CH.DEVILAL STATE INSTITUTE OF ENGINEERING AND TECHNOLOGY

A

Project Report

On

HOTEL MANAGEMENT SYSTEM

Submitted in the partial fulfillment of the requirement for the degree of

BACHELOR OF TECHNOLOGY

(Session-2024-2025)

Submitted To:

Dr. Sanjay Dahiya (H.O.D.)

Dr . Manju Devi (A.P.)

Dr . Prachi (A.P.)

Ms. Anju Godara (A.P.)

Submitted by:

Aryan Singh

CSE 5th Sem.

22098116780034

CANDIDATE'S DECALARATION

I, hereby declare that the proposed work presented in this training report entitled as "Hotel management system" under the guidance of Dr. Sanjay Dahiya, Head of Department and Dr. Prachi, Dr.Manju Devi, Ms.Anju Godara Assistant Professor was carried out at the Department of Computer Science and Engineering, Ch. Devi Lal State Institute of Engineering and Technology, Panniwala Mota (Sirsa), Haryana, India – 125077. It is also certified that no part of this project work has been submitted, either in part or full for any other degree of Chaudhary Devi Lal University, or any other University/Institution.

Date: **Aryan Singh**

22098116780034

ACKNOWLEDGEMENT

I greatly appreciate the guidance and academic support of my mentors whose contribution in suggestions and encouragements helped me complete my training tasks in a convincing manner in all respects. I am awfully thankful to them for their painstaking efforts in arranging experimentation and open discussions on several web development topics that enabled this duration of training a memorable opportunity ushered on to me for learning and sharing newer dimensions to my thinking process in web development as a wonderful opportunity throughout.

In the end, I would like to thank Softwizz Pvt. Ltd. faculty and other staff for arranging needful exposure to me during my training.

Certificate

CIN: U72900HP2015PTC000954

SINCE 2015

Softwizz TECHNOLOGIES PVT. LTD.

Regd. Under Ministry of Corporate Affairs & An ISO 9001:2015 Certified Company

Regn. No. SW/S002/CSE/24

Certificate Of Training

This is To Certify That

Mr./Ms. Aryan Singh C/o Mr./Ms. Surender Singh

Has Successfully Completed Industrial Training

In Web Development

From July 2024 To August 2024

Conducted At Softwizz Technologies Pvt. Ltd.

MINISTRY OF CORPORATE AFFAIRS GOVERNMENT OF INDIA

IBC International Benchmarking & Certifications

SOFTWIZZ TECHNOLOGIES PVT. LTD. SIRSA

Education Specialist

HR Manager

Ph. 98885-05377, 62841-72277
www.softwizz.in, E-mail - info@softwizz.in

INDEX

S No.	TITLE	PAGE NO.
1	**Introduction to Project**	6
2	**Requirement Analysis**	10
3	**System Analysis**	22
4	**Software Design**	25
5	**Coding**	36
6	**Testing**	38
7	**Implementation & Evaluation of Project**	45
8	**Conclusion**	50
9	**Scope of the Project**	51
10	**Bibliography**	52

CHAPTER 1

INTRODUCTION OF PROJECT

1.1 INTRODUCTION

Welcome to Scenic Hotel, where comfort and luxury meet in perfect harmony.

Nestled in the heart of Sirsa, Scenic Hotel offers a unique blend of elegance and convenience. Our property is designed to provide a sophisticated retreat for travelers seeking both relaxation and adventure. Whether you're here for a business trip, a romantic getaway, or a family vacation, our hotel promises an exceptional experience tailored to your needs.

From the moment you step through our doors, you'll be greeted by our friendly staff and enveloped in an atmosphere of refined warmth. Our rooms and suites are thoughtfully designed with modern amenities and stylish decor to ensure your utmost comfort. Enjoy a restful night's sleep on our plush bedding and wake up refreshed, ready to explore all that Sirsa has to offer.

Indulge in our on-site dining options, where our chefs create delicious meals using the finest ingredients. Whether you're enjoying a gourmet breakfast, a leisurely lunch, or a sophisticated dinner, our culinary offerings are sure to delight your palate.

For those seeking relaxation, our spa, pool, or fitness center provide the perfect escape from the everyday hustle. Stay connected with our high-speed Wi-Fi, and take advantage of our business services for any professional needs.

Explore the vibrant neighborhood surrounding us, with its array of shops, restaurants, and cultural attractions just moments away. Our knowledgeable concierge is always on hand to assist with recommendations and arrangements to ensure you make the most of your stay.

At Scenic Hotel, we are committed to delivering an exceptional guest experience with personalized service and attention to detail. We invite you to experience our blend of comfort, luxury, and hospitality.

Thank you for choosing Scenic Hotel. We look forward to welcoming you and makingyourstay unforgettable.

OBJECTIVES

Exceptional Guest Experience

Our primary objective is to provide every guest with an exceptional and memorable experience. We aim to exceed expectations by offering high-quality service, personalized attention, and a welcoming atmosphere that makes our guests feel at home.

Commitment to Comfort and Cleanliness
We are dedicated to maintaining the highest standards of comfort and cleanliness in all areas of the hotel. From our meticulously prepared rooms to our pristine public spaces, we strive to ensure a pleasant and hygienic environment for our guests.

Innovative Hospitality
We continually seek to enhance our services and amenities through innovation and creativity. By staying current with industry trends and incorporating cutting-edge technology, we aim to offer modern conveniences and unique experiences that set us apart from the competition.

Sustainable Practices
We are committed to sustainability and responsible environmental practices. Our goal is to reduce our ecological footprint through energy conservation, waste reduction, and the use of eco-friendly products and procedures. We believe in doing our part to protect the environment for future generations.

Employee Excellence and Satisfaction
We recognize that our staff is our greatest asset. We strive to foster a positive and supportive work environment that encourages professional growth, job satisfaction, and teamwork. By investing in our employees, we enhance the quality of service provided to our guests.

Community Engagement
[Hotel Name] aims to be a valued member of the local community. We are dedicated to supporting local businesses, participating in community events, and contributing to charitable causes. Our goal is to build strong, positive relationships with the community we serve.

Financial Performance
We are committed to achieving strong financial performance and operational efficiency. By managing resources wisely and implementing sound business practices, we aim to ensure the long-term success and profitability of our hotel.

Safety and Security
The safety and security of our guests and staff are of utmost importance. We implement rigorous safety protocols and emergency procedures to provide a secure environment. Our goal is to ensure peace of mind for everyone who stays with us.

Guest Feedback and Continuous Improvement
We value guest feedback as a crucial tool for continuous improvement. By actively seeking and listening to our guests' comments and suggestions, we strive to refine our services and enhance the overall guest experience.

Personalized Service
We aim to provide personalized service that caters to the individual needs and preferences of each guest. By anticipating and responding to specific requests, we seek to create a tailored experience that reflects our commitment to guest satisfaction.

FUNCTIONALITIES

Accommodation

Guest Rooms and Suites: A range of room types, from standard rooms to luxurious suites, equipped with comfortable bedding, modern furnishings, and amenities such as Wi-Fi, flat-screen TVs, and minibars.

Accessibility Features: Rooms and facilities designed to accommodate guests with disabilities, including accessible bathrooms, ramps, and elevators.

Dining and Beverage

On-Site Restaurants: Dining options offering a variety of cuisines, including breakfast, lunch, and dinner services.

Room Service: In-room dining available for guests who prefer to eat in the privacy of their rooms.

Bar and Lounge: A space for relaxation with a selection of beverages and light snacks.

Meeting and Event Facilities

Conference Rooms: Versatile meeting spaces equipped with audiovisual technology for business meetings, conferences, and seminars.

Banquet Halls: Large event spaces suitable for weddings, receptions, and other special occasions, often with catering services available.

Recreational Facilities

Fitness Center: A well-equipped gym for guests to maintain their fitness routines.

Swimming Pool: A pool area for relaxation and recreation, which may include a hot tub or children's pool.

Spa Services: A range of wellness treatments and massages designed to help guests unwind and rejuvenate.

Business Services

Business Center: Facilities for printing, copying, and other office-related services.

High-Speed Internet: Reliable and fast internet access available throughout the hotel for both business and personal use.

Guest Services

24/7 Front Desk: Reception services available around the clock for check-ins, check-outs, and guest inquiries.

Concierge Service: Assistance with travel arrangements, reservations, and local recommendations to enhance guests' experiences.

Laundry and Dry Cleaning: On-site services for laundering clothes and handling special garment care.

Safety and Security

Secure Access: Keycard access to guest rooms and restricted areas to ensure guest security.

24/7 Security: Monitoring and security personnel to maintain a safe environment for all guests.

Parking and Transportation

Parking Facilities: On-site parking options for guests with vehicles, including valet services if available.

Airport Shuttle: Transportation services to and from the airport, if provided.

Housekeeping

Daily Room Cleaning: Regular cleaning services to maintain guest room hygiene and comfort.

Turndown Service: Evening service to prepare rooms for a restful night's sleep.

Technology and Connectivity

Smart Room Controls: Modern technology for controlling lighting, climate, and entertainment systems.

High-Speed Wi-Fi: Access to fast and reliable internet throughout the property.

Retail and Convenience

Gift Shop: A store offering souvenirs, essentials, and local products.

Convenience Store: A small shop with snacks, drinks, and other necessities.

Sustainability Initiatives

Eco-Friendly Practices: Measures to reduce environmental impact, such as recycling programs, energy-efficient lighting, and water conservation efforts

CHAPTER 2

REQUIREMENT ANALYSIS

This process is also known as feasibility study. In this phase, the development team visits the customer and studies their system. They investigate the need for possible software automation in the given system. By the end of the feasibility study, the team furnishes a document that holds the different specific recommendations for the candidate system. To understand the nature of the program(s) to be built, the system engineer or "Analyst" must understand the information domain
for the software, as well as required function, behavior, performance and interfacing.
Requirements analysis in systems engineering and software engineering, encompasses those tasks that go into determining the needs or conditions to meet for a new or altered product, taking account possibly conflicting requirements of the various stakeholders, analyzing, documenting, validating and managing software or system requirements.
Requirements analysis is critical to the success of a systems. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design.

Types of Requirements

There are some common type of software requirements are used as:

1. Customer Requirements:

Statements of fact and assumptions that define the expectations of the system in terms of mission objectives, environment, constraints, and measures of effectiveness and suitability (MOE/MOS). The customers are those that perform the eight primary functions of systems engineering, with special emphasis on the operator as the key customer. Operational requirements will define the basic need and, at a minimum, answer the questions posed in the following listing:

- Operational distribution or deployment: Where will the system be used?
- Mission profile or scenario: How will the system accomplish its mission objective?
- Performance and related parameters: What are the critical system parameters to accomplish the mission?
- Utilization environments: How are the various system components to be used?

- Effectiveness requirements: How effective or efficient must the system be in performing its mission?
- Operational life cycle: How long will the system be in use by the user?
- Environment: What environments will the system be expected to operate in an effective manner.

2. Architectural Requirements:

Architectural requirements explain what has to be done by identifying the necessary system architecture of a system.

3. Structural Requirements:

Structural requirements explain what has to be done by identifying the necessary structure of a system.

4. Behavioral Requirements:

Behavioral requirements explain what has to be done by identifying the necessary behavior of a system.

5. Functional Requirements:

Functional requirements explain what has to be done by identifying the necessary task, action or activity that must be accomplished. Functional requirements analysis will be used as the top level functions for functional analysis.

6. Non-functional Requirements:

Non-functional requirements are requirements that specify criteria that can be used to judge the operation of a system, rather than specific behaviors.

7. Performance Requirements:

The extent to which a mission or function must be executed; generally measured in terms of quantity, quality, coverage, timeliness or readiness. During requirements analysis, performance (how well does it have to be done) requirements will be interactively developed across all identified functions based on system life cycle factors; and characterized in terms of the degree of certainty in their estimate, the degree of criticality to system success, and their relationship to other requirements.

8. Design Requirements:

The “build to,” “code to,” and “buy to” requirements for products and “how to execute” requirements for processes expressed in technical data packages and technical manuals

2.1 PROBLEM ANALYSIS

Problem Statement

- Users can not pay online.
- Users can't send online enquiry to admin.
- Users can't view online information.

Proposed System

- Users can view information about various types room.
- Users can view online information.
- Users can give feedback about the site.
- Users can view different types services.
- Admin can reply to user feedbacks.

