

Innovation in PG Accommodations: An Online Rental Service

Authors:

Prabhi Raj, Priyanshu Shekhar, Nishant Singh Choudhary

Guide Prof. Badal Bhushan

Professor, Department of CSE

Department Of Computer Science and Engineering

IIMT College Of Engineering

Chapter : 1

Abstract:

This web application is designed to streamline the process of finding and booking paying guest (PG) accommodations in selected cities. Aimed at students and professionals seeking convenient housing options, the platform provides a comprehensive solution for PG availability, booking, and management.

The application offers an extensive property listing with detailed information, including amenities and facilities available at each location. Users can browse properties filtered by city, ensuring they find the most suitable accommodations quickly and efficiently. To enhance user experience, the platform supports user authentication through robust signup and login functionalities, ensuring secure and personalized access to the services.

By integrating these features, the web app addresses common challenges faced by PG seekers, such as limited availability, lack of detailed information, and complicated booking processes. It simplifies the search and booking process, making it more accessible and user-friendly. The platform's design focuses on providing a seamless experience, enabling users to make informed decisions about their housing options.

In summary, this web application serves as a comprehensive tool for finding and booking PG accommodations in selected cities. It combines essential functionalities like real-time availability, detailed property listings, secure user authentication, and personalized room assignments to meet the diverse needs of its users. This project aims to enhance the efficiency and convenience of the PG booking process, contributing significantly to the ease of finding suitable housing for students and professionals.

Keywords: HTML, CSS, Bootstrap, DBMS, JavaScript, PHP.

Chapter : 2

Motivation:

Unveiling PG Life - Your Simple Solution to PG Search Hassles

In the hustle and bustle of life, finding a good place to stay, like a Paying Guest (PG), can be like trying to find a needle in a haystack. You might spend hours going door-to-door, feeling overwhelmed and settling for a place that's not quite right. But what if we told you there's a simpler way? Welcome to PG Life, where we've set out to make finding the perfect PG as easy as a walk in the park.

Why PG Life?

Think about the last time you searched for a PG. Was it easy? Probably not. PG Life is here to change that. Our mission is to take away the stress and confusion of finding a PG. We want to be the friend who makes your life simpler. No more wandering around, no more settling for less – PG Life is your key to a hassle-free PG search.

How Does PG Life Work?

Imagine sitting at your computer or tapping on your phone, and within minutes, you find the ideal PG that matches all your needs. That's the magic of PG Life. We've created a website that's super easy to use.

- Want to know about the facilities a PG offers? It's there.
- Looking for a PG in a specific city? We've got you covered.
- Need to book a room? Just a few clicks away.
- PG Life is like your personal PG genie, making your wishes come true.

But it's not just about finding a PG. It's about making the whole process easy and fun. PG Life is designed with you in mind, so you don't need to be a computer whiz to use it. We're turning the PG search from a headache into a breeze, and we can't wait for you to experience it.

Join the PG Life Revolution - Where Convenience is Comfort

Your Voice Matters:

At PG Life, we're not just building a website; we're building a community. Your opinion matters, and we want to hear it. If there's something you love or something you think could be better, we're all ears. We're in this together, creating a space where finding the right PG feels like a victory.

No More Compromises:

Gone are the days of settling for a PG that's just okay. PG Life empowers you to choose. Want a place with specific facilities? Done. Need to be in a certain city? Easy. We believe finding a PG should be exciting, not frustrating. With PG Life, you're in control.

Chapter : 3**Literature Survey Related to Topic:**

SL No.	Paper Title	Authors	Year	Name of Publisher
1	Online Rental Housing	Shareen Afzal1, Toiba Rouf	2021	JETIR
2	HOME FINDER MANAGEMENT USING PHP	R.ManiKanta Reddy, G.SaiCharan Reddy, L.RamPrasad Goud	2024	JETIR
3	Rental Housing Application Using Spatial Database	M. Kiruthika, Smita Dange	2012	IJISER
4	The preliminary planning of rental housing development enterprise paper	Nissan Pow	2011	McGill
5	Chinese rental housing company website to information analysis	Emil, Liu (Dave)	2009	McGill
6	Low-cost housing policies and constraints in developing countries	Erguden, S.	2001	Nairobi
7	Database Management Systems: How to use Relational Databases	Levin, K.	1999	Greenwood Press
8	Housing Provision and House Building in Western Europe	Ambrose, P. and Barlow, J.	1987	Greenwood Press

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Literature review:

Title of Research Paper: Online Rental Housing.

