HOTEL MANAGEMENT SYSTEM WEBSITE
PROJECT PROPOSAL

(COMP 3340)

July 5, 2019

TOCHI IBEGBULAM

104863822

TABLE OF CONTENTS

1. INTRODUCTION

The software product to be produced is a Hotel Management System which will automate the major hotel operations. This professional ecommerce website will feature the luxurious rooms Hotel Biz has to offer. This website will have a great user experience for both Hotel Biz and its customers, and look and feel. It will be responsive on different platforms.

The main purpose of the proposal is to describe the objectives and benefits this project is going to achieve as well as, the web design layout, web technologies and the methodologies that will be used to achieve project success.

If you are going on a long vacation, short trip or just looking for where to pass the night, this website will provide various ads posted by Hotel Biz. The website will feature each room in the hotel. Each room will have a status like occupied, vacant, out of service etc. Each room will also have a certain price.

The technologies that will be used but not limited to these are PHP, MySQL, JavaScript, HTML5, CSS3, Google API.

2. PROJECT SCOPE

- Functional website that will allow user access at their convenience (24 hours/7days)
- Available on all hardware platforms
- Accessible from any web browser and user friendly
- Increase organization’s online presence
- To monitor sales
- Store customer info in a database
- Store room information like status (occupied, vacant, out of service) in a database
- There will be different user level privileges
- Display cost of room
- Categorize rooms based on assets
- Perform data analysis on performance, sales and services rendered
- Generate data analysis report

3. PROJECT REQUIREMENT

This section contains all the software requirements at a level of detail, combined with use cases, use case descriptions and diagram in order to describe the hotel management system in a non-technical everyday language. This will enable the designer and tester to design and test the system to satisfy those requirements.

3.1. FUNCTIONAL REQUIREMENTS

Functional requirements define the necessary features and capabilities the hotel management system must perform.
The system must:

- Record reservations
- Record the customer's first name
- Record the customer's surname
- Record the number of occupants
- Record the room number
- Record the customer's phone number
- Generate a unique confirmation number for each reservation
- Record the expected check-in date and time
- Record the expected checkout date and time
- Check-in customers
- Allow reservations to be modified without having to re-enter all the customer information
- Checkout customers
- Record that the room is empty
- Record the payment, including meals
- Accept reservations for the restaurant and room service
- Display hotel occupancy for a specified period of time
- Allow for the deletion of information, regarding rooms, rates, menu items, prices and user profiles
- Allow for the modification of information regarding rooms, rates, menu items, prices and user profiles

3.2. NONFUNCTIONAL REQUIREMENTS

Nonfunctional requirements describe the characteristics or how the system should be in terms of performance, design constraints, availability, security and database requirements.
The system should be:

- Available 24 hours, 7 days a week
- Able to verify log in information within few seconds
- Able to load user interface screen within few seconds
- Able to run on numerous platforms
- Able to retain customer information
- Accessible by a user log in screen that requires a password
- Accessible by a customer service representative and management
- Allow customer service representative and management have access to different subsystems

3.3. USE CASES

The use case below will focus on the users and how they accomplish a particular goal using different scenarios. This section will contain the goal to be achieved, the primary actor and the steps needed to accomplish the goal.

A. TITLE: Online Booking
PRIMARY ACTOR: Guest
SUCCESS SCENARIO:

- Guest logs in into personal account with personal details
- Guest selects room(s)
- Guest books room(s)
- Guest pays for reservation using a credit card
- Guest gets a notification with a unique confirmation ID that reservation was successfully made

PRECONDITION: Guest has already created an account on website

B. TITLE: Cancel Reservation
PRIMARY ACTOR: Guest
SUCCESS SCENARIO:

- Guest logs in into personal account with personal details
- Guest views reservation in the reservation section of the website
- Guest cancels reservation within 24 hours before check-in date
- Guest gets a notification that reservation was successfully cancelled
- Guest gets a refund