2.2 REQUIREMENT SPECIFICATION DOCUMENT

2.2.1 SOFTWARE REQUIREMENT SPECIFICATION

A software requirements specification (SRS) is a complete description of the behavior of the system to be developed. It includes a set of use cases that describe all of the interactions that the users will have with the software. Use cases are also known as functional requirements. In addition to use cases, the SRS also contains nonfunctional (or supplementary) requirements. Non- functional requirements are requirements that impose constraint on the design or implementation (such as performance requirements, quality standard or design constraint).

In system engineering and software engineering, requirements analysis encompasses those tasks that go into determining the requirements of a new or altered system, taking account of the possibly conflicting requirements of the various stakeholders, such as users. Requirements analysis is critical to the success of project. The document that contains all the requirements of the project is determined as "Software Requirements Specification".

Software requirements specification states the goals and objectives of the software, describing it in the context of the computer based system.

The Information Description provides a detailed description of the problem that the software must solve. Information content, flow and structure are documented.

A description of each function required to solve the problem is presented in the Functional Description. Validation Criteria is probably the most important and ironically the most often neglected section of the software requirement specification.

An SRS minimizes the time and effort required by developers to achieve desired goals and also minimizes the development cost. A good SRS defines how an application will interact with system hardware, other programs and human users in a wide variety of real-world situations. Parameters such as operating speed, response time, availability, portability, maintainability, footprint, security and speed of recovery from adverse events are evaluated. Methods of defining an SRS are described by the IEEE (Institute of Electrical and Electronics Engineers) specification 830-1998.

2.2.3 SPECIFIC REQUIREMENTS

1. Processing Requirements

In this step we analyzed the processing capabilities of the system on which the proposed system would be developed and the specification is divided into two categories namely:

- Minimum Hardware Requirements

1	System Type	32- bit or 64-bit operating System
2	RAM	4 GB
3	Hard Disk	5GB of free HDD space
4	Internet Connection	Required
5	Processor Speed	5.2 GHz

- Minimum Software Requirements

I.	Operating System	Windows 8 or 10 or 11

II.	Front End	HTML 5, CSS 3, Bootstrap 5
III.	Database	MYSQL
IV.	Web Server	APACHE
V.	Text Editor	Visual Studio Code
VI.	Backend Language	PHP

3.2.4 TECHNOLOGY USED

3.2.4.1 PHP

The term PHP is an acronym for – Hypertext Preprocessor. PHP is a server-side scripting language designed specifically for web development. It is open-source which means it is free to download and use. It is very simple to learn and use. The file extension of PHP is ".php".

PHP was introduced by Rasmus Lerdorf in the first version and participated in the later versions. It is an interpreted language and it does not require a compiler.

CHARACTERISTICS OF PHP

- PHP code is executed in the server.
- It can be integrated with many databases such as Oracle, Microsoft SQL Server, MySQL, PostgreSQL, Sybase, and Informix.
- It is powerful to hold a content management system like WordPress and can be used to control user access.
- It supports main protocols like HTTP Basic, HTTP Digest, IMAP, FTP, and others.
- Websites like www.facebook.com and www.yahoo.com are also built on PHP.

- One of the main reasons behind this is that PHP can be easily embedded in HTML files and HTML codes can also be written in a PHP file.

- The thing that differentiates PHP from the client-side language like HTML is, that PHP codes are executed on the server whereas HTML codes are directly rendered on the browser. PHP codes are first executed on the server and then the result is returned to the browser.

- The only information that the client or browser knows is the result returned after executing the PHP script on the server and not the actual PHP codes present in the PHP file. Also, PHP files can support other client-side scripting languages like CSS and JavaScript.

ADVANTAGES: There are the following advantages of PHP:-

1. Cost: PHP is completely free.
2. Ease of Use: PHP is easy to learn compared to many other scripting languages. PHP has a syntax that is easy to parse and is actually rather human-friendly.
3. Embedded: PHP can be easily embedded directly into HTML.
4. Compatibility: PHP runs native on all UNIX and Windows platforms.
5. Not Tag-Based: PHP is a real programming language.
6. Stability.
7. Speed.
8. Open source licensing.
9. Many extensions.
10. Fast feature development.
11. PHP is ideal for web programming.
12. It provides high performance.
13. Features native support for most popular databases.
14. Creates dynamic web pages.

FEATURES:There are the following main features of the PHP:-

1. Open Source: PHP is an open source language and is freely available for use. The community of open source PHP developers provides technical support and is constantly improving updating the core PHP functionalities.
2. Compatibility: PHP provides high compatibility with leading operating systems and web servers such as thereby enabling it to be easily deployed across several different platforms.
3. File Handling: PHP be used to read text and generate files in various formats such as PDF and XML. Using the file manipulation functions, files and documents can be uploaded and stored on the server. The uploaded documents can be accessed and manipulated through PHP code.
4. Improved Performance:The PHP compiler includes features to optimize and improve the quality of compiled code by reducing the size execution time of the code thereby leading to improved performance.
5. Debuggers:Several debuggers are available with PHP enabling developers to identify and analyze the code for potential bugs and bottlenecks.
6. Sessions: PHP provides extensive session and cookie management features and functions enabling the creation and development of personalized web pages.
7. Graphics: PHP can be used to generate images and graphics dynamically. Using the image functionalities available with PHP, the header information of images can be accessed and manipulated.
8. Extensible: The source code of PHP can be modified to include custom created extensions and components thereby increasing its extensibility.

The PHP is a high-level language that can be characterized by all of the following buzzwords:

- Simple
- Object oriented
- Secure
- Portable
- High performance

2.2.4.2 THE WEB HTML

World Wide Web (WWW) programming deals with the development of hypertext document interaction mechanisms, which provide the client with a rich and intuitive interface to the

information that he or she desires to view. Web development heavily utilizes the functionality of the Hypertext Markup Language, commonly known as HTML.

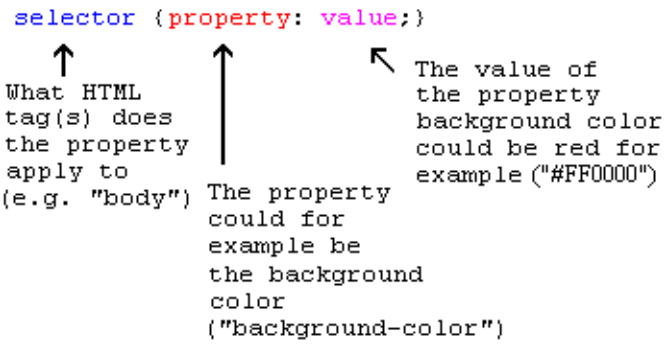
HTML, or **HyperText Markup Language**, is the standard markup language used to create web pages. It's a combination of Hypertext, which defines the link between web pages, and Markup language, which is used to define the text document within tags to structure web pages. This language is used to annotate text so that machines can understand and manipulate it accordingly. HTML is human-readable and uses tags to define what manipulation has to be done on the text. HTML is a simple scripting language that is interpreted within a web browser. It provides functionality to identify and specify how information is presented to the user. Some of the important features of HTML that make it ideal for online representation of information are –

- Ease of Use – HTML constructs are very easy to comprehend, and can be used effectively by anybody.
- Machine Independence – The methodology used by HTML to mark up information is independent of its representation on a particular hardware or software architecture.
- Standardization – HTML syntax is a worldwide standard, developed by the W3C
- Flexible – HTML has been extended in many forms to provide additional functionality.

2.2.4.3 CSS: CASCADING STYLE SHEET

Basicallyused for styling purpose.

Syntax:



A CSS rule has two main parts: a selector, and one or more declarations:
The selector is normally the HTML element you want to style.
Each declaration consists of a property and a value.
This page will be save with the extension .css
The property is the style attribute you want to change. Each property has a value.

CSS can be added to your pages at 3 different levels:

1. Internal
2. External
3. Inline

2.2.4.4 APACHE

Apache is free and open-source software of web server that is used by approx **40% of websites** all over the world. Apache HTTP Server is its official name. It is developed and maintained by the **Apache Software Foundation**. Apache permits the owners of the websites for serving content over the web. It is the reason why it is known as a "**web server**." One of the most reliable and old versions of the Apache web server was published in 1995.
If someone wishes to visit any website, they fill-out the name of the domain in their browser address bar. The web server will bring the requested files by performing as the virtual delivery person.

2.2.4.5 JAVA SCRIPT

Java script is one of the most simple, versatile and effective languages used to extend functionality in websites. Uses range from on screen visual effects to processing and calculating data on web pages with ease as well as extended functionality to websites using third party scripts among several other handy features, however it possesses some negative effects that might make you want to think twice before implementing JavaScript on your website.

Javascript is a lightweight, cross-platform, single-threaded, and interpreted compiled programming language. It is also known as the scripting language for webpages. It

is well-known for the development of web pages, and many non-browser environments also use it.

Javascript is a weakly typed language (dynamically typed). Javascript can be used for Client-side developments as well as Server-side developments. Javascript is both an imperative and declarative type of language. Javascript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, controlstructures, and statements.

ADVANTAGES

- Java is executed on the client side
- Java Script is a relatively easy language
- JavaScript is relatively fast to the end user
- Extendedfunctionality to web pages

2.2.4.6 MY SQL

(Used in backend)

Introduction:

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database. MySQL is open-source and free software under the GNU license. It is supported by **Oracle Company**.

Our MySQL tutorial includes all topics of MySQL database that provides for how to manage database and to manipulate data with the help of various SQL queries. These queries are: insert records, update records, delete records, select records, create tables, drop tables, etc. There are also given MySQL interview questions to help you better understand the MySQL database.

MySQL is the most popular online database. It can be used as a stand alone database, or used as a back-end for your PHP based website. Using a database of information allows to you create on the fly results for your users.

- MySQL is a database server
- MySQL is ideal for both small and large applications
- MySQL supports standard SQL
- MySQL compiles on a number of platforms
- MySQL is free to download and use

You can use MySQL to create databases that contain several tables of information, and within each table you can hold several fields of information. Once you have an existing database you can always add more tables, or remove tables at any time.

MYSQL is one of the top databases available in the market. MYSQL is a relational database with many advanced features and options. Over time, MYSQL has proved itself to be a fast, reliable and cost effective competitor to the other more expensive databases like MS SQL Server and Oracle. Here are a few of the advantages of using MYSQL in database development.

ADVANTAGES OF MYSQL:

1. Open Source
2. Fast Development
3. Better for Small Business
4. Cross Platform Operability
5. Security
6. Connectivity

2.2.4.7 BOOTSTRAP

Bootstrap is a free and open-source tool collection for creating responsive websites and web applications. It is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites. It solves many problems which we had once, one of which is the cross-browser compatibility issue. Nowadays, the websites are perfect for all the browsers (IE, Firefox, and Chrome) and for all sizes of screens (Desktop, Tablets, Phablets,

and Phones). All thanks to Bootstrap developers -Mark Otto and Jacob Thornton of Twitter, though it was later declared to be an open-source project. Bootstrap has evolved many versions and every time when we want to use this framework we can select the version which we want to use.

Why Bootstrap?

- Faster and Easier Web Development.
- It creates Platform-independent web pages.
- It creates Responsive Web-pages.
- It is designed to be responsive to mobile devices too.

CHAPTER 3
SYSTEM ANALYSIS

INTRODUCTION

System analysis is the process of studying the business processors and procedures, generally referred to as business systems, to see how they can operate and whether improvement is needed. This may involve examining data movement and storage, machines and technology used in the system, programs that control the machines, people providing inputs, doing the processing and receiving the outputs.

INVESTIGATION PHASE

The investigation phase is also known as the fact-finding stage or the analysis of the current system. This is a detailed study conducted with the purpose of wanting to fully understand the existing system and to identify the basic information requirements. Various techniques may be used in fact-finding and all fact obtained must be recorded. A thorough investigation was done in every effected aspect when determining whether the purposed system is feasible enough to beimplemented.

Investigation

As it was essential for us to find out more about the present system, we used the following methods to gather the information: -

1. Observation: -Necessary to see the way the system works first hand.
2. Document sampling: - These are all the documents that are used in the system. They are necessary to check all the data that enters and leaves the system.
3. Questionnaires: - These were conducted to get views of the other employees who are currently employed in the system.

System Security

System security is a vital aspect when it comes to developing a system. The system should ensure the facility of preventing unauthorized personnel from accessing the information and the data within the system. The system should provide total protection for each user's

information so that the integrity of data is sustained and also prevent hackers from hacking the system.

