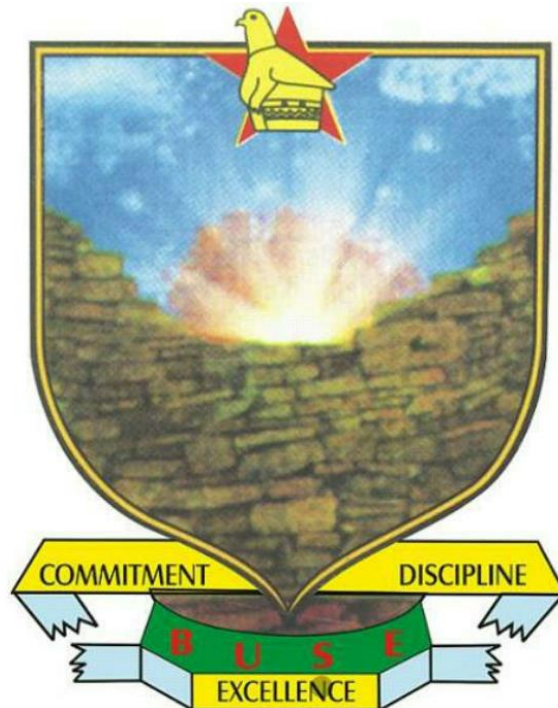


BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF COMPUTER SCIENCE



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SYSTEM DOCUMENTATION: Hotel booking websit

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Abstract

The project entitled “online hotel booking system” is a network-based application that is designed and that will be developed in JavaScript and MySQL. The mentioned system is intended to replace the computerized system (offline) processes of booking rooms at a hotel. With the use of the data driven application, it will and can eliminate all the problems encountered in offline system which include double booking, inaccurate records of bills, sometimes not being able to offer our guest vacant after they have traveled from different places. I will use the waterfall Model as the software development life cycle for the system explained below. The model is a step by step procedure until we reach the final stage for our finished product which includes feasibility study, requirement specification, design stage coding stage system testing and maintenance phase.

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Chapter 1: Problem Identification

Introduction

Alex is a hotel which provides accommodations to its guest. Recently they have decided to change their reservation system from an offline based system to an online system. This transition will help the hotel to manage the customer booking more easily and accessible thus also to keep the customer data safer through encryption and scheduled backups. It will also

help staff to keep in track of their customers online booking requests well as reply to feedback from customers easily through our online forums. Also, it gives room to our guests to keep updated to what services are being offered from the comforts of their homes by viewing Alex Hotels website. Customers will also be able review prices, the residence itself and be able to make bookings and the convenience of paying pay online.

Motivation

Online booking website and scheduling software save staff time and also guests time rather than them traveling to and from the hotel just to make a reservation. Removes the bottleneck of phone booking systems meaning the hotel will have to reduce labor costs by replacing some staff with the online system. Greater sales and increased market share of the hotel as we will be able to target clients from all countries. Online system is a modern approach to booking keeping the hotel competitive amongst other hotels.

Premises of the Research

The standard that is going to be followed in the whole project is the ISO 9000 family of standards which addresses quality management. As Alex Hotels we value quality services towards our customers. These standards aim to fulfill the customers quality requirements and applicable regulatory requirements, while aiming to enhance customer satisfaction during booking and their stay. Also, we intend to achieve continual improvement of their online booking on the website

Problem Statement

- The current system is computerised but clients have to travel from their homes to the hotel to make reservations which is so costly and sometimes they will not be able to make the booking after travelling which is disappointing.
- Clients have to go through agents who are so costly as they put their mark-up to make booking price
- Clients are being scammed by fake agents with aim to make bookings for their holidays
- Clients have no access to information concerning the hotel pricing and the services that they offer.
- Some potential customers have no ways to get in touch with the hotel since they only way to reach them is by visiting the hotel.
- Customers have no directions to the hotel which is inconvenient

Technical Objectives

The main objectives of the research are as follows:

- The online reservation website should allow our guest to be able to make reservations in different places around the globe.

- Clients should have an embedded google maps chart within the website to help them get to the hotel.
- Clients should be able to view check rooms available for booking
- Clients should also be to view service or facilities offered at the hotel
- Website should allow customers to cancel their booking
- Admins should have overall control over adding and removing rooms available for booking

Justification

Upcoming restaurants have found it difficult trying to reach potential guests, the costs that goes into reaching potential new guests or bringing back old guests are so expensive which is why we intend to bring the online booking website. Online booking website allows potential customers to check services available and self-book. It securely stores data of our customers and manage staff ensuring data security. Online booking website is not just a place to book a reservation but a search database for potential guest to find the right hotel for their occasion with the exact taste they want in the right location. Online booking website configure the information technology aspect of managing reservations and a way to market out hotel out to the public (putting it on the global market). With an online system we have high chances of increasing our target market and make it global thus more revenue.

Hypothesis

To achieve objectives of this study as mentioned below, the following hypothesis were investigated

- ✓ H1. Does the system meet our clients' needs and also satisfy the hotels requirement?
- ✓ H2. Is the proposed system more secure depending on who is accessing the proposed system? If not are there any security measures put in place?
- ✓ H3. Is the system user friendly?
- ✓ H4. Is the proposed system real time?

Proposed tools

Hardware

- Intel CPU: Quad core 2GHZ or Higher
- AMD CPU: Quad core 3GHZ or Higher
- 8 GB RAM minimum recommended
- 500 GB Standard Hard Drive
- Monitor: 1080p or higher (we strongly recommend having more than a single screen).
- Internet: Broadband with 10 Mbs download and 1.0 Mobs upload.
- Phones
-

Software

- Windows 10 and 11Pro (32-bit & 64-bit)
- Anti-virus updated and latest version
- Anti-malware updated and latest version
- Internet browser: Mozilla Firefox, Goggle Chrome
- Archive software: Zip, WinZip, WinRAR
- Office software: Microsoft Office 365
- PDF File Software: Reader (Windows 8, 8.1), Adobe Reader
- Visual studio code, Visual code
- JavaScript
- MYSQL
- HTML
- CSS

Expected Results

- An algorithm that allows customer to check residence status and transact.
- A system that allows clients to be able to make bookings online.
- System that allows clients view to rooms available and make reservations.
- A research papers.

Ethics Consideration

There are some ethical clearances that will be requisite to this project and certain steps will be taken to achieve this. is required for this proposed project. If so, clearly state the steps to be taken in order to get cleared. The Economic and Social Research Council (ESRC) which oversees social research has an excellent Research Ethics Framework which is helpful in entrenching ethics for any issues encountered. The following are some principles of ethical social research:

- Anonymity – the confidential information collected from participants should be kept secret and may be disclosed upon mutual consent.
- Full Briefing - the participants as well as those helping carrying out the research should be fully informed on the reasons why the research was conducted and how it was done as well as the use of the research findings.
- Avoid Harm – any harm should be prevented upon any participant as a priority.
- Research Independence – research independence must be concise and any conflicts should be addressed.
- Well Structured – the research should be well designed and should be performed to ensure integrity.

