना चाहते हैं। नियमित कार्यों को स्वचालित करने और संचार बढ़ाने के लिए प्रौद्योगिकी का लाभ उठाकर, आरआरएमएस मकान मालिकों को अपनी किराये की संपत्तियों को आसानी और दक्षता अधिकतम मैनेजमेंट को आय के साथ प्रभावी ढंग से प्रबंधित करने का अधिकार देता है ।

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Chapter-1 Introduction

Introducing our innovative Room Rental Management System, designed to revolutionize the way properties are managed and rented. In an increasingly dynamic real estate landscape, our comprehensive solution offers property owners and managers a seamless platform to efficiently list, manage, and rent out their spaces. With intuitive features such as property listing management, booking scheduling, payment processing, and reporting tools, our system empowers users to streamline operations and maximize revenue potential. Whether you're a property owner looking to monetize unused space or a renter in search of the perfect accommodation, our Room Rental Management System provides a user-friendly interface and robust functionality to meet your needs. By leveraging cutting-edge technology and a customer-centric approach, we're committed to transforming the rental experience, making it simpler, smarter, and more rewarding for all stakeholders involved. Welcome to the future of property management with our Room Rental Management System.

1.1 Problem identification

A. The traditional methods of managing rental properties, specifically rooms for rent, are plagued by inefficiencies and complexities. Landlords and property managers face challenges such as tedious administration, time-consuming tenant screening processes, communication bottlenecks, and limited visibility into property performance.

B. A Room Rental Management System needs to address these issues by offering features like streamlined property listing and vacancy management, comprehensive tenant screening and on boarding functionalities, efficient rent collection and financial management tools.

C. Users might face issues like double bookings, conflicting reservations, or incorrect availability information.

D. Lack of clear communication between renters and property owners/managers regarding terms, conditions, and expectations can lead to misunderstandings and conflicts

E. Poor user interface design or navigation can frustrate users and deter them from using the system-effectively.

1.2 Parent Organization

Techieshubhdeep IT Solutions Pvt. Ltd.

Introducing Techieshubhdeep IT Solutions Pvt. Ltd. cutting-edge Parent Organization Room Management System, a revolutionary solution tailored to address the complex needs of educational institutions, corporate entities, and large organizations. Our system is meticulously crafted to optimize the allocation, scheduling, and utilization of shared spaces within parent organizations, fostering seamless collaboration and maximizing operational efficiency. Through intuitive features such as centralized room booking, real-time availability tracking, and customizable user permissions, our platform empowers administrators to efficiently manage resources while ensuring equitable access for all stakeholders. Whether coordinating board meetings, scheduling classroom sessions, or organizing company-wide events, our solution provides a user-friendly interface and robust functionality to streamline the entire room management process. With Tech Shubhdeep Pvt Ltd's commitment to innovation and customer satisfaction, our Parent Organization Room Management System stands as a beacon of excellence, revolutionizing the way organizations manage their shared spaces and driving productivity to new heights. Welcome to the future of room management with Tech Shubhdeep Pvt Ltd.

1.3 Hardware and Software Specification

The Room Rental Management System developed using the MERN (MongoDB, Express.js, React.js, Node.js) technology stack demands a tailored blend of hardware and software specifications to deliver an efficient and user-friendly experience. On the hardware front, a robust server infrastructure is paramount, boasting a multicore processor, substantial RAM, and SSD storage for rapid data processing and retrieval. Additionally, a dedicated database server with similar specifications ensures seamless data management and scalability. Networking equipment, including switches and routers, facilitates smooth communication between servers and client devices. Client devices, ranging from desktop computers to mobile devices, require compatible web browsers to access the system's interface seamlessly. Software-wise, the system operates on Linux or Windows Server, serving as the operating environment, while Express.js handles server-side operations efficiently. MongoDB acts as the database management system, storing and retrieving data effectively, and React.js powers the dynamic and intuitive frontend interface for users. Node.js orchestrates the backend operations, enabling real-time communication and seamless integration of features. Security measures such as SSL/TLS certificates and firewall software fortify the system against potential threats. With meticulous adherence to these hardware

and software specifications, the Room Rental Management System built on the MERN stack ensures optimal performance, scalability, and user satisfaction.

1.3.1 Hardware Specification

a. **Processor**: A modern multi-core processor like Intel Core i5 or equivalent is recommended. This ensures smooth performance during development and can handle multiple tasks and servers efficiently.
b. **Memory**: 8 GB RAM is the minimum, but 16 GB or more is ideal. This allows you to run multiple applications and virtual machines without experiencing sluggish performance.
c. **Storage**: A 256 GB Solid State Drive (SSD) is the minimum, but a 512 GB SSD or larger is recommended. An SSD significantly reduces loading times for your development environment and tools.
d. **Display**: A monitor with a resolution of at least 1920x1080 is comfortable for coding. Consider a larger display or even a dual-monitor setup to maximize productivity.
e. **Network**: A stable internet connection is necessary for downloading dependencies, updates, and collaborating with team members if applicable.

1.3.2 Software Specification

a. **Operating System**: Choose from Windows 10 or 11 (64-bit), macOS (latest version), or Linux (popular distributions include Ubuntu and Fedora).
b. **Development Environment**: Install Node.js (latest LTS version), MongoDB Community Edition, and a text editor or IDE like Visual Studio Code for writing code.
c. **Dependencies**: Use npm or yarn to manage dependencies for the project. This includes packages for Express.js, React, and any other libraries or frameworks used in your application.
d. **MongoDB**: This NoSQL database serves as the data storage backbone for your MERN applications.
e. **Browser**: Make sure you have the latest versions of modern web browsers like Chrome, Firefox, or Edge for testing and debugging frontend components.

Chapter-2 System Analysis

2.1 Problem Analysis

Analyzing the problems in a room rental management system involves identifying issues that hinder its efficiency, effectiveness, and user satisfaction. Here are some common problems that may arise.

a. **Booking Errors:** Incorrect bookings or double bookings can occur if the system doesn't properly manage reservations or if there are inconsistencies in the data.

b. **Limited Visibility:** Lack of real-time updates or insufficient information about room availability can lead to misunderstandings and inconvenience for both renters and property owners.

c. **Payment Processing Issues:** Problems with payment processing, such as failed transactions or delays in receiving payments, can disrupt the rental process and cause frustration for all parties involved.

d. **Communication Breakdown:** Inadequate communication channels between renters and property owners/managers can result in misunderstandings, missed messages, and delays in resolving issues.

e. **Maintenance Management:** Difficulty in managing maintenance requests, scheduling repairs, or addressing property issues promptly can impact the overall satisfaction of renters and affect the reputation of the rental service.

f. **Security Concerns:** Insufficient security measures to protect personal information, payment details, and property access can compromise the trust and confidence of users in the system.

g. **Scalability Challenges:** The system may struggle to handle a growing number of users, properties, or transactions, leading to performance issues and degraded user experience.

h. **Lack of Customization**: Limited options for customization or personalization may not meet the specific needs or preferences of different users or property owners.

i. **Regulatory Compliance:** Failure to comply with relevant regulations and legal requirements, such as data protection laws or rental regulations, can expose the system to legal risks and penalties.

By addressing these issues through system improvements, updates, or additional features, you can enhance the overall functionality and user experience of the room rental management system.

