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Online Hotel Management System

A Report Submitted

In partial fulfillment for the Degree of

B. Sc. Computer Science

By

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Pursued in

Department of Computer Science

Faculty of Computer Science

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CERTIFICATE

This is to clarify the project report entitled Online Hotel Management System submitted by Sushama Kangude (202001149) to the Department of Computer Science, Faculty of Science & Technology, Pune, in partial fulfilment for the award of the degree of B.Sc. in Computer Science is a bona fide record of project work carried out by her under my supervision. The contents of this report, in full or in parts, has not been submitted to any other institution or University for the award of any degree or diploma.

Ms. Shriprada Chaturbhuj

Project Guide

Dr. Pooja Kulkarni

HEAD, Department of Computer Science

Pune

May,2023

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Ms. Shreepada Chaturbhuj

Project Guide

Dr. Pooja Kulkarni

Head, Department of Computer Science

Pune

May,2023

2. Declaration

I, Hemlata Sutar and Sushama Kangude, hereby declare that the project entitled Online Hotel Management System is our original work, and the information presented in this report is based on my own research and analysis. I have not copied any material from any source without proper citation, nor have I presented the work of others as my own.

All references used in the presentation of this report have been duly acknowledged and cited in the bibliography. Any material used directly or indirectly from other sources has been acknowledged and referenced as per the citation guidelines.

I further declare that this report has not been submitted for assessment to any other institution or university. I understand that any violation of academic integrity will lead to consequences as per the policies and regulation of the institution.

Hemlata Sutar & Sushama Kangude

10/05/2023

3. ACKNOWLEDGEMENT

Perseverance, inspiration and motivation have always played a key role in success of any venture. In the present world of competition there is a race of existing in which those who are having willed to come forward succeed. Project is like a bridge between theoretical and practical working. With willing we join this particular project. To design and compare a project report is very laborious work, which no student complete without taking any help from any professional.

We express our deep gratitude to our guide for his invaluable guidance during the project. His unlimited guidance, innovative ideas and tireless efforts helped along the way in completing the project. We are also thankful to the staff members for their encouragement and cooperation in this successful completion of our project. In the end we would like to thank our parents whom greatly indebted for having us brought us love and encouragement of this stage.

4. Abstract

Nowadays, Online Hotel Management System is one of the most essential tools that are mostly used in hotels, it is mostly used to manage the hotel related activities such as booking, record keeping, payment records as well as managing the information about hotel's rooms. Many hotels are still operating manually, they don't have adequate software to manage their daily activities.

In this project we tried to develop a computerized and web based Online Hotel Management System. Our main intension is to allow a customer to book a room as per their choice. This system is designed to overcome all challenges related to management of hotel's rooms that were used to be handled locally and manually.

Online Hotel management System has its own significance. Using this system, it will help us to record all transactions made at a daily booking, recognize all customers, balance etc. It will manage all activities that increase productivity and maximize profit by minimizing the risk of getting loss because all transactions will be recorded to the system.

5. Abbreviation

The following are the abbreviation used in this report

SRS – Software Requirement Specification

HMS – Hotel Management System

API – Application Interface

OS – Operating System

DBMS – Database Management System

PHP – Hypertext Preprocessor

MySQL – My Structured Query Language

6.Introduction

6.1 Background:

Our project on "Online Hotel Management System" gives an idea about the management in hotels. Although, hotel is already having well-developed software for information management, we just want to study how this is done. So, we selected hotel management system as our project. Developing software on a topic like "Hotel Management System" has much scope. It can be made more attractive and many more modules can be attached to provide various service to customers. The package gives all the information regarding hotel system and working. The package also provides each and every detail about employee working in hotel. This software is useful to the departments for managing their activities. In the most of the hotels the back-end used only MS-ACCESS. We have included MySQL in our project since it is pure relational database. Most of the hotels facing problem in providing rooms to customers. In our project we have tried to solve this problem and at any moment of time the status of room that weather it is vacant or occupied is shown correctly. The project consists of two main parts: Building solution for database for storing and representing metadata in easy way. The reservation process of reserving rooms for the customers, booking the rooms, vacating the rooms, billing process, etc. all are computerized and the management is done without any difficulty. We also provide the online payment system, that user can pay the bill online. The overall process system will be interactive, faster and user-friendly for the end user.

6.2 System Overview:

Online Hotel Management System is a software that enables hotel chains to run business operations more effectively and efficiently. This software is designed and developed with latest technology meeting Hotel Management Standards.

To resolve the current problems the hotel decided to do in a fashionable way so that they know their situation. So, hotel agreed to do in a computerized method to resolve the booking problems. The system belives that advantages of doing in a computerized system. This system also included online payment option for the customers. The overall process system will be interactive, faster and user-friendly for the end user.

7. Modules

There are several modules required to complete this system. Here we are discussing the main modules or core modules of the system.

➤ Customer Profile:

In the Customer profile, people can check the availability of rooms and they can also book a room according to their budget and need. Customer profile contains their name, Contact details, address, and other necessary details, etc. They need to sign-up for booking the hotel, which will make them as well as the manager of the hotel easily interact with each other. They can pay the amount Online and if they need to do payment Offline, they must give some advance amount to confirm their room.

➤ Booking:

The customer can easily search their Room from the various option available. This all will be so user-friendly so that Customer will not find any trouble in the booking room. Once the room is searched and the customer finds his choice room then this module helps the customer to book the room by following the rules of the Hotel like Check-in and check-out time of the Hotel, Limit of people per room, etc. If everything is done properly, he will be asked to pay partial or complete money. And then he will be forwarded to Payment Gateway. Where he can easily pay Online.

➤ Payment Details:

After filling in the booking details clients need to pay the money using different options available like cash/net banking/ATM card. The payment portal would use a payment gateway to clear payment. Once payment will clear receipt of payment will be generated automatically and this receipt will be sent to the manager and the Receptionist will get the notification to make the room ready before they arrive.

➤ User Authentication According to His/her Role:

This portal will take care of every profile in our system. No user will be allowed to use our system without a valid ID. Every profile must authenticate using system procedure. This would ensure the security of our system.

