HOTEL AND TOUR RESERVATION SYSTEM

By

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THE REPORT

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Of

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-Approved-

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ABSTRACT

Most of the existing system maintains only hotel management activities. They have the record of hotel inner process only. It is highly complicated as the booking system is regulated manually by administrator. Customers can't check the availability of room and prices and features of hotels. It takes lot of time for booking and there is no strong database of everyone

The proposed system is for Roo Hotels & Tours. This system helps us to manage the all function of their company reservation activities. The project contains the admin side and the user side. Sri Lanka is one of the most beautiful country in the South Asia. It has so many attractive tourist places. This includes information about all holiday places rent and the facilities they have.

There will be many users visiting the portal and hence we require a strong and reliable frontend which can withhold the users on our site. The proposed Hotel and Tourism Reservation System provide facility for customer to visit online and check room availability, check price, features of the hotel. They can easily visit the place using the location. Rooms can be easily reserved according to their wish and the reservation is accepted quickly. Also, they can visit out tour packages and reserve. Users can view the details of the upcoming events too. It saves time of the staff as well as customers. After reserving the rooms, they must do the payment to confirm the reservation. A confirmation mail is sent to the customer after booking. It is easy to store and retrieve information. This system is very secure, user-friendly, and reliable. Administrator module, User module, login module, hotel module, tour module, reservation module, payment module are the main modules in the system.

ACKNOWLEDGEMENT

I would like to take this opportunity to thank all those who contributed towards the success of this project and it gives me a great pleasure to convey my sincere gratitude to all.

I am really fortunate that, I had the kind association and supervision of Ms. Chamila Jayasooriya who guided me all the way throughout the project. This project could have been completed as successful in due time because within her willing disposition, spirit of accommodation, frankness, timely clarification and above all faith.

It is my pleasure and bond to be thanking to our Director madam Mrs. N.N.P. Dais for providing me this noble and tremendous opportunity. Also, I would like thank our Head of Department Ms. Nadheeshika Meddage for the guidance and instructions given throughout the project.

I gratefully acknowledge for the assistance, cooperation, guidance and clarifications provided by all the other lecturers in the Information Technology Department, during the development of this Hotel and Tour Reservation System - project.

I also want to express my deepest thanks to academic and non-academic staff members for help me to success this project.

It is my duty and responsibility to deliver my heartiest thanks to my dear parents for their faith and hope towards me right along and for standing beside me.
And also, I'm pleased to express my warmest thank to all my colleagues and friends who helped me to complete this project successfully.

Lastly, I offer my regards to all of those who supported me in any respect during the completion of the project.

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LIST OF ABBREVIATIONS

PHP	:	Hypertext Preprocessor
HTML	:	Hyper Text Markup Language
CSS	:	Cascading Style Sheet
XAMPP	:	X-OS, Apache, MySQL, PHP and Perl
SDLC	:	Software Development Lifecycle
ERD	:	Entity Relationship Diagram
DFD	:	Data Flow Diagram
OOD	:	Object Oriented Development
UML	:	Unified Modelling Language

CHAPTER SUMMARIES

CHAPTER 01

I hope this chapter has given an overview to the entire project. This chapter will explain about project background, the existing system, proposed system, aims and objectives of the system and the scope of the system. The objective of this chapter is to cite the system planning and initialization procedures and notes with substantial explanation.

CHAPTER 02

This chapter contains requirement specification of the system. It contains user requirements, functional requirements, non-functional requirements and technical requirements. And also, this chapter contains feasibility study for the proposed system where it describes Technical Feasibility, Operation Feasibility, Economical Feasibility and Legal feasibility. This chapter will describe how the web application analyze the system by using SDLC.

CHAPTER 03

This chapter describes the Unified Modelling Language of the web application using UML diagrams. This chapter describe about the concept Object Oriented Development. UML diagrams contain use case diagram, class diagram and activity diagram.

CHAPTER 04

This chapter describes the system design of the web application using logical designs and the Interface design. Logical design contains ER Diagram and Data Flow Diagram where it describes the data flow, input and output of the system. This chapter contains some interfaces of the project.

CHAPTER 05

This chapter describes the system implementation and system maintenance of the project. It discusses about the hardware and software requirements of the environment. It contains types of implementation. It also describes about the technical overview which contains front end and back end tools.

CHAPTER 06

This chapter summarized and concludes the entire Project. It discusses the Hotel and Tour Reservation System features and archived results; In addition, it suggests some potential areas for future improvement and Future Avenue of the system.

Chapter 01

Introduction

1.1. Introduction

Information Technology is widely used for faster and easier way of transaction and communications. It is also used in managing the operation undertaken by the business. Hotel and Tourism Reservation System is a web application implemented in PHP to reserve hotel rooms and tours.

Most of the Hotel and Tourism System has file system. In this method owner encountered many problems. Using traditional method sometimes there will be a data loss in manual method and making changes in the information or details are very difficult. If they want to search for details in current method, it's time consuming and difficult to find and manage correct information. But our system reduces paper works and transfers the all details as computerized.

Hotel Online Reservation System is a system that helps us to manage the all function of their company reservation activities. The project contains the admin side and the user side. Sri Lanka is one of the most beautiful country in the South Asia. It has so many attractive tourist places. This includes information about all holiday places rent and the facilities they have. Also, they can visit out tour packages and reserve. Users can view the details of the upcoming events too. Administrator module, User module, login module, Room module, tour module, reservation module, are the main modules in the system.

People they don't have sufficient time for update their day-to-day records in database, so they can use this kind of reservation system. The user can book rooms and reserve tours plan of their choice, while the admins can view all users' bookings and manage the rooms and touring plans. The design of this project is pretty simple so that the user won't find any difficulties while working on it.

1.2. Existing system

Here existing system maintains only hotel management activities. They have the record of hotel inner process only. They have to manage the details of reservation, hotel, tour package, events customers manually which is not a success process. It is highly complicated as the booking system is regulated manually by administrator.

1.2.1. Problems of the existing system

- Customers can’t book a room through online
- Customers can’t check the availability of room and prices and features of hotels
- Customers can’t reserve tour packages
- Takes lot of time for booking
- There is no strong database of everyone

1.3. Proposed system

There will be many users visiting the portal and hence we require a strong and reliable frontend which can withhold the users on our site. The proposed Hotel and Tourism Reservation System provide facility for customer to visit online and check room availability, check price, features of the hotel. Rooms can be easily reserved according to their wish and the reservation is accepted quickly.

Payment must be done to confirm the booking. They can book tours and check for upcoming events in our system. It saves time of the staff as well as customers. It is easy to store and retrieve information. This system is very secure, user-friendly, and reliable.

1.4. Aims

Our main aim of building this project is to give facilities for the people who wishes to reserve places online and spend their time with their family with full secure. We have a security system to protect customer's information.

To maintain Reservation Activities without any errors. Also develop the better relation between the customer and our system. The propose system can overcome the all the limitation of the existing system. The system provides proper security and reduces the manual work.

1.5. Objectives

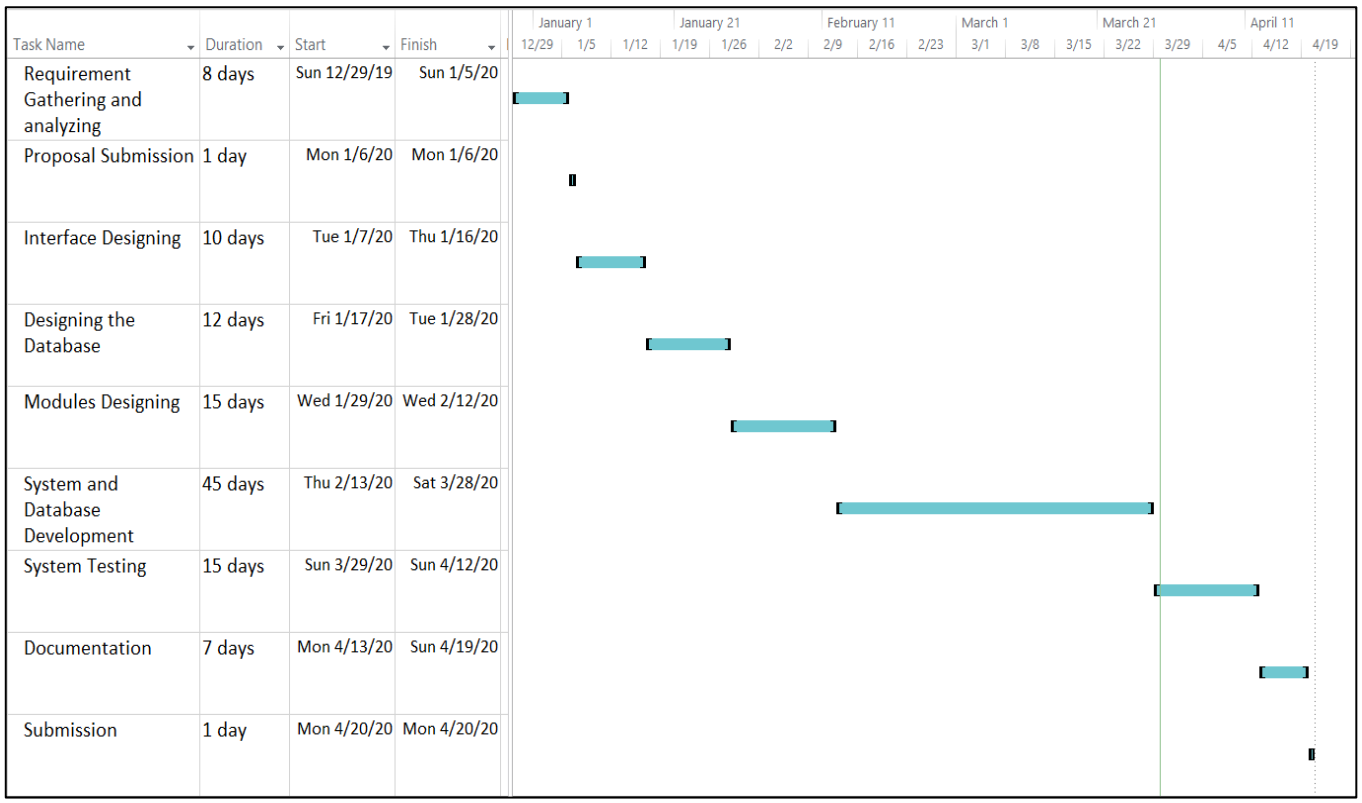
The main objective of this project is to develop a system that automates the process and activities of the hotels and tour reservation which provide a good service and allow customers to book places online by simply sitting in home. This helps customer in choosing the good places based on price and facilities. It reduces the number of human resource in an organization but makes the work faster and more efficient.

1.6. Scope of the system

The system enables system administrator to maintain anything at one platform. It is easy for them to update their day to day changes using this system.

- Searching availability
- Pre reservation of rooms online
- Customer can view the details of the system
- Maintain and control the database of information easily.
- The admin can view and manage the reservations, add/modify/delete the room details, tours and events
- Payment via online

1.7. Gantt Chart/Time Frame



Task Name	Duration	Start	Finish
Requirement Gathering and analyzing	8 days	Sun 12/29/19	Sun 1/5/20
Proposal Submission	1 day	Mon 1/6/20	Mon 1/6/20
Interface Designing	10 days	Tue 1/7/20	Thu 1/16/20
Designing the Database	12 days	Fri 1/17/20	Tue 1/28/20
Modules Designing	15 days	Wed 1/29/20	Wed 2/12/20
System and Database Development	45 days	Thu 2/13/20	Sat 3/28/20
System Testing	15 days	Sun 3/29/20	Sun 4/12/20
Documentation	7 days	Mon 4/13/20	Sun 4/19/20
Submission	1 day	Mon 4/20/20	Mon 4/20/20

Figure 1.1 Gantt Chart/Time Frame

Chapter 02
System Analysis

2.1. Requirement Analysis

The Hotel and Tour Reservation System is a web-based application. The main purpose of this system is to provide a convenient and easy way for a customer to book hotels and get tour packages. A software requirements specification is a complete description of the behavior of the system to be developed. This includes a set of use cases that describe all of the interactions that the users will have with the software. Under this Requirement analysis there are four types of requirement those are user requirement, functional requirement, non-functional requirement, technical requirement.

2.1.1. User Requirements

The user requirement specifies the requirements the user expects from software to be constructed in a software project. An important and difficult step designing a software product is determining what the customer actually wants it to do. This is because often the customer is not able to communicate the entire needs and the information, they provide may also be incomplete, inaccurate and self-conflicting. The responsibility of completely understanding what the customer wants then falls on the providers of the product. User requirements of Hotel and Tour Reservation System are given below.

