

Website development and transaction management

Priyanka Dudhe¹, Dolly Lohana², Nisha Rahandani³, Dolly Chhabriya⁴

¹ Asst. Prof, Computer Science and Engineering, Jhulelal Institute of Technology, RTMNU, Nagpur, Maharashtra, India

² Students of Computer Science and Engineering, Jhulelal Institute of Technology, RTMNU, Nagpur, Maharashtra, India

³ Students of Computer Science and Engineering, Jhulelal Institute of Technology, RTMNU, Nagpur, Maharashtra, India

⁴ Students of Computer Science and Engineering, Jhulelal Institute of Technology, RTMNU, Nagpur, Maharashtra, India

Abstract

This project is going to provide the online booking for the customers through website. Our website will manage the online booking and transactions easily. With this website, admin can even take attendance of the staff and can maintain the record of the customer, which will save time of customer and owner, as they need not to fill details again and again. Our website is a responsive website with attractive and user friendly interface with bootstrapping in it. We are delivering a high standard of services to the customers and owner. With the help of this portal customer can book rooms/halls/lawns in advance, and can also see the picture gallery to decide various things. We are providing recreation in it so that youth can easily attracted to our website. Review section is also there in which customers can review the resort, which will help other customer to take decision while booking resort. Also owner can make improvements in their service with the help of reviews. Creating website according to the current culture, economic, and social issues.

1. Introduction

Poorly developed websites can lead to lot of productivity and revenue. The most important question is how to improve the design of informational websites. Although there are books filled with the web design guidelines but there is a wide gap between the heuristic that 'Make the interface consistent and responsive' and the

implementation of the device. Moving further these guidelines tend to conflict, and leads to a non-consistent and unresponsive website design. Finally, guidelines require careful study and practice for developing a user friendly website^[1].

Along with a consistent website design, transaction and database Management also plays an important role. Making a website that performs online transactions without any failure has become important in today's era. A real website is one that must process the information and produce the response within a specified time, else risk serve Consequences, including failure. A major issue in building a consistent website is successful transaction^[2].

As a part of a Website Development and Transaction Management Project, we explore the automated approaches for helping them to improve their sites. Our goal is to create an interactive website that helps the website designers away for bad designs and transaction failures and move them towards the better ones^[3].

2. Objective

The main objective of this project is to develop a responsive website. We focus on creating an attractive and user friendly interface and deliver a high standard of service. Our project helps in re-creation of currently available resources along with the commercial establishment.

3. Proposed System

3.1 Web Page and Site Measures.

A website interface is a complex mix of text, links, graphics, formatting and many other aspects that affects the website's quality. Following are the major set of activities addressing the consistent website design.

Category	No. of measures	Aspects measured
Text elements	31	Amount of text, type, quality, and complexity. Includes visible and invisible text.
link elements	6	Number and type of links.
Graphics elements	6	Number and type of images.
Text formatting	24	How body text is emphasized; whether some underlined text is not in text links; how text areas are highlighted; font styles and sizes; number of text colors; number of times text is repositioned.
Link formatting	3	Colors used for links and whether there are text links that are not underlined or colored.
Graphics formatting	7	Minimum, maximum, and average image width and height; page area covered by images.
Page formatting	27	Color use, fonts, page size, use of interactive elements, page style control, and so on. Key measures include evaluating the quality of color combinations (for text and panels) and predicting the functional type of a page
Page performance	37	Page download speed; page accessibility for people with disabilities; presence of HTML errors; and "scent" strength.
Site architecture	16	Consistency of page elements, element formatting, page formatting and performance, and site size (number of pages or documents)

Figure (1): Web page and site measures.

The important components of designing the website are- Information design, Navigation Design, Graphics Design and Experience Design.

Information design- It contain identity and groups for content items in the developing site of the information structure.

Navigation design- It belongs to the developing part of the site for the label of information structure.

Graphics design- Its vital role is to focus on the visual presentation of the developing site.

Experience design- This is the combination of all above designs and also their properties that may affect the experience design of the developing site. All these components entail

Some analysis the task that user likely undertake. Information design Navigation design, Graphic design and Experience design can be further refined into following aspects shown in figure (2) ^[1].