2.2 Feasibility Study

2.2.1 Economical Feasibility

Economic feasibility assessment of a room rental management system involves a meticulous examination of its financial viability and potential return on investment. This analysis encompasses various factors, beginning with a thorough cost-benefit evaluation to determine if the anticipated benefits outweigh the incurred costs. Initial expenses, including software development, customization, and infrastructure acquisition, are scrutinized alongside implementation and ongoing operational costs. Revenue generation avenues, such as subscription fees or premium features, are identified to gauge potential income streams. Return on investment calculations consider both upfront investments and expected financial gains over time. Additionally, risk analysis helps identify potential threats to economic feasibility, enabling the development of mitigation strategies. Sensitivity analysis further enhances decision-making by assessing the impact of variable changes on project viability. By conducting a comprehensive economic feasibility study, stakeholders can make well-informed decisions about investing in and implementing a room rental management system, ensuring it aligns with financial objectives and delivers sustainable economic benefits.

a. Personal Expenses

S. No.	Resource	Cost
1.	System Analyst (1) [8 days/month]	₹4000 /-
2.	Programmer (1) [25 days/month]	₹5000 /-
3.	Database Specialist (1) [10 days/month]	₹2000 /-
Total		**₹11000 /-**

b. Other Expenses

S. No.	Resource	Cost
1.	Electricity (120 unit × 8rs/unit)	₹960 /-
2.	Stationery	₹600 /-
3.	Workspace facility	₹1800 /-
4.	Internet/Wi-Fi	₹1500 /-
Total		**₹4860 /-**

c. Hardware & Software expenses

S. No.	Specification	Cost
1.	Development Server (Express JS))	₹3000 /-
2.	Server Software (O.S.)	₹600 /-
3.	DBMS Server (MYSQL)	₹1800 /-
Total		**₹4860 /-**

2.2.2 Technical Feasibility

a. Programming Languages

S. No.	Site	Details
1.	Front-End	HTML, CSS, JS6, React Js
2.	Back-End	ExpressJs, NodeJs
3.	Database	MongoDB

b. Hardware Requirements

S. No.	Component	Specification
1.	Processor (CPU)	Intel Core i5 or AMD Ryzen 5 or higher
2.	Monitor	FHD (1920x1080)
3.	Memory (RAM)	At least 8 GB or above
4.	Storage (SSD)	256 GB
5.	Internet	512 KB (Speed)

6.	Keyboard	USB Wired or Wireless
7.	Mouse	USB Wired or Wireless
8.	Printer	HP Laser MFP 136w

c. Software requirements

S. No.	Site	Details
1.	Front-End	React Js, CSS
2.	Back-End	ExpressJs
3.	Application	Visual Studio Code, MySQL workbench
4.	Operating System	64 bit (Window 11)
5.	Network	MySQL

2.2.3 Behavioural Feasibility

a. Behavioral feasibility in the context of a room rental management system involves evaluating how users, including property managers, landlords, and tenants, are likely to interact with and respond to the system.

b. Understanding user behavior is crucial for ensuring successful adoption and utilization of the system. This assessment encompasses several key aspects. Firstly, it examines user acceptance, assessing whether users are open to incorporating the system into their existing workflows or if there is resistance to change. Additionally, the evaluation considers the training needs of users to effectively navigate and utilize the system, ensuring that adequate resources are provided to facilitate learning and adoption.

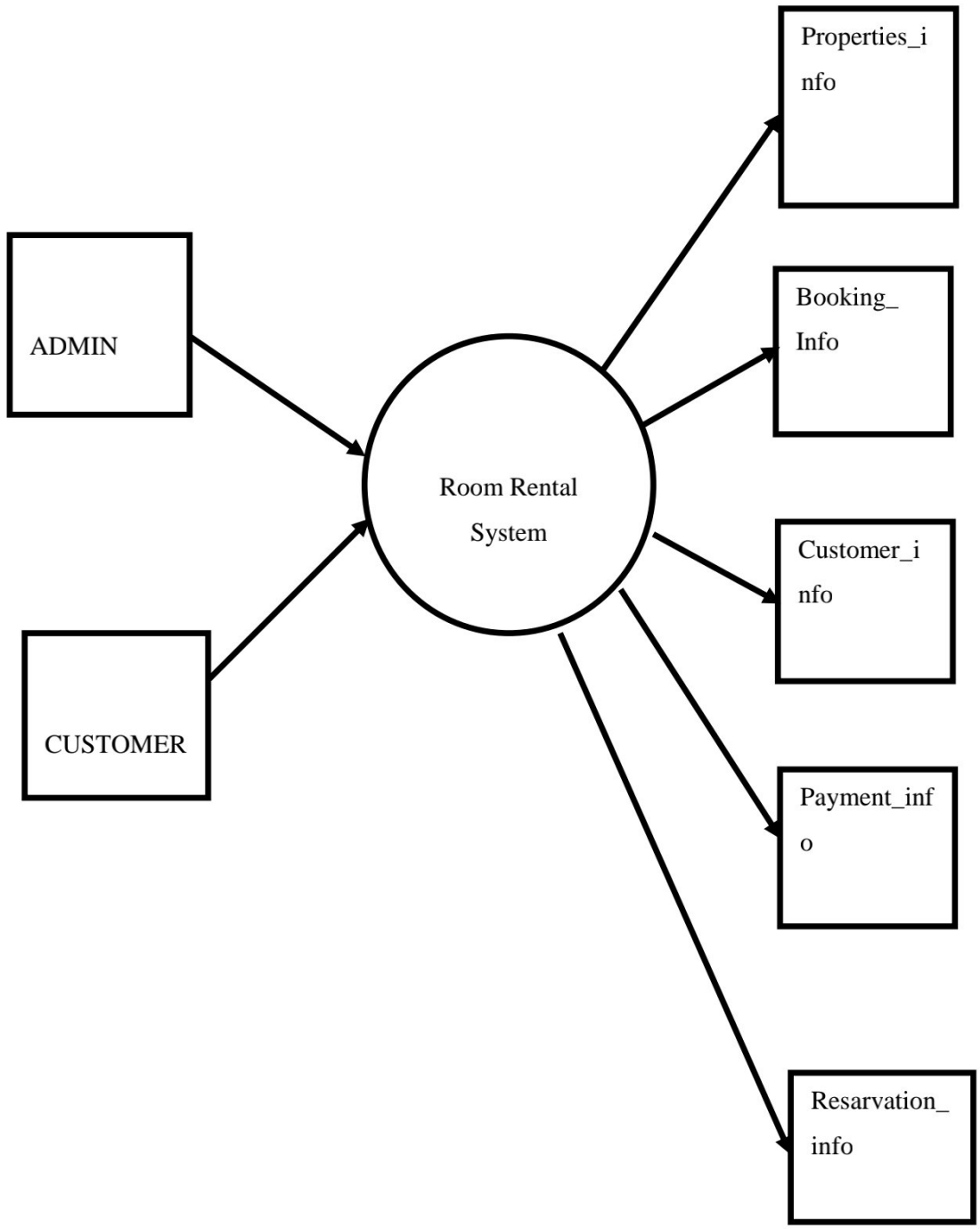
c. Furthermore, attention is given to the user experience, with a focus on interface design, ease of use, and intuitiveness, as a positive user experience can significantly impact adoption rates.

d. Communication channels and support mechanisms are also evaluated to ensure that users have access to assistance and guidance when needed. Cultural and organizational factors are taken into account, recognizing that user behavior may be influenced by cultural norms, organizational structures, and hierarchies.

