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# Enhancing Accessibility and Cost-Effectiveness in Room Booking Website for Students and Employees in Nearby Organizations

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**ABSTRACT:** According to our survey, out of 154 people approximately 71% of the people face the problem of a suitable room near their organizations. Accessibility of finding a room near the organization is always a tough challenge for most of people. There has been scarce innovation when it comes to platforms or technologies that can be used to find Rooms or PGs for the people. In Bharat, we do not have real-time accessibility to proper rooms or locations that can accommodate enough people nearby organizations like Schools, College, Companies, etc. Room Viewers is a visual mode of communication that allows people to communicate between an owner of the building and the tenant such that the problem of real-time can be resolved. Room Viewers allow you to stay in different places like PGs, Flats, Rooms, Apartments, Hotels, and Houses. This website gives you a lot of choices to stay wherever you want. In summary, this paper seeks to explore the journey of the Room booking system from its historical roots to the current scenario and to evaluate the impact of the current solution over other developed solutions till now. By doing this we hope to contribute to the well-being in the life of those individuals.

## I. INTRODUCTION

### 1.1 What is Node.JS?

JavaScript runtime surroundings called Node.JS lets in JavaScript code to be achieved outside of a web browser. It is lightweight and efficient because it's far based totally on the V8 JavaScript engine discovered in Chrome and uses an event-pushed, non- blockading I/O structure. web applications, particularly people who require a whole lot of records and are real-time, are commonly advanced with Node.js.

## II. SURVEY

**2.1 Issue in finding a room near organization** - The given survey states that 83.9% of the people are not able to find a room near the organization even if the rooms are available the person is not well aware about the current location of the available room and the conditions of nearby areas.

**2.2 Stay Period** - The duration of the stay is not known to the owner in advance so this creates a tension between owner and the tenant if he stays there for a long period of time.

**2.3 Cost-Effectiveness** – The price of the available rooms are always high near the organizations. Whenever a person goes there they have to seek a broker to find them a room within their budget due to the broker's commissions the price of the rooms are always high. Our proposed solution can minimize this problem and give you a room with cost-effective price.

**2.4 Age** - Many tenants who are seeking education or the jobs are lies with-in the range of 18-35. The person seems to find the room where they can work or rest properly.



**2.5 Room Partners** - The survey findings indicated that there are many times when people are comfortable with their room-partners so they have to switch the rooms multiple times.

**2.6 Challenges while booking Rooms** – The room is not up to the mark as per the rent, the location of the room is very far so they either have to take auto or the metro and the problem is the real time room availability and accessibility of the room is not to anyone other than the owner.

**2.7 Difficulties when using other platforms** - A significant portion of survey participants conveyed that the location of rooms along with room-partners and the nearby places are not described well in a single platform. The geographical knowledge of the area isn't described well like nearby markets, shops, hospitals and the distance between the room and the organization.

### III. METHODOLOGY

In order to ensure the functionality of the “Room Viewers” website we have to follow some procedures & steps given below:-

**3.1 Requirement Analysis** – It provides both qualitative and quantitative requirements of the project about research provide a comprehensive view. It needs the basic details of rooms, PG's and homes with the basic necessities and the details.

**3.2 Market Research** – We develop surveys to collect quantitative data on topics such as stay of period, age, difficulties in using other platforms, proficiency and well-being of peoples, also it includes open-ended questions to elative data. We conduct interviews with peoples those live in rental rooms and suffer to search a best spot. Analyze pain points and the user preferences in the Room booking domain.