- **Verifiable Requirements-:** is stated in such a way that it can be tested by inspection, analysis of demonstration.
- **Clear and Concise Requirements-:** must be easily read and understand by non-technical people.
- **Complete Requirements-:** contains all the information that is needed to define the system function.

2.1.2. Functional Requirements

The purpose of this diagram is to demonstrate how objects will interact with the system and map out the basic functionality of the system. Here we identify the functional requirements of our online book purchasing website.

- **Sign in-:** Hotel and Tour Reservation System provides specific interface for the customer and admin to sign in.

- **Manage users-:** Administrator can manage all user of this system and can find their activities perform by system. He can find login information of all users.
- **Manage Customer's Details-:** Managers can manage customers' details.
- **View / Edit and Update the room and tour details: -** Manager is able to view edit and update the room details and details of tour packages.
- **Reservation-:** Users can reserve rooms and tour packages.

2.1.3. Non-Functional Requirements

There are requirements that are not functional in nature. Specifically, these are the constraints the system must work within. These are so many non-functional requirements, to understand this system it is mostly important one.

- Security
- Availability
- Data integrity
- User utility
- Maintainability

2.1.4. Technical requirement

2.1.4.1. Hardware requirements

Processor – intel CORE i3 or above
Processor speed – 2.0GHZ or above
RAM – at least 2 GB
Hard Disk – 500 GB

2.1.4.2. Software requirements

Operating system – windows XP or any compatible OS
Browser – internet explorer (HTML5 support)
Front end – PHP, HTML, CSS, JavaScript, Bootstrap, jQuery
Database – MySQL
Editor tools – notepad ++, visual studio code

2.2. Feasibility Study

A feasibility study is carried out to select the best system that meets performance requirements. The main aim of this feasibility study activity is to determine whether it would be financially, technically, economically and legally feasible to develop the Hotel and Tour Reservation System. Feasibility studies are almost always conducted where large sums are at stake.

2.2.1. Technical Feasibility

The technical feasibility basically centers on alternatives for Hardware, Software and design approach to determine the functional aspects of system. Under the technical feasibility we identified that following requirements are need to develop this system.

- Visual Studio Code as the IDE
- XAMPP Server
- Microsoft Word (to prepare report)
- Microsoft Office Project 2007

2.2.2. Operational Feasibility

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization's operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation. Some of the important issues raised are to test the operational feasibility of a project includes the following:

- Is there sufficient support for the management from the users?
- Will the system be used and work properly if it is being developed and implemented?
- Will there be any resistance from the user that will undermine the possible application benefits?

2.2.3. Economic feasibility

A system can be developed technically and that will be used if installed must still be a good investment for the organization. In the economic feasibility, the development cost in creating the system is evaluated against the ultimate benefit derived from the new systems. Financial benefits must equal or exceed the costs.

2.2.4. Legal feasibility

People are inherently resistant to change, and computers have been known to facilitate change. An estimate should be made of whether the proposed system conflicts with legal requirements and how strong a reaction the user is likely to have toward the development of a computerized system. It is common knowledge that computer installations have something to do with turnover, transfers, retraining, and changes in information and to ensure those are being enforced by a law and as long as it exists all abide by the rules imposed.

The proposed system was found to be technically, operationally, economically, and legally feasible. The system was developed user friendly, needless training and improves the working environment. Justification for any capital outlay is that it will increase profit, reduce expenditure or improve the quality of service or goods, which in turn may be expected to provide increased profits. Disregarding the initial expenses, the proposed system was assessed to be feasible in all ways.

2.3. SOFTWARE DEVELOPMENT LIFECYCLE (SDLC)

Software Development Lifecycle (SDLC) is a systematic process for building software that ensures the quality and correctness of the software built. SDLC process aims to produce high-quality software that meets customer expectations. The system development should be complete in the pre-defined time frame and cost.

SDLC consists of a detailed plan which explains how to plan, build, and maintain specific software. Every phase of the SDLC life cycle has its own process and deliverables that feed into the next phase. SDLC stands for Software Development

2.3.1. SDLC Phases

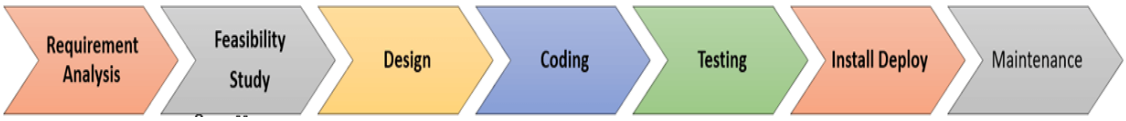


Figure 2.1 SDLC Phases

- **Requirement collection and analysis:**
  The requirement is the first stage in the SDLC process. Planning for the quality assurance requirements and recognition of the risks involved is also done at this stage.

- **Feasibility study:**
  Once the requirement analysis phase is completed the next step is to define and document software needs.

- **Design:**
  In this third phase, the system and software design documents are prepared as per the requirement specification document. This helps define overall system architecture.

- **Coding:**
  Once the system design phase is over, the next phase is coding. In this phase, developers start build the entire system by writing code using the chosen programming language. In the coding phase, tasks are divided into units or modules and assigned to the various developers.

- **Testing:**
  Once the software is complete, and it is deployed in the testing environment. The testing team starts testing the functionality of the entire system. This is done to verify that the entire application works according to the customer requirement.

- **Installation/Deployment:**
  Once the software testing phase is over and no bugs or errors left in the system then the final deployment process starts. Based on the feedback given by the project manager, the final software is released and checked for deployment issues if any.

- **Maintenance:**
  Keeping the system up to date with the changes in the organization and ensuring it meets the goals of the organization.

2.3.2. SDLC Models

There are various software development life cycle models defined and designed which are followed during the software development process. Each process model follows a Series of steps unique to its type to ensure success in the process of software development.

Following are the most important and popular SDLC models,

- Waterfall Model
- Iterative Model
- Spiral Model
- V-Model
- Big Bang Model

2.3.2.1. Waterfall model

Waterfall approach was first SDLC Model to be used widely in Software Engineering to ensure success of the project. In "The Waterfall" approach, the whole process of software development is divided into separate phases. In this Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially.

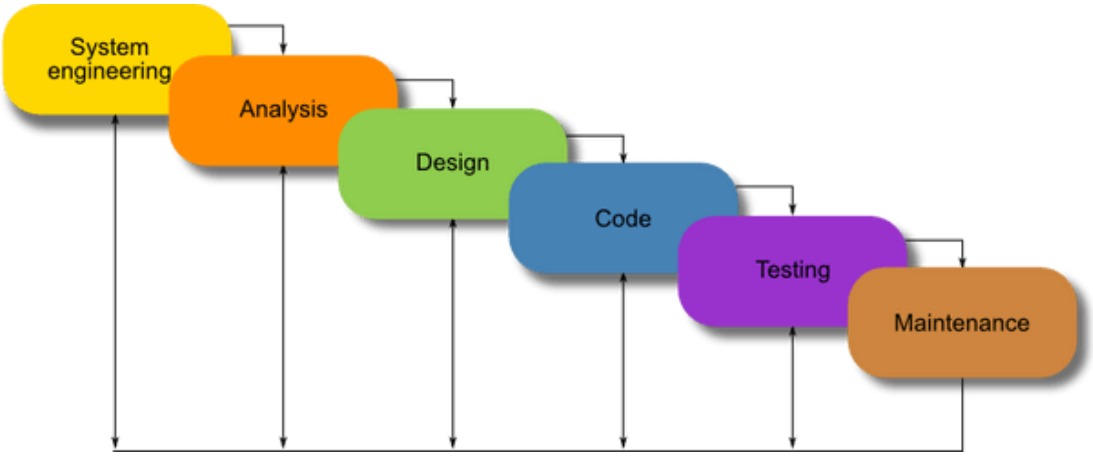


Figure 2.2 Waterfall Model

Chapter 03
Unified Modelling Language

3.1. Object Oriented Development

Object-oriented development is a group of methodologies that sees real world entities as objects and classes. This method is fundamentally different from traditional functional approaches to design and serves to help manage the complexity of massive software-intensive systems. The main aim of OOD is to improve the quality and productivity of system analysis and design by making it more suitable.

Benefits of OOD

- Faster Development
- Increased Quality
- Modular Architecture
- Promotes the reuse of components
- Client/Server Applications

3.2. Methodology

There are several methodologies to develop systems. Among them we used agile model to develop this system. Agile model is an incremental model. System is developed in incremental rapid cycles. Each release is thoroughly tested to ensure the quality of the system. Agile model was selected due to following reasons.

- High user involvement
- Customer satisfaction by rapid, continuous delivery of useful system.
- Working system is delivered frequently
- Face to face conversation is the best form of communication
- Regular adaptation to changing circumstances

3.3. UML Diagrams

UML (Unified Modelling Language) is a visual language that lets you to model processes, software and systems to express the design of system architecture. It is a standard language for designing and documenting a system in an object-oriented manner that allow technical architects to communicate with developer. It includes many diagrams types.

3.3.1. Use case diagram

The use case diagram is usually referred to as behavior diagrams use to describe a set of actions (use cases) that some system or systems (subject) should or can perform in collaboration with one or more external uses of the system (actors). Following use case diagram show how each members of the system is interacting with this system.

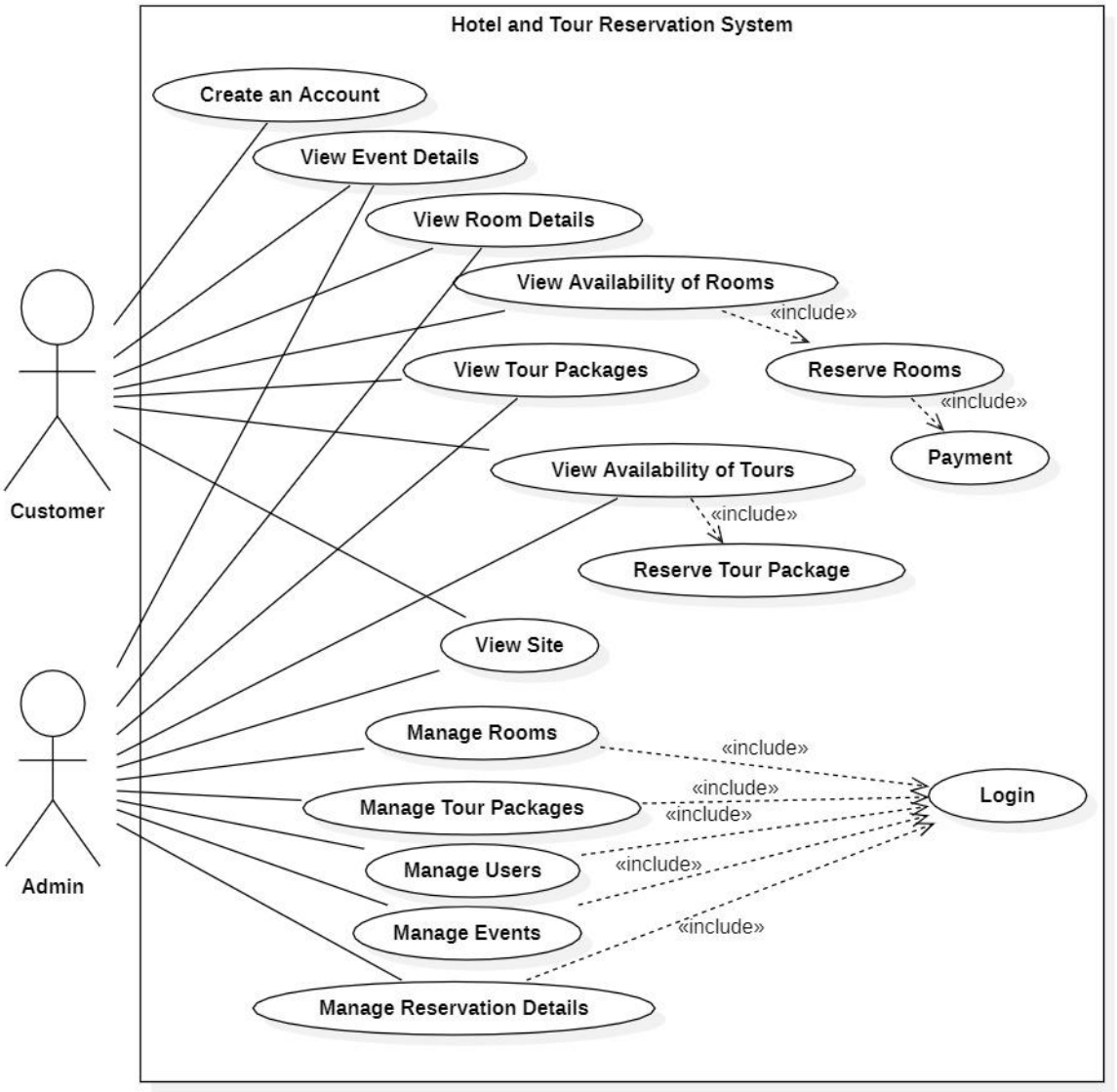


Figure 3.1 Use Case Diagram

3.3.2. Class Diagram

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of object-oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages.