8. Project Overview

8.2 Purpose

The Software Requirements Specification (SRS) will provide a detailed description of the requirement for the Hotel Management System (HMS). This SRS will allow for a complete understanding of what is to be expected from the newly introduced system which is to be constructed. The clear understanding of the system and its functionality will allow for the correct software to be developed for the end user and will be used for the development of the future stages of the project. This SRS will provide the foundation for the project. From this SRS the hotel management system can be designed, Constructed and finally tested. The system should be user appropriate, easy to use, provide easy recovery of errors, and have an overall end user high subjective satisfaction. This application gives him the power and flexibility to manage the entire system from a single customer. Hotel management android project provides room booking and other necessary hotel management features to make it a complete portable hotel management solution.

8.3 Future enhancement

- Laundry System
- Car Facilities
- Restaurant System
- Tourist Package & Guide System
- Meeting & Conference Facility
- Chatbot

9.Overall description

9.1 Product perspective:

Online Hotel Management System pricing than offline hotels, with increased access, lower transaction and rooms cost, convenience and greater anonymity for consumers.

The main perspective of this project is to provide an online platform for bookings of hotel's rooms with secure payment option and easy done. This is similar to going hotel and booking that we have, but with the use of computers for creating online platform, it will be easy for people to book hotel at any time. The newly introduced system will provide an easy access to the system and it will contain user friendly functions with attractive interfaces. The system will give better options for the problem of handling large scale of physical file system, for the errors occurring in calculations and all the other required tasks that has been specified by the client. The outcome of this project will increase the efficiency of almost all the tasks done at the Hotel in a much convenient manner.

9.2 System Interface:

➤ Login:

Customers logins to the system by entering valid user id and password for booking. End user can browse hotels' rooms, their categories, he/she can book rooms to his/her wish list.

➤ Register Interface:

If customers want to book room the he/she must be registered. Unregistered user can not view the login page, booking page as well as payment option.

➤ Booking Interface:

If customers want to book the room, then login is must. Without login, user will not able to see booking page. When user done with correct login id and password, then room booking page will get open.

➤ Payment:

Secure billing will be prepaid as debit or credit card after booking.

9.3 Design Constraints:

➤ User Experience:

The application must be designed with a focus on user experience to ensure that it is easy to use and navigate. The application must be visually appealing and intuitive, with clear and concise instructions and error messages.

➤ Network Connectivity:

The application requires an internet connection to function properly. The application must be designed to handle poor network conditions and intermittent connectivity, and must provide clear error messages to users in case of connectivity issues.

➤ Security:

The Online Hotel Management System must be designed with security in mind to protect user data and prevent unauthorized access. The application must implement secure authentication and encryption protocols, and regular security audits and updates must be performed.

➤ Database Management:

The software uses a database to store user and room information, as well as payment details. The database must be designed to handle large amounts of data and must be scalable to accommodate future growth.

➤ Platform Compatibility:

The Online Hotel Management System is developed using the PHP is compatible with any operating system. . However, the software may not be compatible with iOS or older versions of the operating system or devices with limited hardware capabilities.

9.4 Product Functions:

- **User Accounts:**
The software allows users to create and manage their accounts, which includes viewing past bookings, tracking current bookings, and payment information.
- **Room Details:**
The software provides detailed rooms information, including rooms descriptions, images, pricing.
- **Booking Tracking:**
The software provides real-time tracking of booking, informed about their booking' status and payment times.
- **Booking Filters:**
The application includes filter options such as price range, room type, and availability, making it easy for users to narrow down their search results to find the room they need.

9.5 User Characteristics:

- **Owner: -**

Hotel owner has the privilege of Monitoring and authorization of all the tasks handle by the system. He can access every function performed by the system. Owner of the company as well as the system can access to the administration panel which is consider the core of the system. As the main authorized person of the company owner gets the ability to manage the other users including their user levels and privileges. Taking backups of the system and restoring system can also be done by the Owner. Meanwhile he will be able to take all the kinds of reports available in the system. As the owner of the system and the company he has the power to set room rates as well. Hotel owner has the sole right of deleting a staff member from the system database

- **User:**

The user should be familiar with hotel's booking terminologies like check-in, check-out, transactions etc.

9.6 Constraints, Assumptions and Dependencies

➤ Constraints:

Software development crew provides their best effort in developing the system. In order to maintain the reliability and durability of system, some design and implementation constraints are applied. Availability of an android app for hotel management system could make the system portable but due to time constraint it is not possible. System will need a minimum memory of 512MB. But it is recommended to have a memory of 1GB. When designing interfaces of system, we had the capability of work with new tools. Considering the client's budget, we decided to create those interfaces in a simple realistic manner using affordable technology.

➤ Assumptions and Dependencies:

Some software used in implementing the system is with high cost and the client has agreed to afford the amount of money needed to purchase them. It's assumed that client won't change that decision on the next phases of the software development. Although we assume that client is using windows 7 or windows 8. Otherwise, if client use an open-source operating system, there is a need of changing the SRS accordingly.

10. Specific Requirement

10.1 External Interface

Screen Name	Description
Login	Login into the system as a user.
Booking	Book a room as per choice and accept payment type - credit or debit card.
Check- in	Check-in customers, accept payments.
Check-out	Check-out customers, generate bills.
Hotel Payment	Accept payment for the room.
Room Service	View room details, booking details, generate bills.

10.2 Performance Requirement

- Responsiveness: The software should load quickly and respond promptly to user interactions to provide a seamless user experience.
- Scalability: The software should be designed to handle a large volume of traffic and data, allowing for scalability as the user base grows.
- Reliability: The software should be highly reliable and available, minimizing downtime and ensuring that users can access the platform when needed.

10.3 Logical database requirements

- Data Structure: The software should have a well-structured database that enables efficient querying and retrieval of data, minimizing response times.
- Data Security: The database should be highly secure, protecting sensitive user and supplier information from unauthorized access or theft.
- Data Backup and Recovery: The software should have a robust backup and recovery system in place to ensure that data is not lost in the event of a system failure or outage.

