

Analysis of PG/Flat Rental Website Developed Using PHP/Xampp with Existing PG/Flat Business/Rental Websites

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Abstract - This research paper is discussing the numerous tools and approaches that are utilized in website creation. It is talked about how to set up a website, with an emphasis on the Xampp tool, which is a local host. This also goes through the web application life cycle concept and framework development. This will discuss the PG/Flats rental in metro cities. This paper discusses the technologies utilized in this development, specially PHP, and the functionality of Xampp as a result. It is believed that it would serve as a valuable guide for the procedure.

Keywords - Xampp, PHP, Development, Rental.

1. INTRODUCTION

The growth of rental PGs and Flats has become a significant feature in modern life. This chapter will provide you with a quick overview of the project problem statement, its objectives, scopes and project deliverables. People come to the city from all over the country to live the life they want. Also, people want money and big cities are the platforms for making money. Everyone tries to do business or get a job with a good salary. Now the point is, that they come to cities where they have a place to live.

From making the website choosing a programming language is one of the most important aspects of the website. HTML and CSS are mostly used in web design. High-level HTML expertise is not required for site design. Features such as webpage formatting, design, page layout approaches, graphics, multimedia, photos, and multipage website functionality should all be included.

A test server should be used after the programming language to view the layout of the webpage. The reason for this is that developers use programming languages, and if they are experts in the language but still make mistakes frequently, there is a need to run server-side coding to get the preview via a test server.

In the housing sectors, the housing sector stays watchful in the face of change, implementing a new strategy that makes it easier to manage rental properties. As a result, a rental property management system that simply work for rental managers is required for all of their tasks to be efficient and productive. The user enters values and submits them to the server to obtain information on how rental properties are being maintained. The server keeps track of the number of rental properties.

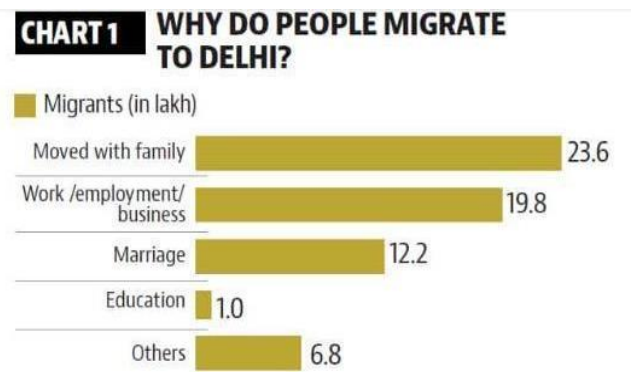


Fig 1. People migrates to Delhi

The migration towards urban centres is not due to economic opportunities but also because of many other amenities and avenues. Educational and health services, higher wages, entertainments, and a better standard of living available in cities also pull the rural people towards them.

Where do migrants live?

Southern districts have a higher share of migrant population

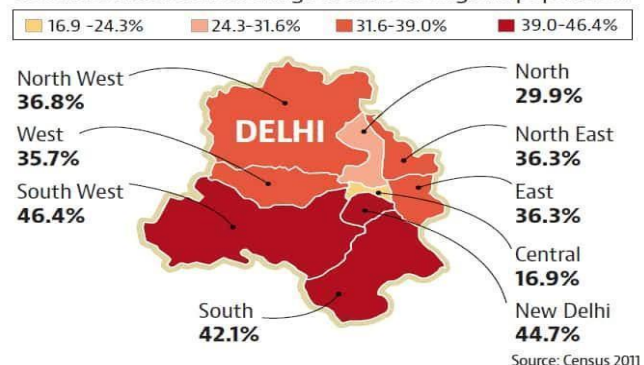


Fig. 2. The area where migrants live in Delhi

2. LITERATURE REVIEW

People are moving from one city to another, or from one country to another, fairly regularly and on a massive scale these days. People are shifting to metro areas like New Delhi, Mumbai, Bangalore, Pune, Uttar Pradesh, and others, according to a report by **The Hindustan Times**[1]. Take the case of Delhi, where nearly 40% of the population is made up of migrants from other Indian states, with 23.6 lakhs moving with their families, 19.8 lakhs moved for work/employment/business, 12.2 lakhs moved for marriage, 1.0 lakhs moved for education, and 6.8 lakhs moved for other reasons.