Class diagram shows a collection of classes, interfaces, associations, collaborations, and constraints. It is also known as a structural diagram.

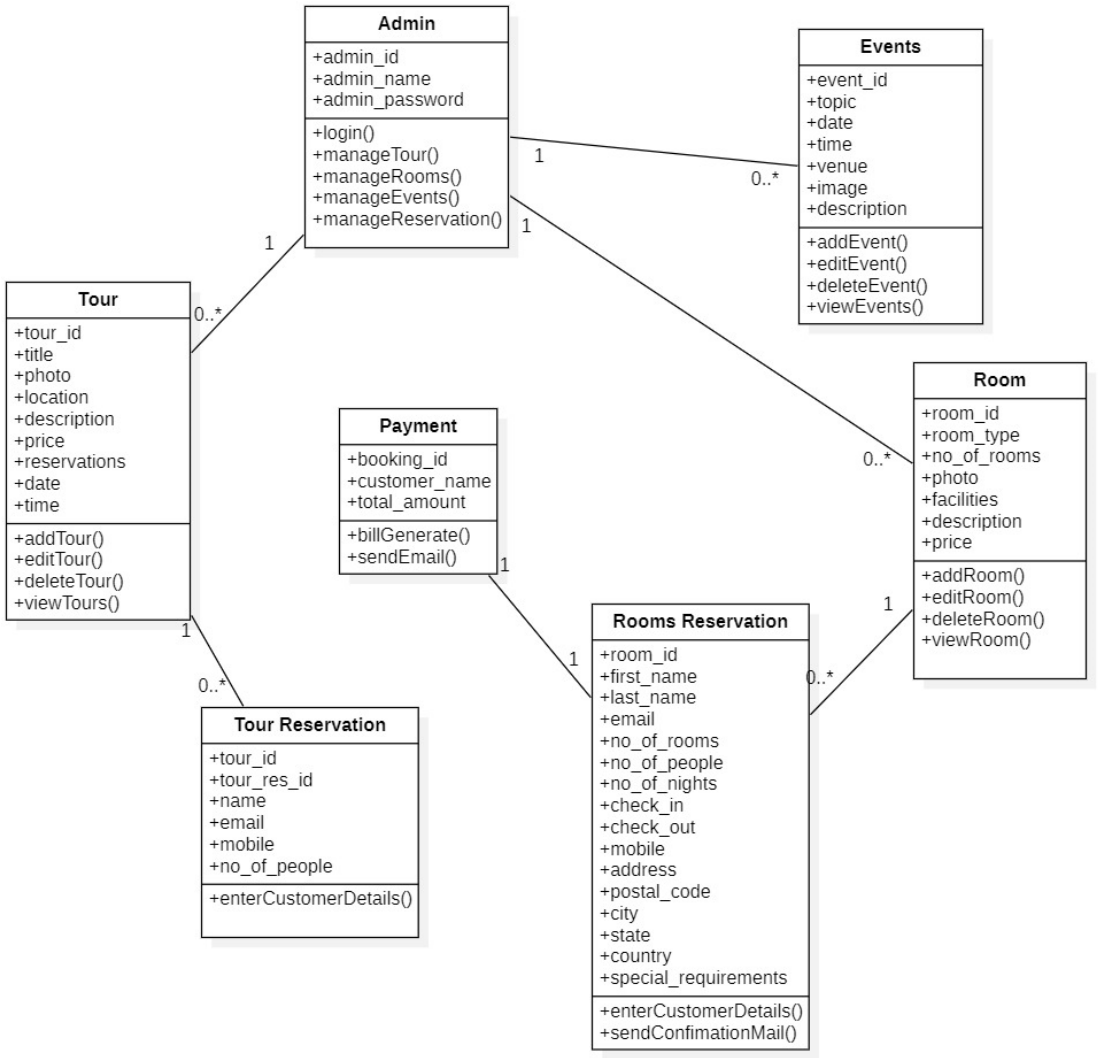


Figure 3.2 Class Diagram

3.3.3. Activity Diagram

Activity diagram is another important diagram in UML to describe the dynamic aspects of the system. Activity diagram is basically a flowchart to represent the flow from one activity to another activity. The activity can be described as an operation of the system.

The control flow is drawn from one operation to another. This flow can be sequential, branched, or concurrent. Activity diagrams deal with all type of flow control by using different elements such as fork, join, etc.