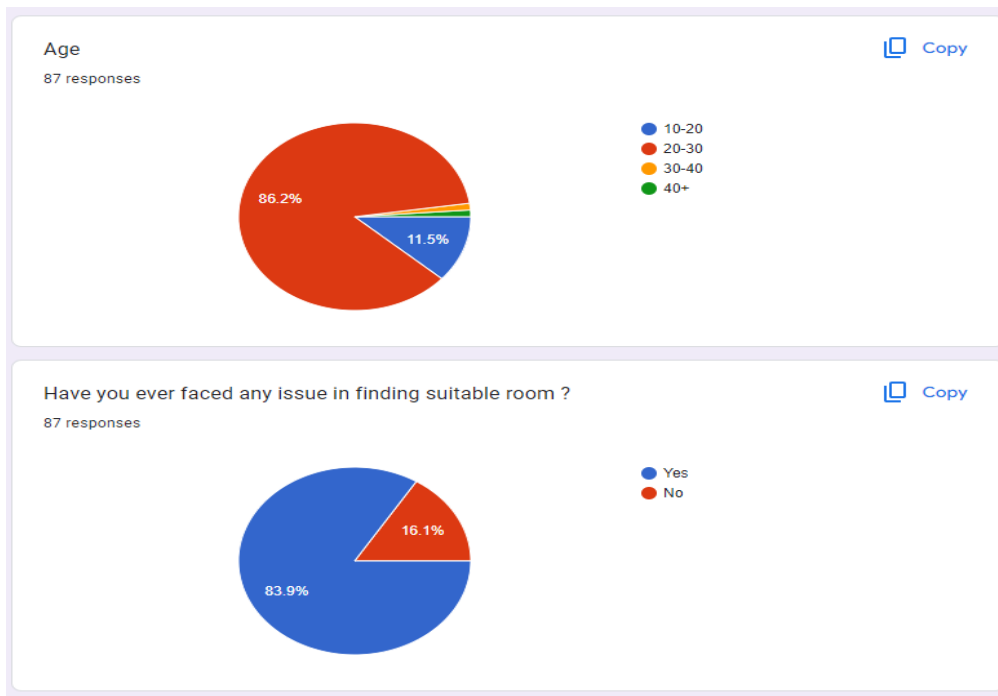


Figure 1. Market Research analysis report

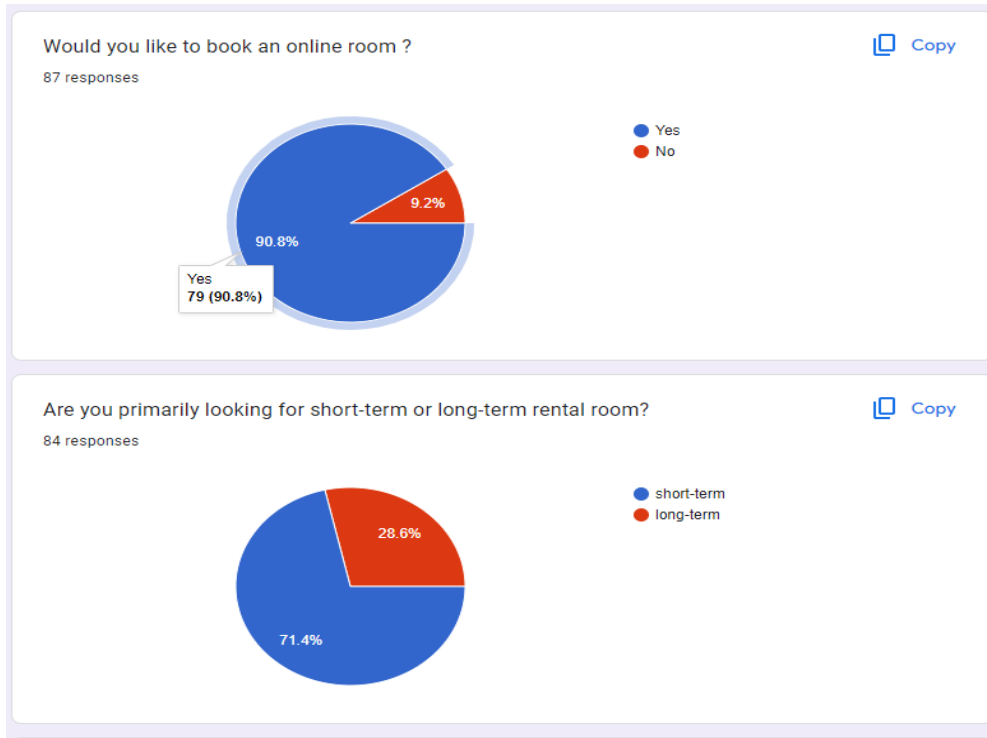


Figure 2. Market Research analysis report

**3.3 Technology Solution** – In Room Viewers we are using HTML(HYPertext MARKUP LANGUAGE), CSS(CASCADE STYLE SHEET) and JAVASCRIPT in the front end, a slight touch of the react and in backend we .JS in the database we are using MONGODB.

**3.4 Database Design** – We are making 4 databases that are explained below:-

**3.4.1 Student & Employees** – This database collects information of student and the employees.

**3.4.2 Owner** – In this database we have all the registered owners of PGs & Rooms.

**3.4.3 Rooms** – A database which contains the information about rooms.

**3.4.4 Administrator** – A Database about a person that holds the control over every data.

**3.4.5 Integration of APIs** – It is used for providing extra features like Payment processing, location based services & reviews and ratings.