PRECONDITION: Guest has already made and paid for a reservation

C. **TITLE:** Check-in
PRIMARY ACTOR: Customer Service Representative, Management
SUCCESS SCENARIO:
- Customer Service Representative or Management confirms conservation using guest unique confirmation ID
- Customer Service Representative or Management checks-in guest(s)
- Customer Service Representative or Management takes guest(s) to the booked room

3.4. USER LEVEL PRIVILEGES

There will be 3 user levels for the Hotel Management System. They are
- Guest
- Customer Service Representative
- Management

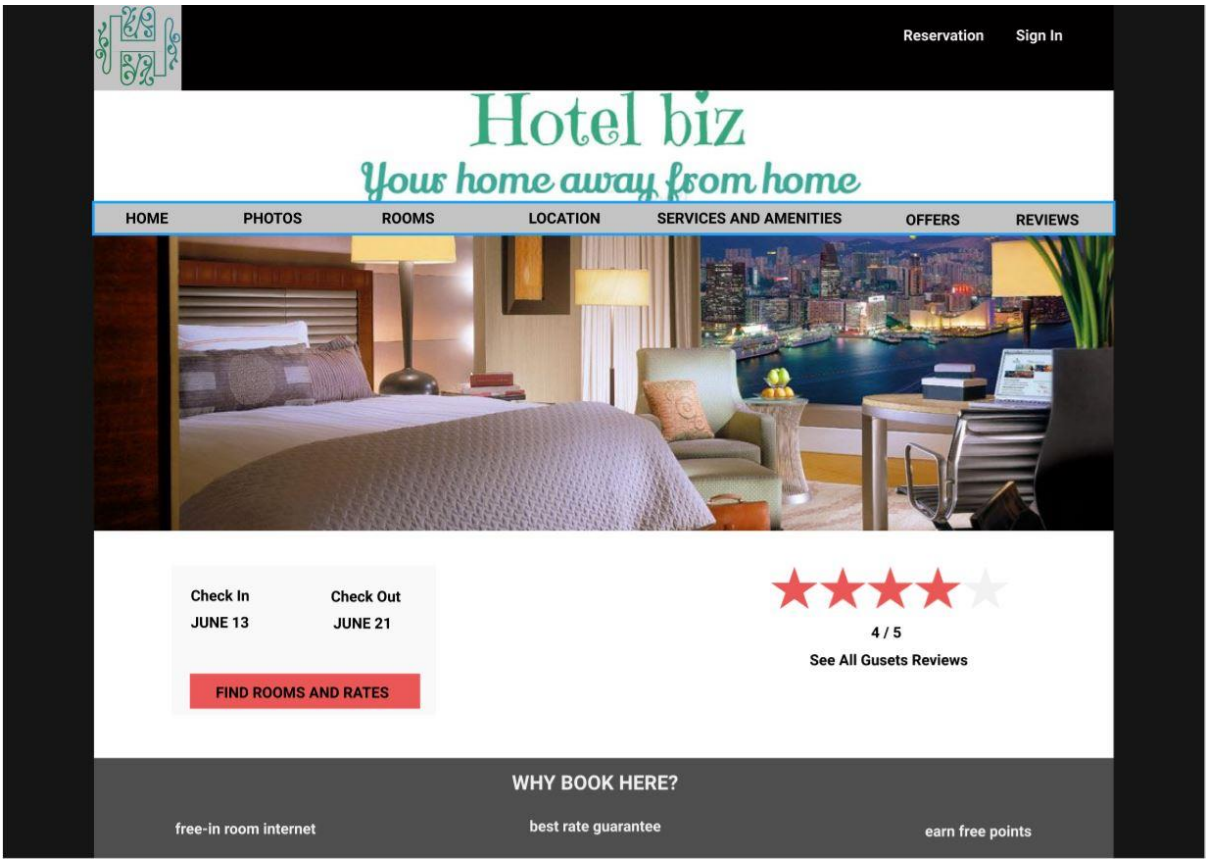
3.5. QUERIES

- Where is the hotel's location?
- Which period of the year has the most bookings?
- What type of room does the hotel have?
- Which type of room is mostly booked?
- Which type of people or organisations make bookings?
- How many languages would the website support?
- How would data be gathered for data analysis?
- What kind of data would be gathered for data analysis?
- Which browsers will the website run on?
- What kind of database would be used?
- What will disability support technology be incorporated?
- Which webserver will be used?
- Which operating system will the web server support?