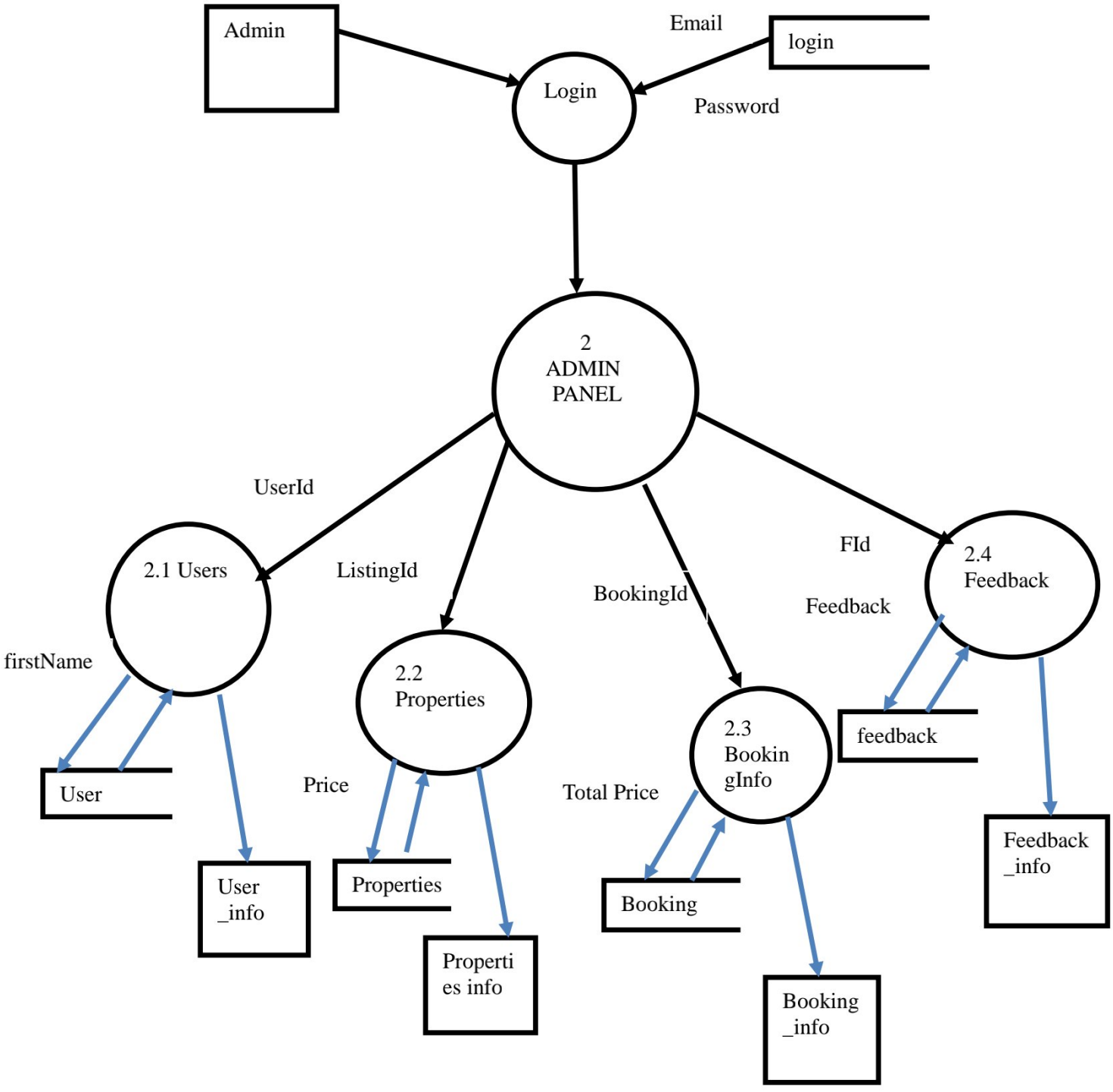
e. Finally change management strategies are developed to address potential resistance and facilitate a smooth transition to the new system. By conducting a thorough behavioral feasibility assessment, stakeholders can identify potential challenges and opportunities related to user behavior, allowing for the development of targeted strategies to promote acceptance, engagement, and effective utilization of the room rental management system.