According to the Online Home Rental Services Market,[2] Internet house rental services are services in which vendors give landlords with an online platform to showcase their properties in order to appeal to and reach a large number of tenants. The industry for online house rental services is relatively new, but it has developed rapidly in the last several years. Websites are used by market participants to supply tenants with apartment listings. Renters may use such websites to examine photographs of homes, search by budget, features, and neighbourhoods, and contact landowners and brokers. The businesses make money by charging landlords and brokers to list their homes, promote those listings, and place adverts on their websites.

According to M. Tayloret al. [3], The proposed work in this article on "A User Center Website Development Approach" identifies the website's user demands, which is necessary for understanding the many requirements, after which the website is created and appropriate approaches are used. The various categories of website visitors, in general, determine website characteristics. The bulk of the tactics used in this type of site are referred to as user-centered website design.

Rust, R. T. and Kannan, P.K., 2003[4], The concept of e-living is much broader than IT services, web services, or infrastructure services, as it encompasses all of these services, as well as the service product, service environment, and service delivery that are all part of any business model, whether it belongs to a goods manufacturer or a pure service provider. The information and communication technology (ICT) in the e-service facilitates the customer's connection or contact with the firm.

3. RESEARCH METHODOLOGY

Most websites have a need that cannot be changed based on time or cost, and we also need web server space and cost to keep the website on the web-server; data cannot be saved on a local server. We may overlook a critical feature that we desperately need while a website project is just getting started, or we may not designate enough about the source data since the requirements aren't clear.

The mechanism employed in this situation will be an iterative model. It is part of the steps that the developer will employ to create the system. The iterative technique starts with a primitive implementation of a piece of the software requirements and iterates until the complete system is developed. With each iteration, design modifications are made and new functional capabilities are added. This strategy's main notion is to create a system in small parts over time (iterative)[7].

The following illustration is a representation of the Iterative model –

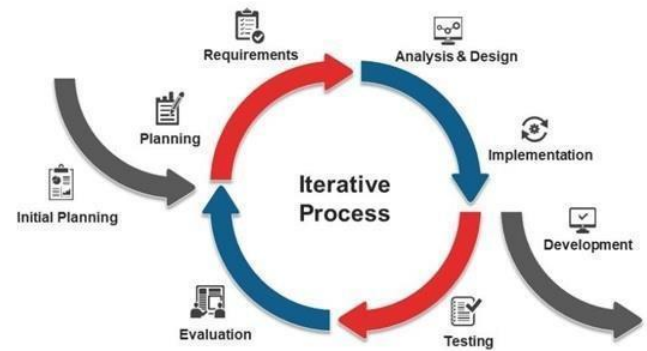


Fig. 3. Iterative Model

You can start with some software specs and construct the initial version of the software using this model. If the program has to be changed after the first version, a new version of the software is developed with a new iteration. Every iteration of the Iterative Model is completed in a precise and definite time frame.

3.1 Phases of Iterative Model:

The iterative life cycle model comprises repeating the below-mentioned four stages as a sequence[9]. These are:

1. **Requirements Phase:** The system-related information is obtained and evaluated throughout the requirements phase of software development. The collected requirements are then used to design the system's development.
2. **Design Phase:** The software solution is created to fulfil the design requirements during the Design phase. The system design may be fresh or an expansion of a prior build.
3. **Implementation and Test:** The system is created throughout the implementation and testing phases by coding and developing the user interface and modules, which are then included and tested.
4. **Review Phase:** During the review step, the software is calculated and tested in accordance with the existing requirements. Then, further needs are addressed and analyzed in order to offer an update in the following iteration.

3.2 Technical Tools

We use Xampp for local hosting for the rental website. Xampp gives us a clear view of a local server's website, allowing us to see a finished approach on a single local server[8]. We used PHP to code the content of our site and other icons that we wanted to show on it for this performance; it works in the same manner as CSS and HTML do for the site's content and design. We have an index file for the icons we want on the front as headlines for several pages, and in the index file we give the link to the file, where we put the content of that file.