- Voluntary – participants should take part in the research based on their own free will and anyone shouldn't be forced to do so.

Time Table

First month	Planning Requirements elicitation
Second month	System design and coding
Third month	Testing and implementation

Estimated Budget

ITEM	VALUE (USD)
RESEARCH	50
TOOLS	80
TRANSPORT	25

Glossary

HIT: Harare Institute of Technology

OHBS: Online Hotel Booking System

HTML: Hyper markup language

CSS: Cascaded style sheet

OS: Operating System

SQL: Structured Query Language

Chapter 2: Literature Review

Introduction

The internet is widely used by many organizations, institution and even for personal use today, it has become a major trend because of the way it provides free information exchange daily (Palmer, 1999). Over 400,000 networks in the world today are communicating with each other (Rivers & Judd, 2001). The internet is also used to gather information regarding a place such as hotel and even make reservation with that hotel online.

Online reservations are becoming a very popular method for booking rooms in a hotel that operates online. This is the fastest way to contact and communicate with a hotel (James, 2008). Ivanovo Mathew (2008) defined Online booking “as a tool to store, publish and update the dynamic data availability and prices and additionally provide the users with a regular reservation process”. Hotel reservation systems are an easy prearrangement for guests to reserve a room or rooms directly via the internet once availability is confirmed. This is a brilliant and efficient system yet is easy to use compare to similar system software’s (Rivers, 2001). The online booking systems grants both existing and prospective guest complete authority and power on the hotel booking via the internet. This means that guest can have any

special request, make payment and get confirmed about their bookings within a short period of time. (Wagner, 2001). Customers want an easy and simple way to connect to a hotel for either enquiry or make a reservation. To do this, an online booking is is needed (James, 2010).

Many hotels usually use different online distribution channels in order to be more present online and to attract many potential customers to their hotel but the most profitable way to attract clients is for a hotel to have their own website. (Static Brain, 2012). When a hotel develops their own website, it can be used to promote their products and services, attract more customers and also offer them the opportunity to book a room directly on the website without other online channels. This way, hotels do not have to pay online agencies any commission or other third parties because there will be an accuracy in providing what the client online wants compare to these agencies (Matei, 2013). “Finding new ways to encourage clients to reserve rooms directly on the hotel website should become a major strategic objective for hotels” (Matei, 2013). Many customers believe when a company operates online they feel more connected or safe with the company because it is the easy and fastest way of communication between the customers and the hotel or any company that operates online. Online booking systems supports most of the phases of making a reservation and customers can directly make a secured payment to confirm their reservation (Landvogt, 2004).

Tools and Technology

The various tools used in developing the system are PHP (for creating codes that links the web pages to the database), MYSQL (for creating database), HTML and CSS (for designing and styling the website). These tools are used to develop an interactive system with users.

The **Hypertext processor** (PHP) is a programming language that allows web developers to create dynamic content that interacts with database (Taie, 2013). For this project, the PHP Code used is embedded into the HTML source codes which is linked to the database and then interpreted by a web server, that generates the page document for proper understanding. PHP is used because; it quickly identifies errors in codes and easier to fix problems, supports **LAMP**, simple and easy to use and it is speedy

Structured Query Language (SQL) is a database programming language designed for managing and retrieving data. It specializes in updating, deleting and requesting information from database. SQL is used in this project to create database that stores user's information (data). The benefits of SQL to this project are: it is easy to use, an open source and user friendly.

Hypertext Markup Language (HTML) and **Cascading Styling sheet (CSS)** are tools used in building Web pages. (Berners-Lee. 1998). HTML provides the structure of the web pages (for example headings and paragraphs). CSS is a language created to define and style the appearance of content and other materials of the Web page (Taylor, 2013) (for example fonts and size). The advantages of using HTML and CSS are: it has a build in function (easy to use) that allows users specify various format and style properties.

JavaScript: This is a dynamic programming language used as a part of web browser which allows client-side script interact with user and server side. It is increasingly considered as an “assembly” language or the “x86 of the web”. (Eich, 1995). This scripting language is classified as a prototype-based language with dynamic typing which has a first-class function. (McFarland 2008).

Notepad++ is used in this project as the main source code editor needed in developing the system. It supports several languages, which makes it suitable for this project.

Comparison between existing Systems

A comparison of two hotel that operates the same with the proposed system (Online reservation system) was done to identify the differences and similarities of the hotel’s website. The two hotels chosen are Meikles hotel and Marondera hotel both in Zimbabwe

Reservation System for Meikles hotel

Meikles hotel official website provides information on the website and online reservation systems. Customers or visitor can get most information on the website such as hotel location, room description, room rates, contact information, photo gallery, promotions and other facilities and activities available at the hotel. There is an online form for guests who want to make a reservation in the hotel and guest may fill in another form for any special request for the reservation.

The structure of the website is well-organized and easy for visitors to navigate through. Sufficient information has been provided on the website and are up-to-date. The website is a good example for hotels online booking as it provides correct information on the hotel.

Reservation System for Marondera Hotel

Marondera is a well-known hotel for its services. Its websites aim to provide customers with accurate information regarding the hotel as well as their online reservation system. Visitors can get most information on the website such as hotel location, room description, room rates, promotions and photo gallery. The website also has a **virtual tour** which consists of the tennis court, lobby, restaurants, bars and recreational areas. The reservation process requires guests to fill an online form in order to make a reservation, and reservation is guaranteed by providing credit card details. The system layout is user friendly for customers and can browse and get information easily.

Meikles hotel	Marondera Hotel
Has a descriptive image gallery	Has a virtual tour of the hotel

Similarities of Both Website

- Both websites provide useful functions such as hotel address, reservation form.
- The website homepage has less information but more images of the hotels
- Both websites are easy to navigate through
- Easy to interact with.

References

Abdul Aziz, "Online Hotel Booking System, A proposed system for Pakistan",
Institution of information
Technology, Department of Information Technology, August 2011

G.O. Ofori-Dwumfuo and E. Patel, "The Design of an Hotel Management System",
Research Journal of
Information Technology 3(2): 91-98, 2011, ISSN: 2041-3114

Kaunda Chis, "ISLAND HOTEL MANAGEMENT SYSYTEM Buildup", Web Developer,
2009

Castellan, C. (2010). Online Hotel Sytems Research: a view for clarity. *International Journal of Education*, 2(2), 1-14.

Charmaz, K. (2006). *Constructing grounded theory: a practical guide through Booking Systems*. London, United Kingdom: Sage.

Coughlan, M., Cronin, P, & Ryan, F. (2007). Step-by-step guide to Hotel Booking Systems research. *British Journal of Nursing*, 16(11), 658-663

CHAPTER THREE: SYSTEM REQUIREMENTS

Introduction

In this chapter, I shall fully elaborate on the set of all requirements that are to be imposed on the design and verification of the application. Both the functional and non-functional requirements will be briefed here.