2.3 Data Flow Diagram

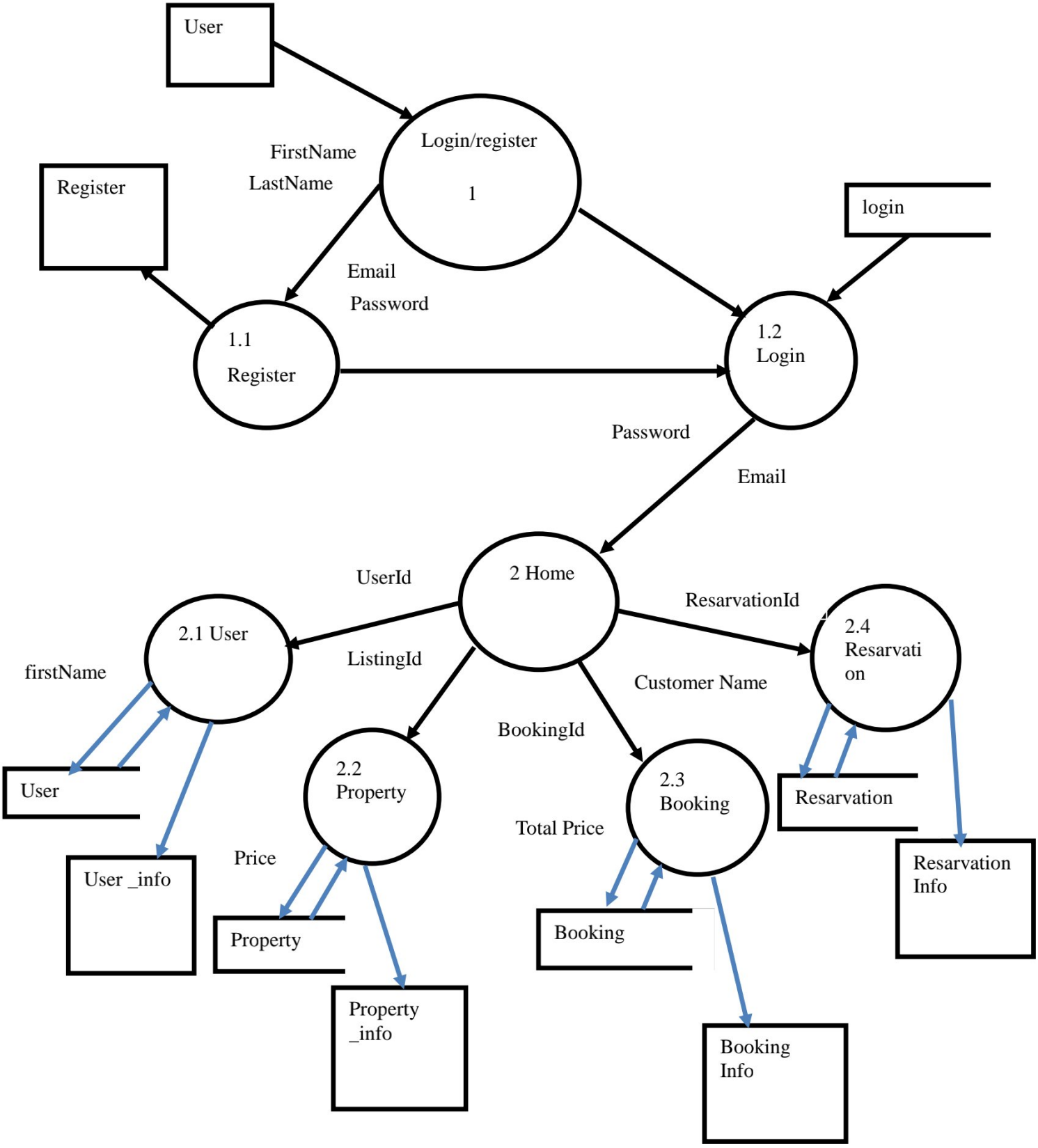
2.3.1 DFD 0



2.3.2 DFD 1 For Admin



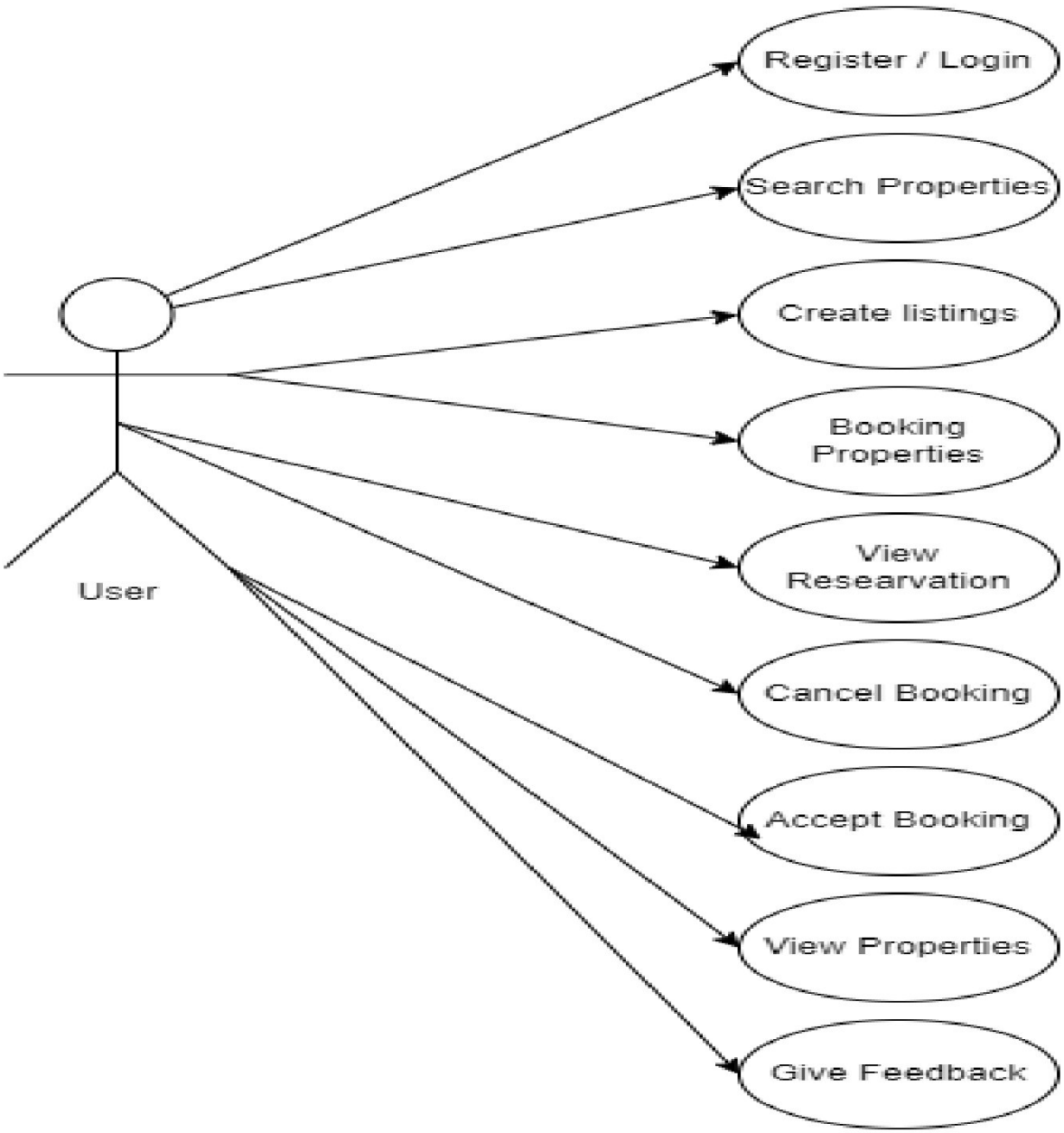
2.3.3 DFD 1 User



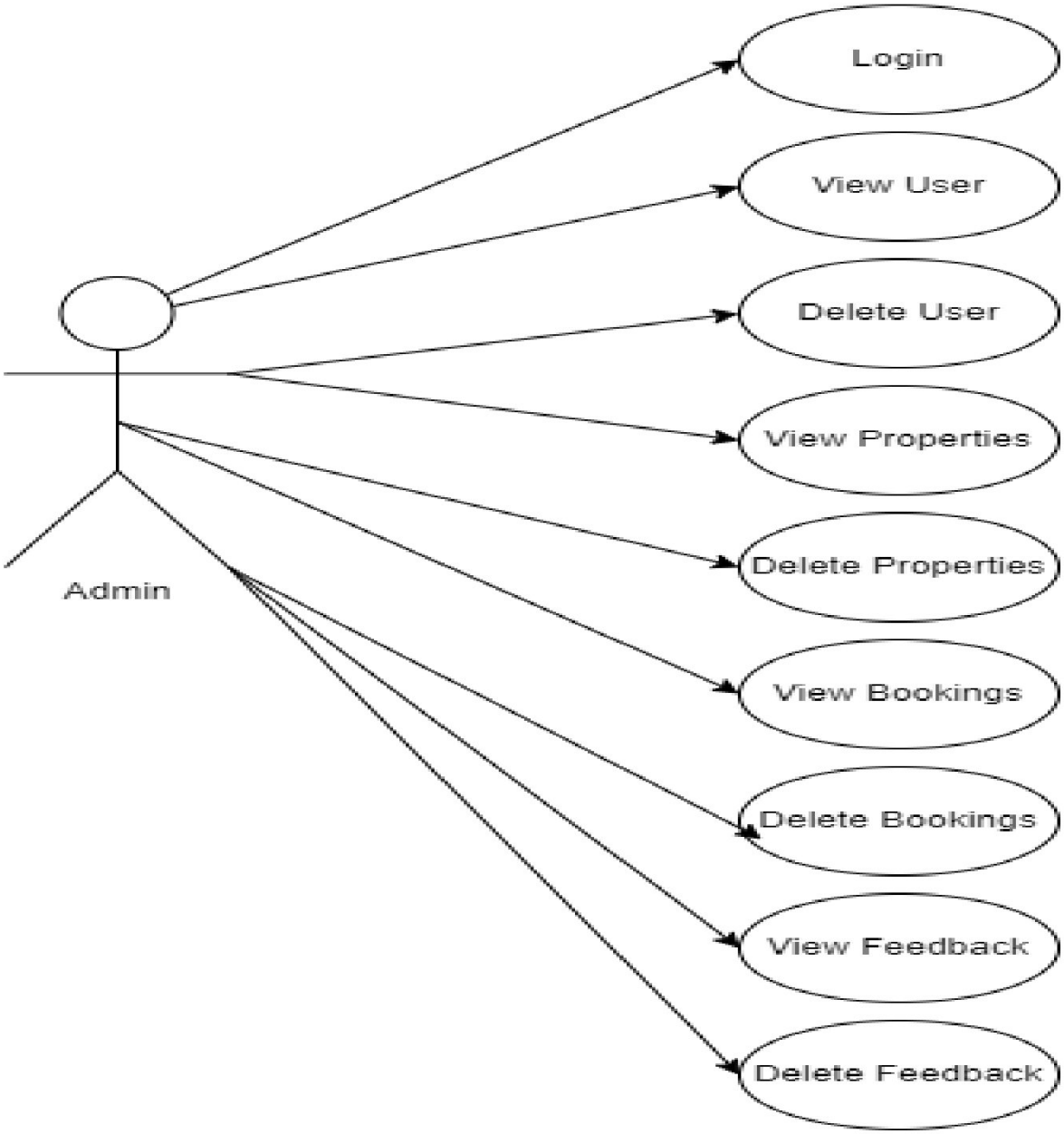
Chapter-3 System Analysis

3.1 Use Case Diagram

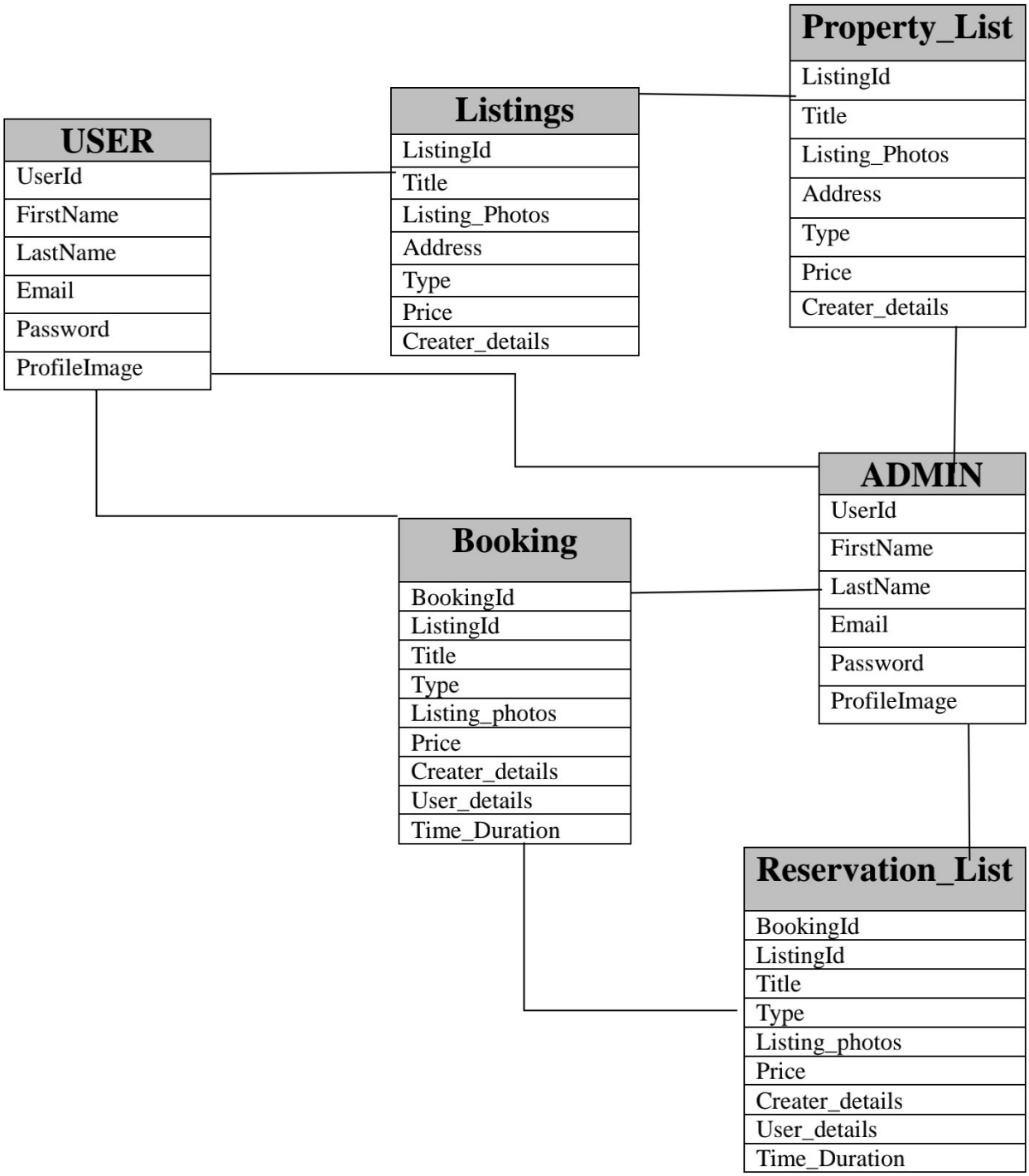
3.1.1 User case For User



3.1.2 Use case For Admin



3.2 UML Diagram



Chapter-4 Testing

Testing is the process of evaluating an application or system to detect defects, bugs, errors, and other issues that may affect its quality, reliability, or functionality. It involves running the application in a controlied environment to verify that it behaves as expected, and comparing its actual results against its intended results. The main objective of testing is to ensure that the application meets the requirements and specifications set forth by its users or customers, and that it performs the tasks it is designed to do in a consistent, reliable, and efficient manner. So here we are using various testing approaches to check that the developed system met the specified requirements or not.

4.1 Unit Testing: We perform unit testing on each and every smallest unit of the developed website individually to check its working. We used different test data to perform the testing. We try possibly each and every type of inputs to check their corresponding outputs, and its related working. We performed these tests on admin login, customer sign up, customer login, add listing and feedback form. We also tested the two modules individually viz. admin module and customer module.

Test Case id	Section	Element name	Test data	Expected result	Actual Result
001	Admin Login	Username, Password	No Data	Please fill out this field.	Test case passed.
			Administrator/******	Error Occurred.	Test case passed.
			admin/*****	Successfully logged in.	Test case passed.
002	User Login	Email, Password	No Data	Please fill out this field.	Test case passed.
			0901CA221020/******	Error Occurred.	Test case passed.
			0901CA221020/*********	Successfully logged in.	Test case passed.
003	User Registration	FirstName, LastName, EmailId, number, Picture, Password	No Data	Please fill out this field.	Test case passed.
			Shivamgmail.com	Error Occurred.	Test case passed.

			shivam@gmail.com	Successfully Registered.	Test case passed.
004	customer feedback	UserId, rating, comment	No data	Please fill out this field	Test case pass
			Shivamgmail.com	Error occurred	Test case pass
			Shivam@gmail.com	Successfully	Test case pass

4.2 Compatibility Testing: We performed integration testing on this website. For this testing we integrated all the individual units, and then checked the working of each module with every other module. We integrated the admin module, customer module, and other homepage functionalities as a complete web app to check its overall working website functions work properly and consistently for users.

Test Case ID	**Element Name**	**Element Type**	**Test Condition**	**Expected Result**	**Actual Result**	**Test Result**