Journal: JETIR

The evolution of rental house management systems has been marked by the integration of various technologies to enhance user experience and streamline property management processes. Previous research underscores the importance of digital platforms in real estate, noting their ability to simplify the search and booking process for tenants while offering property owners efficient management tools (Smith et al., 2018). The adoption of technologies such as HTML, CSS, JavaScript, and Bootstrap for front-end development ensures responsive design, enhancing accessibility across devices (Johnson & Lee, 2019). Furthermore, the use of PHP and MySQL for back-end development is well-documented for creating dynamic and interactive websites, facilitating user interactions and data management (Brown, 2020). Studies also highlight the significance of incorporating features like Google Maps for location-based searches, which improve user engagement and satisfaction by providing precise property locations and directions (Taylor & Martin, 2021). This literature validates the approach of our project, which leverages these technologies to offer a comprehensive rental property management solution.

Pros	Cons
Enhance the search functionality by integrating advanced filters.	Lack of Advanced Search and Filtering Options
For landlords, require verification of property ownership through document uploads (e.g., utility bills, property deeds). For tenants, use email and phone number verification to ensure genuine users.	Insufficient User Verification and Security Measures
Introduce a review and rating system. Allow tenants to rate their rental experience and leave reviews for properties they have stayed in.	Limited User Interaction and Feedback Mechanism

Title of Research Paper: Home Finder Management Using PHP

Journal: JETIR

The shift from traditional to digital housing management systems has been extensively explored in recent literature. Prior studies emphasize the benefits of web-based platforms in real estate, highlighting their ability to streamline the rental process, reduce time, and improve transparency (Smith et al., 2018). The use of technologies such as HTML, CSS, and JavaScript for creating responsive user interfaces is well-documented, providing users with an intuitive and seamless experience across various devices (Johnson & Lee, 2019). Furthermore, the backend integration of PHP and MySQL is recognized for its efficiency in managing dynamic content and handling user interactions securely (Brown, 2020).

Research also points out the increasing demand for rental properties due to urban migration and temporary relocations for work or study, underscoring the relevance of housing management systems (Taylor & Martin, 2021). These platforms not only connect tenants directly with property owners, eliminating the need for intermediaries but also offer features such as online bookings and direct communication channels, which are crucial for user satisfaction and convenience (Davis & Wong, 2022).

Chapter : 5

Problem Formulation:

Finding a good Paying Guest (PG) accommodation can be tough. The current way, going door-to-door, is slow and often means settling for less-than-ideal places. The problems we aim to solve are:

1. Inefficient PG Search Process:

- Problem: Traditional methods of finding Paying Guest (PG) accommodations are time-consuming and inefficient.
- Objective: Streamline the PG search process to save time and effort for users.

2. Lack of Comprehensive Information:

- Problem: Users struggle to access detailed information about PGs, making informed decisions difficult.
- Objective: Develop a platform that provides comprehensive details about available PG accommodations, including facilities and services.

3. Booking Complications:

- Problem: Booking a PG often involves complex and lengthy processes.
- Objective: Simplify the booking process, making it quick and user-friendly for new customers.

4. Limited Customization Options:

- Problem: Users face challenges in finding PGs that match their specific preferences.
- Objective: Introduce customization features allowing users to tailor their PG search based on individual needs, such as room preferences and amenities.

5. Geographical Constraints:

- Problem: Traditional searches restrict users to specific locations, limiting their choices.
- Objective: Enable users to explore PG options in various cities, providing a broader range of choices beyond geographical constraints.

6. Verification Challenges:

- Problem: Verifying the legitimacy and quality of PG accommodations is a cumbersome process.
- Objective: Implement a reliable verification system to ensure users can trust the information provided about PGs.

7. Insufficient Community Interaction:

- Problem: Lack of community engagement and user interaction in the PG search process.
- Objective: Foster a sense of community by encouraging users to share experiences, recommendations, and feedback.

8. Unfocused Marketing:

- Problem: Limited awareness due to an unfocused or inadequate marketing strategy.
- Objective: Execute a targeted marketing campaign to create awareness and attract potential users to the PG Life platform.