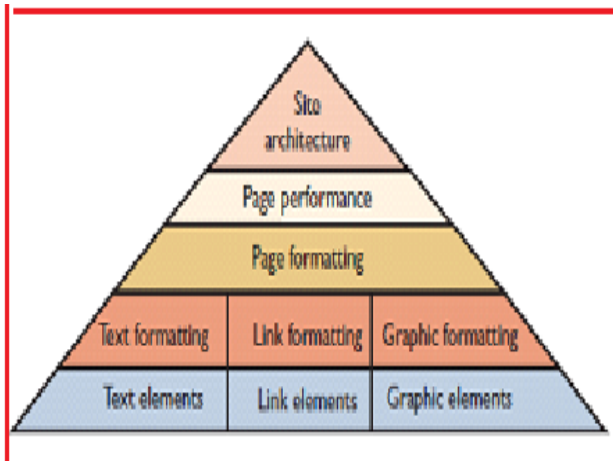


Figure (2): Components of Consistent Websites.

3.2 Bootstrap

Developers and Companies had spent lot of time for making CSS Frame works. Our favorite is BOOTSTAP, among all the CSS frame works. There are some reasons for using bootstrap-

3.2.1 Get started easily

Front End Developer should know about the CSS Pre-processing and it is easy to learn. We have to download a file Bootstrap on Github to take advantage of Bootstrap. The HTML document contain Bootstrap framework having style and JAVASCRIPT plugins .

3.2.2 Having Grid System:

Bootstrap having responsive 12-columns of grid, components and layout. Either you want grid or responsive, you have to do little changes. It is very easy and handy to hide screen size based on content.

3.2.3 Providing base styling for HTML elements:

The HTML has different elements like forms, styles, buttons, list, tables, etc. This fundamental element of HTML has been styled with classes. Styles to be provided by HTML elements are codes, tables, forms, lists, images.

3.2.4 Components

The list of components having style on each single element of the bootstrap. Pre style components are button groups, progress bar, alert, breadcrumbs, labels & badges, dropdown, navigation bar

3.2.5 Provided good documentation:

The good documentation is provided by bootstrap for any website or web applications which makes easy for users to use it

4. Transaction management in database system.

A transaction is defined as a group of tasks. Database management system is a technology of retrieving and storing data in the database. To produce information data is used as fetch a figure, and related data is used as database. Easy to retrieve, produce information and manipulate the data, so that it is easy to maintain database management system. Database used as a relational based table, isolation of data and application, to reduce redundancy, to provide consistency, and Query language. In some systems, transactions are also called LUW for Logical Units of Work^[2].

4.1 Distributed database system (DDBS)

A distributed database is controlled by the database management system and it stores the number of computers in the same physical address for the system management. The distributed database having the two processes that is replication and duplication, and it remain up to date. Replication: In the distributed database the replication works as the changes in the database and using specialized software for the changes. The process take lots of time to complete and it depends upon the size of the database. Duplication: It has less complexity than replication. It finds the master database and duplicates the master database to the database^[2].

4.2 Fundamental of transaction management

In our database transaction perform a logical function that is a collection of operations. Transaction management ensured that database is in a consistent state within the system or transaction failures^[2].

4.3 What is a Transaction?

A transaction is an event that occurs on database system. In this database we can use two operations that are read and write operation. A read operation is used only for reading purpose and write operation is used for the inserting, updating and deleting the data from the database^[2].

4.3.1 Properties of transaction

The following are the properties of the transaction-

The first letter of every property collectively called as ACID property providing accuracy, data integrity, & completeness. They are discussed as ^[2]

4.3.2 Atomicity

The atomicity states that either all transactions should execute or none of them. It is a small atomic unit. In the database there should be not a single state will be partially completed ^[2].

4.3.3 Consistency

Any transaction can occur should be remains in consistent state in the database. There should not be adverse effect on data riding in the database. Before transaction, if database is in consistent state then it should maintain its consistency also after the execution ^[2].

4.3.4 Isolation

If more than one transaction is executed at the same time or simultaneously then the isolation property stated that the all transaction should execute properly at the same time ^[2].

4.3.5 Durability

Database should be durable to hold the transactions updates even when the system fails or restarts ^[2].

5. Usability and website architecture

This is the data flow diagram of website development and transaction management made for our project Genius Resort Pvt. Ltd. The below Data Flow diagram shows that the website is divided into three main modules i.e. Admin, Staff and Customer side module. By using admin side module, the owner of the resort can login and check booking of rooms, lawns and halls. They can maintain and check billing expanses, they can also maintain their staff's attendance and they can update information about their resort. The next module is Staff side module. The staffs have also given a username and passwords with which they can Login and can add/modify details and maintain their information in database. The last module is Customer side module .By using this module the customer can check status of our resort and do booking according to their comfort.