TC-001	Device Compatibility	Responsiveness on different devices	Checking Responsiveness on devices for e.g., Laptops, tablets, Smartphones	Website will adapt different screen sizes on different devices without any disbalancing	As expected, the website is full responsive and working perfectly	Test case passed

TC-002	Operating System	Checking website behavior on different operating systems	Working on different Operating Systems e.g., Android systems, macOS, iOS, Windows, etc.	There shouldn't be any changes in website Designing, Working, Accessibility and Performance speed, while switching the Operating System	Compatibility As Expected, The Website is working all same even on different Operating System expect Linux operating system	Passed
	End-user Security	Data Security	Testing security measures of users	The logged in user will be able to see his/her own details related information only or correct user-profile is opened for user while logging in	As Expected, Details of login Email is shown, no details of other user are visible to all. Hence Secured	Test case passed

4.3 Functionality Testing

Functionality testing of a room management system involves systematically assessing its features and capabilities to ensure they meet specified requirements and expectations. This process typically includes testing various functions such as room booking, reservation modification, cancellation, resource allocation, user access control, reporting, and integration with other systems. Test scenarios are designed to cover different usage scenarios and edge cases, checking for proper behaviour, accuracy, reliability, and security. Through rigorous testing, potential issues like software bugs, usability problems, or performance bottlenecks can be identified and addressed, ultimately ensuring a smooth and efficient experience for users interacting with the room management system.

Chapter-5 Implementation

Firstly, we need to install some IDE softwares for implementing our project which are as follows:-

5.1 Visual Studio Code

a. Go to the official Visual Studio website: https://visualstudio.microsoft.com/downloads/

b. Click on the "Download" button for the version of Visual Studio you want to install.

c. Choose the components you want to install, such as languages, frameworks, and tools.

d. Click on the "Install" button to start the installation process.

e. Follow the installation wizard and select the options that suit your needs

5.2 MongoDB

a. Register here with your google account and login.

b. Go to the official MONGODB Atlas Cluster website And Register Here And Login: https://www.mongodb.com/atlas/database

c. Copy the Atlas cluster link and paste it to the mongo db server file.

d. After that enter your Collection Name in place of " ? " in the link .

5.3 NodeJS

a. Go to the official Node.js website: https://nodejs.org/en/download/

b. Select the appropriate version of Node.js for your operating system (e.g., Windows, macOS, or Linux).