Requirements Engineering

Elicitation

In order to get data and facts to be able to come up with the scope management plan, the following techniques I applied.

- i. **Questionnaires:** I distributed questionnaires to a number of clients residing at the hostel to gather precise information on service provision by the hotel some also responded to questioners through google forms.
- ii. **Interviews:** I carried out a number of in-person interviews with the customers who were going through agencies to hear their problems
- iii. **Observation:** I also once visited the hotel client to get experience of the service in booking

I then came up with the following lists of requirements for the system.

Functional Requirements

- i. Register a new user that is the client. Allow login to registered users
- ii. Embedded google maps for directions
- iii. Show the rooms available and their prices on the website.
- iv. Allow clients to do their booking.
- v. Allow clients to cancel booking.
- vi. It should allow admins to edit rooms available.
- vii. Give feedback to users if they try to book rooms which are fully booked.

Non-Functional Requirements

- i. Intuitive, attractive, and functional user interface design.

- ii. Secure user information architecture.
- iii. Efficiency and throughput.
- iv. Fast.
- v. Functional.

User Software Requirements

The final website will be accessible to any user who has internet access

System Requirements

Inputs

The system shall require user input through registration form and login form. Below is a generic list of some of the input to be collected.

- i. User details (names, email, cell number, picture, address, DOB, password,).
- ii. Administrator inputs. (email, password, staff number)

Processes

- i. Username and password validation.
- ii. Capturing client data.
- iii. Updating clients and rooms database when a booking is made.

Outputs

- i. View of rooms offered by the hotel.
- ii. Status of the rooms.
- iii. View of rooms which are booked

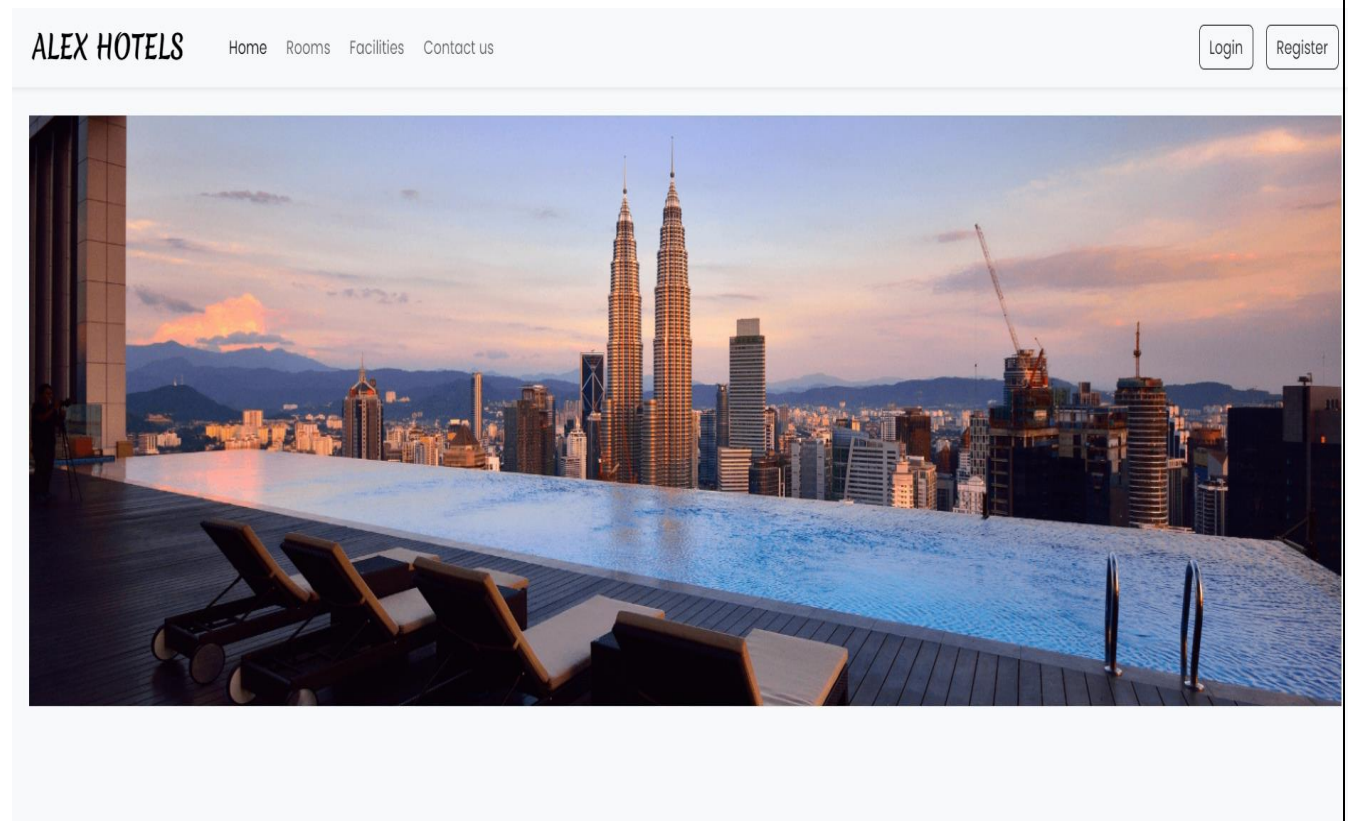
SYSTEM DESIGN

Introduction

The systems design phase focuses on the development of the objectives of the proposed system and it outlines how the proposed system is going to be developed, configured, and deployed.

User Interface Design Snapshots

- The following snaps are of home page that is viewed by everyone who visits the website.



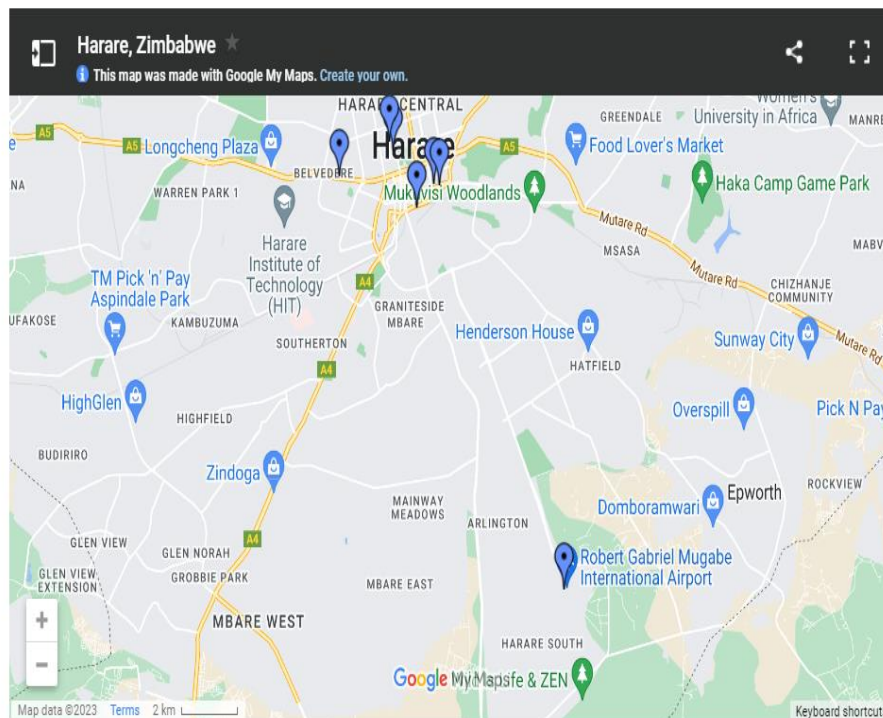
Check-in: Check-out: Adult: Children:

[More Rooms>>](#)

A horizontal row of five white rectangular boxes, each containing a black icon and a label below it. From left to right: 1. A Wi-Fi signal icon with the label 'Wifi'. 2. A television icon with the label 'television'. 3. An air conditioner (AC) unit icon with the label 'AC'. 4. A room heater icon with the label 'Room Heater'. 5. A transport vehicle icon with the label 'transport'.

[More Facilities >>](#)

 Facebook



OUR ROOMS

If you are intrested in our services you can get intouch with us on follwing platforms

FILTERS

CHECK AVAILABILITY

Check-in

dd/mm/yyyy



Check-out

dd/mm/yyyy



FACILITIES

- ☐ Facility one
☐ Facility two
☐ Facility three

GUESTS

Adults

Children



Standard Room

Features

1 room 1 bathroom 1 sofa 1 bed

\$100 per night

Facilities

wifi television AC room heater

[More Details](#)



VIP Rooms

Features

1 room 1 bathroom 1 sofa 1 bed

\$200 per night

Facilities

wifi television AC room heater

[More Details](#)

CONTACT US

If you are intrested in our services you can get intouch with us on follwing platforms



Cell

0774577383

0774577583



EMAIL

alexanderanesubako@gmail.com

Follow Us



Twitter



Instagram



Facebook

designed and developed by Alex

Check vailability form

Check Booking Availability

Check-in

dd/mm/yyyy



Check-out

dd/mm/yyyy



Adult

Open this select menu



Children

Open this select n

Submit

Registration Form

NB: Use official details

Name

Email address

Phone Number

Picture

Choose File

No file chosen

Address

Pincode

DOB

dd/mm/yyyy

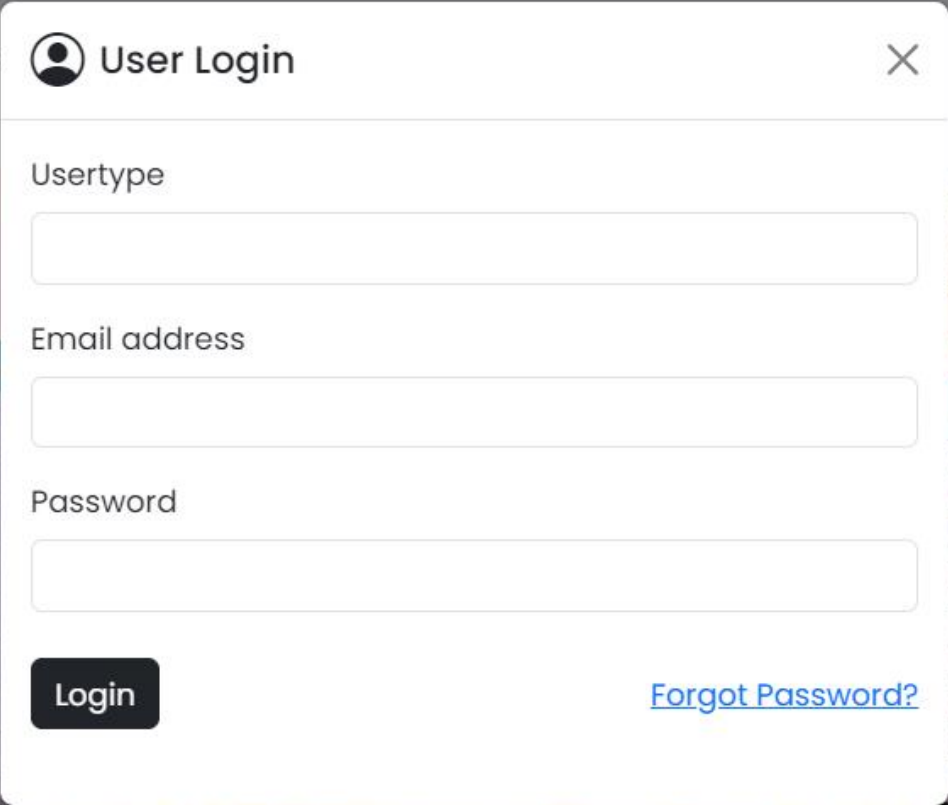


Password

Cornfirm Password



Register

Login form



A modal form titled "User Login" with a close button (X) in the top right corner. The form contains three input fields: "Usertype", "Email address", and "Password". Below the inputs are a "Login" button and a "Forgot Password?" link. The modal is overlaid on a background image of a modern building.


act us

 User Login 

Usertype

Email address

Password

 [Forgot Password?](#)