The proposed system ensures the security and the integrity of data. This is done by providing a password login system . And for example the System Administrator has access to all kinds of information.

By providing this facility information is properly managed and information is protected.

FEASIBILTY STUDY

Feasibility study is done so that an ill-conceived system is recognized early in definition phase. During system engineered, however we concentrate our attention on four primary areas of interest. This phase is really important as before starting with the real work of building the system it is very important to find out whether the idea thought is feasible or not.

- Economic Feasibility: An evaluation of development cost weighted against the ultimate income or benefit derived from the developed system.
- Technical Feasibility: A study of function, performance and constraints that may affect the ability to achieve an acceptable system.
- Operational Feasibility: A study about the operational aspects of the system.

3.1 ECONOMIC ANALYSIS

Among the most important information contained in feasibility study is Cost Benefit Analysis and assessment of the economic justification for a computer based system project. Cost Benefit Analysis delineates costs for the project development and weights them against tangible and intangible benefits of a system. Cost Benefit Analysis is complicated by the criteria that vary with the characteristics of the system to be developed, the relative size of the project and the expected return on investment desired as part of companies strategic plan. In addition, many benefits derived from a computer-based system are intangible (e.g. better design quality through iterative optimization, increased customer satisfaction through programmable control etc.)

3.2 TECHNICAL ANALYSIS

During technical analysis, the technical merits of the system are studied and at the same time additional information about the performance, reliability, maintainability and predictability is collected. Technical analysis begins with an assessment of the technical reliability of the proposed system.

- What technologies are required for accomplished system function and performance?
- What new materials, methods, algorithms, or processes are required and what is their development risk?
- How will these obtained from technical analysis from the basis for another go/no-go decision on the test system? If the technical risk is severe, if models indicate that the desired function cannot be achieved, if the pieces just won't fit together smoothly, it's back to the drawing board.

As the software is very much economically feasible, then it is really important for it to be technically sound. The software will be built among:

- ✓ Backend: Apache Server,MySQL, PHP
- ✓ Frontend: HTML, CSS, Bootstrap

3.3 OPERATIONAL ANALYSIS

Operational analysis is concerned with extracting information from a working system that is used to develop projections about the system's future operations. Additionally, this modelling method can be used by the other three modelling techniques to derive meaningful information that can be fed into their analysis processes or used to verify or validate their analysis operations.

Operational analysis deals with the measurement and evaluation of an actual system in operation. Measurement is concerned with instrumenting the system to extract the information. The means to perform this uses hardware and/or software monitors.

CHAPTER 4
SOFTWARE DESIGN

Design is the first step in the development phase for any techniques and principles for the purpose of defining a device, a process or system in sufficient detail to permit its physical realization.

Once the software requirements have been analyzed and specified the software design involves three technical activities - design, coding, implementation and testing that are required to build and verify the software.

The design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished software or a system.

Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into a representation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data.

Design process for the software system has two levels, namely:

a) System Design

b) Detailed Design

4.1 SYSTEM DESIGN

This design level is also called top level design. At this level, the focus is on:

- Deciding which modules are needed for the system.
- The specifications of the system
- How the modules should be interconnected?

4.1.1 ARCHITECTURAL DESIGN

Analysts collect a great deal of unstructured data through interviews, questionnaires, on-site observations, procedural manuals and like. It is required to organize and convert the data through system flowcharts, data flow diagrams, structured English, decision tables and the like which support future developments of the system.

The Data flow diagrams and various processing logic techniques show how, where, and when data are used or changed in an information system, but these techniques do not show the definition, structure, and relationships within the data.

It is a way to focus on functions rather than the physical implementation. This is analogous to the architect's blueprint as a starting point for system design. The design is a solution, a "how to" approach, compared to analysis, a "what is" orientation.

System design is a highly creative process. This System design process is also referred as data modeling. The most common format used for data modeling is entity-relationship (E-R) diagramming. Data modeling using the E-R notation explains the characteristics and structure of data independent of how the data may be stored in computer memories.

1. The External Design

External design consists of conceiving, planning out and specifying the externally observable characteristics of the software product. These characteristics include user displays or user interface forms and the report formats, external data sources and the functional characteristics, performance requirements etc. External design begins during the analysis phase and continues into the design phase.

2. Physical design

The physical design relates to the actual input and output processes of the system. This is laid down in terms of how data is input into a system, how it is verified/ authenticated, how it is processed, and how it is displayed as output. Physical design, in this context, does not refer to the tangible physical design of an information system. To use an analogy, a personal computer's physical design involves input via a keyboard, processing within the CPU, and output via a monitor, printer, etc. It would not concern the actual layout of the tangible hardware, which for a PC would be a monitor, CPU, motherboard, hard drive, modems, video/graphics cards, USB slots, etc.

3. Logical design

The logical design of a system pertains to an abstract representation of the data flows, inputs and outputs of the system. This is often conducted via modeling, which involves a simplistic (and sometimes graphical) representation of an actual system. In the context of systems design, modeling can undertake the following forms, including:

- Data flow diagrams
- Entity Relationship Diagrams

Prototyping Model has been used for software development according to which a throwaway prototype of the proposed system, based on the currently known requirements, is given to the user so that he has a fair idea about how the proposed system is going to be like. This will help him in deciding the interface, input and output requirements.

It can be easily adjudged that inputs and outputs are big in number, can increase exponentially and may create a big chaos if not restricted properly. As the user spends some time on the prototype, he will become more precise about his own input and output requirements. This prototype will provide him with an environment analogous to the proposed system's environment.

Because of object oriented support in PHP, various concepts (like reusability, polymorphism, isolation etc.) are already there but for the efficient management of system components, Component based Software Engineering will also be exercised which will help in a resultant library of components, the benefit of which will be reusability and fast development.

Because of lack of hierarchical structure in object oriented approach, there is no meaning of Bottom-up or Top-down testing. Testing will begin from the most rudimentary levels of the system and will move towards higher level components which will be based on design phase rather than coding phase. In little words, it can be said that 'CLUSTER Testing' will be exercised to scrutinize all the parts and their associative functionality.

This design level is also called Logic Design. In this level, the internal design of the modules or how the specifications of the module can be satisfied is decided.

Much of the design effort for designing software is spent creating the system design. The input to the design phase is the specifications for the system to be designed. The output of the top level design phase is the architectural design for the software to be built.

A design methodology is a systematic approach to create a design by applying set of techniques and guidelines. A design can be either object oriented or function oriented. In

function orienteddesign, the design consists of modules definitions with each module supporting a functional abstraction. In object oriented design, the modules in the design represents data abstraction.

The snapshots of step by step forms designed to achieve the goal through the proposed system along with their brief description are shown below:

The main objective of the system design is to make the system user friendly. System design involves various stages as:

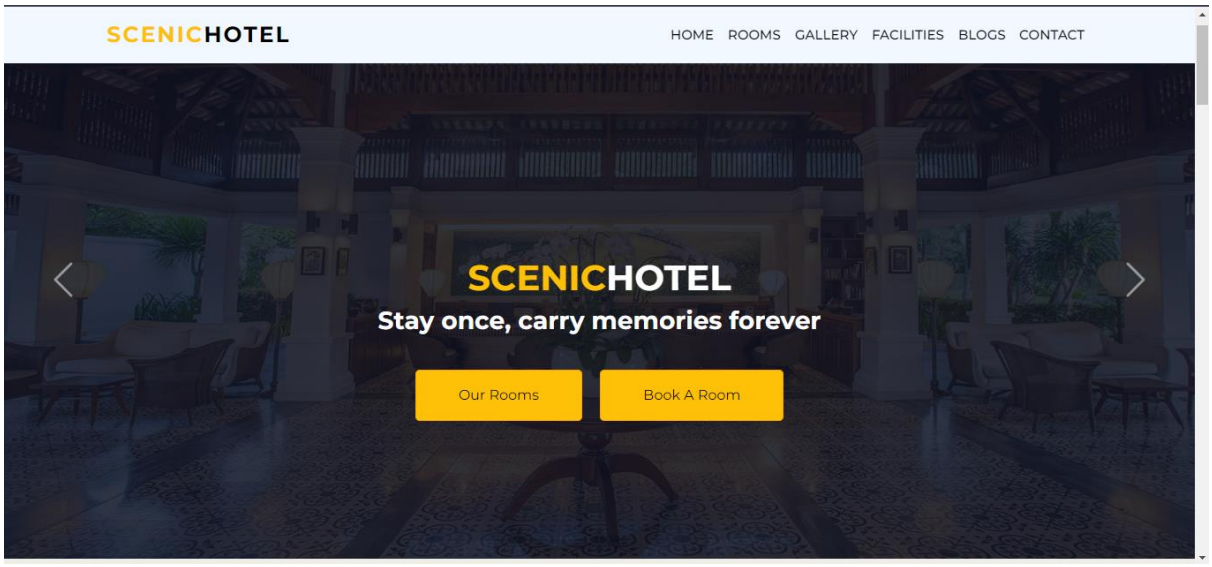
- Data Entry
- Data Correction
- Data Deletion
- Processing
- Updating
- Report Generation

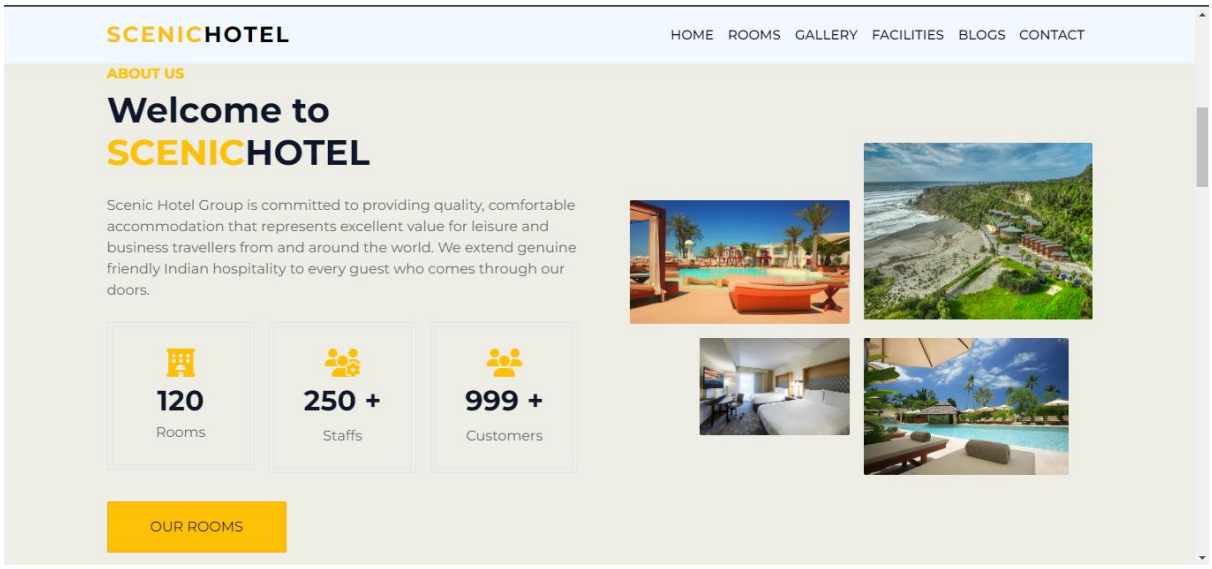
System design is the creative act of invention, developing new inputs, a database, offline files, procedures and output for processing business to meet an organization objective. System design builds information gathered during the system analysis.