**3.4.6 Testing and Hosting** – Perform comprehensive testing, functionality, usability, security and performance testing. Fixing of bugs, deployment of website selection of domain and at the very last hosting.

#### IV. ACCESSIBILITY AND COST EFFECTIVENESS IN ROOM VIEWERS

Both employees and students frequently need to reserve rooms, although it can be a little challenging. Finding the ideal room at the ideal price might be challenging at times. This is where affordability and accessibility are important considerations. It simply means that everyone is able to use the Room Viewers website.

**4.1 Accessibility** - Accessibility is all about ensuring that each and every person that have the opportunity to participate fully in the society. Anybody, including those without impairments or those who are not tech-savvy, can utilize an accessible room booking system without any issues.

**4.2 Cost Effectiveness** - To be cost-effective, one must obtain good value for their money. When we discuss reserving a room that is cost-effective, we mean locating accommodations that are not only reasonably priced but also provide high value in terms of amenities and quality. Nobody likes to overspend on a room that is too small for their requirements.



## V. HOW TO IMPROVE ACCESSIBILITY

To improve the accessibility we have to follow some steps as given below.

**5.1 Simplicity** - The system for booking rooms should be easy to use, with straightforward directions and simple navigation. The descriptions about the rooms and its facilities should be clear and noticeable to the user.

**5.2 Features for Accessibility** - We need to make sure that those with disabilities, including those who can use screen readers, can utilize the system.

**5.3 User Support** - It's critical to provide a channel for users to seek assistance when they have queries or issues.

## VI. HOW TO IMPROVE COST

To improve the cost effectiveness we have to follow some steps as given below.

**6.1 Transparent pricing** - In most of the Room Booking website the price is not transparent. The brokers tend to charge a hefty sum of money thus the price of the room increases. We in Room Viewers can provide you the fix charges with a very small amount of Rs.199 and broke this system.

**6.2 Discounts and Offers** - For the peoples who are looking for a home to stay, we are trying to give them good discounts and offers for affordable rooms.

**6.3 User feedback** - The feedback from the end-user allows us to make accommodations in the present features of the Room Viewers website such that no other users should have to face the same problem again.

By working on these features and making continuous improvements, we as Room Viewers try to create a website that is easy to use and didn't take much money from your wallet. The role of the Room Viewers is to provide each and every person a place to stay with an affordable amount of money.

## VII. PROPOSED OUTCOME / FINDINGS

- This website categorizes the rooms along with tenant work profession and derived location.
- Description about nearby areas like Hospital, market, transport facility etc.
- Real time room availability and tenant verification.
- Cooking, lunch box, mess and cleaning facilities are there.
- Availability if groceries and furniture items.
- The maids are also available for cooking and cleaning services.
- Feature of the proposed system is that this website covers all the areas near the organizations.
- The need of the enhanced room booking system is that no website or other applications covers all the nearby areas of the organizations.
- A signed documentation between user and the tenant which specifies the duration of the user stay and can't be terminated by owner unless the duration of the stay is over.
- Employees or workers need a software solution where they can find the suitable room along with the description easily instead of looking for a broker.
- The proposed system allows you to pay the money for whatever the facilities you are taking with the original rent such that it reduces the pricing by a huge margin.

## REFERENCES

1. <https://www.researchgate.net/publication/371956634> Online Service Booking Platform with Payment Integration
2. <https://scholarworks.lib.csusb.edu/cgi/viewcontent.cgi?article=4119&context=etd-project>



3. <https://www.tandfonline.com/doi/abs/10.1080/19368623.2021.1899095>
4. <https://www.researchgate.net/publication/325980818> Understanding of online hotel booking process A multiple method approach
5. [https://scholar.google.co.in/scholar?q=Jogiyanto,+Analisis+dan+Desain+Sistem+Informasi:+Pendekatan+Terstruktur+Teori+dan+Praktek+Aplikasi+Bisnis,+Edisi+2,+Yogyakarta:+Andy+Yogyakarta,+2001.&hl=en&as\\_sdt=0&as\\_vis=1&oi=scholart](https://scholar.google.co.in/scholar?q=Jogiyanto,+Analisis+dan+Desain+Sistem+Informasi:+Pendekatan+Terstruktur+Teori+dan+Praktek+Aplikasi+Bisnis,+Edisi+2,+Yogyakarta:+Andy+Yogyakarta,+2001.&hl=en&as_sdt=0&as_vis=1&oi=scholart)



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