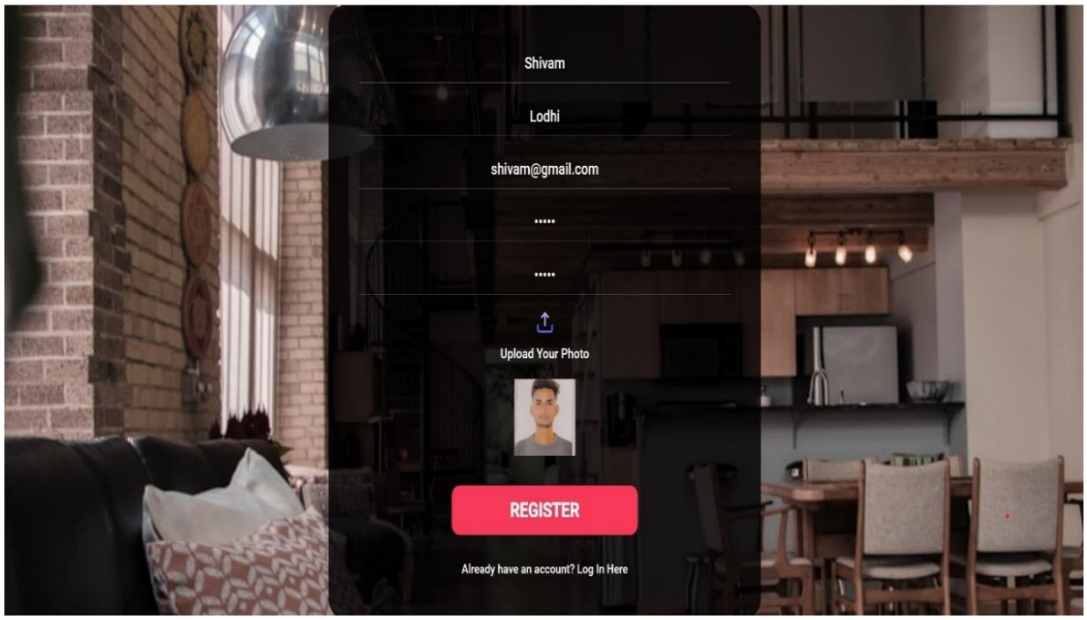
c. Click on the "Download" button to start the download.

d. Once the download is complete, run the installer. Follow the installation wizard and select the options that suit your needs.

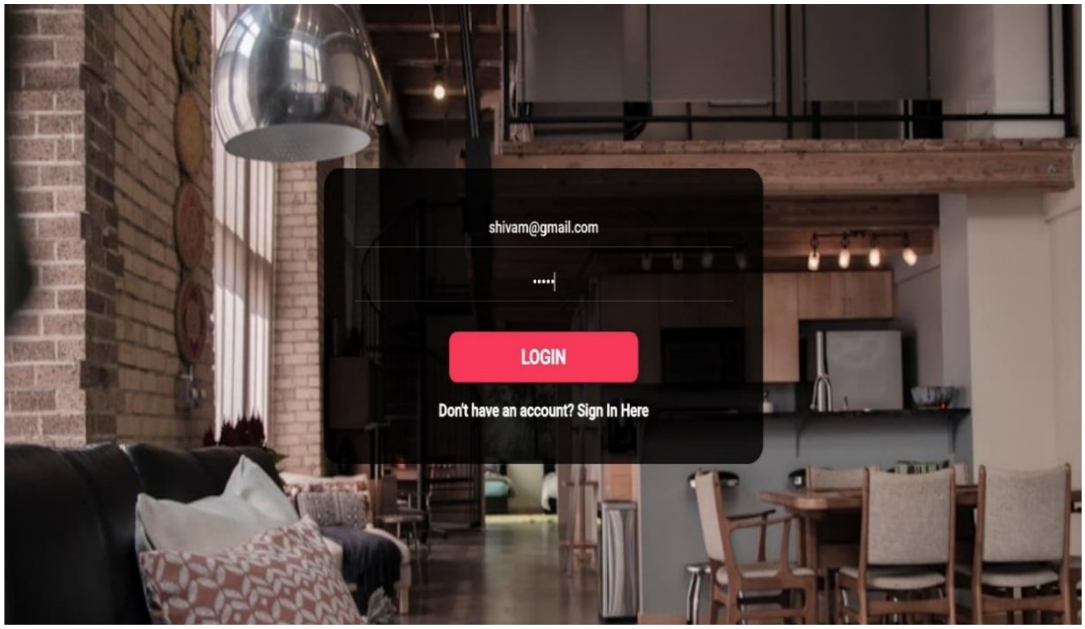
e. Once the installation is complete, you can open a terminal or command prompt and type node -v to check if Node.js is installed correctly. This should display the version of Node.js that you just installed.