3.3.3.1. Activity diagram for Event module

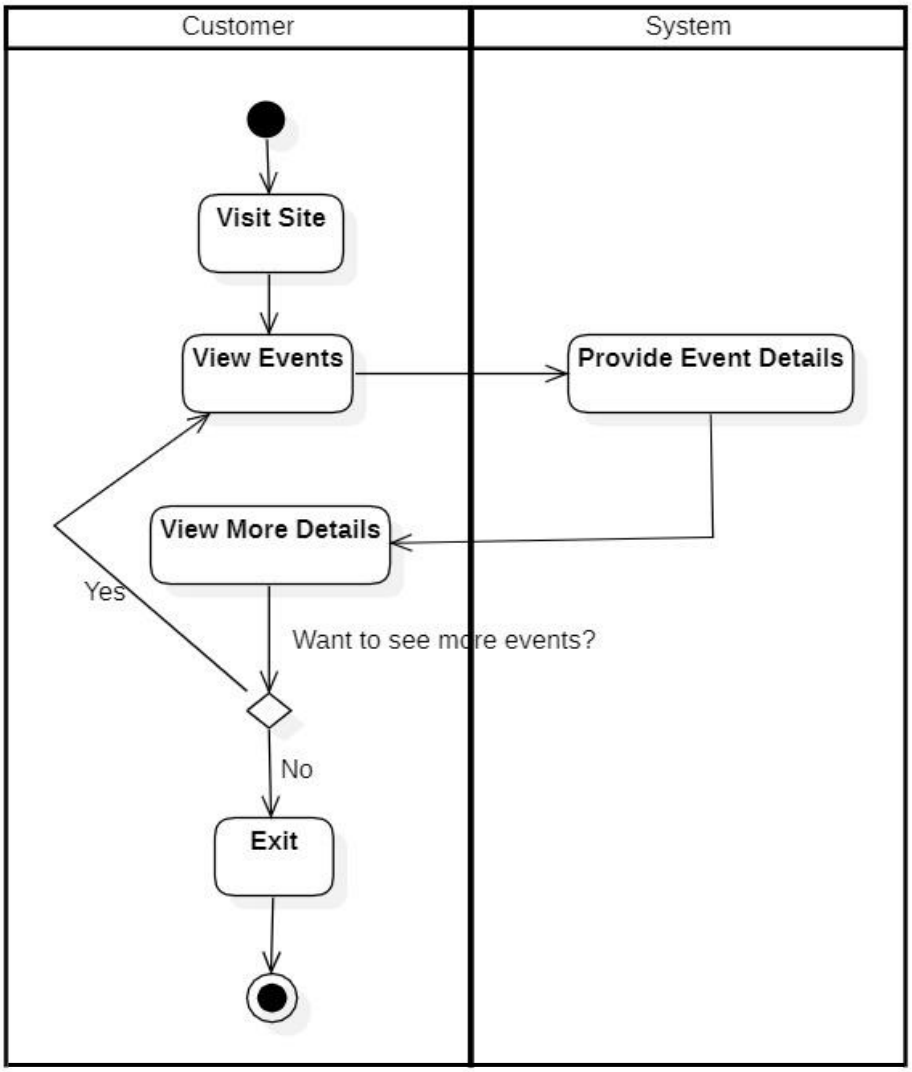


Figure 3.3 Activity Diagram for Event Module

3.3.3.2. Activity diagram for Hotel module

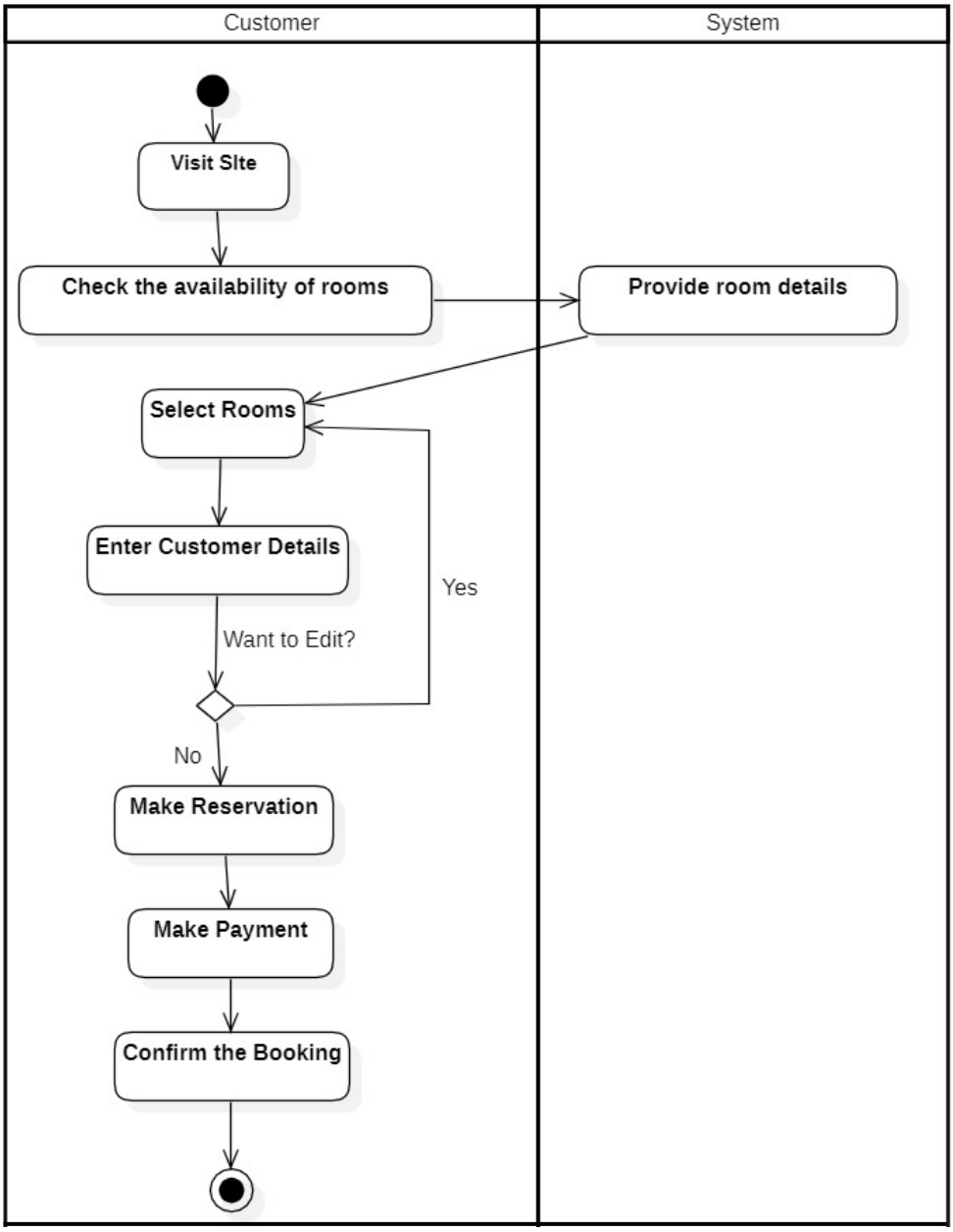


Figure 3.4 Activity Diagram for Hotel Module

3.3.3.3. Activity diagram for Tour module

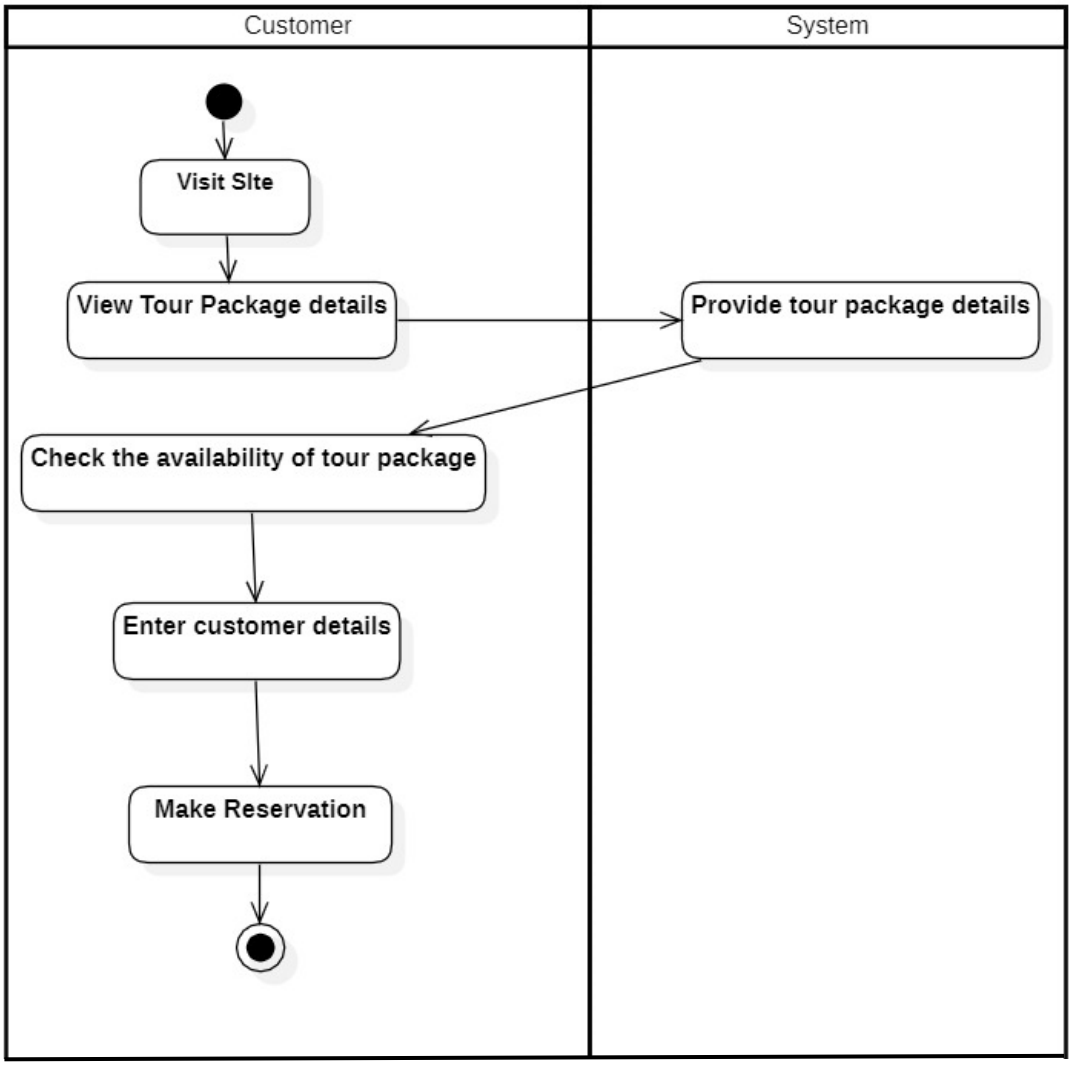


Figure 3.5 Activity Diagram for Tour Module

Chapter 04

System Design

4.1. Logical Design

Logical design pertains to an abstract representation of the data flow, inputs, and outputs of the system. It describes the inputs (sources), outputs (destinations), databases (data stores), procedures (data flows) all in a format that meets the user requirements.

While preparing the logical design of a system, the system analyst specifies the user needs at level of detail that virtually determines the information flow into and out of the system and the required data sources. Data flow diagram, E-R diagram modeling are used.

4.1.1. Data Flow Diagram (DFD)

Data flow diagrams are used to graphically representing the functions, or processes, which capture, manipulate, store, and distribute data between a system and its environment and between components of a system.

Data flow diagrams can be divided into logical and physical. The logical data flow diagram describes flow of data through a system to perform certain functionality of a business.

4.1.2. ER Diagram (ERD)

An entity-relationship diagram is a data modeling technique that creates a graphical representation of the entities, and the relationships between entities, within an information system. The three main components of an ERD are:

- The entity is a person, object, place or event for which data is collected. The entity is represented by a rectangle and labeled with a singular noun.
- The relationship is the interaction between the entities. A relationship may be represented by a diamond shape, or more simply, by the line connecting the entities.
- The cardinality defines the relationship between the entities in terms of numbers. An entity may be optional. There are several different types of cardinality notation; the three main cardinal relationships are: one-to-one, expressed as 1:1; one-to-many, expressed as 1: M; and many-to-many, expressed as M: N.

The following diagram shows the Entity Relationship Diagram of Hotel and Tour Reservation System.

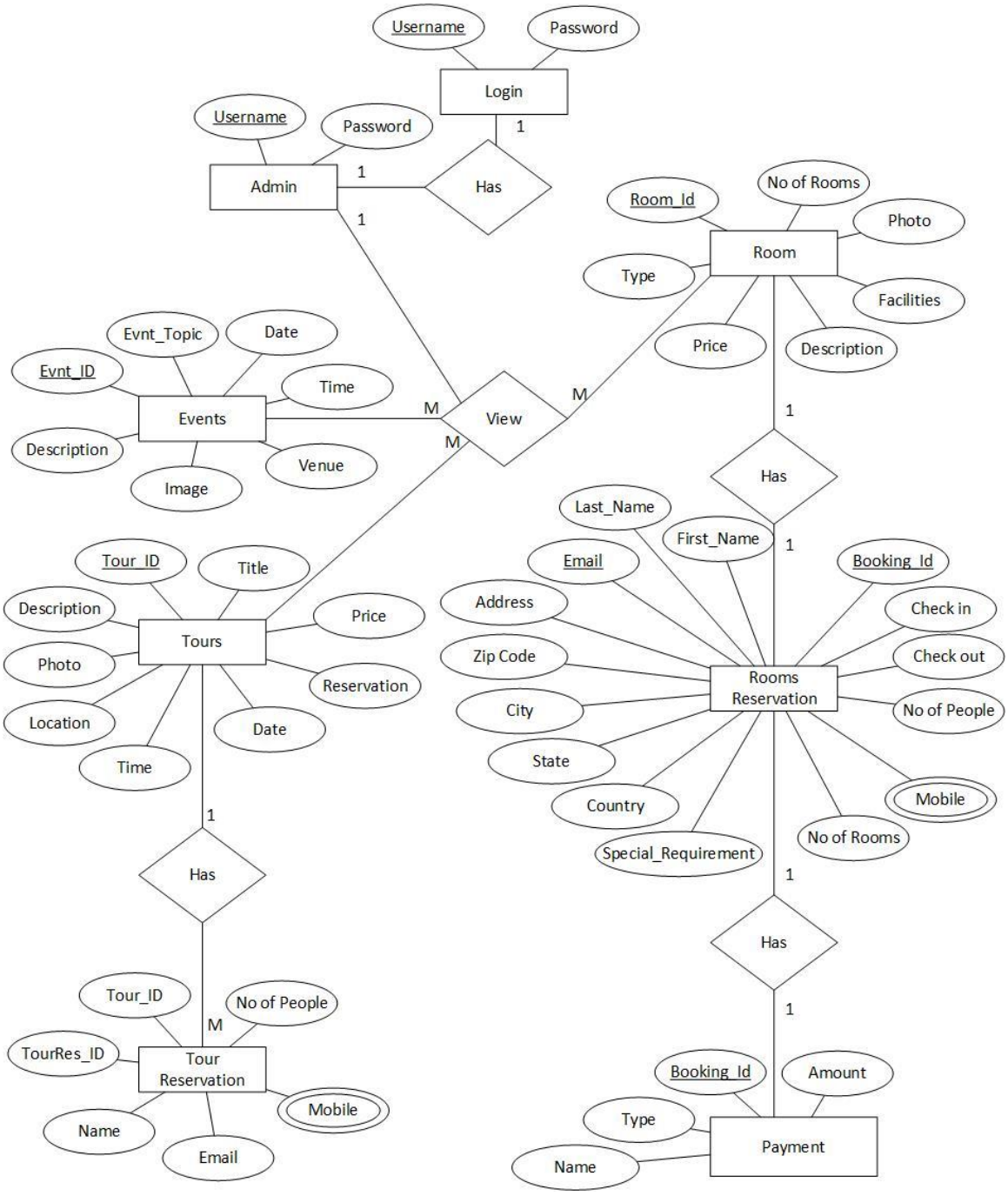


Figure 4.1 ER Diagram

4.2. Interface Design

The system design phase produces a design specification for the new system. After analyzing requirements, it is need to be design database and there after design the interface. Then it makes much easier to implement the system. When designing interfaces, it is necessary to design user friendly interfaces. Otherwise it may get many difficult for a user to work with the system. When designing the interfaces of this system we mainly focused towards the colors.

We used a single theme for the whole system and applied colors that matching for the system**.** The interfaces are not too decorated and applied simple styles. We use Html elements for design the interface and CSS to style those elements. With our user-friendly web pages customer can satisfied they have visited to correct site for booking. We link java script files to attract more users to our website.

Using navigates forms and flash animation slide screen user gets free to interact with our system. User can check room availability according to their wish. Here below you can see some interfaces of our system.

The figure below shows the index page of the system. Here the customer can check the availability of the rooms as well as can check the room details.

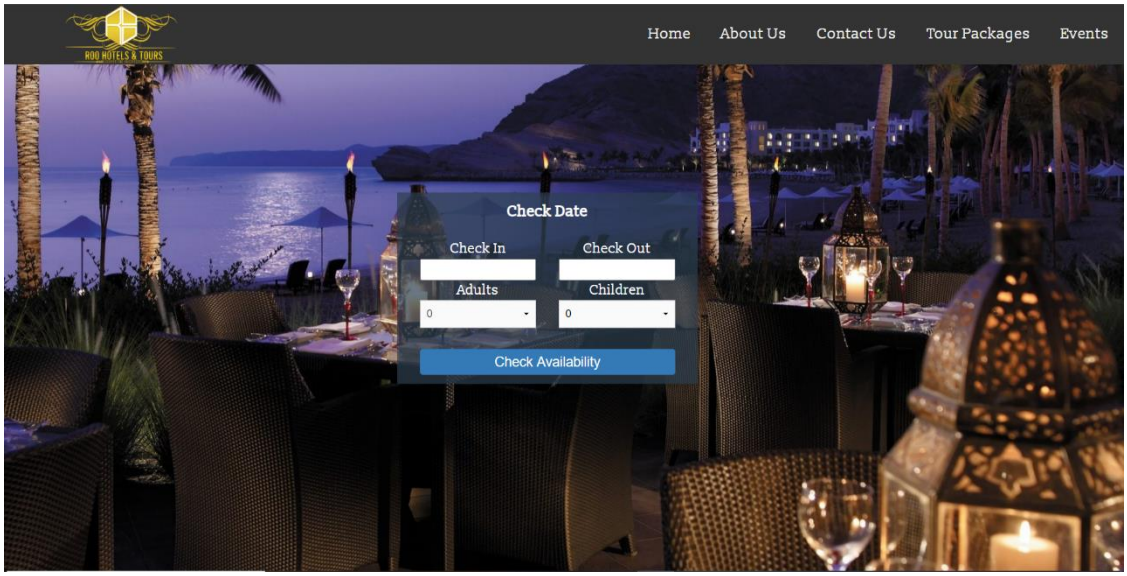


Figure 4.2 Home Page

Here the customer can select the rooms or can edit the check availability date.