10.4 Software system attributes

- **Maintainability:** The software should be designed with maintainability in mind, making it easy for developers to identify and fix bugs, add new features, and modify existing code as needed.
- **Portability:** The software should be designed to be portable, allowing for deployment on a range of platforms and operating systems.
- **Usability:** The software should be designed with usability in mind, making it easy for users to navigate and complete tasks without confusion or frustration.

11. Project screens

INTRODUCTION

The User Manual explains us the step by step procedure to use the Hotel Management system.

REQUIRED SOFTWARE

The required software for the Hotel Management project would be as follows:

- Operating System:

Microsoft Windows 8 or higher.

- PHP:

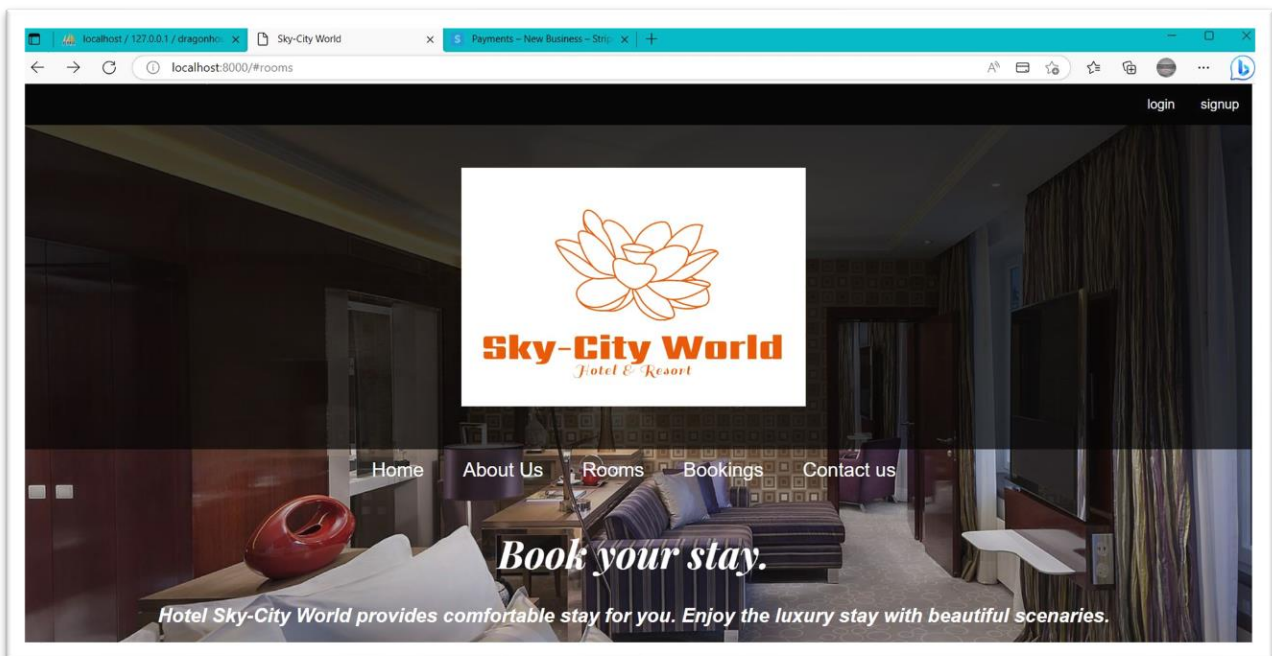
It can be downloaded from Microsoft website (<http://www.microsoft.com/en-in/download/details.aspx?id=3324>).

Xampp:

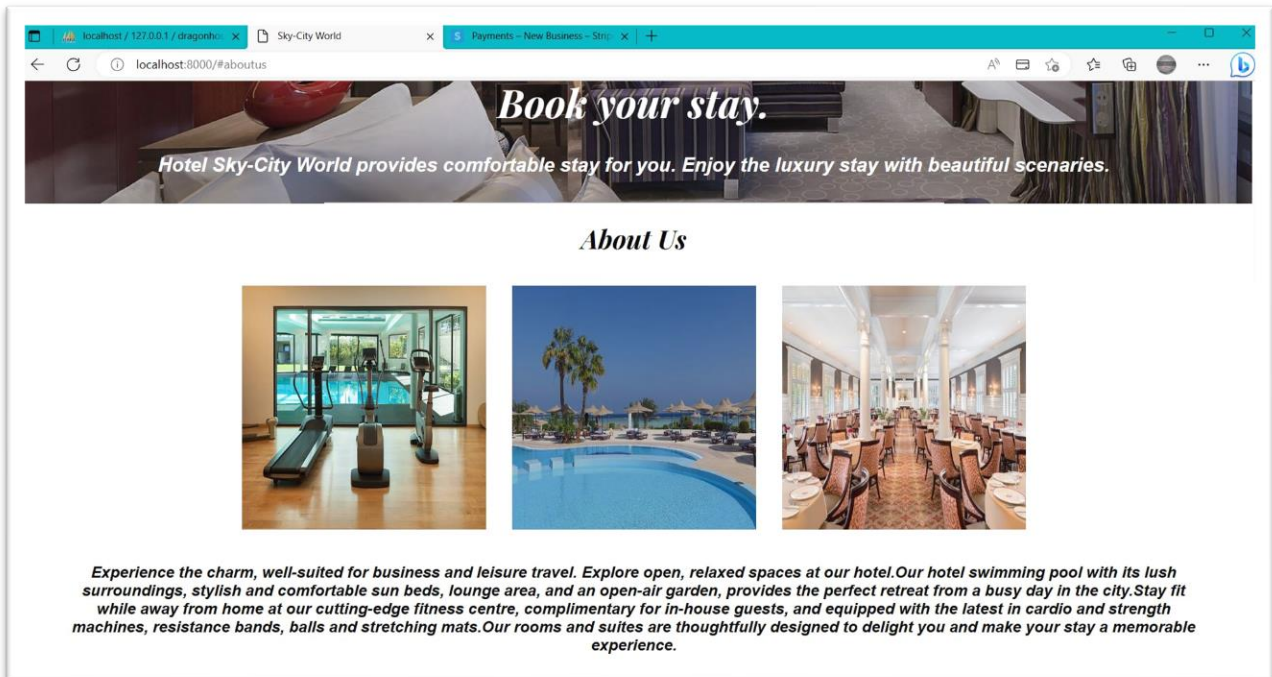
It can be downloaded from below website : <https://www.apachefriends.org/download.html>