Chapter-6 Sample Forms And Reports

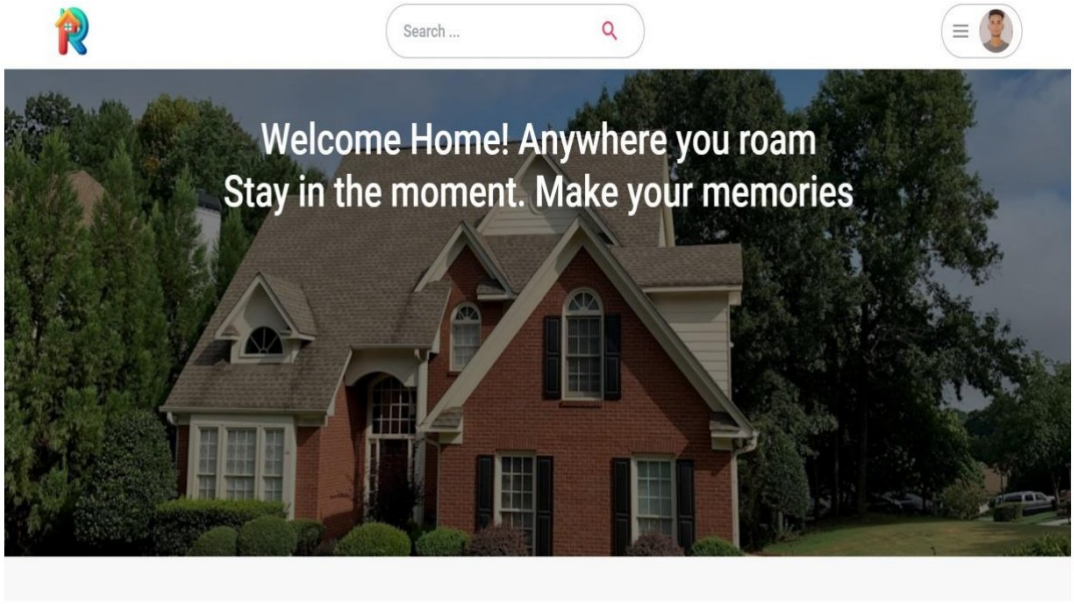
a. Registration form



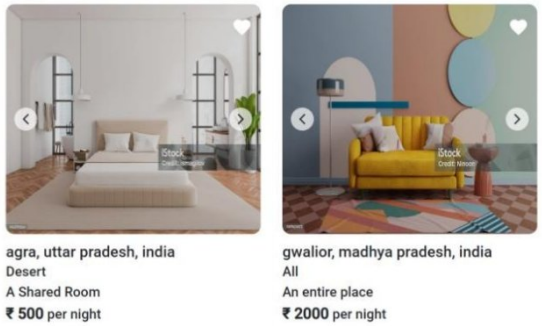
b. User Login Form



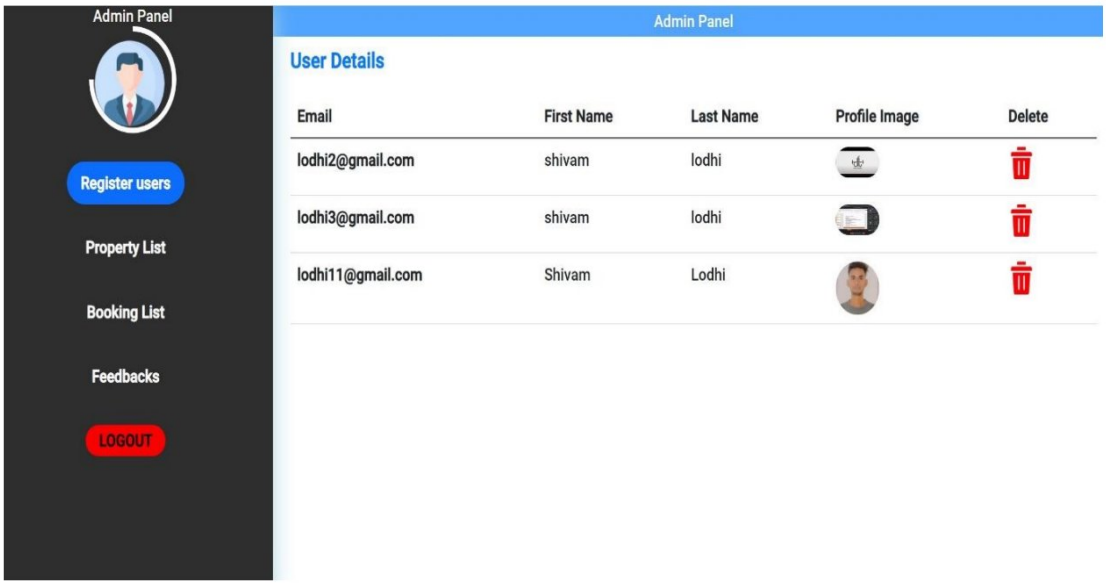
c. User Interface



d. All Rooms

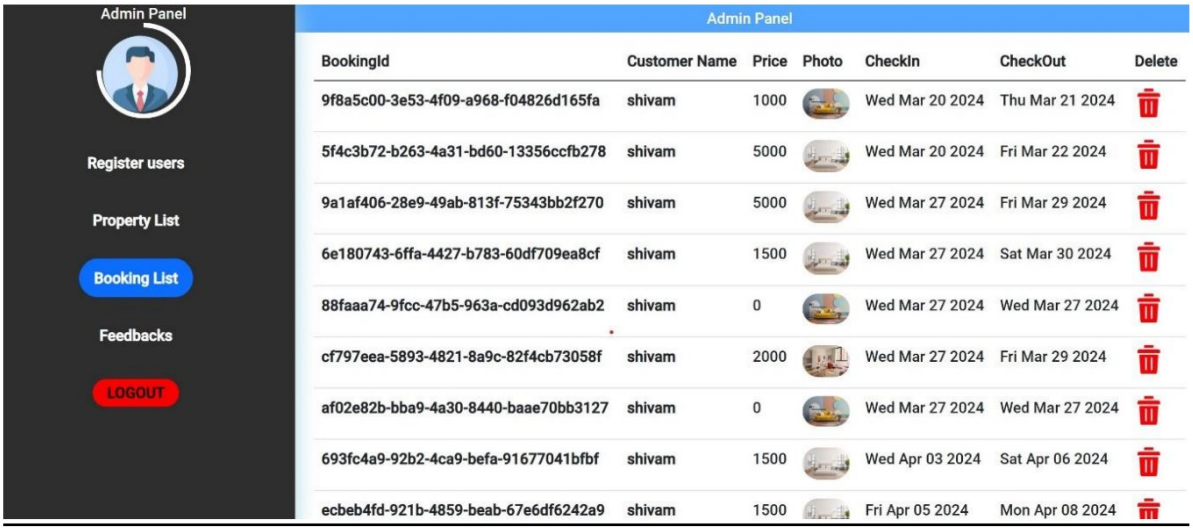


e. Register User



f. Property list

g. Booking List



h. Feedback

Chapter-7 Conclusion and Future Scope

In conclusion, the room rental management system represents a pivotal solution for streamlining the rental process, enhancing user experience, and optimizing property management operations. Through alpha testing, we've diligently scrutinized the system's functionalities, ensuring its reliability, efficiency, and usability. By engaging with internal testers and addressing their feedback, we've identified and resolved potential issues, fine-tuning the system for optimal performance. As we move forward, the robustness of our testing process instills confidence in the system's ability to meet the diverse needs of property owners and renters alike. With a user-centric approach and a commitment to continuous improvement, our room rental management system is poised to revolutionize the rental industry, facilitating seamless transactions and empowering users to achieve their goals with ease.

a. **Efficient Property Management:** Landlords can efficiently manage their properties by automating tasks such as rent collection, lease agreements, maintenance requests, and communication with tenants.

b. **Streamlined Booking Process:** For tenants, it provides a convenient platform for searching available rooms, viewing details such as photos and descriptions, and booking online, reducing the time and effort required for both parties.

c. **Improved Communication:** The system facilitates clear communication between landlords and tenants through messaging features, ensuring prompt responses to inquiries, maintenance requests, and other concerns.

d. **Payment Automation:** Landlords can set up automated rent collection, enabling tenants to pay their rent online through various payment methods, reducing the hassle of manual transactions and late payments.

e. **Enhanced Security:** Secure online payment processing and data encryption help protect sensitive information, providing peace of mind for both landlords and tenants.

f. **Maintenance Tracking:** Tenants can easily submit maintenance requests through the system, and landlords can track and prioritize them efficiently, ensuring timely resolution of issues.

g. **Financial Management:** Landlords can track rental income, expenses, and other financial metrics through built-in reporting tools, simplifying tax preparation and financial analysis.

h. **Documentation Management:** The system can store important documents such as lease agreements, rental applications, and payment receipts securely, reducing the risk of loss or damage.

i. **Tenant Screening:** Landlords can use the system to screen potential tenants by collecting and reviewing rental applications, references, and background checks, helping to ensure reliable tenants and reduce the risk of rental disputes.

j. **Scalability:** The system can scale to accommodate a growing number of properties and tenants, making it suitable for landlords with multiple rental units or property management companies managing large portfolios.

Future Scope: The future and scope of room rental management systems are promising, driven by several factors:

a. **Technological Advancements:** With ongoing advancements in technology such as artificial intelligence, machine learning, and Internet of Things (IoT), room rental management systems can become even more sophisticated. For example, AI algorithms can optimize rental pricing based on market trends and demand, while IoT devices can automate home monitoring and maintenance tasks.

b. **Market Expansion:** The growing demand for rental properties, especially in urban areas and among younger demographics, will drive the expansion of the room rental market. This expansion creates opportunities for room rental management systems to cater to a larger user base and offer more diverse features and services.

c. **Regulatory Compliance:** With evolving regulations and compliance requirements in the real estate industry, room rental management systems can play a crucial role in helping landlords stay compliant with local laws and regulations related to rental properties, such as tenant screening, lease agreements, and fair housing practices.

d. **Integration with Smart Home Technology:** Integration with smart home technology can enhance the functionality of room rental management systems by offering features such as remote keyless entry, energy management, and home automation, providing added convenience and security for both landlords and tenants.