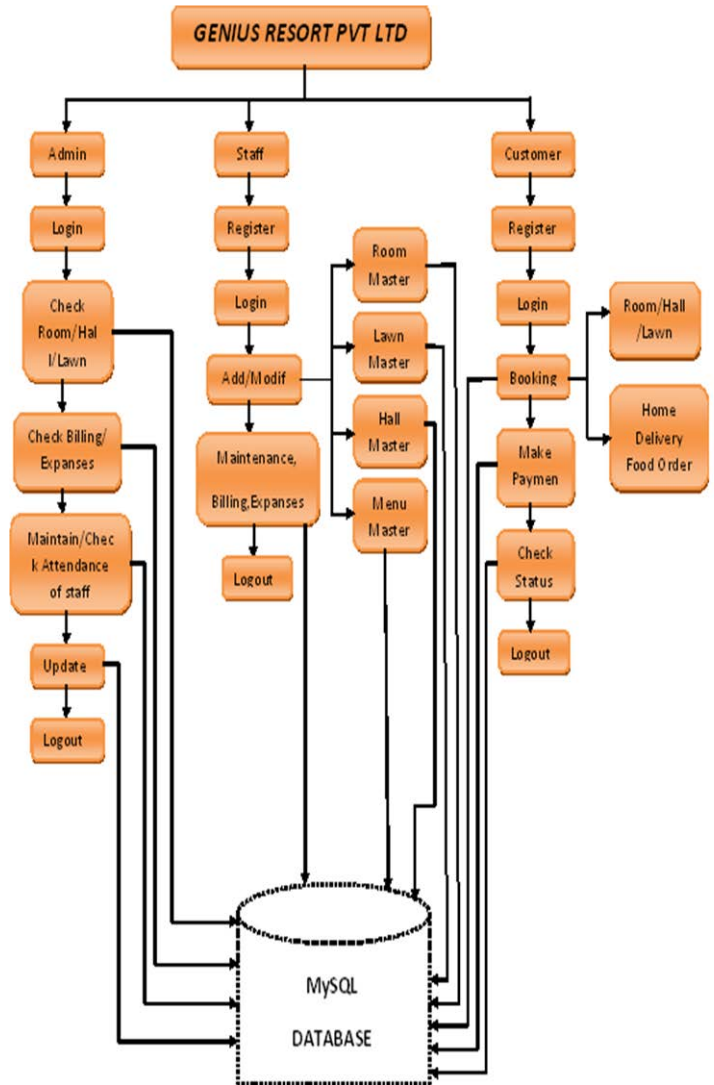


Fig.5.1 Example

6. Conclusions

The study of improved sites helps to provide insight for improving the design of sites this can be done with the help of Bootstrap. One can make their website responsive using various techniques of CSS and HTML which helps users to understand the site very easily. This helps in understanding the importance of identifying the good elements of design.

References

- [1] “Improving Web Site Design”, Melody Ivory and Marti A. Hearst, University California, Berkeley.(March-April 2010)
- [2] “Transaction Management in Homogenous Distributed Real-Time Replicated Database Systems” , Ashish Srivastava1, Udai Shankar, Sanjay Kumar Tiwari, Dept. of Computer Science & Engineering Madan Mohan Malaviya Engineering College, Gorakhpur, India .(June 2012)
- [3] K. Betz, A. Leff and J. Rayfield "Developing Highly-Responsive User Interfaces with DHTML and Servlets", Proceedings of the 19th IEEE International Performance, Computing, and Communications Conference - IPCCC-2000.

First Author Asst. Prof Priyanka Dudhe in department of Computer Science & Engineering in Jhulelal Institute of Technology Nagpur., MTech in Computer Science & Engineering (YCCE, Nagpur), B.E in Computer Science & Engineering (SVSS, Nagpur)

Second Author Dolly Lohana Student of B.E in department of computer Science and Engineering in Jhulelal Institute of Technology Nagpur.

Third Author Nisha Rahandani Student of B.E in department of computer Science and Engineering in Jhulelal Institute of Technology Nagpur.

Fourth Author Dolly Chhabriya Student of B.E in department of computer Science and Engineering in Jhulelal Institute of Technology Nagpur.