1.Home page of Hotel Management System:

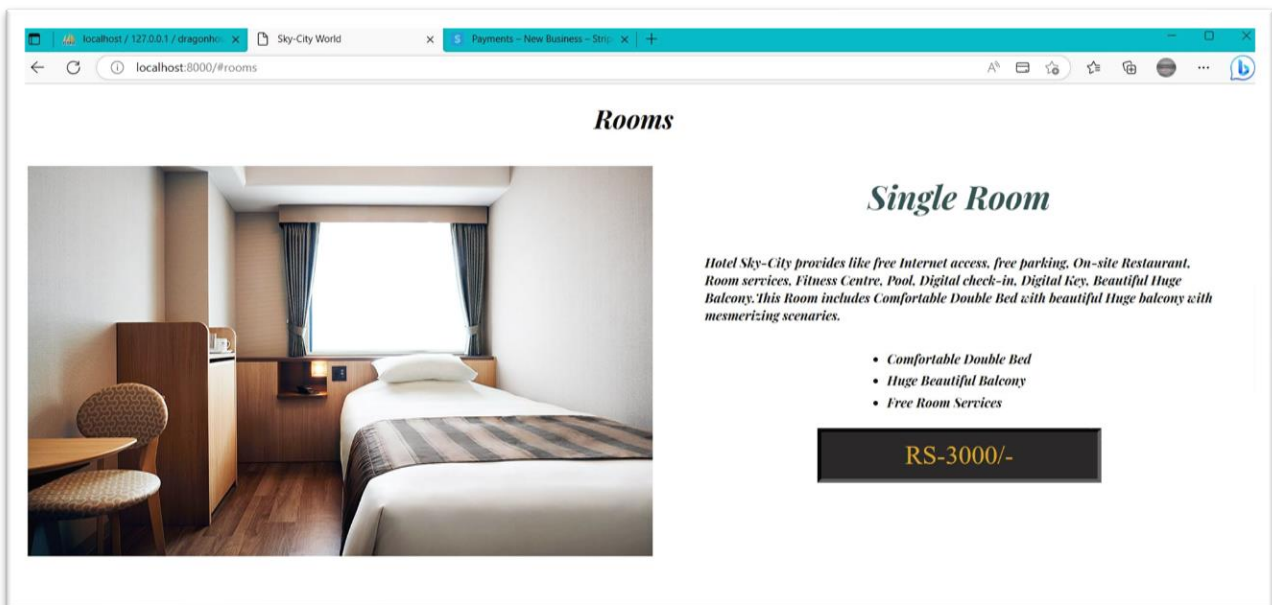
User can view website and check the room details for booking.



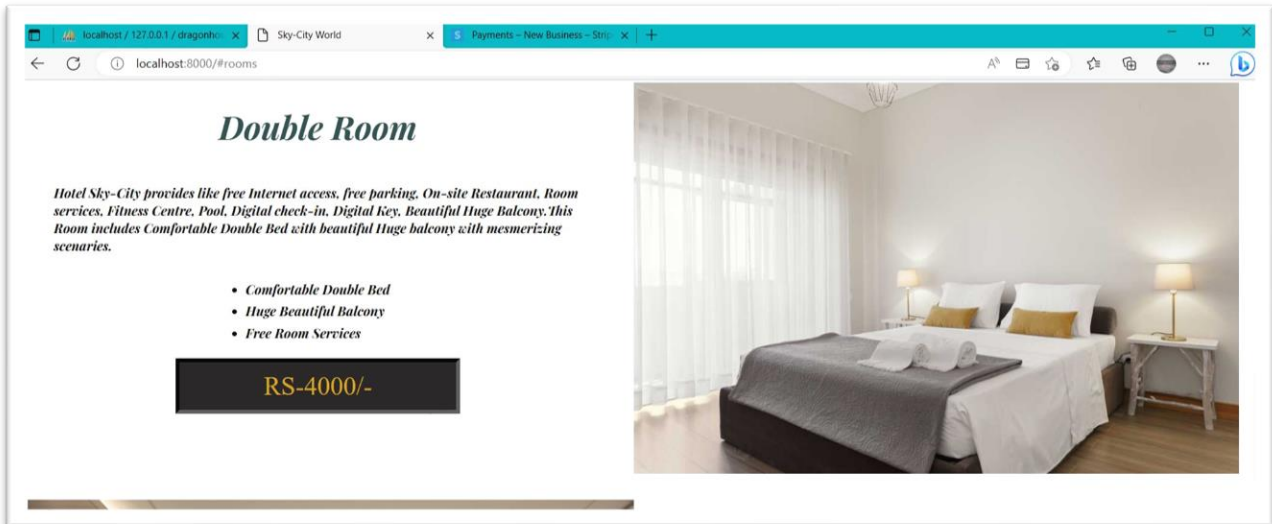
1.1 About Us page (overview of hotel):