Admin form to add or remove rooms

Add rooms

Room Type

Quantity

Amount

Add

remove rooms

logout


Booking form

Contact us

BOOK NOW

Lo

click the button on your preferred room to make a booking with us



Standard Room

Features

1 room 1 bathroom 1 sofa 1 bed


Facilities

wifi television AC room heater

\$100 per night

booknow

CancelBooking



VIP room

Features

1 room 1 bathroom 1 sofa 1 bed

Facilities

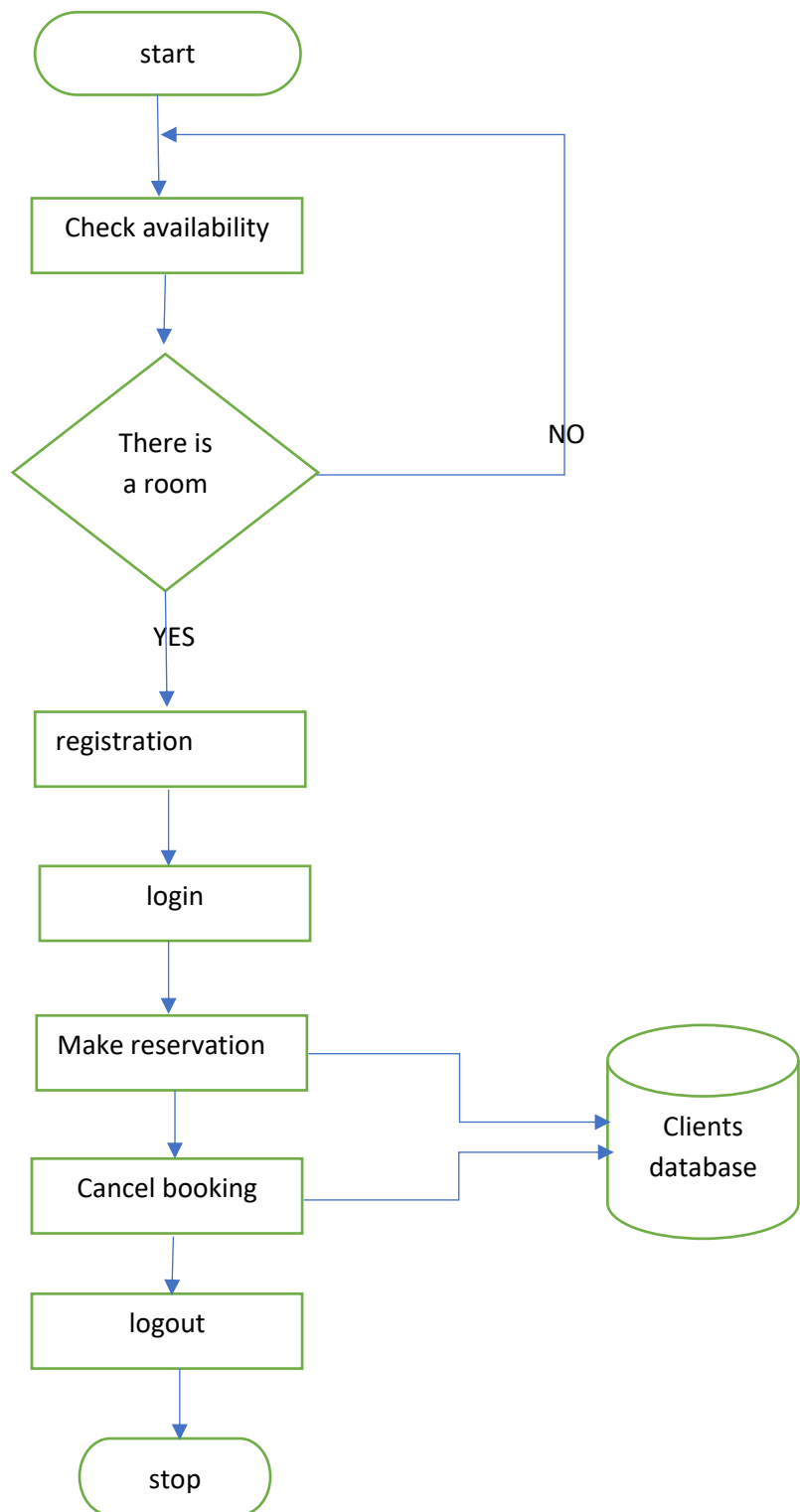
wifi television AC room heater

\$200 per night

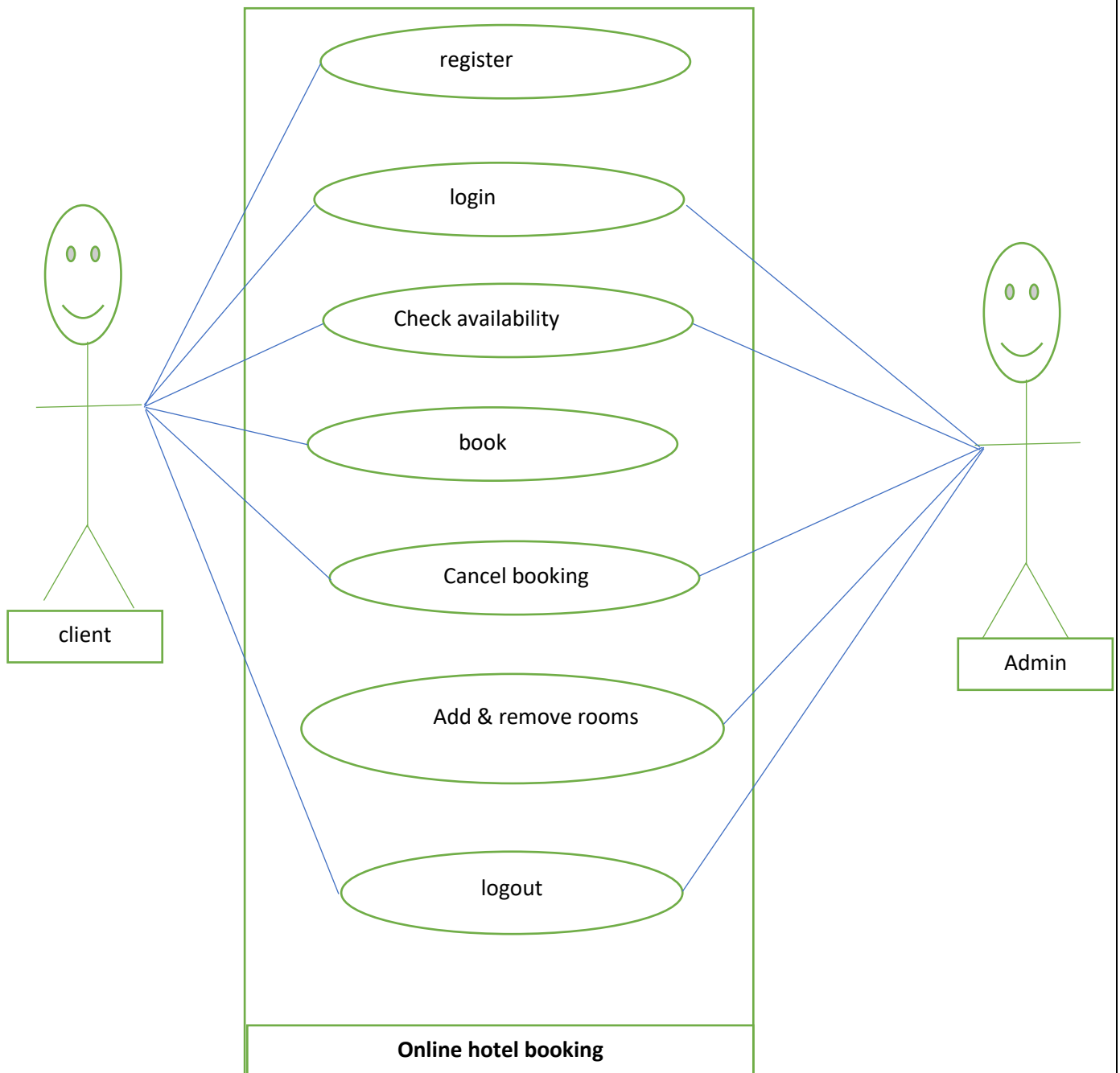
booknow

CancelBooking

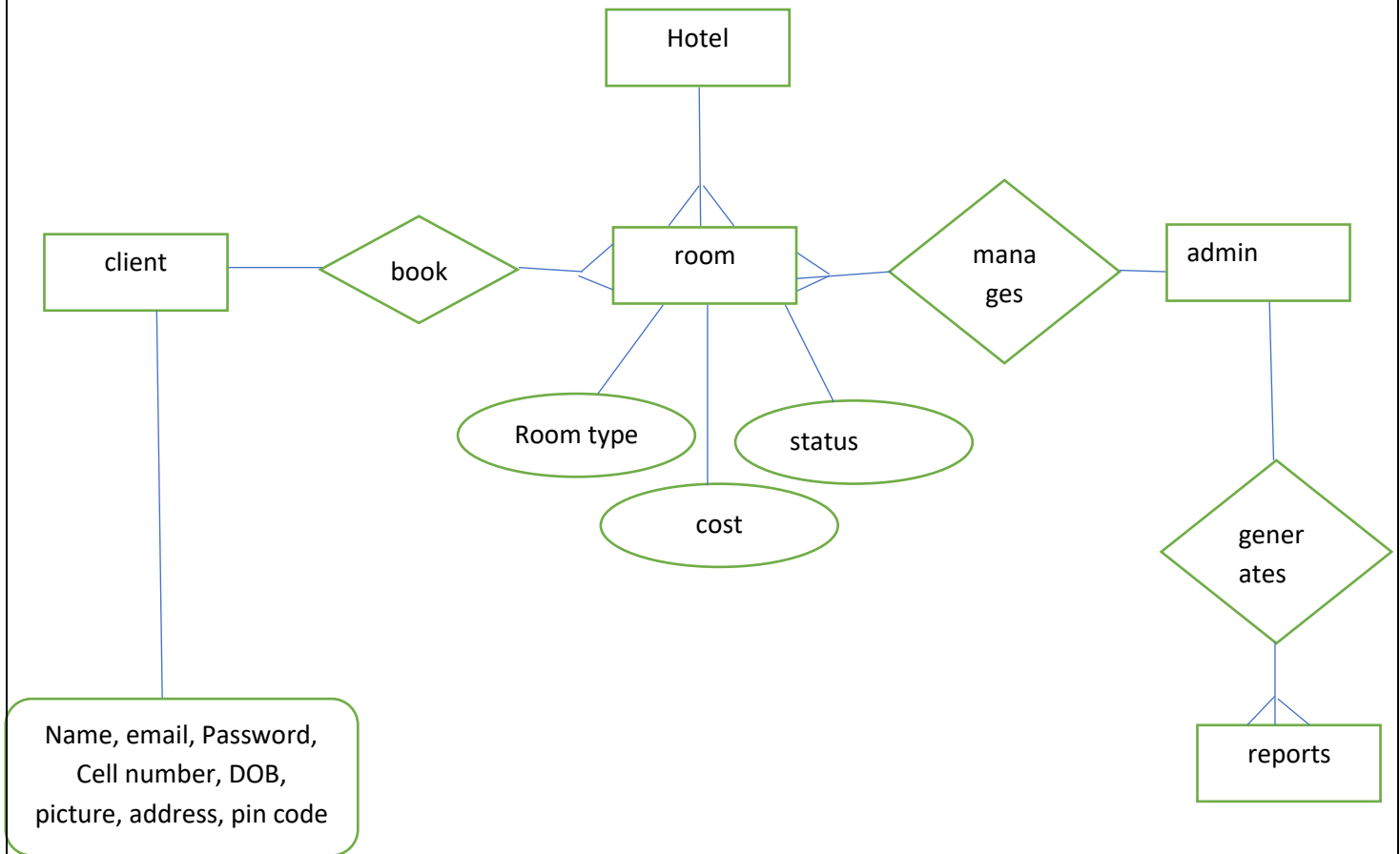
Process Flowchart



Use Case Diagram



Entity relationship diagram



Database Design

The website will use the MySQL database system, whose dynamics make it easy for the end-users to access it via the internet. This means that the user can expect high availability with maximal compliance.

Key Capabilities

Flexibility.

The MySQL data model supports flexible, hierarchical data structures. Store your data in documents, organized into collections. Documents can contain complex nested objects in addition to sub collections.