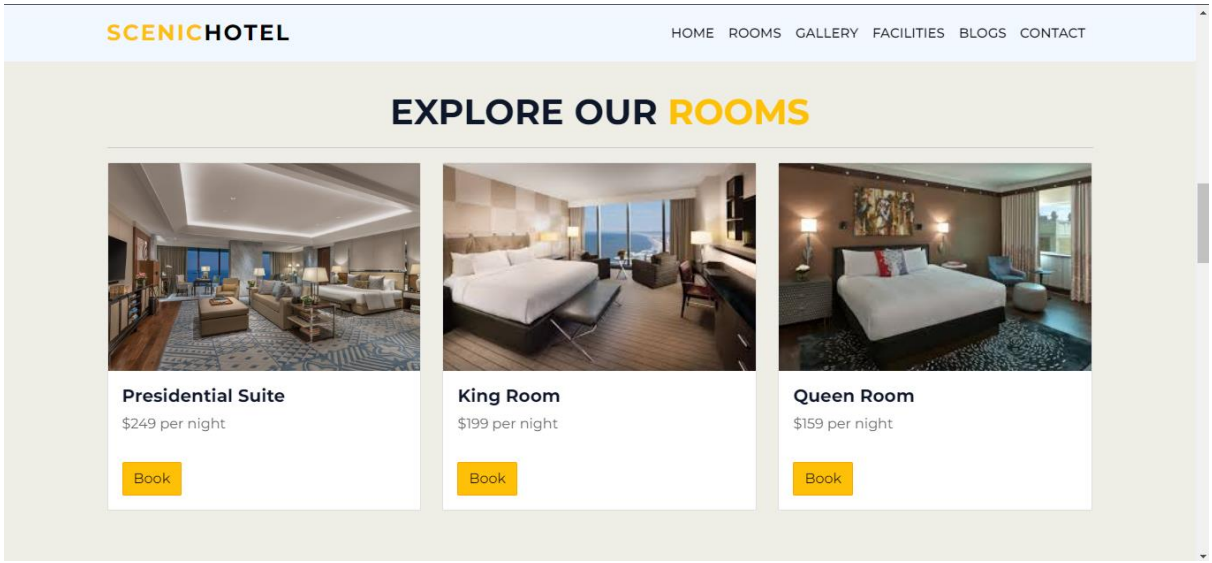
4.2 USER INTERFACE DESIGN

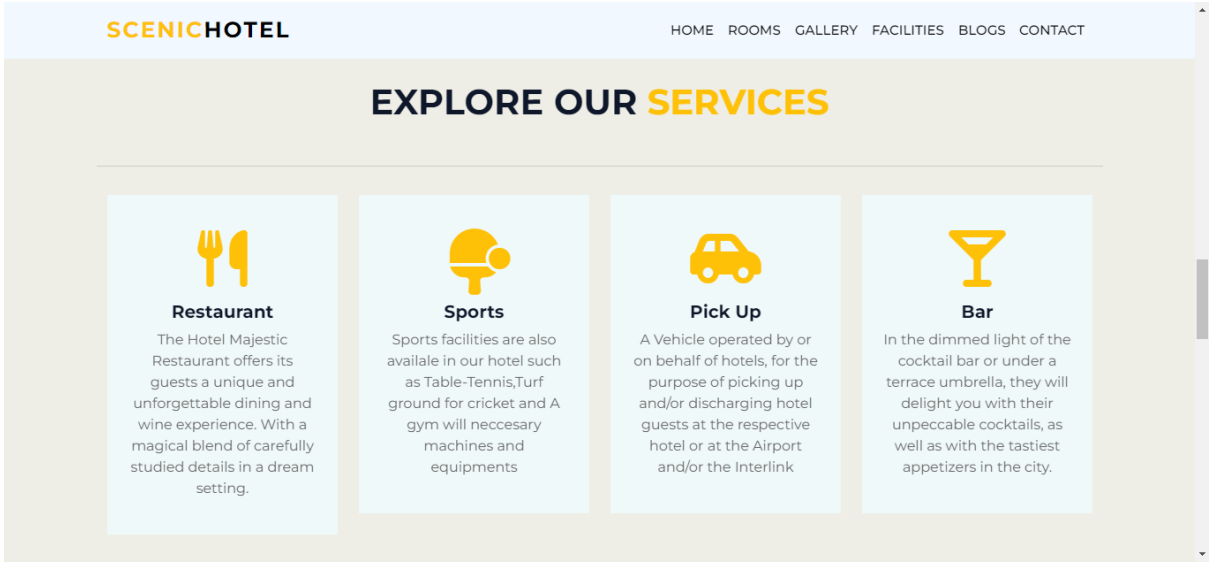
SNAPSHOTS

Home




SCENICHOTEL
HOME ROOMS GALLERY FACILITIES BLOGS CONTACT
ABOUT US
Welcome to
SCENICHOTEL
Scenic Hotel Group is committed to providing quality, comfortable accommodation that represents excellent value for leisure and business travellers from and around the world. We extend genuine friendly Indian hospitality to every guest who comes through our doors.
120
Rooms
250 +
Staffs
999 +
Customers
OUR ROOMS


SCENICHOTEL
HOME ROOMS GALLERY FACILITIES BLOGS CONTACT
EXPLORE OUR ROOMS
Presidential Suite
$249 per night
Book
King Room
$199 per night
Book
Queen Room
$159 per night
Book


SCENICHOTEL
HOME ROOMS GALLERY FACILITIES BLOGS CONTACT
EXPLORE OUR SERVICES
Restaurant
The Hotel Majestic Restaurant offers its guests a unique and unforgettable dining and wine experience. With a magical blend of carefully studied details in a dream setting.
Sports
Sports facilities are also availale in our hotel such as Table-Tennis,Turf ground for cricket and A gym will neccesary machines and equipments
Pick Up
A Vehicle operated by or on behalf of hotels, for the purpose of picking up and/or discharging hotel guests at the respective hotel or at the Airport and/or the Interlink
Bar
In the dimmed light of the cocktail bar or under a terrace umbrella, they will delight you with their unpeccable cocktails, as well as with the tastiest appetizers in the city.

SCENICHOTEL

HOME ROOMS GALLERY FACILITIES BLOGS CONTACT

Hotel Showcase

SCENICHOTEL

HOME ROOMS GALLERY FACILITIES BLOGS CONTACT

Customer Says

The room was very spacious, clean, and had the amenities we needed. Breakfast was delicious; it was a very wide buffet spread.

Matt Demon

I stayed at Scenic Hotel for a night, really enjoyed its location in the city centre where everything is within walking distance.

Jimmy Kimmel

SCENICHOTEL

HOME ROOMS GALLERY FACILITIES BLOGS CONTACT

evening with good tapas table and nice wines.

Jason Doe

with attentive staff. Received good recommendations for food.

Dave Wood

SCENICHOTEL

Admin Login

Contact Us

Sirsa,Haryana

1234567890

scenichotel@gmail.com

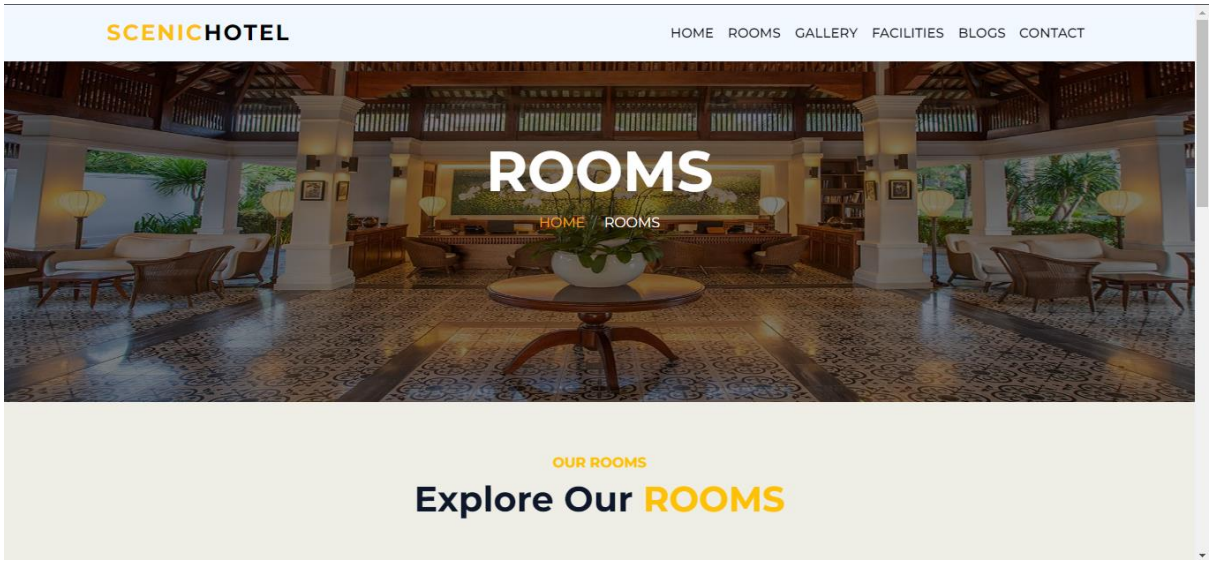
Facilities

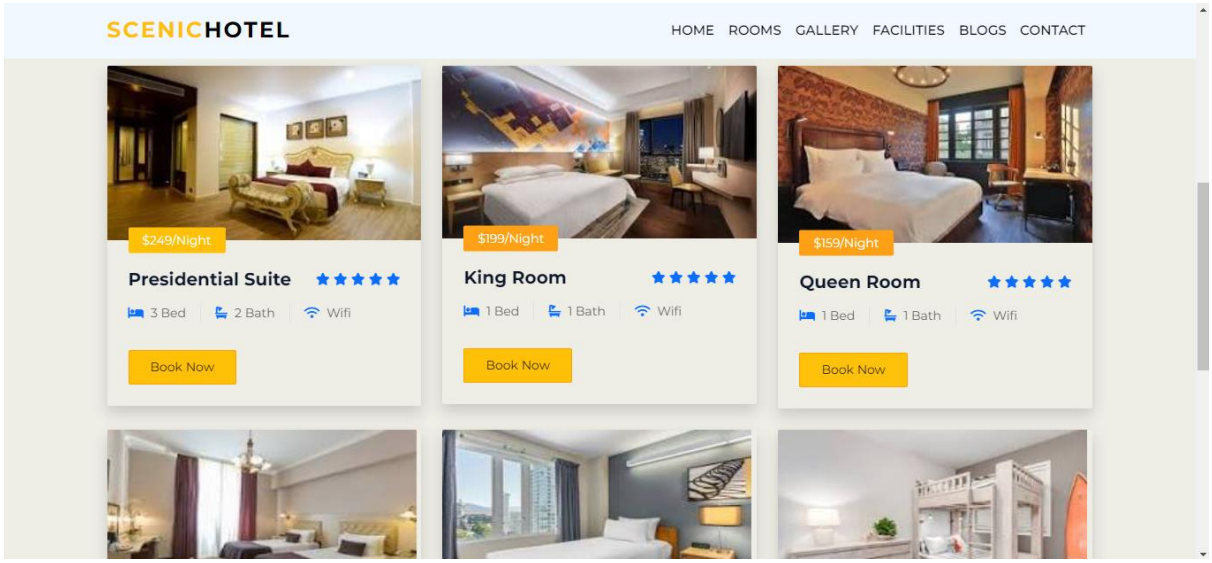
- Swimming Pool
- SPA
- Free WiFi
- Guided Tours
- And More...