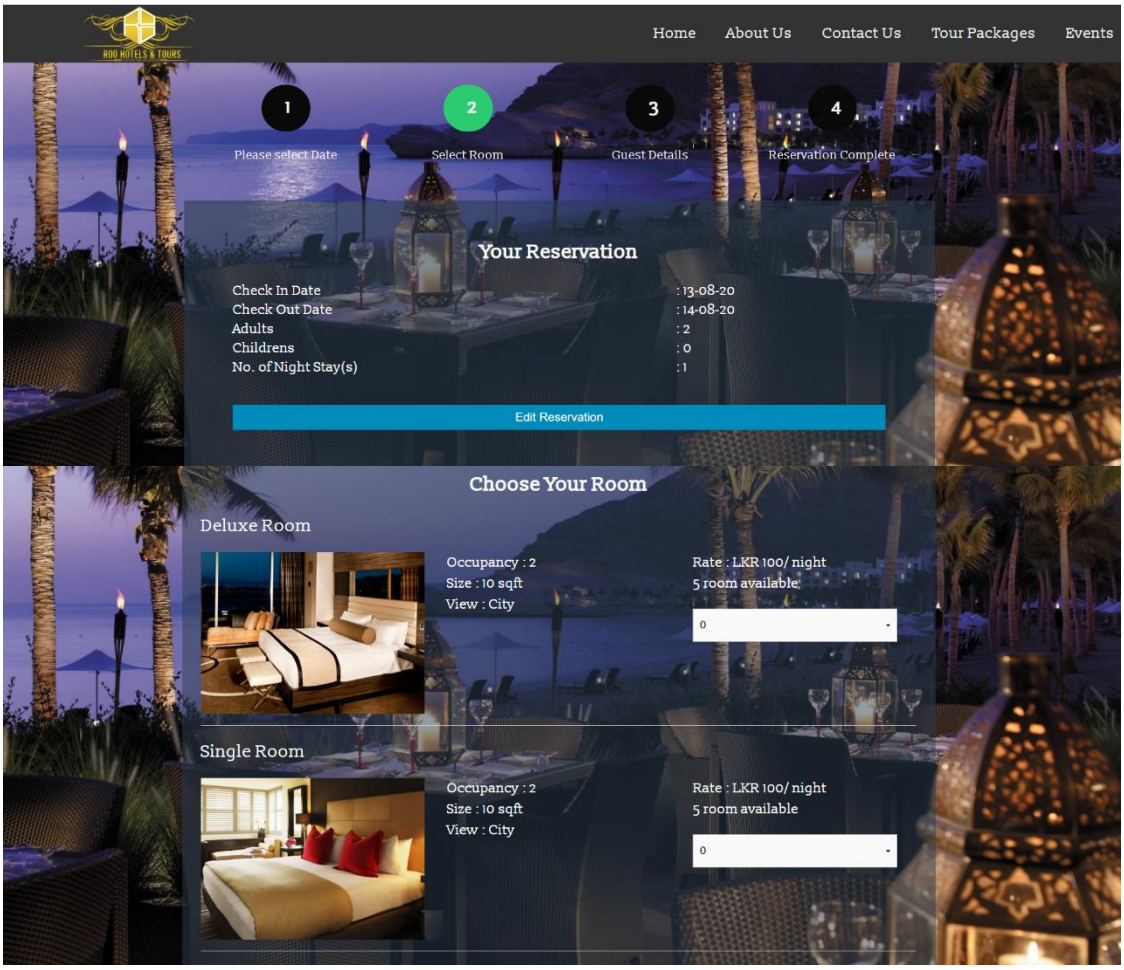


Figure 4.3 Room Selection Page

The figure below shows the room reservation form of the system.

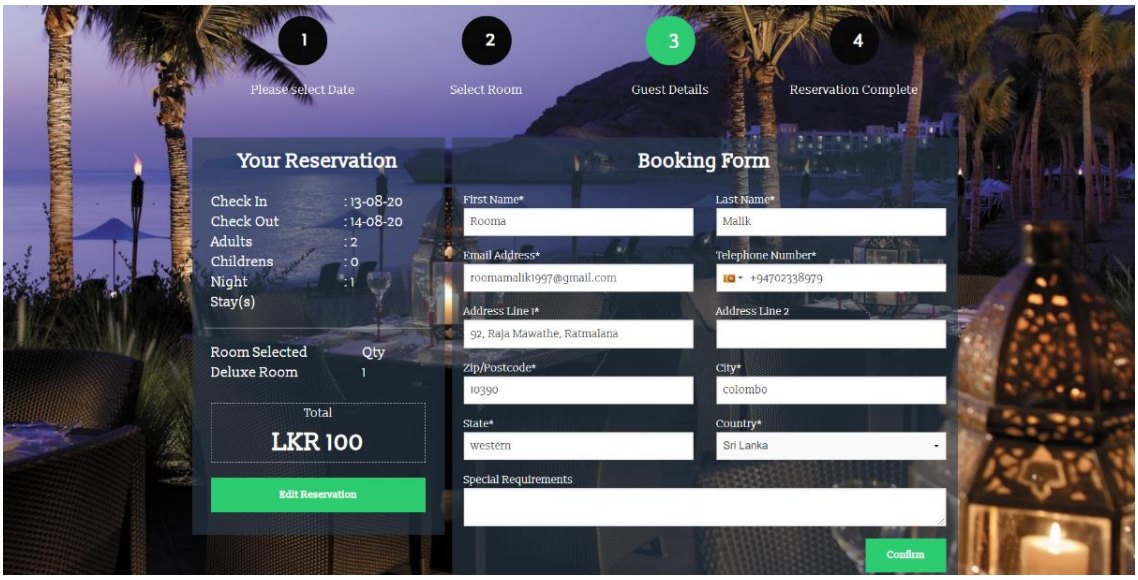


Figure 4.4 Room Reservation Page

Here the customer will get a confirmation mail and has to confirm their reservation by doing the payment.

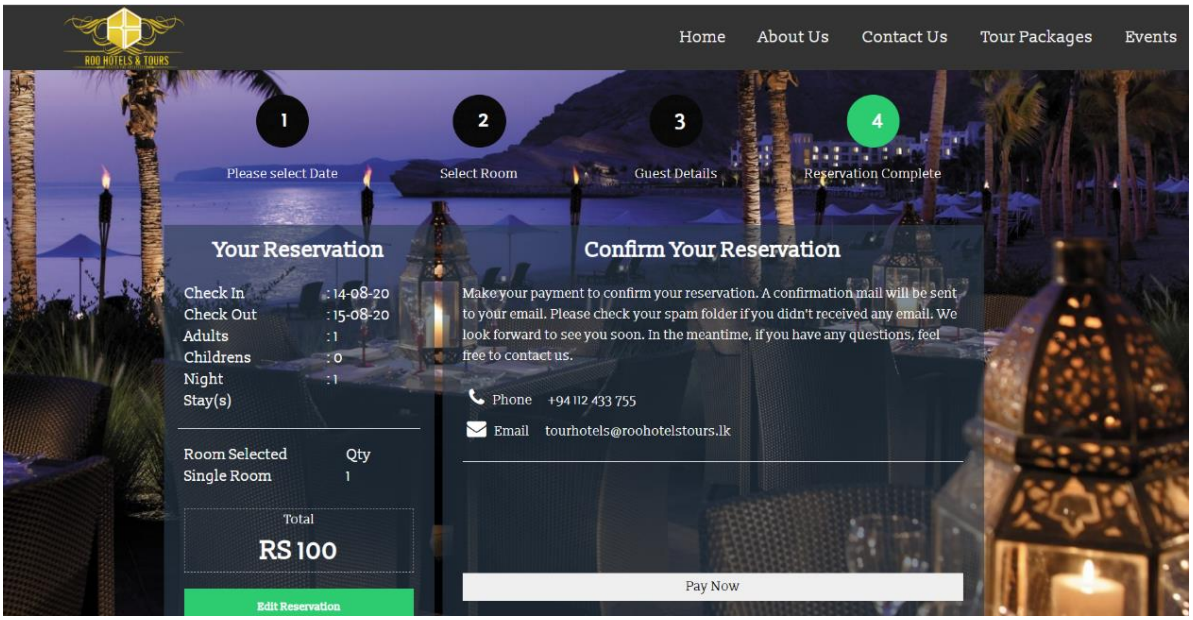


Figure 4.5 Reservation Completion Page

Customers must do the payment using credit card in order to confirm the reservation.

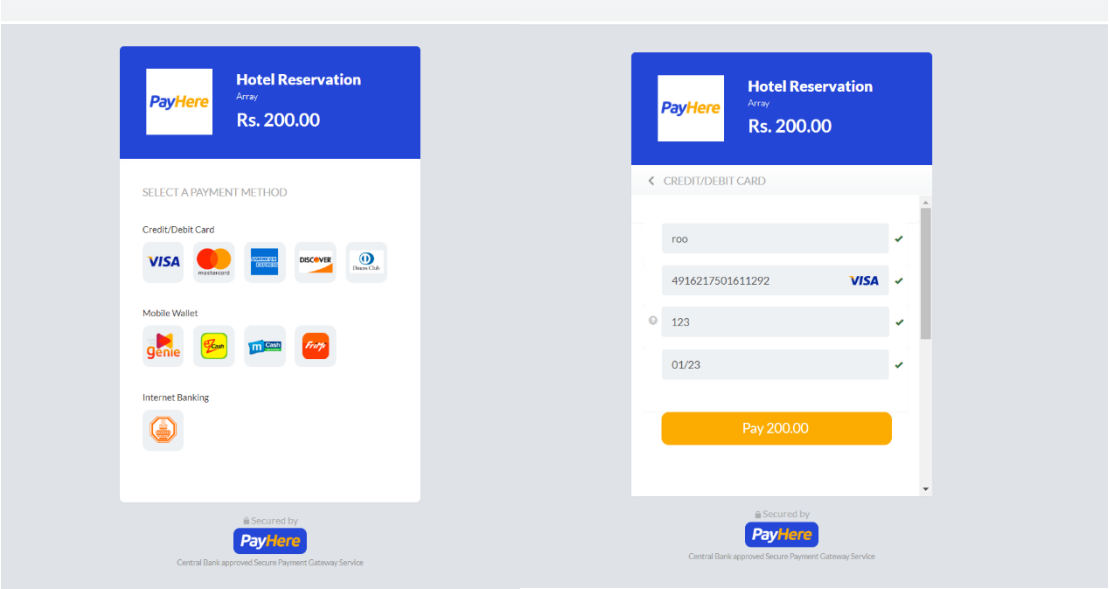


Figure 4.6 Payment Page

The figure below shows the success page after completing the payment for room booking.

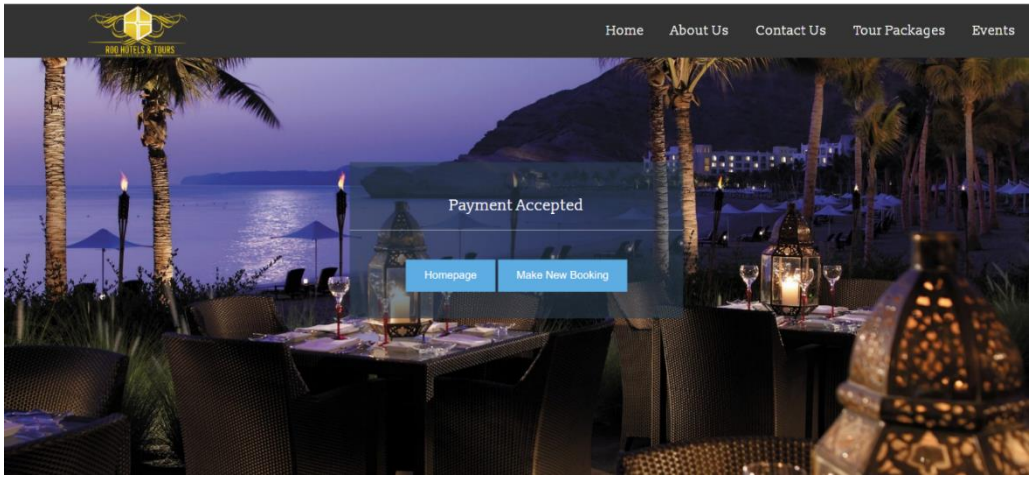


Figure 4.7 Payment Success Page

The figure below shows the contact page of the system. The customer can send message to admin through this.

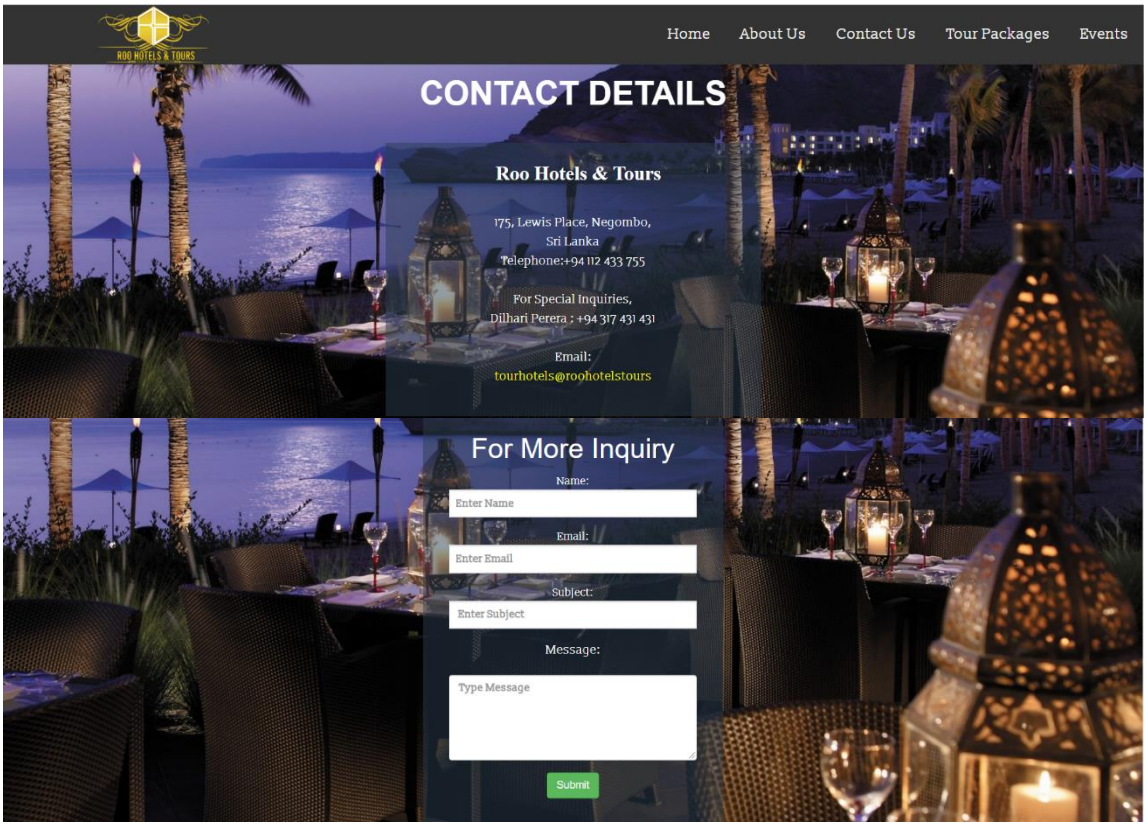


Figure 4.8 Contact Us Page

Customer can view the tour packages in the figure given below.