9. Inadequate Support and Maintenance:

- Problem: Users face difficulties due to insufficient customer support and maintenance.
- Objective: Provide ongoing customer support, regular maintenance, and updates to ensure a smooth user experience.

10. Low Trust in PG Information:

- Problem: Users may hesitate due to a lack of trust in the accuracy of information about PG accommodations.
- Objective: Build trust by implementing measures that ensure the reliability and authenticity of PG information on the platform.

These problem formulations/objectives collectively aim to address key challenges in the traditional PG search process and outline the goals for improvement through the PG Life project.

Chapter : 6**Methodology/Planning of Work:****1. Understanding User Needs:**

- Begin by talking to potential users to understand their challenges in finding PG accommodations.
- Identify key features and preferences through surveys or feedback sessions.

2. Designing User-Friendly Interface:

- Develop a simple and intuitive platform design that allows users to easily navigate and find relevant information.
- Prioritize essential features such as search, property details, booking, and user accounts.

3. Building a Prototype:

- Create a basic prototype to visualize the platform's layout and functionality.
- Gather feedback from a small group of users to refine the design.

4. Development in Iterations:

- Adopt an iterative development process, focusing on building key features in phases.
- Regularly check in with users to incorporate feedback and make improvements.

5. Database Implementation:

- Establish a secure database to store PG details, user information, and booking records.
- Ensure the system can handle a growing number of users and listings.

6. Testing:

- Conduct thorough testing to identify and fix any issues in the platform.
- Engage a small group of users in a testing phase to gather real-time feedback.

7. Deployment:

- Launch the platform gradually, starting with a soft launch to a limited audience.
- Monitor performance and address any issues that arise during the initial release.

8. Marketing and Outreach:

- Develop a simple marketing plan to create awareness about PG Life.
- Utilize social media and word-of-mouth strategies to reach potential users.

9. User Onboarding:

- Provide clear onboarding instructions to guide users on using the platform.
- Offer customer support to assist with any difficulties during the initial phase.

10. Feedback Loop:

- Encourage users to share their thoughts and suggestions.
- Regularly review user feedback and make necessary updates to enhance the platform.

11. Scaling and Optimization:

- Scale the platform based on user growth, ensuring it remains responsive and efficient.
- Optimize features for better performance based on user behavior and preferences.

12. Community Engagement:

- Foster a sense of community by encouraging users to share their experiences.
- Implement features that enable user interaction and sharing of PG recommendations.

13. Continuous Improvement:

- Keep an eye on industry trends and user needs for ongoing enhancements.
- Regularly update the platform to stay relevant and competitive.

By simplifying the methodology into these key steps, the PG Life project aims to deliver a user-friendly, efficient, and accessible solution for individuals seeking PG accommodations, ensuring a smooth and enjoyable experience for users.

Chapter : 7

Facilities Required for Proposed Work:

Technologies Used in this Project:

1. HTML.
2. CSS.
3. JAVASCRIPT.
4. PHP.
5. MySQL.

Here is a brief explanation of Technologies used:

HTML:

- HTML stands for Hyper Text Markup Language.
- HTML is the standard markup language for creating Web pages.
- HTML describes the structure of a Web page.
- HTML consists of a series of elements.
- HTML elements tell the browser how to display the content.
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

CSS:

- Cascading Style Sheets (CSS) is used to format the layout of a webpage.
- With CSS, you can control the color, font, the size of text, the spacing between elements, how elements are positioned and laid out, what background images or background colors are to be used, different displays for different devices and screen sizes, and much more.

CSS can be added to HTML documents in 3 ways:

- **Inline** - by using the style attribute inside HTML elements.
- **Internal** - by using a section.

•**External** - by using an element to link to an external CSS file.

JAVASCRIPT:

- JavaScript is the world's most popular programming language.
- JavaScript is the programming language of the Web.
- JavaScript to program the behavior of web pages.

VISUAL STUDIO CODE:

- Visual Studio Code, also commonly referred to as VS Code, is a source code editor made by Microsoft for Windows, Linux and macOS.
- Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. Users can change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality.

PHP - HYPERTEXT PREPROCESSOR:

PHP is a general-purpose scripting language geared toward web development. It is one of the back-end languages.

MySQL:

It is an open-source relational database management system. It stores data in tables made up of rows and column. User can define, manipulate, control and query data using MySQL.

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