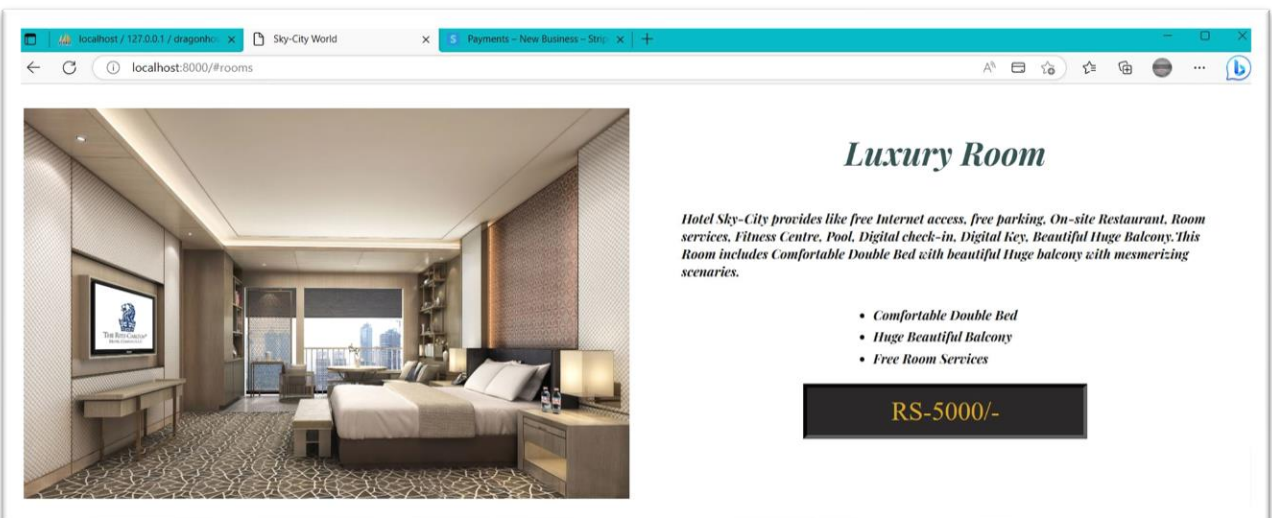
1.2 Room Page: It provides room types and their respective facilities provided with their prices.



(Hotel Rooms – Single Room)

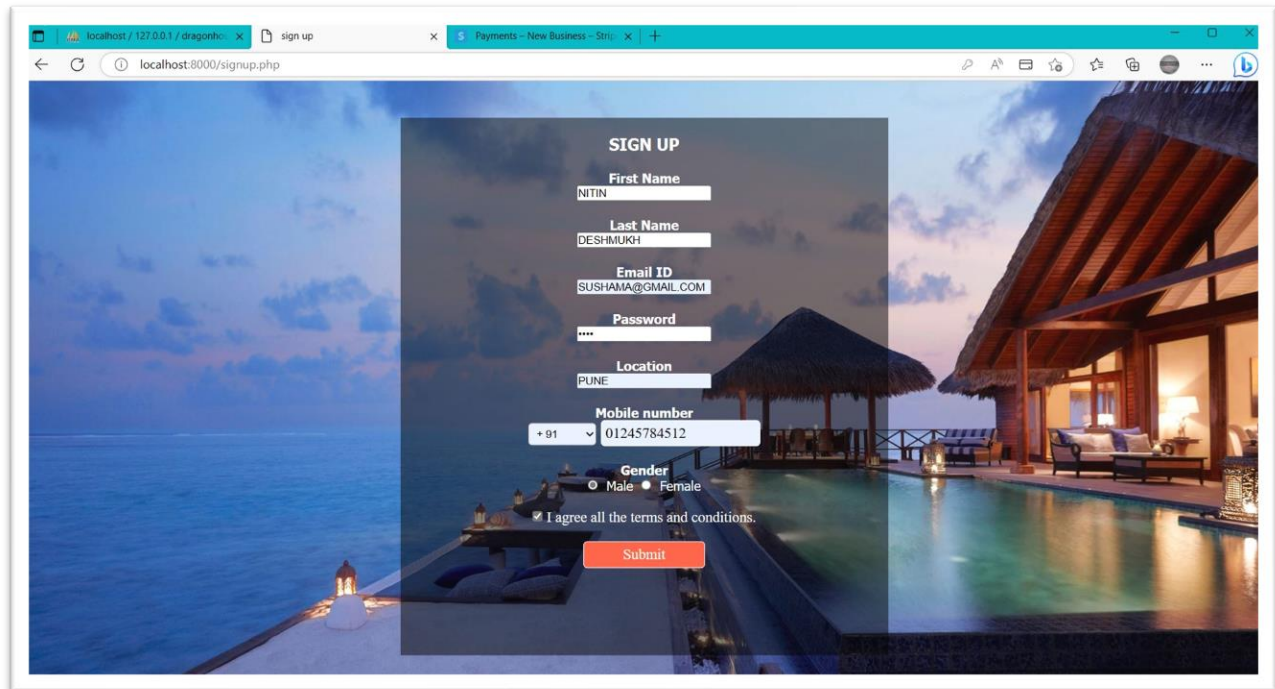


(Hotel Rooms – Double Room)



(Hotel Rooms – Luxury Room)

2.SignUp Page: For room reservation user have to sign-up for further process.