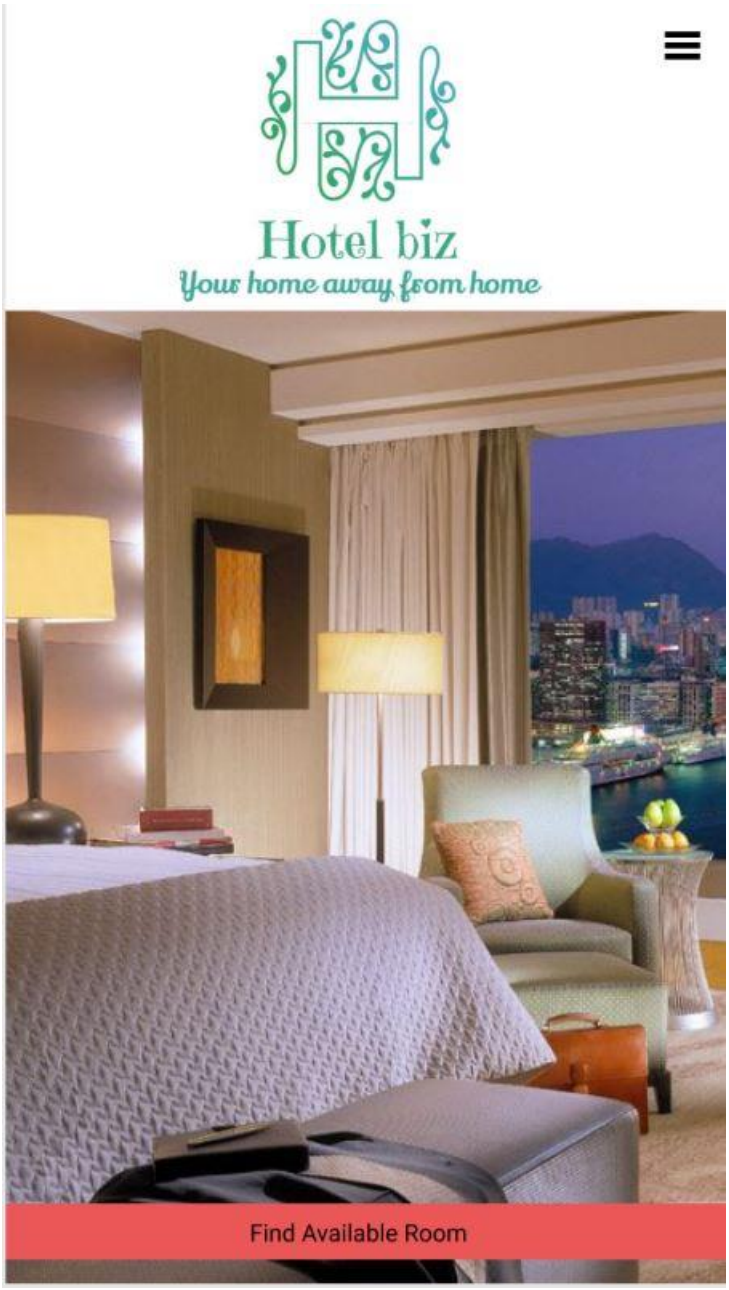
4. PROJECT DESCRIPTION

4.1. WEBSITE VIEW

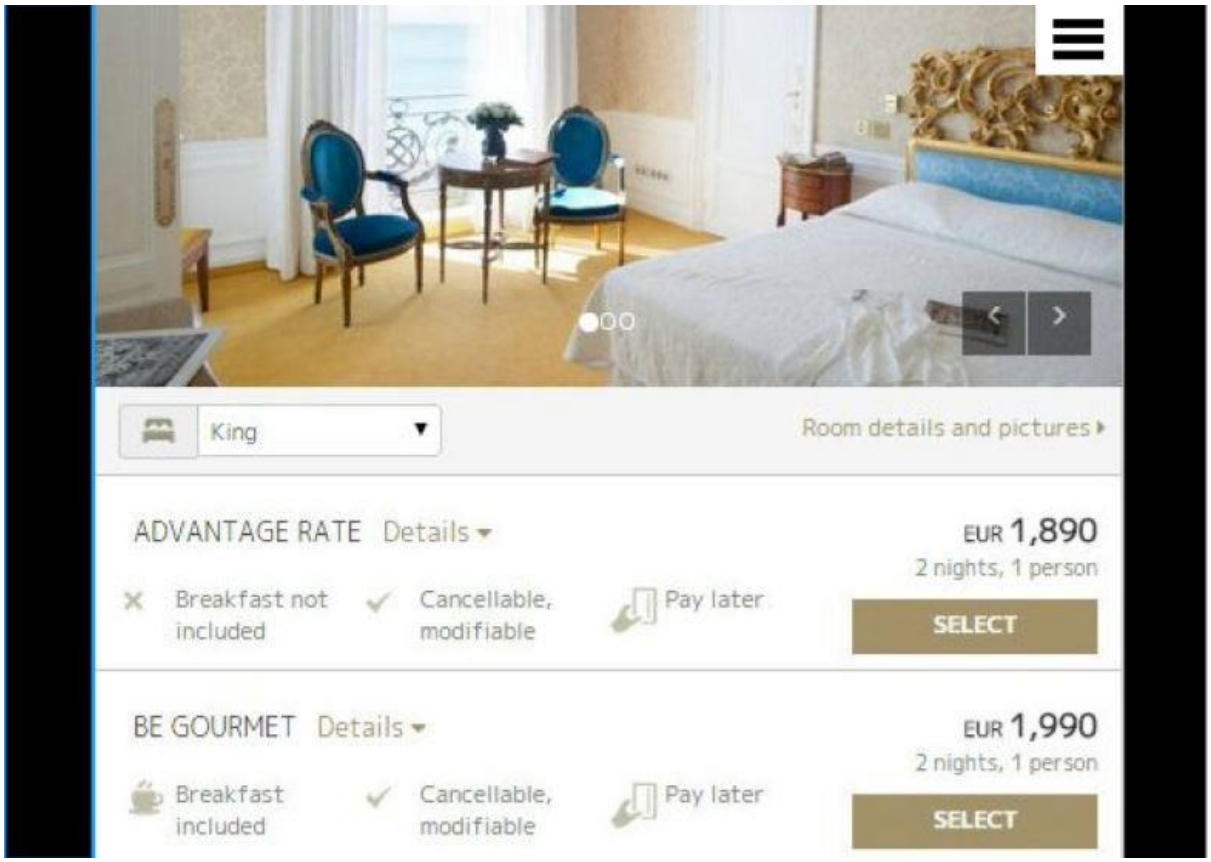
The preliminary graphical design for the website will undergo many changes in the future. The following diagrams illustrate some of the ideas for the layout of the final website for desktop and mobile platforms:



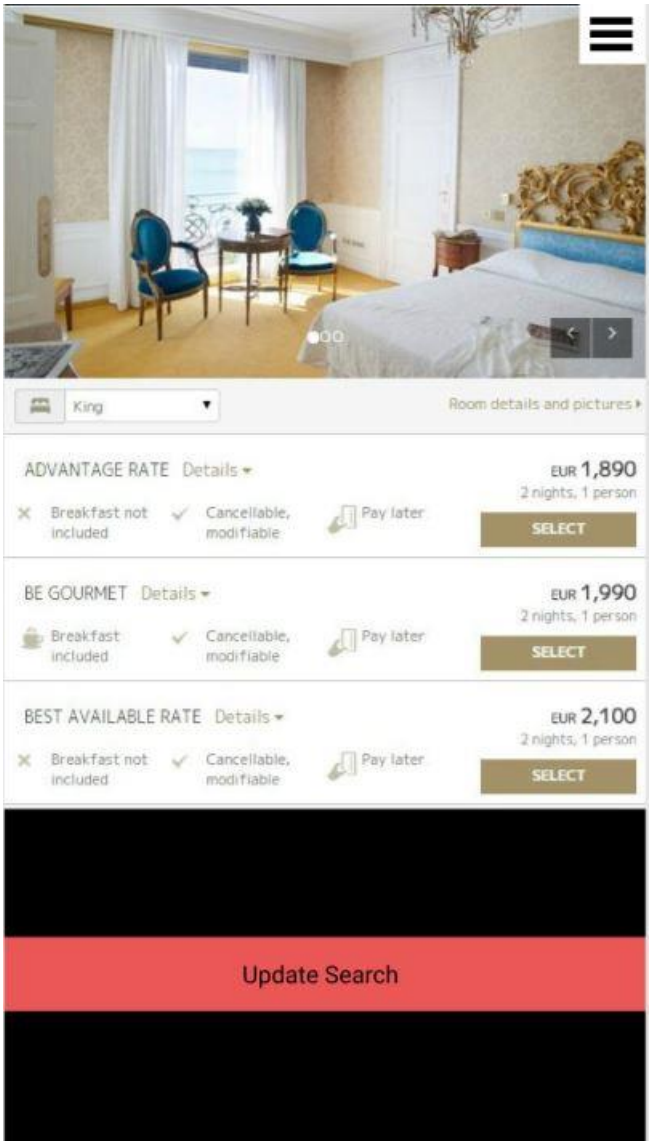
DESKTOP HOME PAGE



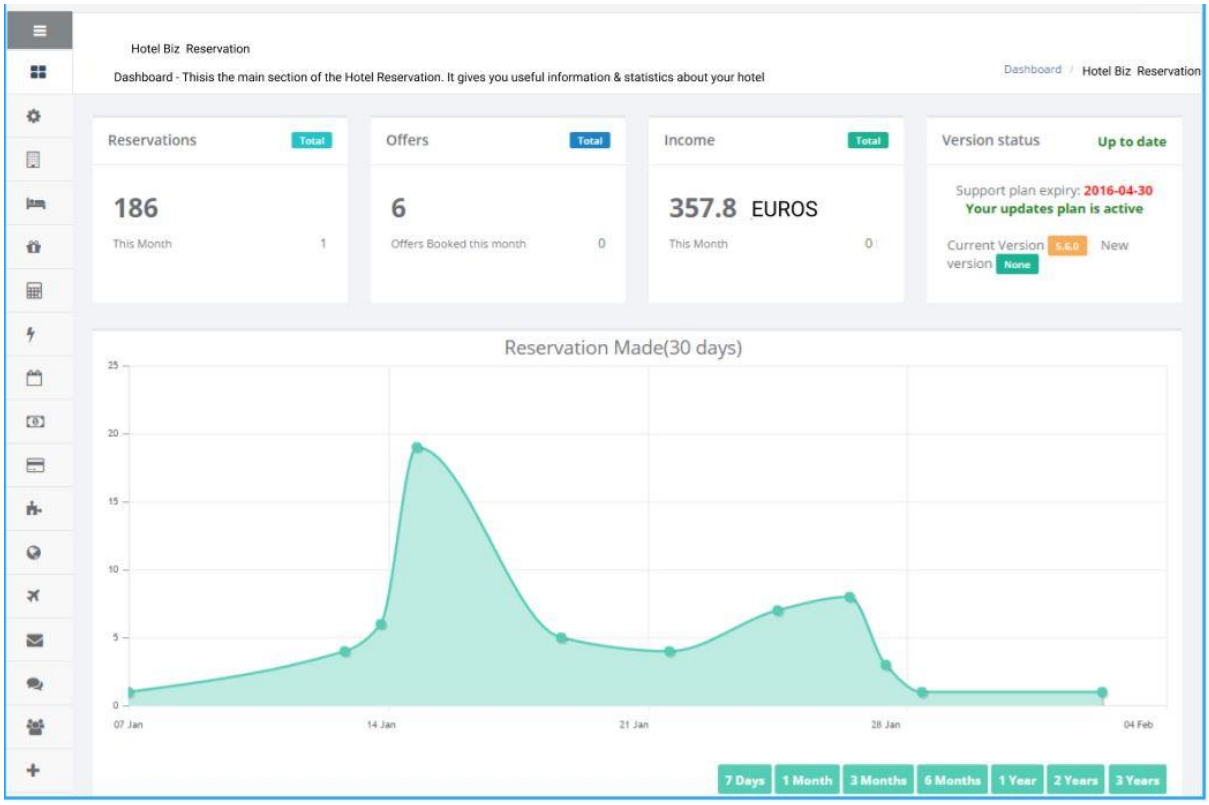
MOBILE GUEST HOME PAGE



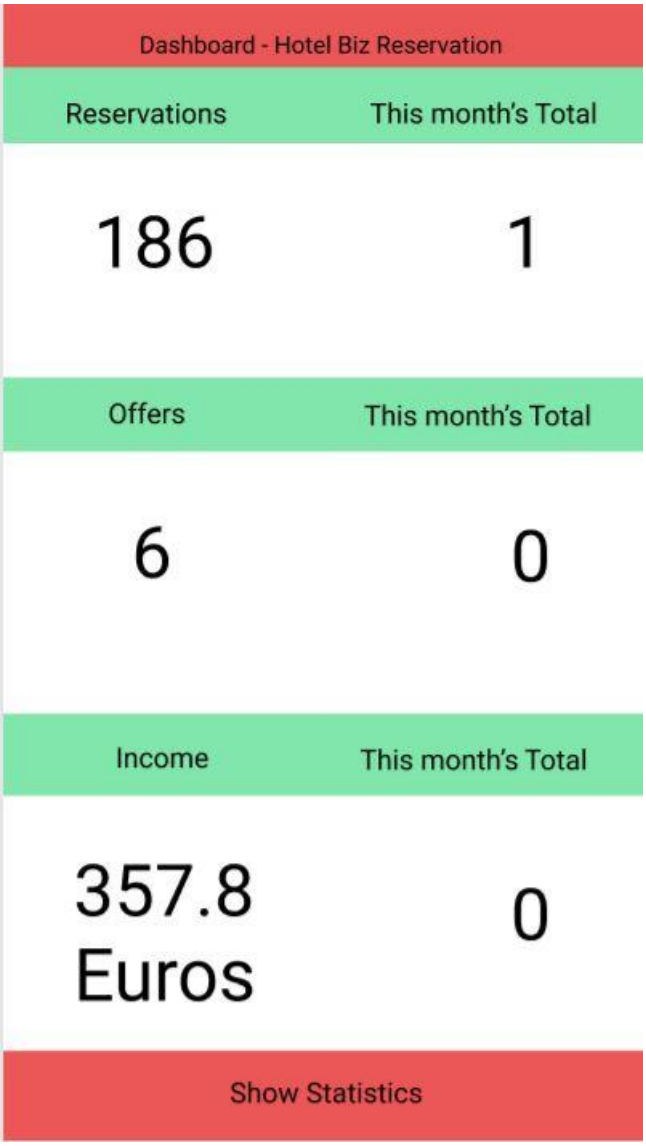
DESKTOP BOOKING PAGE



MOBILE BOOKING PAGE



DESKTOP ADMIN STATISTICS PAGE



MOBILE ADMIN STATISTICS PAGE

4.2. DATABASE IMPLEMENTATION

MySQL database will store and retrieve data. PHP integrates well with MYSQL database and generates viewable HTML content from MySQL database queries. The database will store the guests' information and room information.