Bibliography

1. https://www.w3schools.com/html/default.asp
2. https://www.w3schools.com/css/default.asp
3. https://www.w3schools.com/js/default.asp
4. https://nodejs.org/en/download
5. https://getbootstrap.com/
6. https://dev.mysql.com/downloads/installer/
7. https://www.quikr.com/
8. https://www.olx.in/en-in
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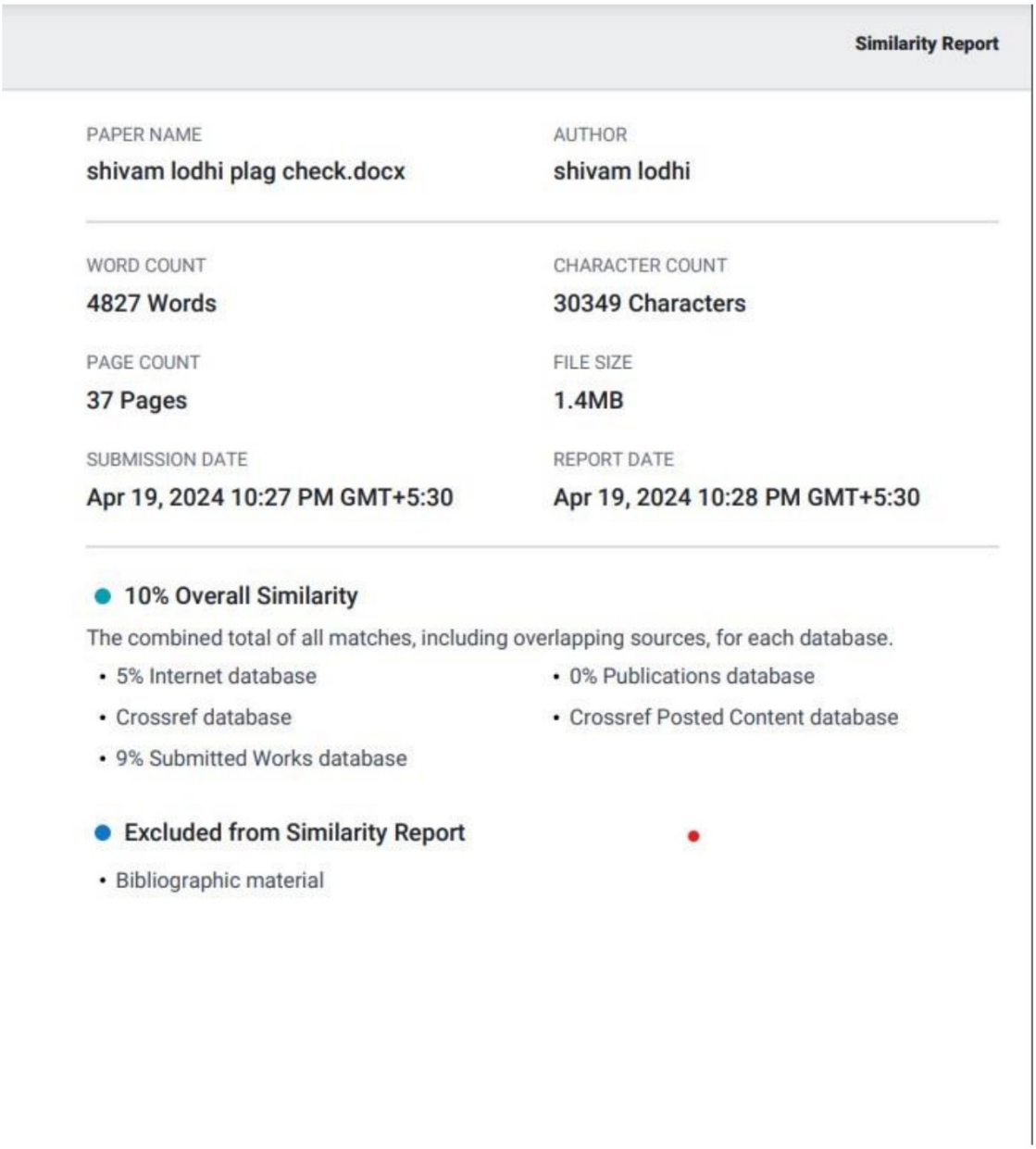

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Industry/Organization	Techie Shubhdeep IT Solution Pvt Ltd		Date/Duration	15/01/2024-24/01/2024	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work			✓		
Learning capacity/Knowledge up gradation				✓	
Performance/Quality of work			✓		
Behaviour/Discipline/Team work				✓	
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	He is doing MERN Stack technology.				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT**				
Name of Industry Mentor	Mr. Himanshu Gupta				
Signature of Industry Mentor	HR Manager Techieshubhdeep IT Solutions Pvt. Ltd.				

Receiving Date	5/2/24	**Name of Faculty Mentor**	Dr. Parul Saxena	**Sign**	5/2/24

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FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	SHIVAM LODHI		Department	CSE (Program: MCA)	
Industry/Organization	Techie Shubhdeep IT Solution Pvt Ltd		Date/Duration	25/01/2024-31/01/2024	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work				✓	
Learning capacity/Knowledge up gradation				✓	
Performance/Quality of work			✓		
Behaviour/Discipline/Team work			✓		
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	He is working on login/signup and registration form.				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT**				
Name of Industry Mentor	Mr. Himanshu Gupta				
Signature of Industry Mentor	HR Manager Techieshubhdeep IT Solutions Pvt. Ltd.				

Receiving Date	5/2/24	**Name of Faculty Mentor**	Dr. Parul Saxena	**Sign**	5/2/24

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FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	SHIVAM LODHI		Department	CSE (Program: MCA)	
Industry/Organization	Techie Shubhdeep IT Solution Pvt Ltd		Date/Duration	1 Feb - 15 Feb 2024	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work			✓		
Learning capacity/Knowledge up gradation		✓			
Performance/Quality of work		✓			
Behaviour/Discipline/Team work			✓		
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	He is working on client side coding.				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT**				
Name of Industry Mentor	Mr. Himanshu Gupta				
Signature of Industry Mentor	HR Manager Techieshubhdeep IT Solutions Pvt. Ltd.				

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(4)

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FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	SHIVAM LODHI		Department	CSE (Program: MCA)	
Industry/Organization	Techie Shubhdeep IT Solution Pvt Ltd		Date/Duration	16-02-24-29-02-24	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work			✓		
Learning capacity/Knowledge up gradation			✓		
Performance/Quality of work			✓		
Behaviour/Discipline/Team work				✓	
Sincerity/Hard work				✓	
Comment on nature of work done/Area/Topic	He is working on zoom dental Project Admin Side.				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT**				
Name of Industry Mentor	Mr. Himanshu Gupta				
Signature of Industry Mentor	Techie Shubhdeep IT Solutions Pvt.Ltd.				

Receiving Date	19/3/24	**Name of Faculty Mentor**	Dr. Parul Saxena	**Sign**	

(5)

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FORTNIGHTLY PROGRESS REPORT (FPR) FROM INDUSTRY MENTOR

Name of student	SHIVAM LODHI		Department	CSE (Program: MCA)	
Industry/Organization	Techie Shubhdeep IT Solution Pvt Ltd		Date/Duration	1-03-24 to 15-03-24	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work			✓		
Learning capacity/Knowledge up gradation			✓		
Performance/Quality of work				✓	
Behaviour/Discipline/Team work				✓	
Sincerity/Hard work			✓		
Comment on nature of work done/Area/Topic	Room rental project is mostly done.				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT** ✓				
Name of Industry Mentor	Mr. Himanshu Gupta				
Signature of Industry Mentor	Techieshubhdeep IT Solutions Pvt.Ltd.				

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Industry/Organization	Techie Shubhdeep IT Solution Pvt Ltd		Date/Duration	16/03/24 – 30/04/24	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work			✓		
Learning capacity/Knowledge up gradation		✓			
Performance/Quality of work		✓			
Behaviour/Discipline/Team work			✓		
Sincerity/Hard work			✓		
Comment on nature of work done/Area/Topic	Room Rental Project Now Responsive.				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT**				
Name of Industry Mentor	Mr. Himanshu Gupta				
Signature of Industry Mentor	techieshubhdeep IT Solutions Pvt.Ltd.				

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Industry/Organization	Techie Shubhdeep IT Solution Pvt Ltd		Date/Duration	1/04/24 – 15/04/24	
Criterion	**Poor**	**Average**	**Good**	**Very Good**	**Excellent**
Punctuality/Timely completion of assigned work			✓		
Learning capacity/Knowledge up gradation			✓		
Performance/Quality of work			✓		
Behaviour/Discipline/Team work			✓		
Sincerity/Hard work			✓		
Comment on nature of work done/Area/Topic	He is working on Room Rental. Project Hix Project working for TOLET Aroom.				
OVERALL GRADE (Any one)	**POOR/AVERAGE/GOOD/VERY GOOD/EXCELLENT**				
Name of Industry Mentor	Mr. Himanshu Gupta				
Signature of Industry Mentor	Techieshubhdeep IT Solutions Pvt.Ltd.				

Receiving Date	22/4/24	**Name of Faculty Mentor**	Dr. Parul Saxena	**Sign**	