­­PROJECT REPORT

##### ON

**ApnaRoom.Com(Find Your Perfect Rental with ApnaRoom”)**

Towards partial fulfillment of the requirement

For the award of degree of

###### Bachelor of Computer Application

Submitted by Under Guidance of

Ansh Mishra Mr. Amit Srivastava

ID : 722016

Academic Session 2023-25

Department of Computer Science



**National P.G. College**

**(An Autonomous College of Lucknow University)(NAAC ‘A’ Grade Credited)  
2- Rana Pratap Marg,Lucknow**

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**National P.G. College**

**2, Rana Pratap Marg, Lucknow(U.P.)**

**CERTIFICATE**

This is to certify that project report entitled

**ApnaRoom.Com**

being submitted by

**Ansh Mishra**

Towards partial fulfillment of the requirement

For the award of degree of

**Bachelor of Computer Application(BCA)**

In the Academic Session: 2022-2025

Is a record of students own work

And to the best of my knowledge the work reported here in does not form a part of

Any other thesis or work on the basis of which degree or award was conferred on

An earlier occasion to this or any other candidate

**Mrs. Shalini Lamba**

**H.O.D(Computer Application)**

CANDIDATE DECLARATION

I, hereby certify that the work which is being presented in the project work entitled **“ApnaRoom.Com”** is the fulfillment of the requirement for award of the Bachelors in Computer Applications submitted in the Computer Science Department of National P.G. College.

This is an authentic record of my work during 6 months period under supervision of **Mr.Amit Srivastava.**

The matter presented in the project work has not been submitted by me for the award of any other Degree/Diploma of this or any other University.

**Date : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Place : Lucknow (Signature of Candidate)**

**Acknowledgement**

The satisfaction and euphoria that accompany the development of any task would be incomplete without the mention of the people who make it possible, whose constant guidance and encouragement crowned our efforts with success.

We, the developers feel indebted to a lot of people who during the course of our project not only held us in good stead but also provided us with invaluable services both personal and professional.

At this juncture, when we, at the successful completion of our project are presenting our report it would be unfair not to acknowledge the various acts of kindness done to us by our teachers. They were always present on our every beck and call to help us out of every hurdle and obstacle that we faced.

Our first vote of thanks goes to our Parents, with every gesture, every word, every pat on the back, they have always tried to inspire us for better things and attain them. More so with this project, they were with us every instant, sharing our joys-when the code used to work and wiping our tears when machine used to hang.

We wish to place on record our whole hearted gratitude to **Mr. Amit Srivastava** our project guide for making available every facility that we required during the course of our project. Also, we are extremely thankful to you Sir, for extending your kind guidance and words of wisdom from your treasure trove of experience. With friendly advice and guidance at every step, his presence was a welcome sight through out the project. .

Thank you Sir.

We are also deeply indebted to our **HOD Mrs Shalini Lamba** for their constant presence, supervision and advice paid off in the culmination of this project and has helped us a great deal with this project with their constant words of encouragement and advice.

Actually, this project report is just an excuse to convey our feelings about how much we appreciate the amount of concern and caring that our teachers exhibit in all our pursuits ranging from anything as simple as the routine lab program to something as taxing as a project. Their patient listening to our problem is itself a major source of strength to us.

Thanks to all of u….

Finally, we would like to bind up by paying our heartfelt thanks and prayers to the Almighty, without whose willing nothing is possible in this world and all my dear friends for their support.

**1.1 Statement of Proposed System**

The Apnaroom platform revolutionizes the property rental market by offering an advanced online solution tailored for seamless property management and acquisition. Users can effortlessly browse a curated selection of rental properties within their local area, ensuring they find the perfect match for their needs. Apnaroom stands out with its emphasis on hyperlocal connectivity, delivering real-time property listings and updates to facilitate quick and informed decisions. The platform also provides detailed expense breakdowns, ensuring full transparency in rental costs, and fosters trust with comprehensive property and landlord profiles. This modern approach addresses the growing demand for efficient and localized rental solutions, positioning Apnaroom as a cutting-edge player in the property rental sector.

**1.2 Problems of Existing Systems**

Current online property rental platforms often fail to address key concerns for users, such as the lack of detailed expense breakdowns and difficulty finding nearby properties that meet diverse needs. Many platforms do not provide a separate listing of individual rental expenses, leaving users uncertain about the total financial commitment involved Additionally, users struggle to find properties that are conveniently located, with options ranging from affordable, economical choices to high-end luxury accommodations. This lack of transparency and localized search can make it challenging for users to make informed decisions and secure suitable rentals efficiently.