The database would be built based on the following quesries:

- What category of rooms can be booked?
- How many rooms can be booked at once by the same customer?
- How many guests can be assigned to one room?
- What kind of extra services would be part of the booking?
- How long will the guest(s) stay in the room.

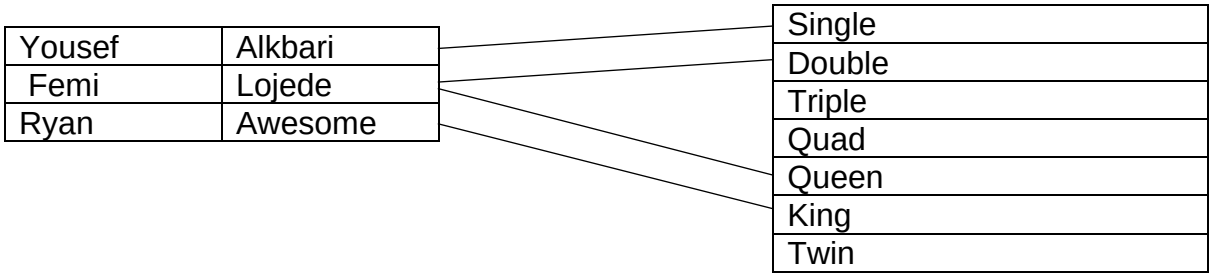
Based on these queries the database system would result to a many-to-many relationship

guest_id	first_name	surname	address	city	Phone_number
1	Yousef	Alkbari	226 Walker Rd., Downtown	Windsor	286-455-7788
2	Femi	Lojede	1025 Sandwich Street West	Windsor	519-888-9999
3	Ryan	Awesome	485 Queens Street	London	226-419-9999

GUEST DATABASE

Room_id	type of room
1	single
2	double
3	triple
4	quad
5	queen
6	king
7	twin

ROOM DATABASE



TABLES SHOWS THE RELATIONSHIP THE GUEST AND ROOMS BOOKED

guest_id	room_id	booking_date
1	1	May 23, 2019
2	2	June 1, 2019
2	5	June 1, 2019
3	6	July 12, 2019

GUEST-ROOM

5. DATA ANALYSIS

Google Analytics API would be used to generate a data analysis report in order to keep track of performance, sales and services rendered at any time period. Different queries could be tracked. Examples: number of visitors who visit the website, visitor's behaviour, most booked room, etc.

6. SYSTEM ADMINISTRATION, TESTING, AND MAINTENANCE PLAN

This proposal is going to address the following:

A. MAINTENANCE PLAN AFTER IMPLEMENTATION:

- Monthly backup of site
- Database backup
- Using version control (Git) to backup software codes and library
- Updating OS and web browser
- Scripts update
- Updating plugins to maintain security and reliability
- Layout and content updates at request

B. TESTING AND QUALITY ASSURANCE:

The main objective of testing is to uncover a host of errors, systematically and with minimum effort and time.

- Load test of site
- Speed test of site
- Responsiveness test
- Perform reliability test on all web browsers, OS and mobile devices

C. FILE NAMING CONVENTION

These would be the key rules for naming and organising files for the website:

- Lower case letters will be used to name files
- Spaces will be avoided entirely in naming files
- Files would be replaced by using the same file name
- Special characters will be avoided entirely
- Replace spaces with hyphens

- File names will be descriptive
- Short file names

D. DIRECTORY FOLDER STRUCTURE

Files used to design the website would be assembled into a sensible structure on the server in order for the files to be able to talk to one another. They are:

- **Root folder:** This is where the html files would be placed
- **PHP folder:** This is where the php files that will access the database would be placed
- **Images folder:** Images of the website would be placed here
- **Styles folder:** This is where the CSS files would be placed
- **Scripts folder:** This is where the JavaScript files would be placed

E. ELEMENTS AND CODES

- Cross browser testing would be performed in order to ensure compatibility with the most popular web browsers like chrome, firefox, opera, IE.
- Testing will also be performed on mobile devices
- Disability support would also be confirmed via test