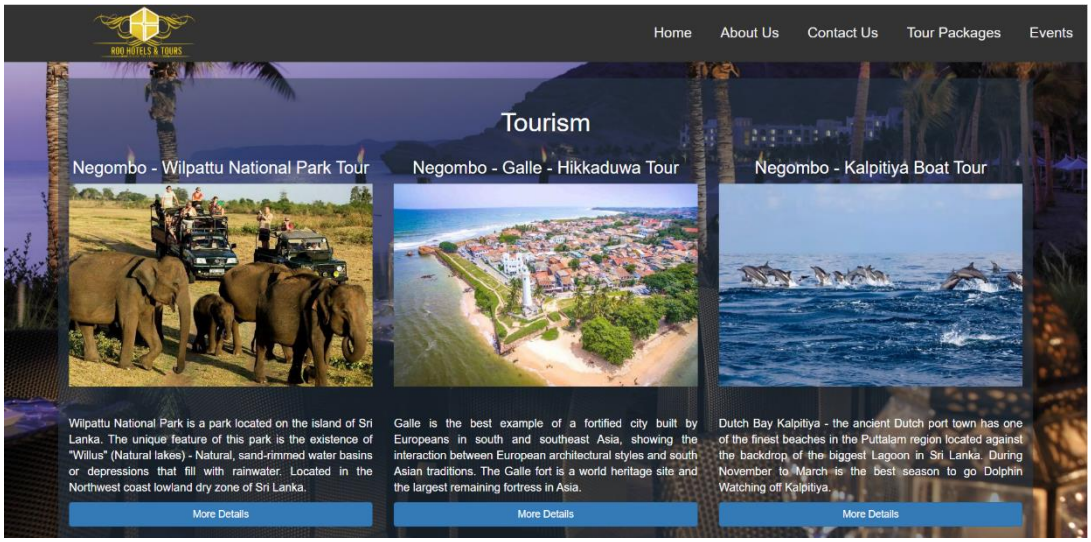


Figure 4.9 Tour Packages Page

The figure below shows the tour reservation page of the system

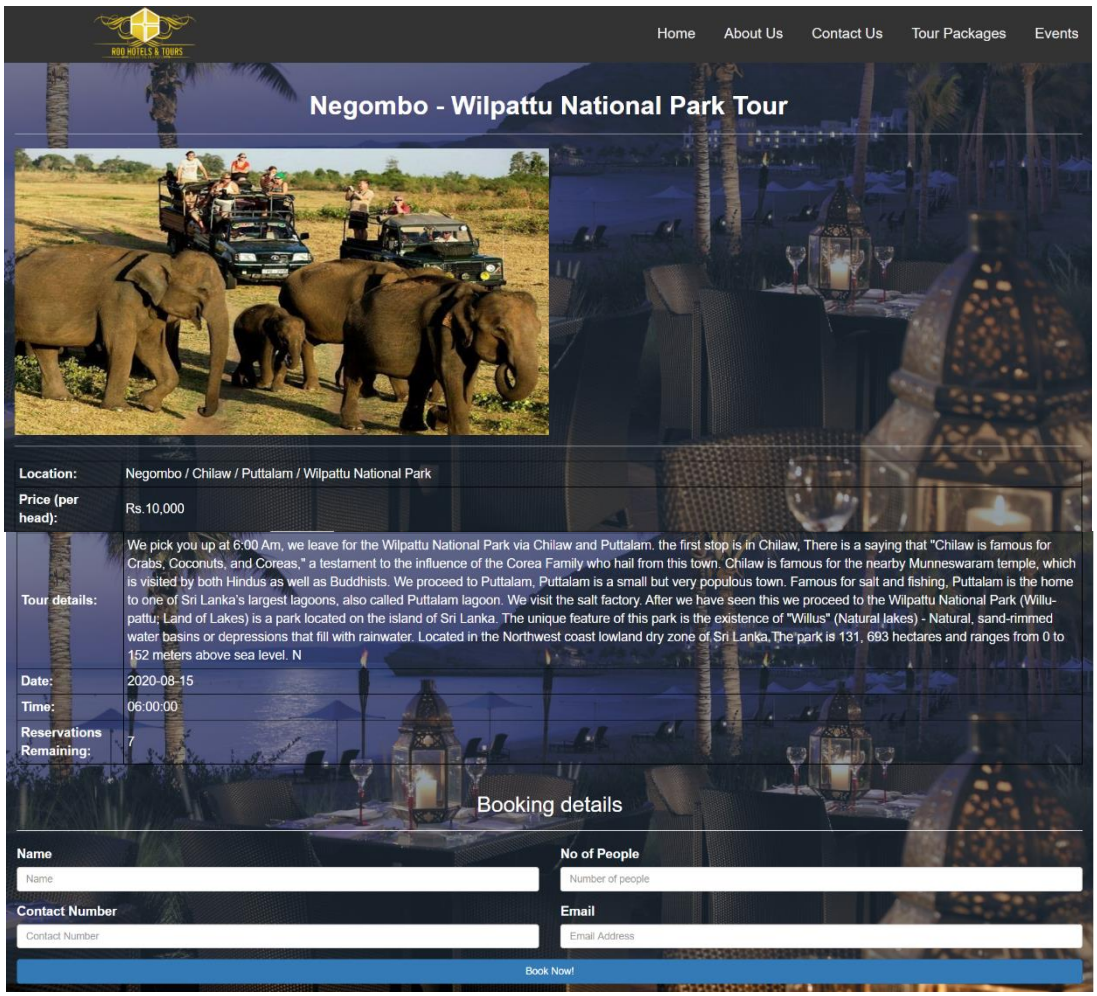


Figure 4.10 Tour Reservation Page

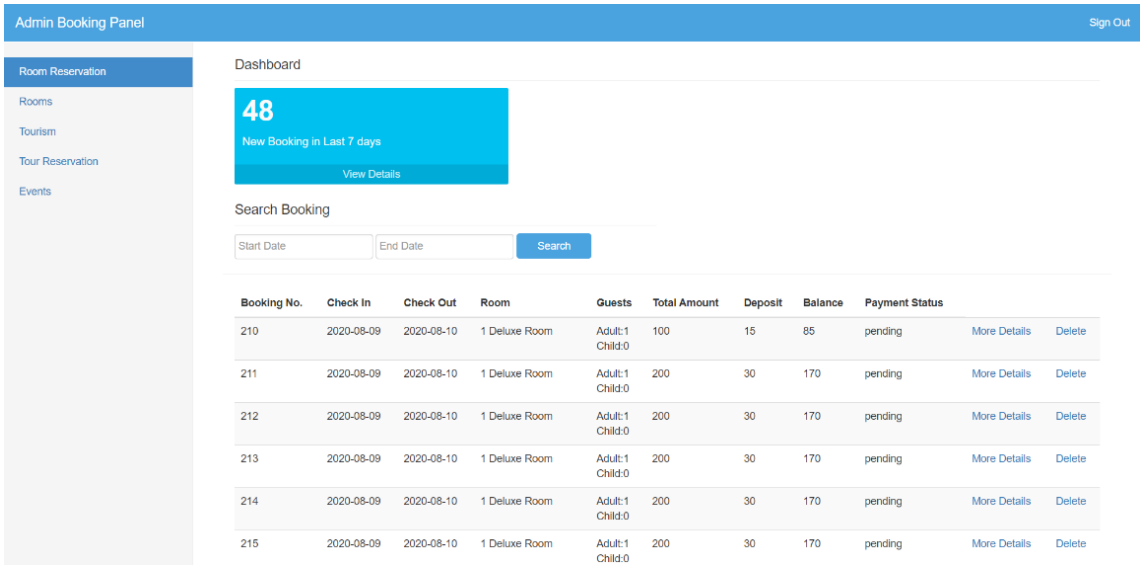


Figure 4.11 Admin Dashboard Page

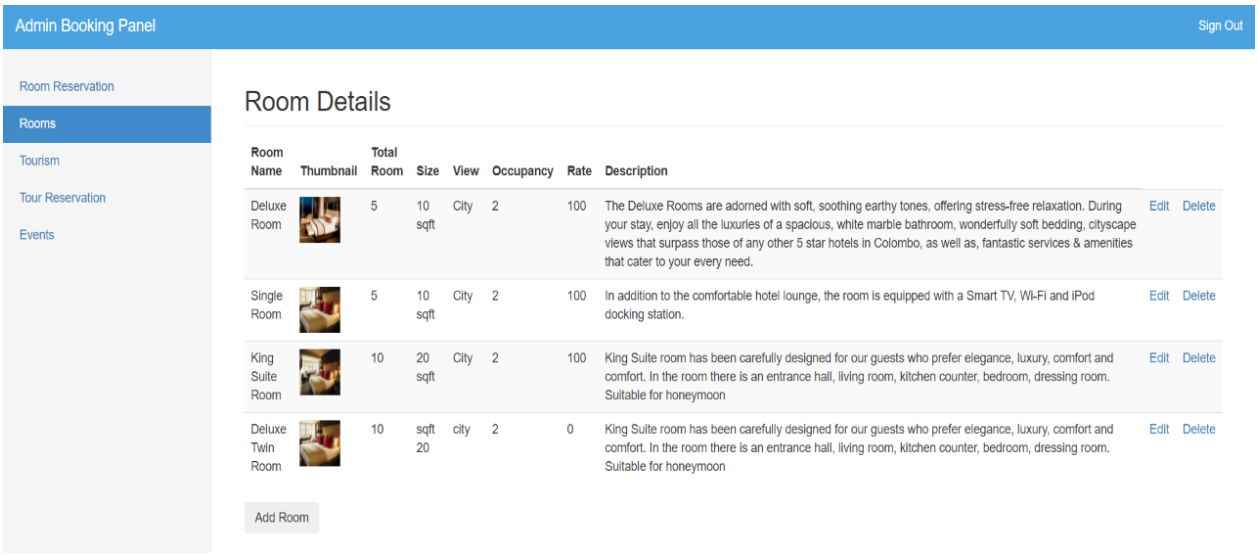


Figure 4.12 Admin Room Details Page

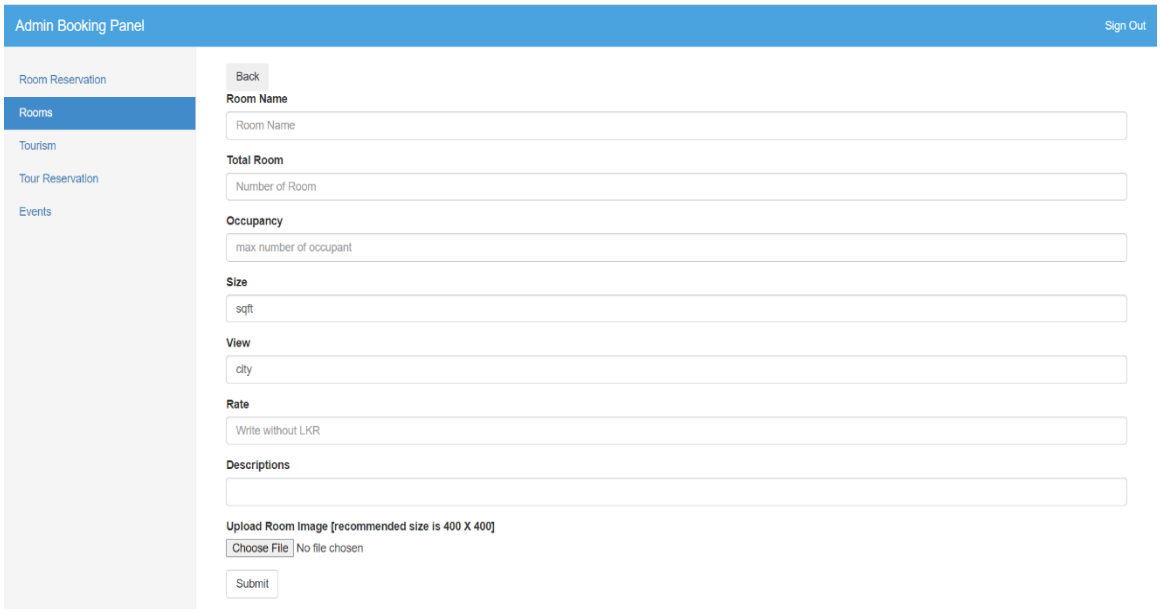


Figure 4.13 Add Room Page

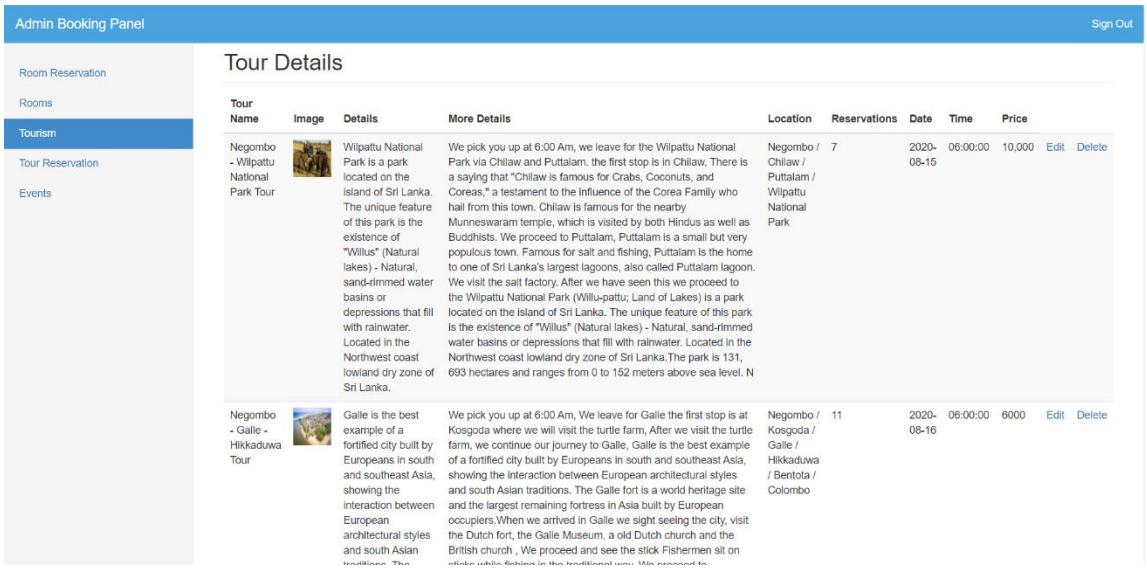


Figure 4.14 Admin Tour Packages Details Page

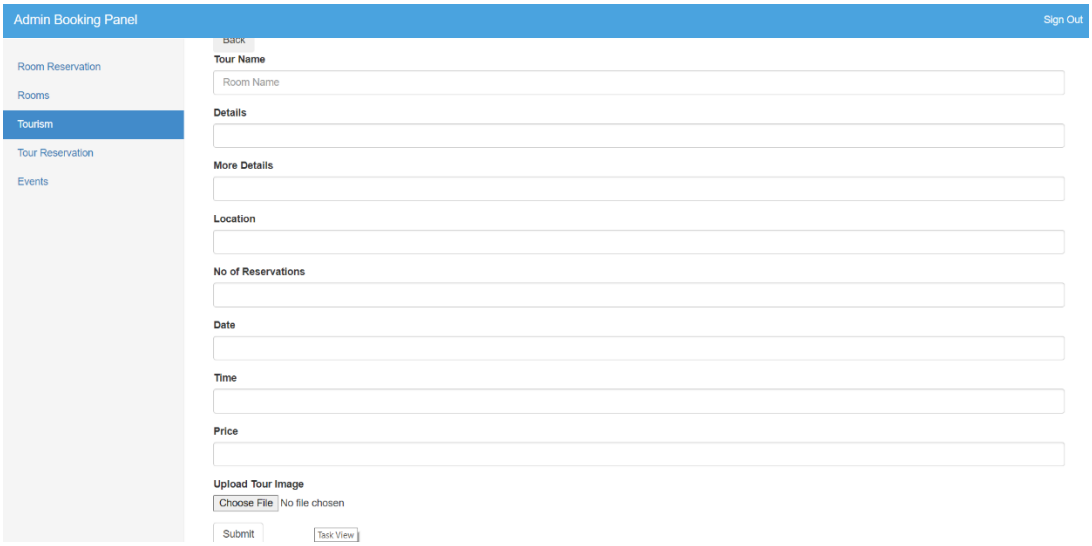


Figure 4.15 Add Tour Page

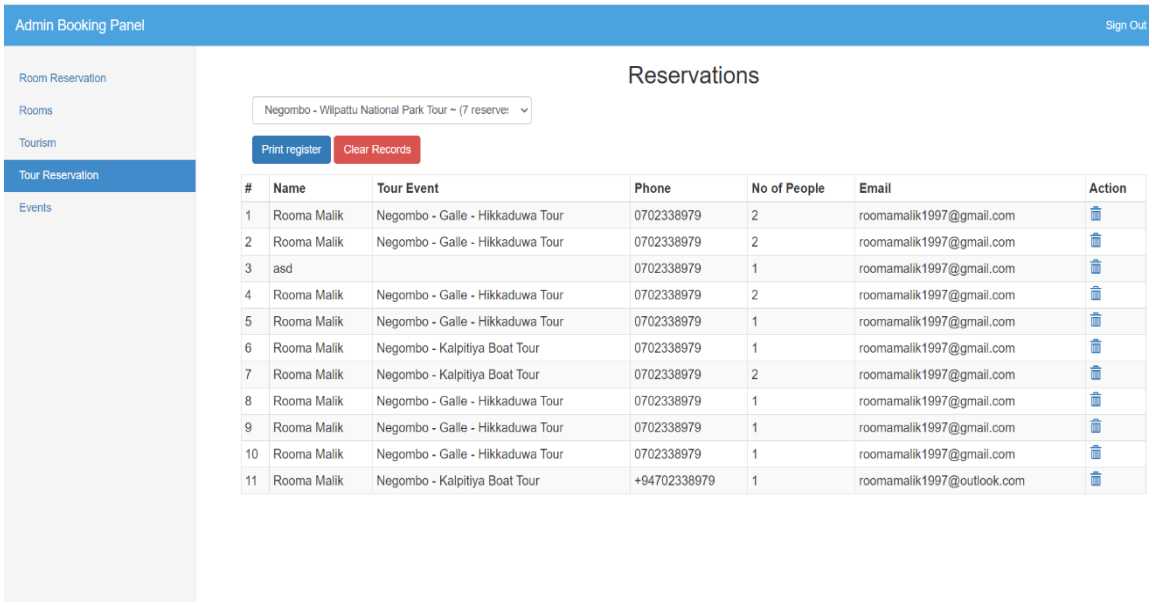


Figure 4.16 Admin Tour Reservation Details Page

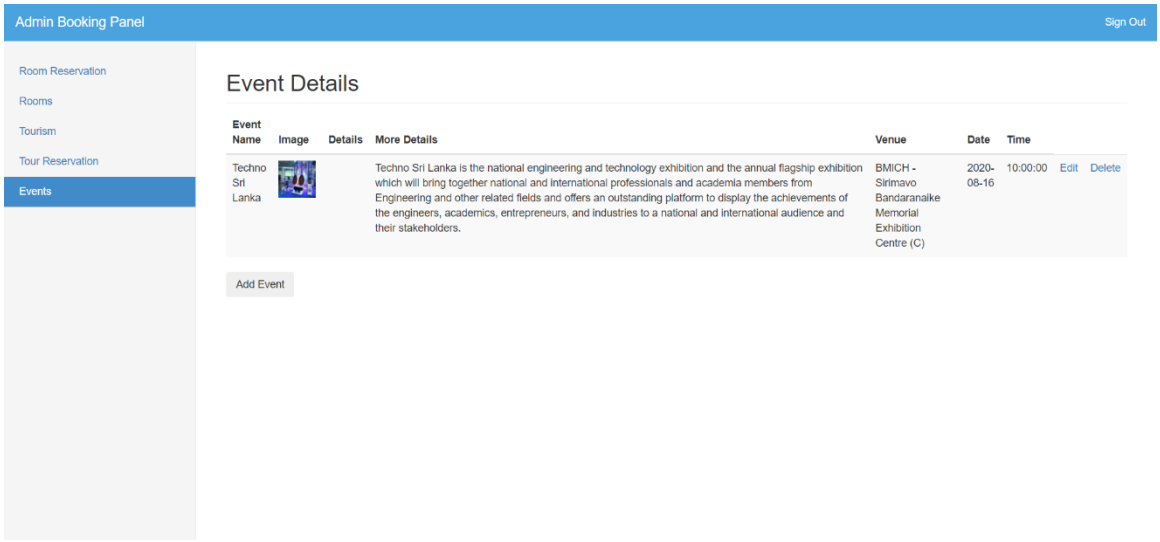


Figure 4.17 Admin Event Details Page

Figure 4.18 Add Event Page

CHAPTER 05

Implementation and Maintenance

5.1. Introduction

This chapter basically describe about implementation and maintenance of Hotel and Tour Reservation System. The implementation stage involves careful planning, investigation of the existing system and its constraints on implementation, designing of methods to achieve changeover and evaluation of changeover methods.

Implementation phase will describe how the actual system is developed using previously mentioned designs. The implementation phase constructs, installs and operates the new system. The most crucial stage in achieving a new successful system is that it will work efficiently and effectively.

5.2. Hardware and Software Environment

Under this topic hardware and software requirements of Development environment, hosting environment and user environment are listed. We have used several hardware and software devices to complete our group project, Online book purchasing system successfully, in that process we used some hardware and software requirements to achieve following tasks.

- Easy to use
- Easy to develop the system
- Save time
- To accomplish system goals effectively.

These are the hardware requirements for development:

- Intel Core i3 2.0 GHz processor
- 4 GB RAM
- 500 GB HDD Space
- These are hardware requirements for client side:
- Intel Core i3 or above
- 2GB RAM
- 500 GB HDD Space

These are the software requirements for developing process:

- Windows 10
- XAMPP Server
- Microsoft Office 2013
- Microsoft Project 2013
- Visio 2013/ Star UML

These are the software requirements for client side:

- Microsoft office
- Adobe acrobat reader

5.3. Technical Overview

This module discusses the technologies used to develop the system.