All files are read by Xampp and converted to CSS and HTML. It can also convert HTML, CSS, and Java Scripts and give the results in the same format to the client. The objective at hand is to develop guidelines

that will increase work accuracy[5]. We may change these files whenever we want from the standpoint of the site. Requirements may be readily adjusted, and this will be visible on our local server; however, because security is also a major priority, the danger will be modest.

3.3 Rental Housing

Paying Guest (PG) lodging or an independent residence are the two most prevalent forms of residential arrangements among students. Regardless of the city, each offer advantages and disadvantages. 99acres dives deeply into them for the benefit of the prospective tenant community[10].

3.3.1 Rent

One of the most significant benefits of living in a PG is that the rent is less expensive than that of a single-family house. It is also cost-effective because all expenses and risks are shared. Independent homes, on the other hand, are more expensive due to their size. Families like them, although bachelors may want to live in a group so that the entire cost may be divided.

3.3.2 Social Security

For a single tenant, living in a PG is typically preferable since you get social security. Even in an emergency, you may turn to someone for help. Furthermore, you will not be expected to conduct housework, which will allow you to dedicate more time to your study or profession. PGs are also more secure because they are part of an occupied social edifice. This is especially desirable in light of the post-COVID-19 scenario, since gated communities focus more on sanitization and hygiene facilities, as well as taking all possible efforts to avoid Coronavirus transmission. Renters in independent housing, on the other hand, are responsible for their security.

3.3.3 Ready-made facilities

Unlike a private home, most PGs provide utilities like as cable TV, a refrigerator, and a geyser, among others, so you won't have to pay extra for these items. Some PGs also give wi-fi access so that students or working professionals may complete their work online. Residents with self-contained units are responsible for providing all furniture and other utilities, which increases the cost.

4. DATA ANALYSIS AND DISCUSSION

4.1 Comparison With OYO Rooms Website Traffic Load.



Fig. 4. OYO rooms website traffic load

According to the most recent traffic statistics for the OYO Rooms website, there have been 4.3 million total user visits in the previous few months, with an average time per user visit of roughly 5 minutes.

Our system design plan for our initial version is roughly 1 billion users, one billion people enrolled, the response from API/Server will be around 1MB, thus we need 1 TB data every hour, 24 TB to 30 TB of data per day, with a 1 TB data wiping interval.

Audience Demographic:

An audience demographic is a visual representation of any data. Following the graphical view,[6] we can see that the male majority generates traffic on the OYO site, implying that their main consumer based on gender in Fig. 5 is male and the female percentage is 38.68 has a lot of traffic as well.



Fig. 5. Gender Distribution on OYO rooms

People in India utilize OYO rooms for a variety of reasons. If they are traveling (with or without family), they book OYO rooms, and in a recent interview with Ritesh Aggarwal, he stated that the majority of OYO rooms were booked for pilgrimage. Assuming that the majority of OYO users are travelers who travel with family, concentrating just on male customer service based on site traffic data would be ineffective because females would also be present in a family.

The Age Distribution graph in Fig. 6 shows that the age group of 25-34 is the most active. If we target these age groups with our advertising, we will see an increase in website traffic and engagement.