We Are Global

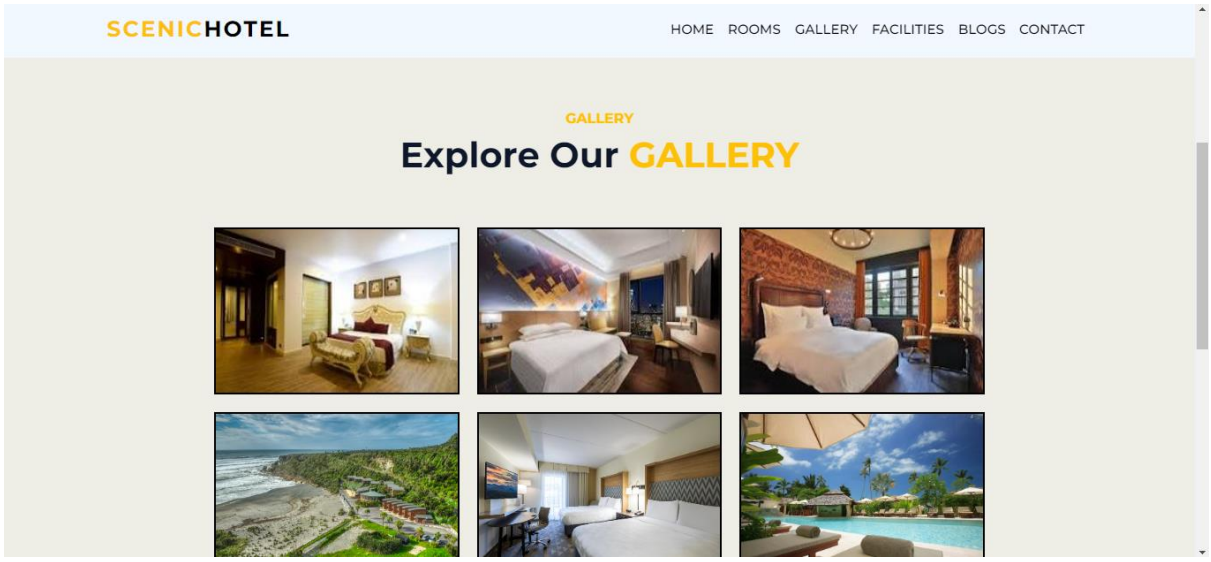
© 2024 ScenicHotel. All rights reserve

Rooms

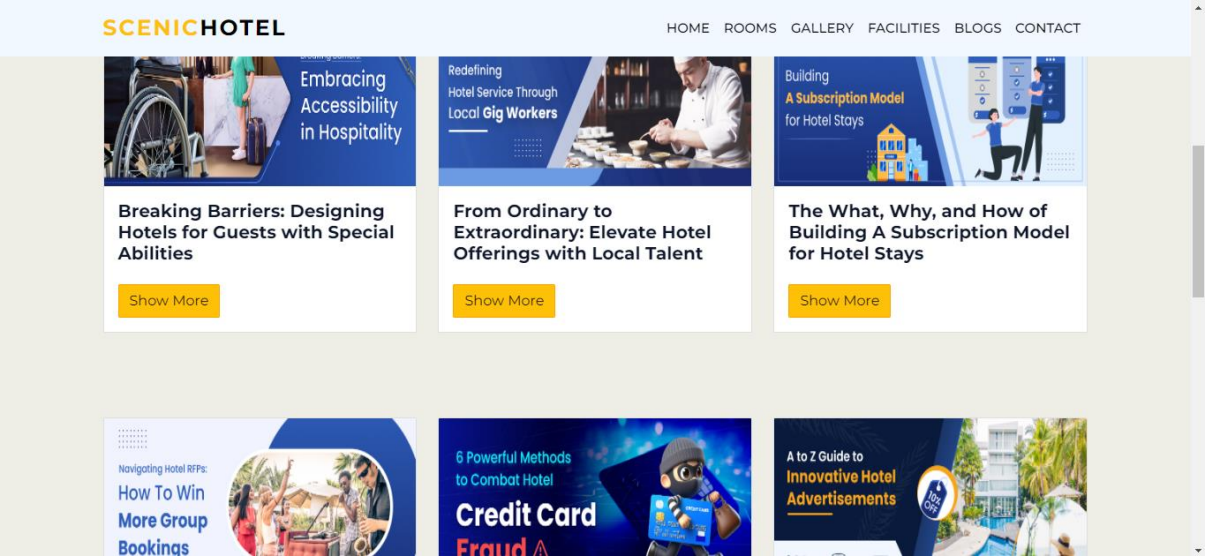


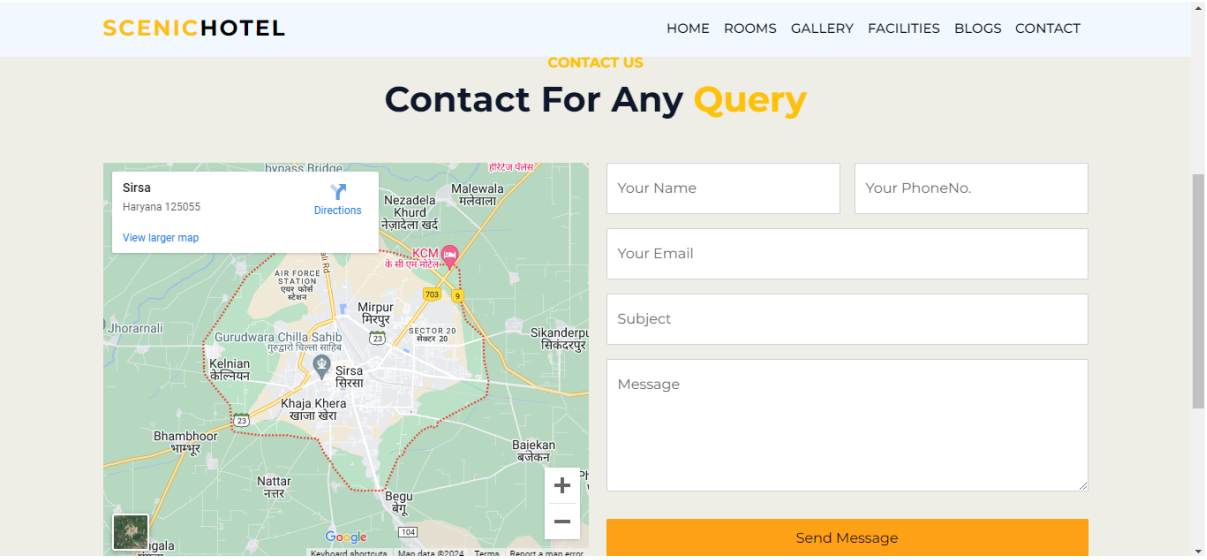


Gallery



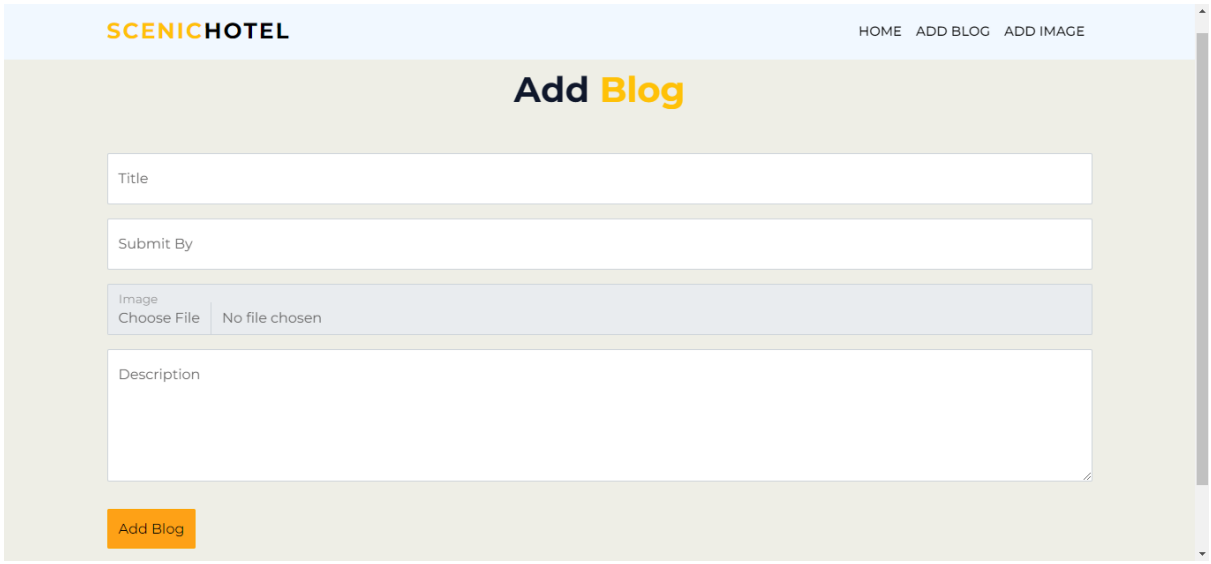
Blogs

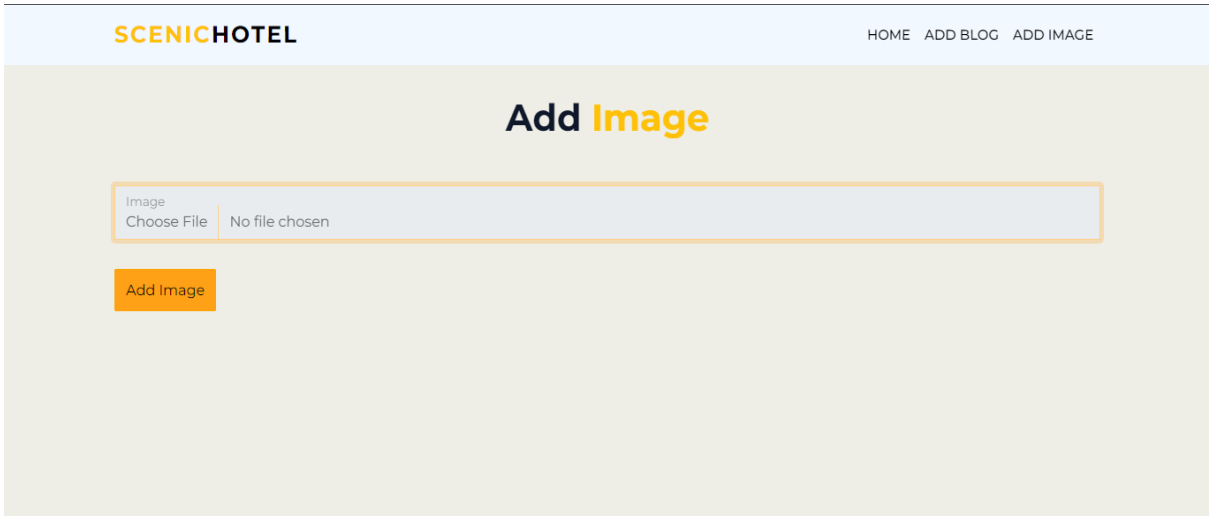


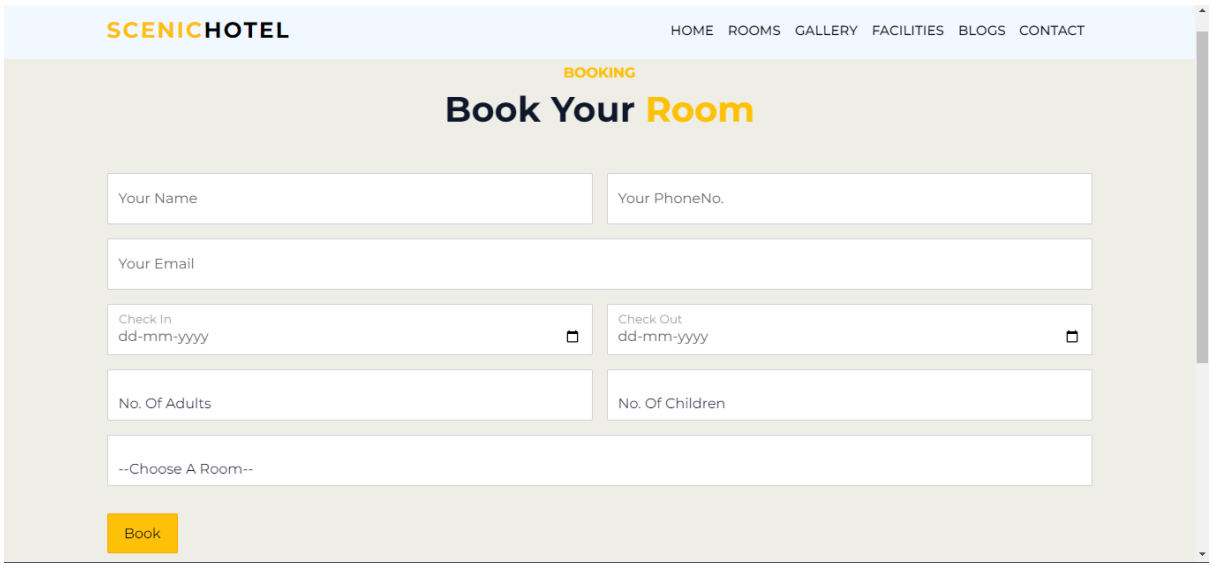


Dashboard

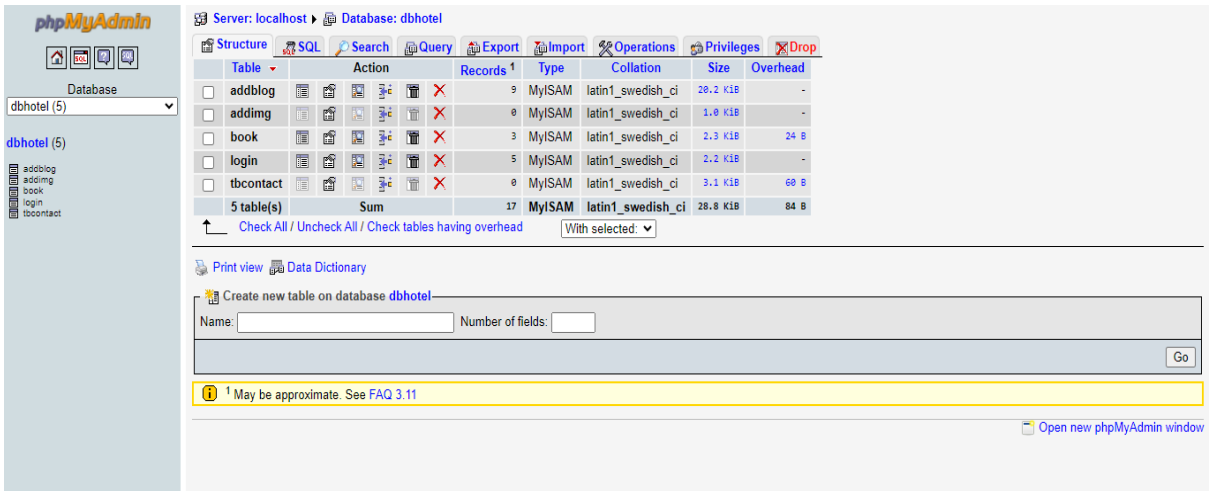
Name	Phone No.	Email	Check In	Check Out	Adults	Child	Room	Booking Date/Time
Kamal	1354643324	kamal@gmail.com	2024-08-15	2024-08-21	2	1	Double Room	2024-08-05 10:57:22
Shyam	2147483647	shyam@gmail.com	2024-08-14	2024-08-21	2	1	King Room	2024-08-05 10:56:34
Deep	1234567890	deep@yahoo.com	2024-08-15	2024-08-21	2	1	Presidential Suite	2024-08-05 10:55:52