5.3.1. Programming Language Selection

Various languages are possible for such a system such as JAVA, ASP.NET, PHP etc. PHP was selected as the apt choice for this system. PHP is the fast-growing programming language which is used widely by several developers. It is a server-side scripting language which is used for dynamic web application development. Since its open source language, it's free of charge, hence effective. The development and support tools can be found free.

This language enables object an oriented programming, so the object orient concepts can be used in development such as encapsulation, polymorphism etc. When it comes to hosting, the charges are very low for the sites which are developed in PHP and its loads very fast when comparing to other languages (PHP, 2015).

5.3.2 Front-end and Back-end tools

Front-end tools-The tools which are used to design the user interfaces of the application

- PHP
- JavaScript
- HTML
- CSS

Back end tools-The tools which are used to design data base (storage design) of the application

- MySQL

5.4. Stages/ Types of System Implementation

Implementation in system is development lifecycle Model. There are several types of adoption can be used to implement a system. The type Big bang or direct implementation, Phase implementation and Parallel implementation form the main types that are used to implement a system.

5.4.1. Direct Implementation

With this method of implementation, the users stop using the old system and start using the new system from a given date. The big bang relates to the cosmological theory (Big bang) where the start of the cosmos happened at one moment in time. Once the management has decided to use the big bang method and supports the changes which are needed for this, the real changing process can start. This process consists of several steps:

Converting the system

- Convert data from old system
- Load data into new system
- Test data in new system
- Execute offline trials
- Check to verify validity

Release the system

- Release converted database
- Release produced application
- Release infrastructure

5.4.2. Phase Implementation

Phased implementation means that the adoption will happen in several phases, so that after each phase the system is a little closer to be fully adopted by the organization. The phased approach takes the conversion one step at a time. The implementation requires a thoroughly thought out scenario for starting to use the new system. And at every milestone one has to instruct the employees and other users.