Apnaroom resolves these issues by offering a unique solution that includes comprehensive expense listings for complete financial clarity and a hyperlocal search feature. This allows users to easily find properties within their desired area, catering to both budget-friendly and luxury preferences, thus enhancing the overall rental experience with greater transparency and convenience.

**1.3 Objectives of the Project**

In the evolving digital landscape, Apnaroom seeks to redefne property rental experiences by leveraging the latest in technology and local connectivity. Our project aims to bridge the gap between online convenience and local reliability, focusing on the following key objectives:

**Local Integration:** Rather than relying on centralized warehouses, Apnaroom partners with local property owners and managers, ensuring that users benefit from the efficiency of online searches while enjoying personalized, nearby support and rapid responses.

**Empowering Local Landlords**: The platform offers small and independent property managers an opportunity to thrive in the competitive rental market,

aligning with the growing demand for localized, accessible property solutions.

**Comprehensive Information:** Apnaroom provides detailed, transparent information about each property, including expense breakdowns, amenities, and location specifcs, enabling users to make well-informed decisions.

**Convenient Access:** Catering to busy individuals, the platform allows users

to search for and manage rental properties online, saving time and offering

flexibility.

**Flexible Payment Options:** Users can make payments through various

methods including cash, debit cards, or digital transactions, ensuring a

seamless and secure fnancial process.

**Enhanced Transparency and Security:** By offering clear details on costs

and property features, Apnaroom fosters trust and ensures a secure

rental experience with reliable delivery and support services.

Apnaroom aims to transform the property rental landscape by combining the

best aspects of online convenience with the personal touch and

reliability of local services, ultimately providing a superior and more efcient

rental experience.

**1.4 Project Description**

The project, titled "**Apnaroom: Your Local Property Rental Platform,"** redefnes the rental experience by integrating local property management with advanced online functionality. Apnaroom focuses on transforming property searches and rentals through a platform that connects users with trusted local property owners, offering an alternative to traditional, broader

**II System Analysis**

**Requirement Analysis**

The system has been designed with the following functional and non-functional requirements:

* **Functional Requirements**:

**Landlord Dashboard:**

**Access and Authentication:** Landlords must register or log in to access their dashboard.

**Property Management:** Landlords can list new rental properties, update existing property details,

and manage their listings.

**Listing Overview:** Landlords can view and track the performance of their property listings,

including inquiries and reservations.

**Profile Management:** Landlords can update their profle information and manage account settings.

**Tenant Dashboard:**

**User Authentication:** Tenants must log in with verifed credentials to access their dashboard.

**Property Search and Inquiry:** Tenants can search for rental properties based on various criteria, view

detailed property information, and submit inquiries.

**Reservation and Booking:** Tenants can make reservations and manage their bookings through

the dashboard.

**Profile Management:** Tenants can update their personal information and manage their account

settings.

**Administrator Features:**

**Platform Management**: Administrators have the ability to add and manage localities, property

categories, and brands across the platform.

**Billing and Reports**: Administrators handle billing statement generation and oversee comprehensive

transaction reports.

**Full System Access:** Administrators have unrestricted access to all system features and can monitor

overall platform activity.

**User Interface Requirements:**

**Intuitive Navigation:** The interface should be user-friendly, allowing landlords and tenants to easily

navigate their respective dashboards.

**Clear Functionality:** Interface elements should be clearly labeled and provide immediate,

understandable feedback.

**Consistent Design:** The interface should maintain consistency in actions and prompts to ensure a

cohesive user experience across different dashboards.

**Aesthetic Appeal**: The design should feature an attractive layout and color scheme, enhancing both

usability and visual appeal.

**2.2 Risk Analysis**

Uncertainty is a constant factor in both personal and professional environments,

shaping the choices we make daily. When we discuss risk, it typically refers to the

likelihood of encountering an adverse outcome. Naturally, we strive to either

avoid or mitigate these risks. For instance, if there's a forecast of rain and we

want to avoid getting drenched, we could stay indoors to avoid the risk altogether

or carry an umbrella to reduce its effects. Similarly, uncertainty can infuence

decisions both positively and negatively. In risk analysis, our focus tends to be on

potential setbacks—those scenarios that could result in loss or harm—though a

comprehensive analysis also sheds light on positive opportunities.

In the context of apnaroom, risk assessment involves evaluating the platform’s

infrastructure, security measures, and processes to gauge their resilience against

potential threats. The business impact analysis goes deeper, identifying key

functions like property listings, user account management, and payment

processing, while assessing the impact if any of these functions are interrupted for a

signifcant period. Criteria such as customer experience, operational efficiency, legal

compliance, and financial stability are vital in evaluating these risks.