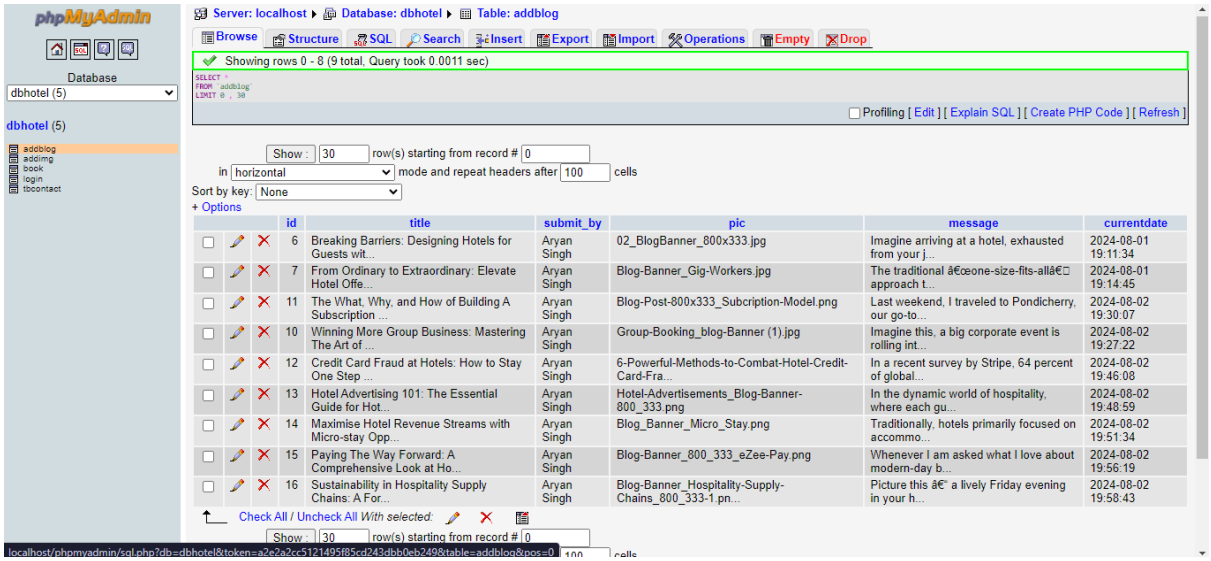

SCENICHOTEL
HOME ADD BLOG ADD IMAGE
Add Blog
Title
Submit By
Image
Choose File No file chosen
Description
Add Blog

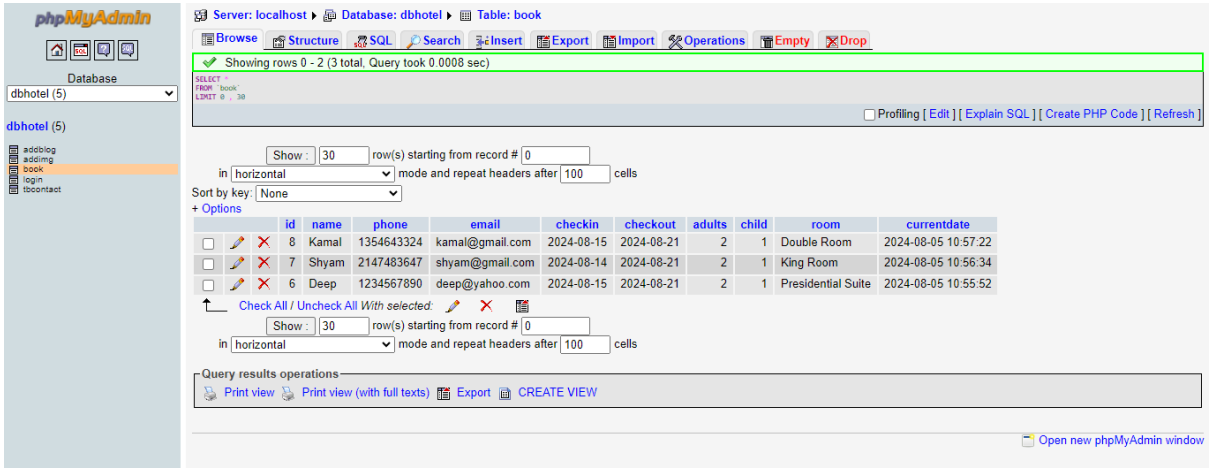

SCENICHOTEL
HOME ADD BLOG ADD IMAGE
Add Image
Image
Choose File No file chosen
Add Image

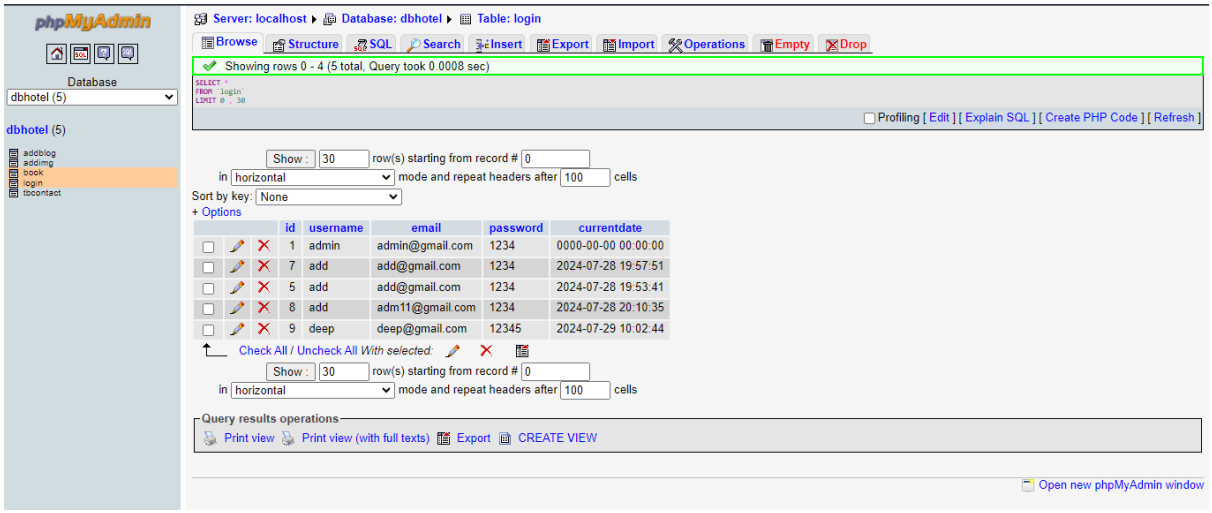

SCENICHOTEL
HOME ROOMS GALLERY FACILITIES BLOGS CONTACT
BOOKING
Book Your Room
Your Name
Your PhoneNo.
Your Email
Check In
dd-mm-yyyy
Check Out
dd-mm-yyyy
No. Of Adults
No. Of Children
--Choose A Room--
Book

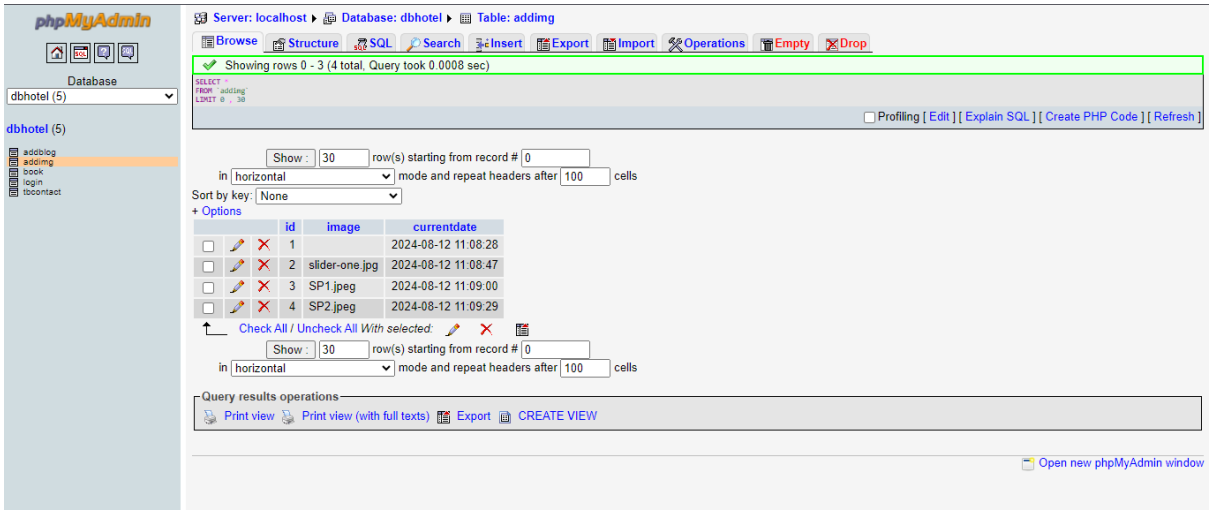
DATABASE SNAPSHOTS

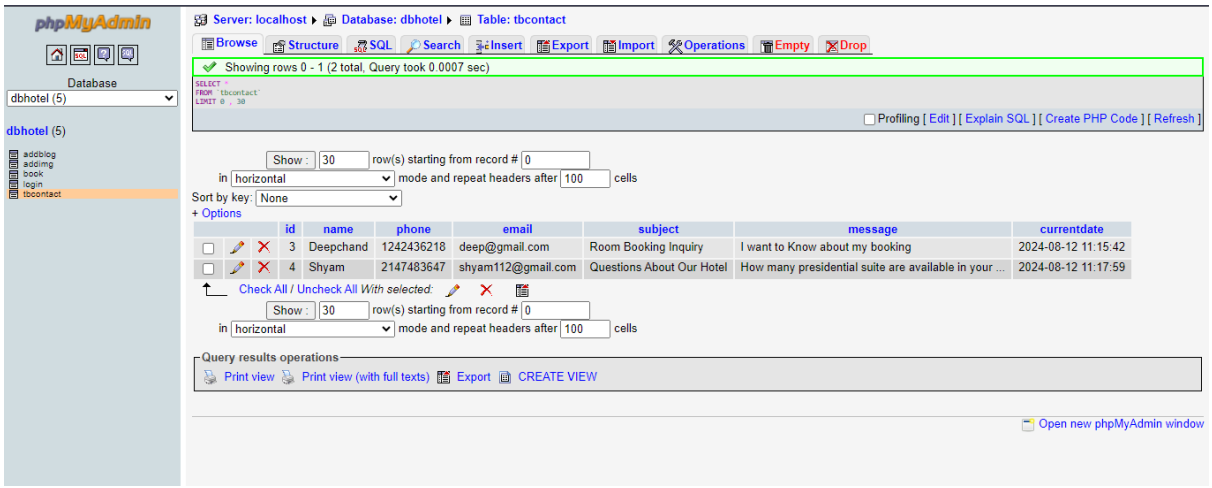







phpMyAdmin
Database
dbhotel (5)
dbhotel (5)
addblog
addimg
book
login
tbcontact
Server: localhost ▸ Database: dbhotel ▸ Table: login
Browse Structure SQL Search Insert Export Import Operations Empty Drop
Showing rows 0 - 4 (5 total, Query took 0.0008 sec)
SELECT *
FROM `login`
LIMIT 0 , 30
Profiling [Edit] [Explain SQL] [Create PHP Code] [Refresh]
Show : 30 row(s) starting from record # 0
in horizontal mode and repeat headers after 100 cells
Sort by key: None
+ Options
id username email password currentdate
1 admin admin@gmail.com 1234 0000-00-00 00:00:00
7 add add@gmail.com 1234 2024-07-28 19:57:51
5 add add@gmail.com 1234 2024-07-28 19:53:41
8 add adm11@gmail.com 1234 2024-07-28 20:10:35
9 deep deep@gmail.com 12345 2024-07-29 10:02:44
Check All / Uncheck All With selected:
Query results operations
Print view Print view (with full texts) Export CREATE VIEW
Open new phpMyAdmin window