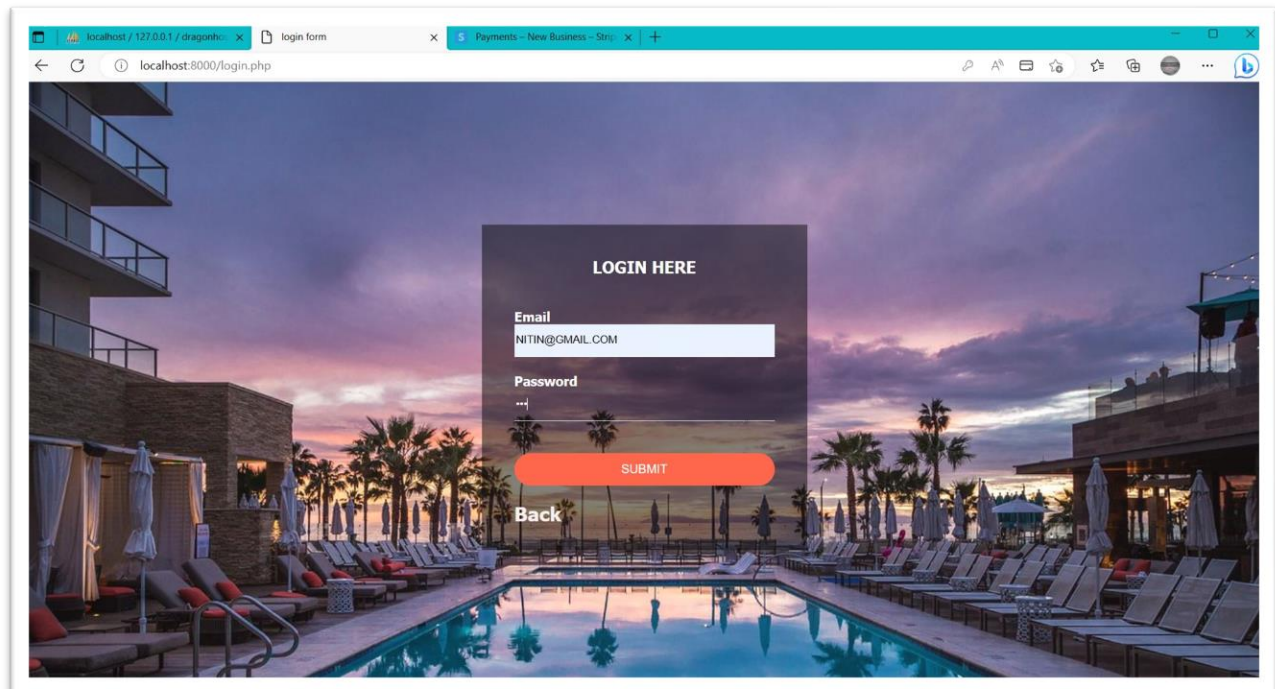


The screenshot displays a web browser window with the URL `localhost:8000/signup.php`. The page features a registration form titled "SIGN UP" centered over a background image of a tropical resort with a swimming pool and thatched-roof buildings. The form fields are as follows:

- First Name:** NITIN
- Last Name:** DESHMUKH
- Email ID:** SUSHAMA@GMAIL.COM
- Password:** (masked with four dots)
- Location:** PUNE
- Mobile number:** +91 01245784512
- Gender:** Male (selected), Female
- ☒ I agree all the terms and conditions.
- Submit:** (orange button)

3.Login page:

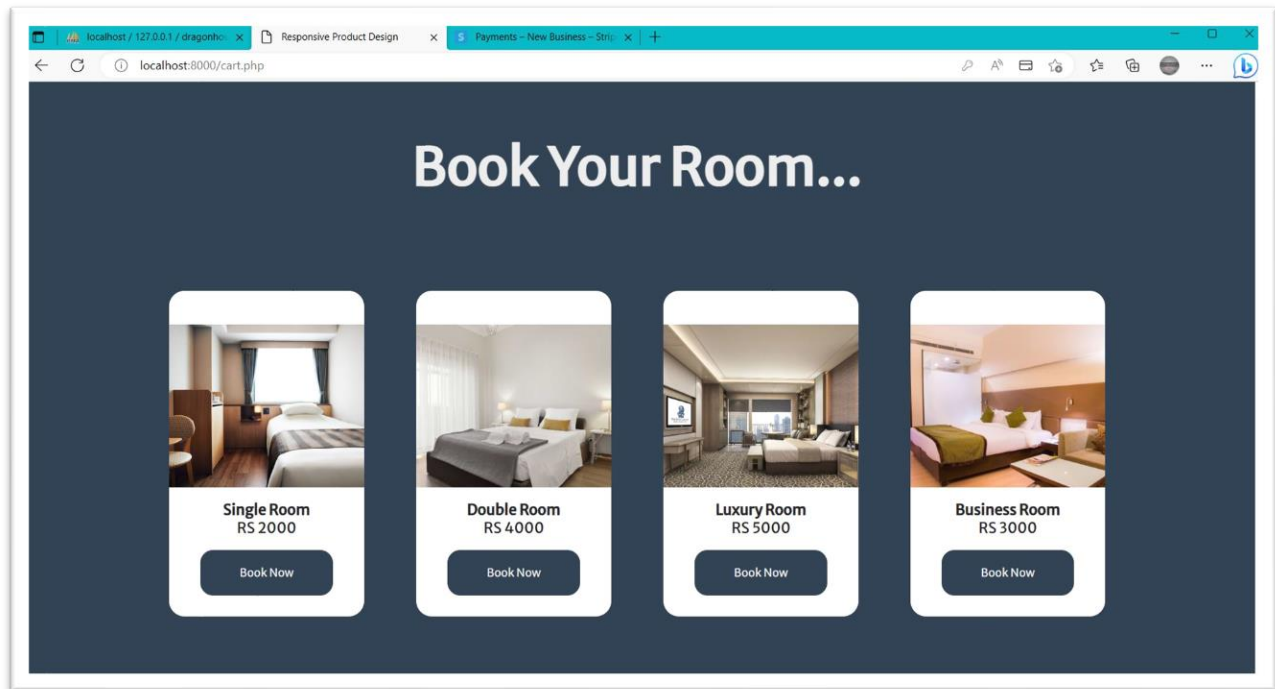
For user's authentication user have to login with correct mail id and password .If the password and mail id are correct only then user can be successfully login to website and complete with further process.



The screenshot displays a web browser window with the URL `localhost:8000/login.php`. The page features a login form titled "LOGIN HERE" centered over a background image of a tropical resort with a swimming pool and lounge chairs. The form fields are as follows:

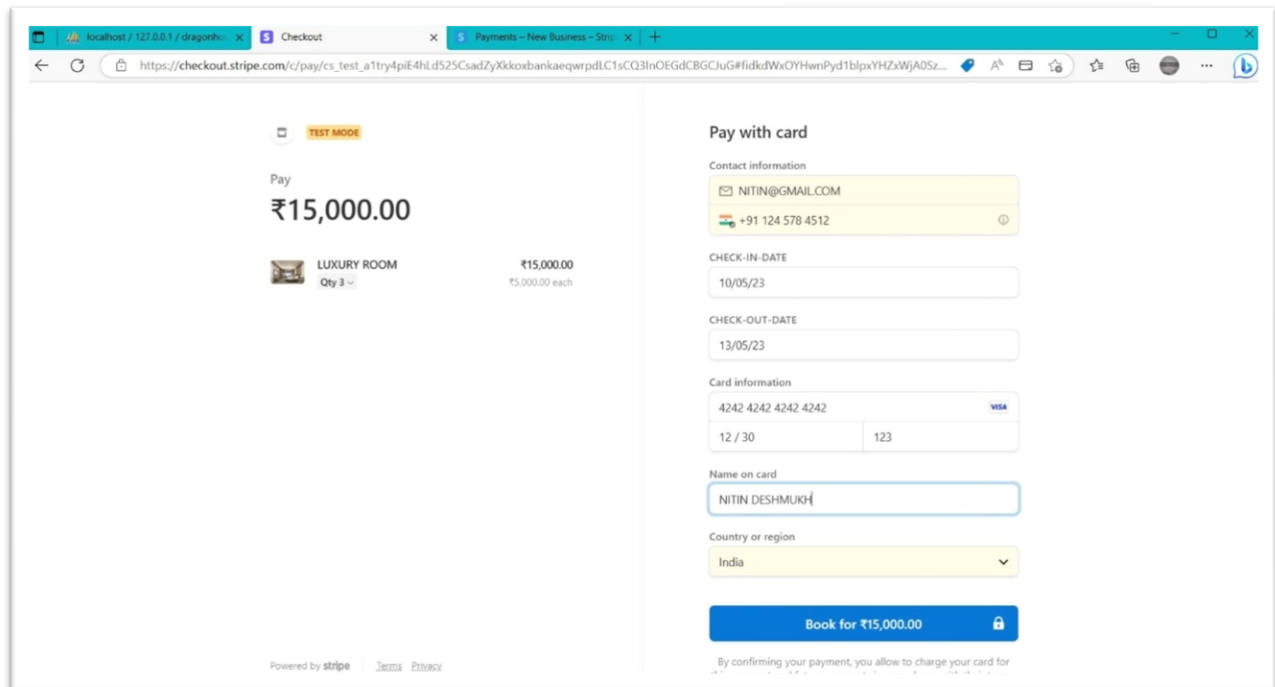
- Email:** NITIN@GMAIL.COM
- Password:** (masked with three dots)
- SUBMIT:** (orange button)
- Back:** (text link)

4.Booking page: It provides room reservation it includes the room type and their respective price .User can select according to their requirement and proceed for further billing process.

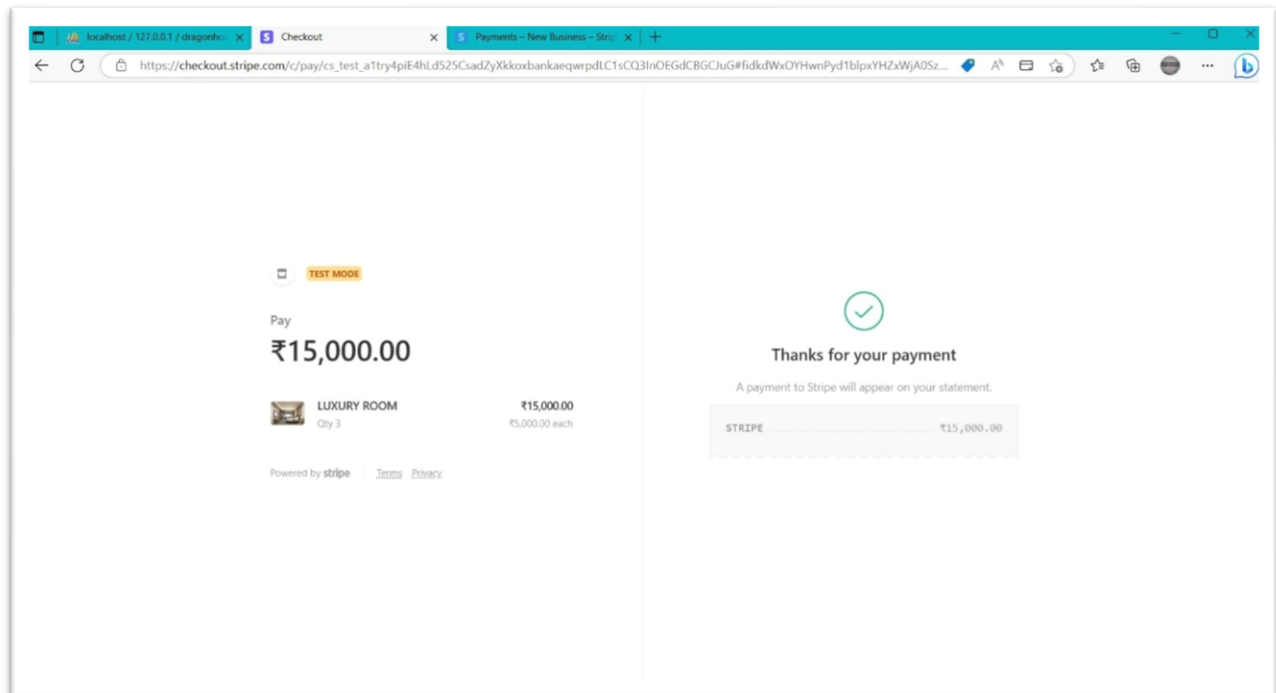


5.Online payment portal:

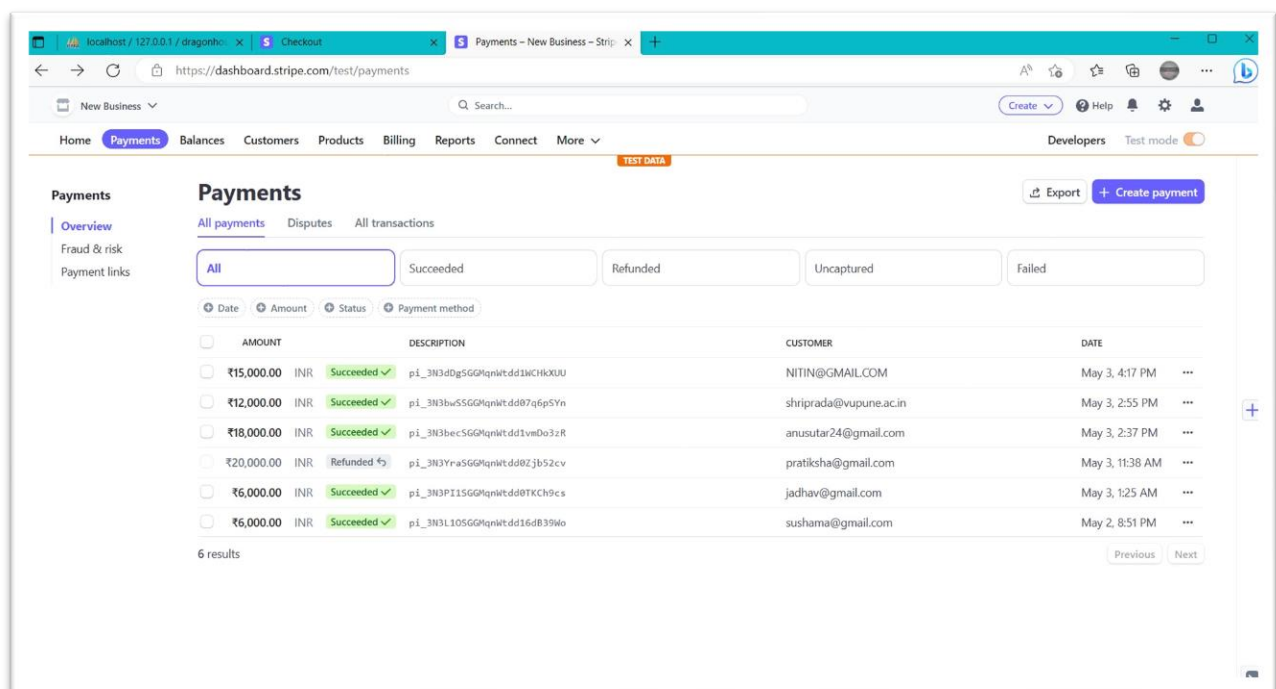
User have to fill correct card details for payment.