The core objective of business recovery planning is to safeguard apnaroom’s

functionality in case any part of its operations or services becomes unavailable.

Every department from IT to customer support needs to be analyzed for potential

risks posed by factors such as cyber threats, system failures, or natural disasters.

Despite efforts to prevent risks, both internal and external threats must be evaluated

comprehensively. Although the specific nature of potential issues is difficult to predict,

conducting a thorough risk assessment of plausible threats is invaluable. The primary

goals remain to ensure user safety, protect data, and maintain service continuity.

Uncertainty can manifest in several ways for apnaroom: If we're unsure of a

competitor’s marketing strategy, the uncertainty stems from our limited access to

that information. It might be known to them, but it’s hidden from us.

If the uncertainty relates to market demand for rental properties, it arises from the

interplay of economic factors, user preferences, and actions taken by competitors.

Even with full knowledge of these variables, predicting demand can be a complex

challenge.

In terms of technology, uncertainty could come from our ability to scale the platform

effectively, influenced by technical limitations or emerging technology trends.

Certain operational aspects, like fluctuating user behavior, may involve inherent

randomness that is beyond control or prediction.

Understanding and managing these risks will help apnaroom remain a reliable and

resilient platform for all users.

**Preliminary Investigation**

The preliminary investigation marks the initial phase of the system development life cycle, providing a foundational understanding of the system in question. It offers a comprehensive overview of the existing processes and helps identify areas where improvements can be made.

At this stage, the necessity of developing a new system is critically assessed.

For apnaroom, this involves gathering essential insights to outline the key components of the platform. This stage leads to the creation of a "Project Overview" document, which outlines the challenges with current property rental methods, the objectives of the apnaroom platform, its scope, constraints, and the potential advantages of implementing the proposed solution, all aligned with user needs.

**The major steps in this stage are:**

* Identifcation of the key problems and formal initiation of the project.
* Conducting background research to understand the current landscape of rental systems.
* Drawing inferences and drafting a system proposal based on initial fndings.
* Estimating the scope and scale of the project, including resources required.
* Evaluating alternative solutions by comparing their costs and benefts.
* Assessing the technical feasibility and viability of different approaches.

This stage sets the groundwork for the apnaroom project, helping to ensure that the platform is designed to address the right challenges with a feasible and scalable solution.

**Project Feasibility**

Project feasibility involves evaluating whether pursuing the project is both practical and valuable. The process used to reach this conclusion is

known as a feasibility study. This study assesses whether the proposed project can be successfully implemented and whether it will provide meaningful benefits. Once apnaroom is deemed feasible, the next step is to develop detailed project specifications, which outline the specific requirements and features of the platform.

The feasibility study focuses on answering three critical questions:

1. What are the clear needs of the users, and how does the proposed apnaroom platform address them?

2. What resources, such as technology, time, and finances, are available to support the development of the apnaroom platform? Is solving the current problem a worthwhile endeavor?

3. How will the implementation of the apnaroom platform affect the overall operations and success of the rental ecosystem?

**Methodology Used**

**Technologies Used:**

**1. Frontend: React.js**

React.js is a powerful JavaScript library used for building interactive user

interfaces. For apnaroom, it will allow seamless navigation and dynamic updates

without reloading the page, enhancing the user experience.

**2. Backend: Node.js with Express**

Node.js, combined with the Express framework, provides a lightweight and efficient

server-side environment. It enables fast and scalable back end operations for

handling user requests, managing data, and processing transactions on apnaroom.

**3. Database: MySQL**

MySQL is a reliable and widely-used relational database that will store and

manage structured data for apnaroom, such as user accounts, property listings,

bookings, and transactions. Its robust query capabilities ensure fast and secure

data handling.

**4. Payment Integration: PayPal**

PayPal is integrated to handle secure online payments for property bookings and

other transactions on apnaroom. It offers users a familiar and trusted method for

completing payments.

**5. Cloud Hosting: Microsoft Azure**

Microsoft Azure provides scalable cloud hosting for apnaroom, ensuring that the

platform can handle increased traffic while maintaining high availability and security for users and data.

**6. Version Control: GitHub**

GitHub is used for version control and collaboration. It helps in managing code

changes and enabling efficient teamwork throughout the development of apnaroom.

**7. API Integration: RESTful API**

RESTful APIs are used to facilitate communication between the frontend and

backend, allowing efficient data transfer, such as retrieving property listings and

booking details.

**8. Security: SSL Encryption**

SSL encryption is implemented to ensure that all data exchanged between users and

the platform remains secure, protecting sensitive information such as login credentials

and payment details.