phpMyAdmin
Database
dbhotel (5)
dbhotel (5)
addblog
addimg
book
login
tbcontact
Server: localhost ▸ Database: dbhotel ▸ Table: addimg
Browse Structure SQL Search Insert Export Import Operations Empty Drop
Showing rows 0 - 3 (4 total, Query took 0.0008 sec)
SELECT *
FROM `addimg`
LIMIT 0 , 30
Profiling [Edit] [Explain SQL] [Create PHP Code] [Refresh]
Show : 30 row(s) starting from record # 0
in horizontal mode and repeat headers after 100 cells
Sort by key: None
+ Options
id image currentdate
1 2024-08-12 11:08:28
2 slider-one.jpg 2024-08-12 11:08:47
3 SP1.jpeg 2024-08-12 11:09:00
4 SP2.jpeg 2024-08-12 11:09:29
Check All / Uncheck All With selected:
Query results operations
Print view Print view (with full texts) Export CREATE VIEW
Open new phpMyAdmin window


phpMyAdmin
Database
dbhotel (5)
dbhotel (5)
addblog
addimg
book
login
tbcontact
Server: localhost ▸ Database: dbhotel ▸ Table: tbcontact
Browse Structure SQL Search Insert Export Import Operations Empty Drop
Showing rows 0 - 1 (2 total, Query took 0.0007 sec)
SELECT *
FROM `tbcontact`
LIMIT 0 , 30
Profiling [Edit] [Explain SQL] [Create PHP Code] [Refresh]
Show : 30 row(s) starting from record # 0
in horizontal mode and repeat headers after 100 cells
Sort by key: None
+ Options
id name phone email subject message currentdate
3 Deepchand 1242436218 deep@gmail.com Room Booking Inquiry I want to Know about my booking 2024-08-12 11:15:42
4 Shyam 2147483647 shyam112@gmail.com Questions About Our Hotel How many presidential suite are available in your ... 2024-08-12 11:17:59
Check All / Uncheck All With selected:
Query results operations
Print view Print view (with full texts) Export CREATE VIEW
Open new phpMyAdmin window

CHAPTER 5

CODING & DEVELOPMENT

The purpose of coding is to express the program logic in the best possible way and to the check it. The main reasons for coding are:

1. Unique Identification. Each item in a system should be identified uniquely andcorrectly.

2. Cross referencing. Diverse activities in an organization give rise to Transactions in different sub systems but affect the same item

3. Efficient storage. Code is a concise representation it reduces data entry me and improves reliability, Code as a key reduces storage space required for the data Retrieval based on a key search is faster in a computer.

Requirements of coding scheme:

The number of digits / characters used in a code must be minimal to reduce storage space of the code and retrieval efficiency. It should be expandable, that is it must allow new items to be added easily.

Type of Codes:

1. Serial Numbers. This method is that it is concise, precise and expandable. It is however not meaningful.

2. Block Codes. The block codes use blocks of serial numbers. This code is Expandable and more meaningful than the serial number coding. It is precise but notcomprehensive.

3. Code Efficiency: It is often said that readability of a program is much more important than the intricacies of its code.

Main emphasis while coding was on style so that the end result was an optimized code.
The following points were kept into consideration while coding:

i) Coding Style: - The Structured programming method was used in all the modules of the project. It incorporated the following features:

- The code has been written so that the definition and implementation of each function is contained in one file.
- A group of related function was clubbed together in one file to include it when needed and save us from the labor of writing it again and again.

ii) Naming Convention: - As the project size grows, so does the complexity of recognizing the purpose of the variables. Thus the variables were given meaningful names, which would help in understanding the context and the purpose of the variable. The function names are also given meaningful names that can be easily understood by the user.

iii) Indentation: - Judicious use of indentation can make the task of reading and understanding a program much simpler. Indentation is an essential part of a good program. If code id intended without thought it will seriously affect the readability of the program. The higher-level statements like the definition of the variables, constants and the function are indented, with each nested block indented, stating their purposes in the code. Blank line is also left between each function definition to make the code look neat. Indentation for each source file stating the purpose of the file is also done.

5.1 CODING APPROACH

Top Down Approach:

A top-down approach (also known as stepwise design and in some cases used as a synonym of decomposition) is essentially the breaking down of a system to gain insight into its compositional sub-systems. In a top-down approach an overview of the system is formulated, specifying but not detailing any first-level subsystems. Each subsystem is then refined in yet greater detail, sometimes in many additional subsystem levels, until the entire specification is reduced to base elements. A top-down model is often specified with the assistance of "black

CHAPTER 6
TESTING

During testing the program to be tested is executed with the set of test cases and have the output of the program for the test cases is evaluated to determine if the program is performing as expected. Due to its approach dynamic testing can only ascertain the presence of errors in the program, the exact nature of errors is not usually decided by testing. Testing forms is the first in determining errors in the program.

Once a programs are tested individually then the system as a whole needs to be tested. During testing the system is used experimentally to ensure that the software does not fail i.e. it will run according to its specification. The programs executed to check for any syntax and logical errors. The Errors are corrected and test is made to determine whether the program is doing what it is supposed to do.

This system is tested using unit testing firstly then all the modules are integrated and again the system is tested using integrated testing and it was find that system is working according to its expectation.

Why testing is done

- Testing is the process of running a system with the intention of finding errors.
- Testing enhances the integrity of a system by detecting deviations in design and errors in the system.
- Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system.
- Testing also add value to the product by confirming to the user requirements.

Causes of Errors

The most common causes of errors in a software system are:

- Communication gap between the developer and the business decision maker: A communication gap between the developer and the business decision maker is normally due to subtle differences between them. The differences can be classified into five broad areas: Thought process, Background and Experience, Interest, Priorities, Language.
- Time provided to a developer to complete the project: A common source of errors in projects comes from time constraints in delivering a product. To keep to the schedule, features can be cut. To keep the features, the schedule can be slipped. Failing to adjust the

feature set or schedule when problems are discovered can lead to rushed work and flawed systems.

- Over Commitment by the developer: High enthusiasm can lead to over commitment by the developer. In these situations, developers are usually unable to adhere to deadlines or quality due to lack of resources or required skills on the team.
- Insufficient testing and quality control: Insufficient testing is also a major source of breakdown of e-commerce systems during operations, as testing must be done during all phases of development.
- Inadequate requirements gathering: A short time to market results in developers starting work on the Web site development without truly understanding the business and technical requirements. Also, developers may create client-side scripts using language that may not work on some client browsers.
- Keeping pace with the fast changing Technology: New technologies are constantly introduced. There may not be adequate time to develop expertise in the new technologies. This is a problem for two reasons. First, the technology not be properly implemented. Second, the technology may not integrate well with the existing environment.

Testing Principles

- To discover as yet undiscovered errors.
- All tests should be traceable to customer's requirement.
- Tests should be planned long before the testing actually begins.
- Testing should begin "in the small" & progress towards "testing in the large".
- Exhaustive Testing is not possible.
- To be most effective training should be conducted by an Independent Third Party

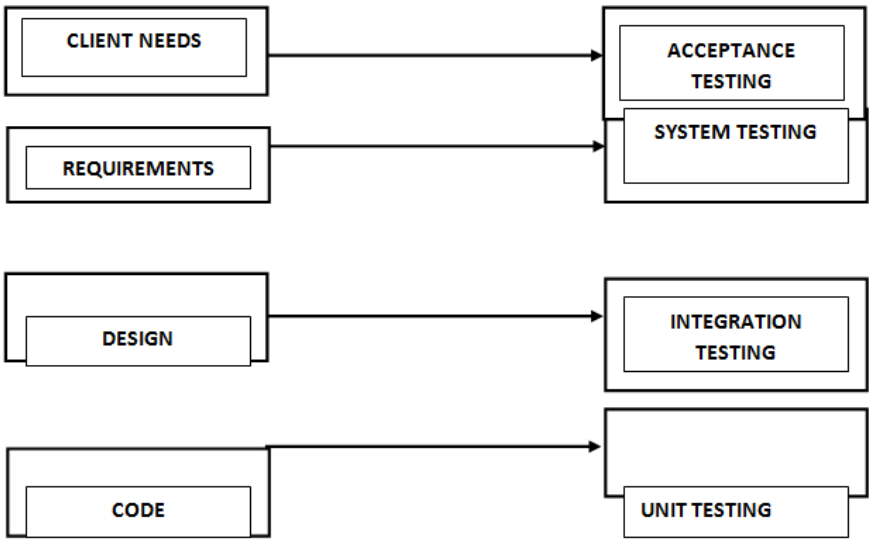
Testing Objectives

- Testing is a process of executing a program with the intent of finding errors.
- A good test case is one that has a high probability of finding an as yet undiscovered error.
- A successful test is one that uncovers an as yet undiscovered error.

Developing a Test Plan:

The first step in testing is developing a test plan based on the product requirements. The test plan is usually a formal document that ensures the product meets the following standards:

- Is thoroughly tested? Untested code adds an unknown element to the product and increases the risk of product failure.
- Meets product requirements: To meet customer needs, the product must provide the features and behavior described in the product specification. For this reason, product specifications should be clearly written and well understood.
- Does not contain defects: Features must work within established quality standards, and those standards should be clearly stated within the test plan.



A good test plan answers the following questions:

- How are tests written? Describe the languages and tools used for testing.
- Who is responsible for the testing? List the teams or individuals who write and perform the tests.
- When are the tests performed? The testing schedule closely follows the development schedule
- Where are the tests and how are test results shared? Tests should be organized so that they can be rerun on a regular basis.

- What is being tested? Measurable goals with concrete targets let you know when you have achieved success.

Some of these questions might have more than one answer, depending on the type of test. For instance, individual developers are often responsible for writing the first level of tests for their own code, while a separate testing team might be responsible for ensuring that all code works together.

The following sections describe the different types of tests and the techniques used with Visual Studio .NET to perform these tests.

TYPES OF TESTS

The test plan specifies the different types of tests that will be performed to ensure the product meets customer requirements and does not contain defects. Table 10-1 describes the most common test types.

Test type	Ensures that
Unit test	Each independent piece of code works correctly
Integration test	All units work together without errors
Regression test	Newly added features do not introduce errors to other features that are already working
Load test (also called stress test)	The product continues to work under extreme usage
Platform test	The product works on all of the target hardware and software platforms

A test plan has the following steps:

- Prepare test plan
- Specify conditions for user acceptance testing
- Prepare test data for program testing
- Prepare test data for transaction path testing
- Plan user testing
- Compile/Assemble program
- Prepare job performance aids

- Prepare operational documents

Test Subject	Test Method	Expected Result	Actual Result	Remarks
Complete testing of system on different browsers	The whole project is executed using different browsers like opera, Mozilla firefox, and internet explorer.	The project should give the same output on all the browsers.	Because High HD picture Quality, the size of the Website Become Large & on executing It takes Time to View.	Browser can sometime effect the working and performance of execution of the project.

Table : Test cases for system testing

- Component testing
- Integration testing
- User testing

1. UNIT TESTING

Unit testing focuses verification effort on the smallest unit of software i.e. the module. Using the detailed design and the process specifications, testing is done to uncover errors within the boundary of the module. All modules must be successful in the unit test before the start of the integration testing begins.

2. INTEGRATION TESTING

After unit testing, we have to perform integration testing. The goal here is to see if modules can be integrated properly, the emphasis being on testing interfaces between modules. This testing activity can be considered as testing the design and hence the emphasis on testing

module interactions.