Expressive querying.

MySQL database use queries to retrieve individual, specific documents or to retrieve all the documents in a collection that match your query parameters. The queries can include multiple, chained filters and combine filtering and sorting. They're also indexed by default, so query performance is proportional to the size of your result set, not your data set.

Offline support

The MySQL database caches data that your app is actively using, so the app can write, read, listen to, and query data even if the device is offline. When the device comes back online, it synchronizes any local changes back to website.

Below is a snapshot of the database with the relevant collections containing the information kept in the database.

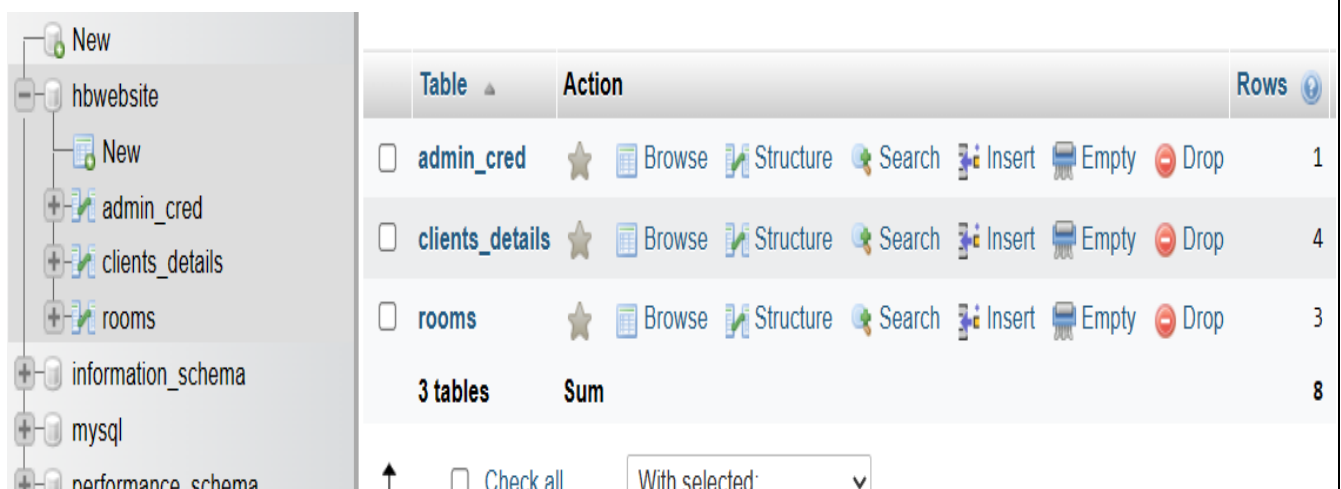


Table	Action	Rows
<input type="checkbox"/> admin_cred	★ Browse Structure Search Insert Empty Drop	1
<input type="checkbox"/> clients_details	★ Browse Structure Search Insert Empty Drop	4
<input type="checkbox"/> rooms	★ Browse Structure Search Insert Empty Drop	3
3 tables	Sum	8