**9. Real-Time Notifcations: Socket.io**

Socket.io enables real-time updates on apnaroom, such as instant notifications for

property availability, booking confirmations, and tenant landlord communications.

**Software and Hardware Requirement**

**Requirement Specification**

**Tools/ Platform/ Software and Hardware Specification :**

**Software Requirement:**

**1. Server:**

Browser: Latest versions of Chrome, Mozilla Firefox, Microsoft Edge

Database: MySQL 8.0 or higher

Operating System: Windows 10, Ubuntu 20.04+, or CentOS 7+

**2. Client:**

Browser: Latest versions of Chrome, Firefox, Safari

Operating System: Windows 10 or higher, macOS, Linux

**3. Developer Environment:**

Browser: Latest versions of Google Chrome and Firefox

Database: MySQL 8.0 or higher, or PostgreSQL

Operating System: Windows 10, macOS, or Linux

(Ubuntu/Fedora)

Documentation Tools: MS Word, Google Docs, MS PowerPoint, Google Slides

Development Tools: Visual Studio Code, GitHub Desktop, Node.js, React Developer Tools

**Hardware Specifcations:**

**1. Server:**

Processor: Intel Xeon or AMD Ryzen 3.0 GHz or higher

RAM: 16 GB

Storage: 256 GB SSD (or higher) for faster data processing and storage

Display: 1920 x 1080 resolution, 32-bit color depth

**2. Client:**

Processor: Intel i5 2.5 GHz or equivalent

RAM: 4 GB or higher

Storage: 50 GB available space

Display: 1920 x 1080 resolution, 32-bit color depth

**3. Developer System:**

Processor: Intel i7 3.0 GHz or equivalent

RAM: 16 GB or higher for smooth multitasking and code compilation

Storage: 512 GB SSD for faster read/write speeds

Display: 1920 x 1080 resolution, 32-bit color depth

**Project Modules**

To effectively manage and develop the apnaroom.com platform, the project is divided into distinct modules. Each module handles specifc

functionalities, ensuring that the system is manageable and each component can be developed, tested, and maintained independently. Below

are the key modules of the apnaroom.com project:

**1. Admin Module:**

The Admin Module is designed for the administrators who oversee the entire platform. It includes functionalities for managing and monitoring

the platform's operations. Key features include:

**User Management:** Manage user accounts, including tenants and landlords.

**Property Listings:** Oversee and approve property listings submitted by landlords.

**Security Controls:** Implement and manage authentication and authorization processes to ensure secure access.

**Content Management:** Edit or update website content, including property details and user information.

**Reporting:** Generate and view reports on user activity, property listings, and system performance.

**2. Landlord Module**

The Landlord Module is intended for landlords who list their properties on the platform. It includes:

**Property Management:** Add, update, or remove property listings, including details such as price, location, and availability.

**Application Management:** Review and manage rental applications from potential tenants.

**Communication:** Communicate with interested tenants through integrated messaging features.

**3. Tenant Module**

The Tenant Module serves users looking to rent properties. It features:

**Search and Filter**: Search for properties based on criteria such as location, price, and type.

**Application Submission:** Apply for rental properties and track the status of applications.

**Profile Management:** Manage personal information and rental history.

Booking: Book viewings and manage rental agreements.

**4. Billing Module**

The Billing Module manages the fnancial transactions on the platform. It includes:

**Invoice Generation:** Generate and send invoices for rental payments and other fees.

**Payment Integration:** Integrate with payment gateways like PayPal for secure transactions.

**Transaction History:** Maintain records of all fnancial transactions for both landlords and tenants.

**5. Property Module**

The Property Module maintains detailed information about properties listed on the platform. Key functionalities include:

**Property Details:** Store and display information such as specifcations, images, and rental terms.

**Category Management:** Categorize properties to facilitate easier searches by tenants.

**6. Feedback Module**

The Feedback Module allows users to provide and view feedback on properties and interactions. It includes:

**Review System:** Submit and read reviews from tenants and landlords.

**Discussion Board:** Participate in forums to discuss property-related queries.

**7. Application Module**

The Application Module tracks and manages rental applications. It includes:

**Application Tracking:** Monitor the status of applications submitted by tenants.

**Document Management:** Handle necessary documentation related to rental agreements.

**8. Search Module**

The Search Module enables users to find properties and information efficiently. Features include:

**Advanced Search:** Utilize filters to search for properties based on various criteria.

**Quick Access:** Allow landlords and tenants to find specific listings or user profiles quickly.

Each module of the apnaroom.com project is designed to ensure a smooth and user-friendly experience, catering to the needs of tenants,

landlords, and administrators alike.