3. SYSTEM TESTING

Here the entire software system is tested. The reference document for this process is the requirements document, and the goal is to see if software meets its requirements. Here entire 'HRRP' has been tested against requirements of project and it is checked whether all requirements of project have been satisfied or not.

4. ACCEPTANCE TESTING

Acceptance Testing is performed with realistic data of the client to demonstrate that the software is working satisfactorily. Testing here is focused on external behavior of the system; the internal logic of program is not emphasized.

5. WHITE BOX TESTING

This is a unit testing method, where a unit will be taken at a time and tested thoroughly at a statement level to find the maximum possible errors

White-box test focuses on the program control structure. Test cases are derived to ensure that all statement in the program control structure. Test cases are derived to ensure that all statement in the program control structure.

Test cases are derived to ensure that all statement in the program has been executed at least once during testing and that all logical conditions have been exercised. Basis path testing, a white box technique, makes use of program graphs (or graph matrices) to derive the set of linearly independent test that will ensure coverage. Condition and data flow testing further exercising degrees of complexity.

6. BLACK BOX TESTING

This testing method considers a module as a single unit and checks the unit at interface and communication with other modules rather getting into details at statement level. Here the module will be treated as a block that will take some input and generate output. Output for a given set of input combinations are forwarded to other modules.

Black-box testing techniques focus on the information domain of the software, deriving test cases by partitioning the input and output

TEST INFORMATION FLOW

A strategy for software testing may also be viewed in the context of the spiral. Unit testing begins at the vortex of the spiral and, concentrates on each unit, component of the software as implemented in source code.Testing progresses moving outward along the spiral to integration testing, where the focus is on designed the construction of the software architecture.

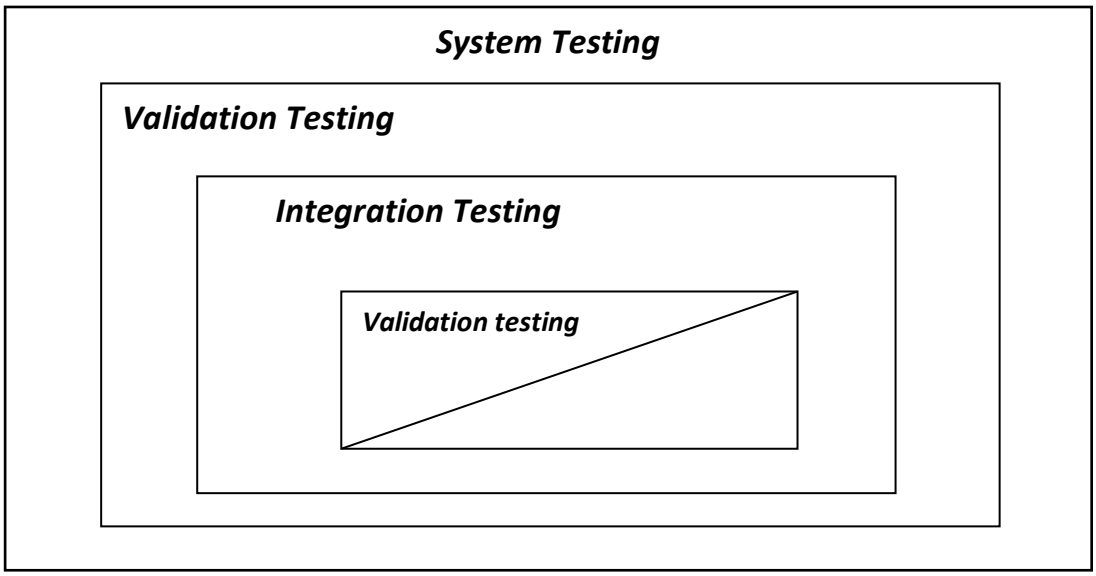


Fig : Stages of Testing

CHAPTER 7

IMPLEMENTATION AND EVALUATION

An Implementation plan is a management tool for a specific policy measure, or package of measures, designed to assist agencies to manage and monitor implementation effectively.
Implementation plans are intended to be scalable and flexible; reflecting the degree of urgency, innovation, complexity and/or sensitivity associated with the particular policy measure. Agencies are expected to exercise judgment in this area; however, the level of detail should be sufficient to enable the agency to effectively manage the implementation of a policy measure.
At a minimum, plans should reflect the standards outlined in the Guide to Preparing Implementation Plans.

Implementation is the stage in the project where the theoretical design is turned into the working system and is giving confidence to the new system for the users i.e. will work efficiently and effectively. It involves careful planning, investigation of the current system and its constraints on implementation, design of method to achieve the change over, an evaluation, of change over methods. A part from planning major task of preparing the implementation is education of users. The more complex system is implemented, the more involved will be the system analysis and design effort required just for implementation. An implementation coordinating committee based on policies of individual organization has been appointed. The implementation process begins with preparing a plan for the implementation for the system. According to this plan, the activities are to be carried out, discussions may regarding the equipment has to be acquired to implement the new system.

Implementation is the final and important phase. The most critical stage is in achieving a successful new system and in giving the users confidence that the new system will work and be effective. The system can be implemented only after thorough testing is done and if it found to working according to the specification. This method also offers the greatest security since the old system can take over if the errors are found or inability to handle certain types of transaction while using the new system.

At the beginning of the development phase a preliminary implementation plan is created to schedule and manage the many different activities that must be integrated into plan. The implementation plan is updated throughout the development phase, culminating in a changeover plan for the operation phase. The major elements of implementation plan are test plan, training plan, equipment installation plan, and a conversion plan.

7.1 IMPLEMENTATION AND OUTPUTS

A crucial phase in the system development life cycle is the successful implementation of the new system design. Implementation simply means converting a new system design into operation. Implementation phase is used to translate the design phase into programming constructs. actual implementation of the project is done or we can say that in this phase we develop all the aspect of the project. In this phase the programmer also does user documentation of the project.

Implementation Phases: - These are the following implementation different phases.

Phase 1: - During this phase, the project water quality goals and plant capacity are set. Then, with assistance from membrane manufacturers and specialty consultants, a critique of various technologies is conducted to assess feasibility and cost-effectiveness of membrane options. Many utilities can complete this phase with their own staff. It is crucial to give a “yes” or “no” to membranes in this phase. Remember, membranes may not be the best option for all types of waters and in every application.

Phase 2: - In this phase, advice from a specialized consultant is a must. This is when layouts and conceptual design are done to evaluate membrane options. This is also the last practical and cost-effective phase where you can go back to the feasibility study if the membrane is not found to be the best alternative. Detailed water quality investigation and sometimes piloting is done in this phase to verify membrane applicability and type of systems to use, as well as setting design parameters for the next phase. Depending on the piloting requirements and periods, this phase could take as little as two or three months to more than a year; if seasonal, water quality changes are substantial. If a pilot study is required, a detailed test protocol should be prepared to not only evaluate various manufacturers but also as a basis for operations and maintenance (O&M) cost evaluation. It is highly recommended to prepare this

test protocol with guidance from the permitting agencies and make them a part of the decision process.

The conclusion of Phase 2 should determine what type of membrane to use and the membrane manufacturer. If manufacturers were invited to pilot test, you must ensure that they are being evaluated in a fair and open environment. Test protocol is the key evaluation tool. It is also recommended to get them involved early in the draft test protocol so there are no surprises.

Phase 3: - Before starting Phase 3, all design parameters, plant capacity, reliability and redundancy factors, stand-by provisions, temperature and water quality considerations must be established. They will then become the design basis for the specialty consultant. Phase 3 is essentially when the local engineers working with the specialty consultants to perform detail designs and preparing the bidding documents while the local engineer is focusing on the site work, building, incoming power, etc. The specialty consultant is doing detail design and layout for the process equipment and setting the bidding requirements for the membrane system.

Depending on the project schedule and local requirements, typically three major submittals are prepared: 20% to 30%, 60% to 70% and 100% design.

It is critical to establish the type of procurement and short list manufacturers, and identify all key process needs during the 20% to 30% phase. Even with the same membrane technology, the system layout, process needs and power/chemical requirements are very different.

Phase 4: - This phase is the most complex phase in membrane system implementation. There are many different methods and ways of bidding membrane systems, each with its own advantages/disadvantages.

Phase 5: - The success and smoothness of Phase 5 depends on phases 3 and 4. The single most important factor becomes how detailed the bid document is and who is responsible for what material and equipment, as well as testing and guarantees.

Phases 6 and 7: - Typically, each entity performs its own function in phases 6 and 7, except the overall controls, for which one entity should be taking charge.

Phase 8: - This phase is preparing as- built, final O&M manuals and each entity completing its punch lists. The specialty consultant can be of great assistance to compile all O&M and shop drawings and provide a comprehensive operator training on the overall plant process, while each supplier provides training of individual components.

Post implementation:-

A Post-Implementation Review (PIR) is an assessment and review of the completed working solution. It will be performed after a period of live running, sometime after the project is completed.

There are three purposes for a Post-Implementation Review:

- To ascertain the degree of success from the project, in particular, the extent to which it met its objectives, delivered planned levels of benefit, and addressed the specific requirements as originally defined.
- To examine the efficacy of all elements of the working business solution to see if further improvements can be made to optimize the benefit delivered.
- To learn lessons from this project, lessons which can be used by the team members and by the organization to improve future project work and solutions.

In some cases, the first of these objectives can be a contractual issue. Where that is the case, it may be safer to run separate reviews - one focused on contractual compliance and the other seeking to derive further benefit from a no-blame review.

TYPES OF IMPLEMENTATION

- Implementation of a computer system to replace a manual system.
- Implementation of a new computer system to replace an existing system.
- Implementation of a modified application to replace an existing one, using the same computer.

Successful implementation may not guarantee improvement in the organization using the new system, but improper installation will prevent it. It has been observed that even the best system cannot show good result if the analysts managing the implementation do not attend to every important detail. This is an area where the systems analysts need to work with utmost care.

7.2 MAINTENANCE

Once the website is launched, it enters the maintenance phase. All systems need maintenance. Maintenance is required because there are often some residual errors remaining in the system that must be removed as they are discovered. Maintenance involves understanding the effects of the change, making the changes to both the code and the documents, testing the new parts and retesting the old parts that were not changed. Maintenance is mainly of two types:

1. Corrective Maintenance
2. Adaptive Maintenance

7.2.1 Corrective Maintenance:

Almost all software that is developed has residual errors or bugs in them. Many of these surfaces only after the system have been in operation, sometimes for a long time. These errors once discovered need to be removed, leading to the software to be changed. This is called Corrective Maintenance.

7.2.2 Adaptive Maintenance:

Even without bugs, software frequently undergoes change. The software often must be upgraded and enhanced to include more features and provide more services. This requires modification of the software. This type of maintenance is known as the Adaptive Maintenance

CHAPTER 8

CONCLUSION

Thank you for considering Scenic Hotel for your stay. We are committed to providing you with an unparalleled experience that blends comfort, convenience, and exceptional service. Our dedicated team is here to ensure that every aspect of your visit meets the highest standards, from our well-appointed accommodations to our diverse range of amenities.

Whether you are here for business, relaxation, or exploration, Scenic Hotel is ideally located to offer easy access to local attractions, business districts, or natural beauty. Our goal is to make your stay as enjoyable and stress-free as possible, providing a sanctuary where you can unwind and recharge.

We invite you to explore the unique features and services we offer, and we look forward to welcoming you in person. Should you have any special requests or need assistance, our team is always ready to help ensure that your stay is memorable and tailored to your needs.

Thank you for choosing Scenic Hotel. We are excited to have you as our guest and hope to make your stay truly exceptional.

Warm regards,

Aryan Singh

CHAPTER 9

SCOPE OF THE PROJECT

The scope of this hotel management project includes the development and implementation of a system to streamline hotel operations and enhance guest experiences. The key areas covered are:

1. Room Booking and Reservation.
2. Customer Management.
3. Guest registration and profile management.
4. Handling special requests and preferences.
5. Room Management.
6. Room allocation.
7. Maintenance tasks.

This project aims to provide a robust and scalable solution for managing hotel operations, enhancing efficiency, improving guest satisfaction, and supporting data-driven decision-making.

.

CHAPTER 10

BIBLIOGRAPHY

Books:

PHP the complete reference by Steven Holzner

The Joy of PHP: A Beginner's Guide to Programming Interactive Web Applications with PHP and MySQL by Alan Forbes

Websites:

www.w3schools.com

www.google.com

www.tutorialspoint.com

www.geeksforgeeks.org

www.javatpoint.com