The old system is taken over by the new system in predefined steps until it is totally abounded. The actual installation of the new system will be done in several ways, per module or per product and several instances can be carried out. This may be done by introducing some of the functionalities of the system before the rest or by introducing some functionality to certain users before introducing them to all the users. This gives the users the time to cope with the changes caused by the system.

5.4.3. Parallel Implementation

Parallel implementation means the new system is introduced alongside the existing system. With parallel running both systems will be in operation at the same time. The activities in Parallel Run are divided in five main phases.

1. Define Implementation Strategy-: that deals with the kind of implementation strategy should be executed.
2. Pre-Implementation-: which do with constructing a planning of all aspects and requirements involved in the implementation.
3. Prepare Organization-: The organization should be prepared properly according to the previous phase.
4. Conversion-: Deals with the actual conversion process.
5. Closing the Conversion Process-: proceeding with the new system. Types of implementation

5.5. System Maintenance

After installed the system client side or client environment this must maintain to get proper performance and satisfy user requirements. This is final stage of development life cycle. The process of monitoring, evaluating, and modifying of existing information systems to make required or desirable improvements may be termed as System maintenance. System maintenance is an ongoing activity, which covers a wide variety of activities, including removing program and design errors, updating documentation and test data and updating user support. For the purpose of convenience, maintenance may be categorized into four classes, namely:

Corrective Maintenance

This type of maintenance implies removing errors in a program, which might have crept in the system due to faulty design or wrong assumptions. Thus, in corrective maintenance, processing or performance failures are repaired.

Adaptive Maintenance

In adaptive maintenance, program functions are changed to enable the information system to satisfy the information needs of the user. This type of maintenance may become necessary because of organizational changes.

Perfective Maintenance

Perfective maintenance means adding new programs or modifying the existing programs to enhance the performance of the information system.

Predictive Maintenance Strategic changes made in anticipation of likely changes to technology, Economic and competitive conditions, working practices in the future and Changes in governmental policies, laws, etc.

Chapter 06

Future Improvements and Conclusion

6.1. Introduction

This chapter summarized and concludes the entire Project. It discusses the Online Restaurant management system features and archived results; In addition, it suggests some potential areas for future improvement and Future Avenue of the system.

6.2. Newly developed System's Features and results

Roo Hotel and Tours is a hotel and tour reservation system which allows you to book rooms and reserve tour packages. Hotel manager needed to manage the rooms with system, it has instead an old manual system. Users reserve many rooms and tour packages per day. The daily transactions turn into more complexity. Since All information are being maintained manually, it leads to many drawbacks and also it costs more for the company.

The new Hotel and Tour Reservation System is designed to reduce the effort that an employee put in manual entries. The old system is not capable of when dealing with large scale of data handling and not valuable for a long-term use. That is why Company wants to set up the standard for everything including front office operations. Because of that, I discovered that Roo Hotel and Tours faces some problems in terms of time wasting and manual book keeping for customers that prompted the idea of computerizing the system.

Following results achieved from Hotel and Tour Reservation System

- User friendly interfaces and attractive forms.
- Customer can check for the availability of rooms and book them.
- Customers can check the availability of tour packages and reserve them.
- Customers can view upcoming Events.
- It reduces the work load of the office.
- By using proposed system, the Roo Hotel and Tours can save time.
- Facilitate the storing the information in a database automatically and systematically. Facilitate entering and retrieving data efficiently.
- Handle and keep track of all the activities.
- It produces a cost-effective system.

6.3. Future improvements & Future Avenue

Future improvement is the most important of the system, because it helps to successfully and effectively integrate the future Management Trust functions. Improvement, in the context in which we work, can mean many things. It can mean delivering better services or simply getting better as an organization. Time to time increase the functions and scope of the organization.

Followings describes the future improvement of Hotel and Tour Reservation system

- Add Online Payment method for Tour Reservation System.
- Generate a report for room booking and tour reservation system.
- Add booking of tickets for the events.

6.4. Conclusion

Roo Hotel and Tours has many customers and also it is very famous Hotel among people. The daily transactions turn into more complexity. Manual book keeping system costs for the restaurant. Therefore, a lot of mistakes may occur. The new proposed system is designed to reduce the effort that an employee put in booking made. Hotel and Tour Reservation System is designed and implemented to ease the customer. And also, this system provides facilities for the Hotel to store their customer data and the booking details as well.

APPENDICES

Database Code

```
<?php
$username = "root";
$password = "";
$hostname = "localhost";

$dbhandle = mysqli_connect($hostname, $username, $password)
 or die(mysqli_error($dbhandle));

$db = "roo_hotel";
$selected = mysqli_select_db($dbhandle,$db)
 or die(mysqli_error($dbhandle));
?>
```

Check Room Availability Code

```
<script>
  $(document).ready(function() {
          $("#checkout").datepicker();
          $("#checkin").datepicker({
          minDate : new Date(),
          onSelect: function (dateText, inst) {
       var date = $.datepicker.parseDate($.datepicker._defaults.dateFormat,
dateText);
        $("#checkout").datepicker("option", "minDate", date);
                    }});});
</script>
<div class="row">
<div class="large-4 columns" style="padding-top:10px; background:
rgba(44,62,80,0.7);">
<div class="large-12 columns " >
<p style="font-size: 20px;"><b>Check Date</b></p>
<form name="form" action="checkroom.php" method="post" onSubmit="return
validateForm(this);">
```

```
<div class="row">
<div class="large-6 columns" style="max-width:100%;">
<label class="fontcolor" for="checkin" style="font-size: 18px;">Check In
<input name="checkin" id="checkin" style="width:100%;"/>
</label></div>
<div class="large-6 columns" style="max-width:100%;">
<label class="fontcolor" for="checkout" style="font-size: 18px;">Check Out
<input name="checkout" id="checkout" style="width:100%;"/>
</label></div></div>
<div class="row">
<div class="large-6 columns">
<label class="fontcolor" style="font-size: 18px;">Adults
<select  name="totaladults" id="totaladults" style="width:100%;">
<option value="0">0</option>
<option value="1">1</option>
<option value="2">2</option>
<option value="3">3</option>
<option value="4">4</option>
<option value="5">5</option>
</select></label></div>
<div class="large-6 columns"  style="max-width:100%;">
<label class="fontcolor" style="font-size: 18px;">Children
<select  name="totalchildrens" id="totalchildrens" style="width:100%;
color:black;">
<option value="0">0</option>
<option value="1">1</option>
<option value="2">2</option>
<option value="3">3</option>
<option value="4">4</option>
<option value="5">5</option>
</select></label></div></div>
<div class="row">
<div class="large-12 columns" >
```

```
<button name="submit" href="#" class="btn btn-primary" style="width:100%;
font-size: 18px;" >Check Availability</button>
</div></div></form></div></div></div>
<script>
        function validateForm(form) {
                var a = form.checkin.value;
                var b = form.checkout.value;
                var c = form.totaladults.value;
                var d = form.totalchildrens.value;
                if(a == null || b == null || a == "" || b == "") {
                alert("Please choose date");
                 return false;}
                if(c == 0) {
                if(d == 0) {
                 alert("Please choose no. of guest");
                 return false;}}
                if(d == 0) {
                if(c == 0) {
                alert("Please choose no. of guest");
                return false;}}}
</script>
```

Sending Mail Code (PHPMailer)

```
<?php
   use PHPMailer\PHPMailer\PHPMailer;
   if (isset($_POST['name']) && isset($_POST['email'])) {
      $name = $_POST['name'];
      $email = $_POST['email'];
      $subject = $_POST['subject'];
      $body = $_POST['body'];
      require_once "PHPMailer/PHPMailer.php";
      require_once "PHPMailer/SMTP.php";
      require_once "PHPMailer/Exception.php";
      $mail = new PHPMailer();
```

```
    $mail->isSMTP();
    $mail->Host = "smtp.gmail.com";
    $mail->SMTPAuth = true;
    $mail->Username = "****@gmail.com";
    $mail->Password = '**********';
    $mail->Port = 465;
    $mail->SMTPSecure = "ssl";
    $mail->isHTML(true);
    $mail->setFrom($email, $name);
    $mail->addAddress("*****@gmail.com");
    $mail->Subject = ("$email ($subject)");
    $mail->Body = $body;

    if ($mail->send()) {
        $status = "success";
        $response = "Email is sent!";
    } else {
        $status = "failed";
        $response = "Something is wrong: <br><br>" . $mail->ErrorInfo;
    }
    exit(json_encode(array("status" => $status, "response" => $response)));
}?>
```

Add Room Code

```
<?php
session_start();
include './auth.php';
$re = mysqli_query($dbhandle,"select * from user where username =
'".$_SESSION['username']."'  AND password = '".$_SESSION['password']."' " );
echo mysqli_error($dbhandle);
if(mysqli_num_rows($re) > 0){
}
else{
session_destroy();
header('location:index.htm');}
```

```
$total = "";
$view = "";
$size ="";
$rate ="";
$desc ="";
$occupancy ="";
$imgpath ="";
$room_name ="";
$imageFileType = pathinfo($imgpath,PATHINFO_EXTENSION);
$uploadDir = "../img/";
$imagename= $_FILES['img']['name'];
$imgpath = $uploadDir.$imagename.$imageFileType;
$uploadDirForSql = "img/";
$imgpathForSQL = $uploadDirForSql.$imagename.$imageFileType;
        $room_name = $_POST['room_name'];
        if(isset($_POST['total_room'])){
        $total =$_POST['total_room'];}
        if(isset($_POST['view'])){
        $view = $_POST['view'];}
        if(isset($_POST['size'])){
        $size = $_POST['size'];}
        if(isset($_POST['rate'])){
        $rate =$_POST['rate'];}
        if(isset($_POST['desc'])){
        $desc =$_POST['desc'];}
        if(isset($_POST['occupancy'])){
        $occupancy =$_POST['occupancy'];}
$sql = "INSERT INTO room (room_id, total_room, occupancy, size, view,
room_name, descriptions, rate, imgpath) VALUES (null, '".$total."', '".$occupancy."',
'".$size."', '".$view."', '".$room_name."', '".$desc."', '".$rate."', '".$imgpathForSQL."')";
        $result = mysqli_query($dbhandle,$sql);
        echo mysqli_error($dbhandle);
        move_uploaded_file($_FILES["img"]["tmp_name"], $imgpath);
header('Refresh: 3;url=room.php');
```

Admin Login Code

```
<?php
session_start();
$_SESSION['username'] = $_POST['username'];
$_SESSION['password'] =  $_POST['password'];
include './auth.php';
$re = mysqli_query($dbhandle,"select * from user where username =
'".$_SESSION['username']."'  AND password = '".$_SESSION['password']."' " );
echo mysqli_error($dbhandle);
if(mysqli_num_rows($re) > 0){
header('Refresh: 0;url=dashboard.php');
}
else{
session_destroy();
header("location: index.htm");
}?>
<form class="form-signin" role="form" action="loginauth.php" method="post">
<h2 class="form-signin-heading">Please sign in</h2>
<label for="name" class="sr-only">Username</label>
<input type="text" id="username" name="username"class="form-control"
placeholder="Username" required autofocus>
<label for="Password" class="sr-only">Password</label>
<input type="password" id="password" name="password" class="form-control"
placeholder="Password" required>
<button class="btn btn-lg btn-primary btn-block" type="submit">Sign in</button>
    </form>
```

Reservation Success Code

```
<?php
include './auth.php';
use PHPMailer\PHPMailer\PHPMailer;
$email = "";
$fname = "";
$lname = "";
$total = "";
$id = $_GET['order_id'];
```

```
if(isset($id) && !empty($id)){
$r = mysqli_query($dbhandle,"UPDATE  `booking` SET  `payment_status` =
'confirmed' WHERE  `booking`.`booking_id` = " . $id);
echo mysqli_error($dbhandle);
$result = mysqli_query($dbhandle,"select * from booking where booking_id =
'".$id."';");
print_r(mysqli_num_rows($result));
if(mysqli_num_rows($result) > 0){
                    while($row = mysqli_fetch_array($result)){
                    $email = $row['email'];
                    $fname = $row['first_name'];
                    $lname = $row['last_name'];
                    $total = $row['total_amount'];
}}}
```

REFERENCES

https://www.w3schools.com/php/

https://www.youtube.com/results?search_query=php+tutorial+for+beginners+full

https://github.com/topics/hotel-reservation

https://www.sololearn.com/Course/PHP/