↑ ☐ Check all With selected ▾

CHAPTER FOUR: CODING AND TESTING

Introduction

I developed the website using PHP, HTML and JavaScript. Below are the main code snippets with a brief explanation of the functionalities. Most of the application code will be delivered through the system files where further analysis can be done.

```
<!doctype htmhead>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <title>Alex Hotels - HOME</title>

    <?php require('links.php');?>

    <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/swiper@9/swiper-
bundle.min.css"/>

    <style>
      *{
        font-family: 'Poppins', sans-serif;
      }
      .h-font{
        font-family: 'Merienda', cursive;;
      }
      input::-webkit-outer-spin-button,
      input::-webkit-inner-spin-button{
        -webkit-appearance: none;
        margin: 0;
      }
      .custome-bg{
        background-color: #2ec1ac;
        border:1px solid #2ec1ac;
      }
      .custome-bg :hover{
        background-color: #279e8c;
        background-color: #279e8c;
      }

      .availability-form{
        margin-top: -50px;
```

```

        z-index: 2;
        position: relative;
    }
    @media screen and (max-width:575px) {
        .availability-form{
            margin-top: 0px;
            padding: 0 35px;

        }

    }

}

</style>

</head>
<body class="bg-light">

<?php require ('header.php'); ?>

```

The above code is a sample of the home page which contains most of the crucial information about the hotel and its offering.

```

<?php
$name=$_POST['name'];
$email=$_POST['email'];
$phonenumber=$_POST['number'];
$picture=$_POST['picture'];
$address=$_POST['address'];
$pincode=$_POST['pincode'];
$DOB=$_POST['dob'];
$password=$_POST['password'];
$Status="No Booking";
$con = mysqli_connect('localhost','root','','hbwebsite');
if(mysqli_connect_error()){
    die("Connection to database failed".mysqli_connect_errno());
}
else {
    $results = mysqli_query($con,"INSERT INTO
clients_details(Username,email,phone_number,picture,addres,pincode,DOB,Pass,Ro
omBooked)values('$name','$email','$phonenumber','$picture',
'$address','$pincode','$DOB','$password','$Status')");
    if (!$results){
        echo("Error is " . mysqli_error($con));
    }
    else{echo 'seccesful';}
}

```

```
}  
?>
```

The above code allows users to be registered as clients of the hotel thus the only way to be able to get into the system because only registered customers can log in.

```
<?php  
session_start();  
?>  
<?php  
$con = mysqli_connect('localhost','root','','hbwebsite');  
if(isset($_POST['login'])){  
    $Ustertype=$_POST['ustertype'];  
    $email=$_POST['email'];  
    $password=$_POST['password'];  
    if($Ustertype=='Client'){  
        $query = "SELECT * FROM clients_details WHERE email = '$email'";  
        $results = $con->query($query);  
        if (!$results){  
            echo("Error is " . mysqli_error($con));  
        }  
        else{  
            if ($results->num_rows > 0 ){  
                $row = $results->fetch_assoc();  
                if ($row['Pass'] == $password && $row['email']==$email){  
                    $_SESSION['email']=$row['email'];  
                    header("Location: booknow.php");  
                }  
                else{  
                    echo("wrong pass");  
                }  
            }  
            else{  
                echo("unregistered");  
            }  
        }  
    }  
}
```

The above code will allow users to login and directed to a page where they can make their reservations in case the customer puts a wrong password or is not registered the system will tell the user to check details again or he/she is not registered.

```
if(isset($_POST['VIP'])){  
    $Status="vip";  
    $stat="UnBooked";  
    $newState="Booked";  
    $email = $_SESSION['email'];
```

```

        $query="UPDATE clients_details set RoomBooked = '$Status' WHERE
email='$email'";
        $result=mysqli_query($con,$query);

$query="SELECT * From rooms where RoomType='$Status'";
$res=mysqli_query($con,$query);

$row=mysqli_fetch_assoc($res);
$quantity=$row['quantity'];

$zero=0;
if($quantity==$zero){
    $qry="UPDATE rooms set statuses='$newState'where RoomType='$Status'";
    mysqli_query($con,$qry);
    echo"All VIP Rooms are Booked Check other Rooms";
}else{
    $num=1;
    $Quantity=$quantity-$num;
    $qry="UPDATE rooms set quantity='$Quantity' where RoomType='$Status'";
    $rez=mysqli_query($con,$qry);
    echo"successfully booked";
}

}

elseif(isset($_POST['cancelVIP'])){
    $Status="vip";
    $stat="Unbooked";
    $state="No Rooms Booked";
    $email = $_SESSION['email'];
    $query="UPDATE clients_details set RoomBooked = '$state' WHERE
email='$email'";
    $result=mysqli_query($con,$query);

    $qry="SELECT * From rooms WHERE RoomType='$Status' ";
    $res=mysqli_query($con,$qry);

    $row=mysqli_fetch_assoc($res);
    $quantity=$row['quantity'];
    $num=1;
    $Quantity=$quantity+$num;
    $qry="UPDATE rooms set quantity='$Quantity' where RoomType='$Status'";
    if($rez=mysqli_query($con,$qry)){
        echo"successfully cancelled";
    }
    if($row['quantity']>0){
        $qry="UPDATE rooms set statuses='$stat' where RoomType='$Status'";
        mysqli_query($con,$qry);
    }
}

```

```
}
```

The above code shows the query which will update client's details table and rooms table when a customer makes a booking or cancel reservation.

```
if (isset($_POST["add"])){
    $Room=$_POST['name'];
    $Quantity=$_POST['quantity'];
    $Amount=$_POST['cost'];
    $Status="Unbooked";
    $query="INSERT INTO rooms(RoomType, statuses, amount, quantity)
VALUES('$Room', '$Status', '$Amount', '$Quantity')";
    $results = mysqli_query($con,$query);
    if($results){
        echo"Successfully added";
    }else{
        echo'failed to add';
    }
}

if(isset($_POST['delete'])){
    $Room=$_POST['name'];
    $Quantity=$_POST['quantity'];
    $Status="Unbooked";
    $query= "UPDATE rooms set quantity='$Quantity' WHERE RoomType = '$Room' and
statuses = '$Status' ";
    $results = mysqli_query($con,$query);
    if($results){
        echo"Updated Successfully ";
    }else{
        echo'failed to update';
    }
}

if(isset($_POST['logout'])){
    header("Location: index.php");
}
?>
```

The above code allows admin to update rooms that are available for booking.

Testing

Test Plan

Test Case 001

- Test Title: Registration
- Test Procedures: Fill the form and click Register.
- Expected Result: Add user in the database

Test Case 002

- Test Title: Client & Admin Login.
- Test Procedures: Type email & password.
- Test Data: Username & password must be correct. Otherwise system will show error Example “you are not registered”.
- Expected Result: It will redirect to login book now page or admin panel for administrators.