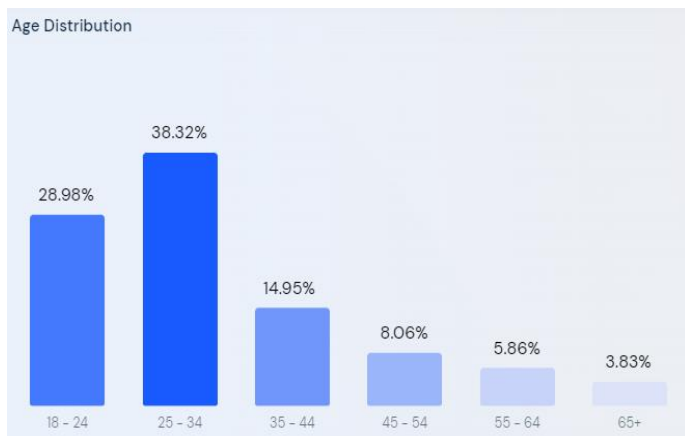


Fig. 6. Age Distribution on OYO rooms

4.2 Comparison With Booking.com Website Traffic Load.

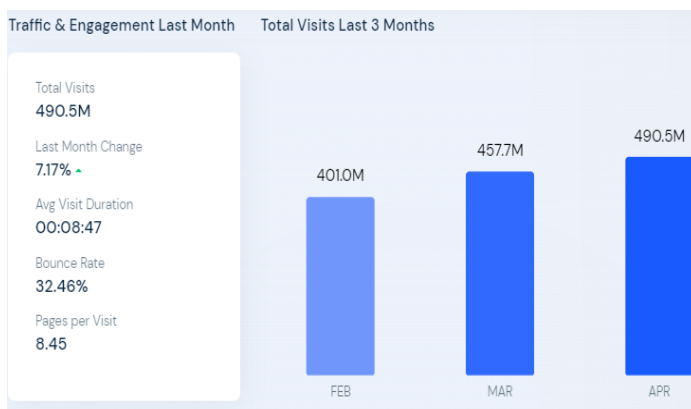


Fig. 7. Traffic and Engagement of Booking.com

Considering the booking.com traffic statistics in Fig. 7. The biggest peak of traffic during the previous three months was 490 million.

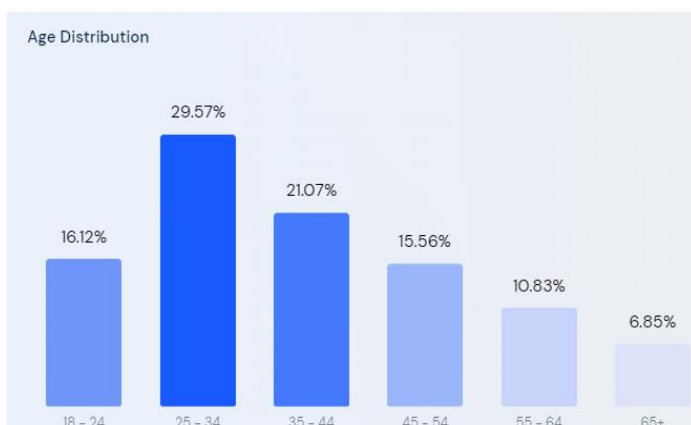


Fig. 8. Age Distribution on Booking.com

According to the Age Distribution graph in Fig. 8, the age group of 25-34 is also the most active here.

5. RESULTS

After examining site data from many sites that provide comparable services, we can conclude that handling backend traffic will be challenging if our code is not optimized in accordance with the data in the comparison section.

Scalability is critical when there are billions of users making requests on the server at the same time to make a user-friendly website. In that instance, the system should be scalable in both vertical and horizontal directions. Load balancing across servers should be optimized to maintain a scalable website. The round-robin method might be used for load balancing.

To make the website quicker, the networking and database architecture should be optimized. For example, when making an HTTP request, always use an HTTP head request that will only request data if the data in the database has been changed. Use DBMS Views to enhance data retrieval and make websites function quicker.

6. CONCLUSION

This research study suggests the development of a web-based online PGs and apartment renting system. We're attempting to build a website on a local web server using the Xampp tools. We will create the website utilizing PHP and HTML, as well as CSS Scripts to make it more interactive.

In Xampp, we'll have an htdocs folder where we'll save website code scripts that we can access in VS Code Editor. Finally, we have a website that can be accessed on the system's local host and seen on the local web server by Outlook. The developer may quickly alter the code to match the criteria after viewing the local host preview. Another benefit is the addition of security features; on another machine, we can't view it without the htdocs folder, and upgrading it is also difficult.

Other user-friendly interfaces have also been implemented. Users will benefit from position tracking technology as well because it will be easy to identify the property on a map.

7. FUTURE SCOPE

Given that this is the first edition of our website, there will be more revisions in the future. Some examples are shown below.

We will enhance the written review method in the PG area. We will introduce a direct chat feature with the property owner or management at any moment. We will update the user interface to make it more appealing and user-friendly.

We will provide a unique section for each user to examine his or her history, and users will be able to keep a list of PG based on their preferences and plans. We will update the sorting and searching algorithms to allow for faster data retrieval. We will add like and comment tools to the Blog and PG sections, and users will be able to order the list according on the number of likes and comments.

We will add a feature to the admin panel that shows who admin added which post to the main admin, while partial admins will just be able to view the PG list that they added.

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