Test Case 004

- Test Title: Make Reservation
- Test Procedures: click “book now” button
- Expected Result: System will capture the room booked by the customer and add to database

Test case 005

- Test Title: Cancel booking
- Test Procedures: Click “cancel booking”.
- Expected Result: update rooms table by plus one and remove the room from client’s row.

Test case 006

- Test Title: Add and Remove rooms
- Test Procedures: login as Admin, add or remove a type of room.
- Expected Result: update rooms table by changes made

Usability Testing Result

The data collected during the usability testing were analyzed using questionnaires. And a report analysis was generated. Below are the results and finding of the usability testing conducted during the evaluation.

It was simple to use this system (10 responses)

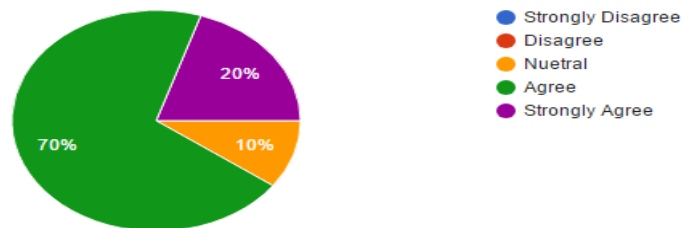


Figure 1: questionnaire response 1

The above chart shows the number of participants who agreed that the system is easy to use.

I was able to complete the tasks given quickly using this system (10 responses)

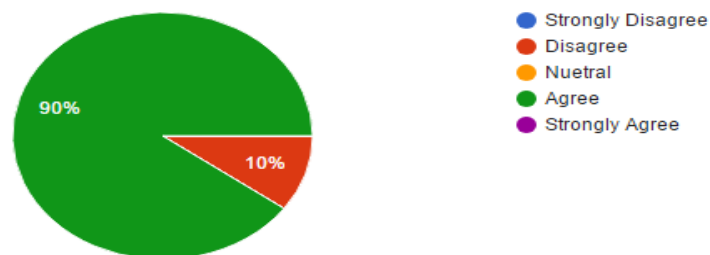


Figure 2: Questionnaire response 2

The above chart shows that 90% of participants were able to complete the tasks given during the evaluation

The system gave me error messages that clearly told me how to fix them
(10 responses)

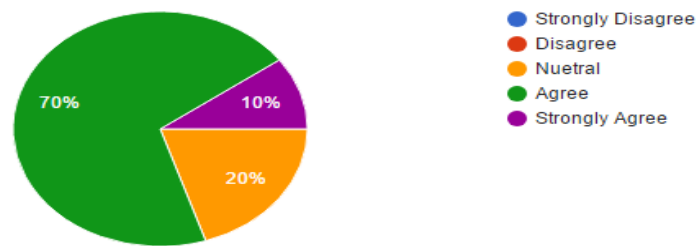


Figure 3: Question response 3

The above chart shows that 70% of participants agreed that the system provided an error message that was helpful to fix the errors.

It was easy to find the information i needed (10 responses)

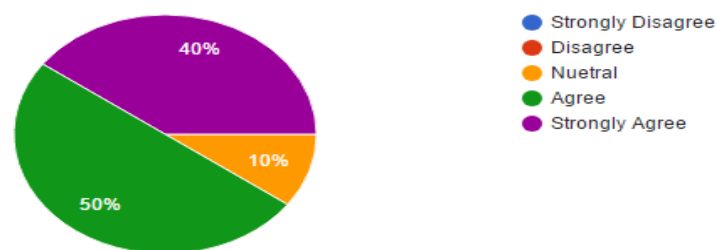


Figure 4: Questionnaire response 4

The above chart shows 50% of users agreed that it was easy to find the information needed on the website

Clicking on icons/links takes me to what i expected (10 responses)

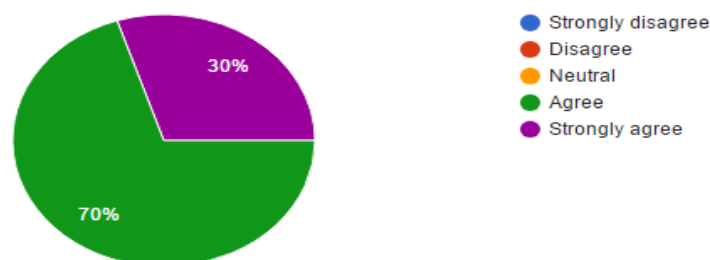


Figure 5: Questionnaire response 5

The above chart shows that 70% of users agreed that the icons on the website link them to the expected page.

IMPLEMENTATION

System implementation is the most important steps in case of finalizing the approved web system. We need to justify some basic requirement (software & hardware) so that the system will work without having obligation and customers dissatisfactions.

Software Requirement:

Operating System: Windows (XP, 7, 8, 8.1) or Mac OSX (Tiger, Leopard, Snow Leopard, Lion, Yosemite).

Web Browser: Google Chrome, Internet Explorer (ver. 8 or later), Mozilla Firefox, Safari (Mac).

Database Management System: MySQL, SQL Server, Microsoft Access, Oracle.

Web Development System: Visual Studio 2010 or later, Adobe Dreamweaver, Notepad, and Notepad++.

Others: .NET FRAMEWORK.

Hardware Requirement

RAM: Minimum 1GB or higher.

HDD: Minimum 50 GB.

Processor: Intel Pentium 4 or AMD.

LAN: Version 1.6.6.406(For fixing up client disconnection

CHAPTER FIVE: Recommendations and Conclusion

Recommendations

To access the website more efficiently and without any delays or interruptions, it is recommended that one use a consistent and uninterruptible internet supply. It is known that for any meaningful computer-based system to be integrated into any organization, proper training and orientation have to be given both to the staff and the clients. The staff should also be highlighted the need and advantages of the system and how it will equally assist them in their various field of work. They should also be informed of the cost of maintaining this new system so that they will handle it with all carefulness. To further improve the application, I recommend chat an imbedded to help send mass messages to registered clients about services and promotions at the hotel. I also recommend the introduction of a payment gateway as part of the future work.

Conclusion

In conclusion, this report has been able to address the issues customers and hotels face when making a reservation using a manual booking system by developing an online booking system for clients to make reservation at their own comfort. It has also discussed on the past studies of online booking and the integration of the internet by hotels to connect more to their customers. It has discussed on the types of method used to gather the requirements needed, the type of development methodology selected for the research and how UML diagrams were created to show the interface of the system. A detailed description of pages on the website was discussed and the types of evaluation used to evaluate the website. In the course of this research project, a few limitations were face and they are;

- In the website, customers can reservations but are unable to make online payments.
- During the heuristic's evaluation, the desired numbers of experts could not be met; this would have enabled more elaborate evaluation to be achieved.
- The environment used in conducting the usability testing was not completely controlled by the researcher because it was a third-party hotel.