(Payment Page: If user select room type “Luxury Room”, then room type and payment details will show on dashboard. Ex- Luxury Room price – RS. 5000 * Total number of days = Total Bill.)



(Payment for Luxury Room is done.)



(Stripe Dashboard – Customers Payment Details)

Summary

Billed to: **NITIN@GMAIL.COM**
 Billing details: **NITIN DESHMUKH**
 India 🇮🇳
 +91 124 578 4512

Invoice number: **E1DBF646-0001**
 Currency: **INR - Indian Rupee**
 Due date: **May 3, 4:17 PM**
 Billing method: **Send invoice**
 Memo: **No memo**

DESCRIPTION	QTY	UNIT PRICE	AMOUNT
LUXURY ROOM	3	₹5,000.00	₹15,000.00
Subtotal			₹15,000.00
Total			₹15,000.00
Amount paid			-₹15,000.00
Amount due			₹0.00

Connections

Customer: **NITIN@GMAIL.COM**

(Customer's Payment Summary)

Customers

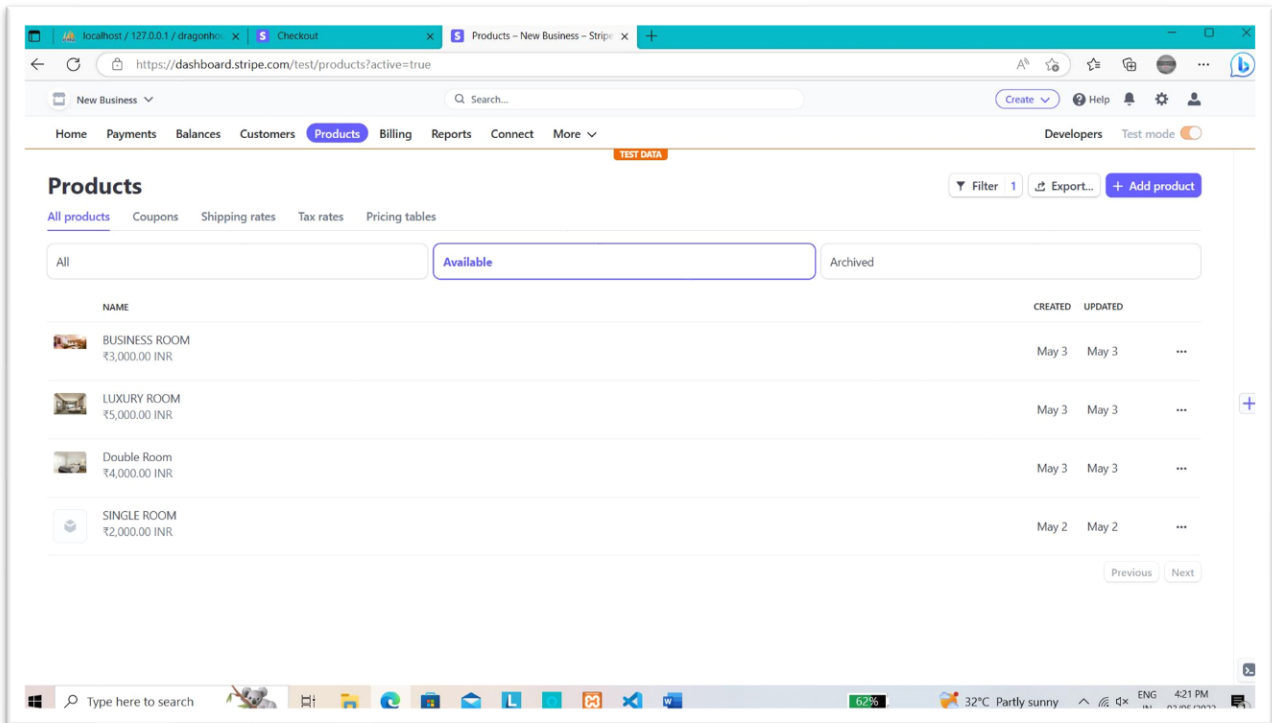
+ Add customer | Feedback

Copy | Export | Edit columns

NAME	EMAIL	DEFAULT PAYMENT METHOD	CREATED
<input type="checkbox"/> NITIN DESHMUKH	NITIN@GMAIL.COM		May 3, 4:17 PM
<input type="checkbox"/> Shripada	shripada@vupune.ac.in		May 3, 2:55 PM
<input type="checkbox"/> sushama	anusutar24@gmail.com		May 3, 2:37 PM
<input type="checkbox"/> sushama	pratiksha@gmail.com		May 3, 11:38 AM
<input type="checkbox"/> sushama	jadhav@gmail.com		May 3, 1:25 AM
<input type="checkbox"/> sushama	Guest sushama@gmail.com	visa **** 4242	May 2, 8:51 PM

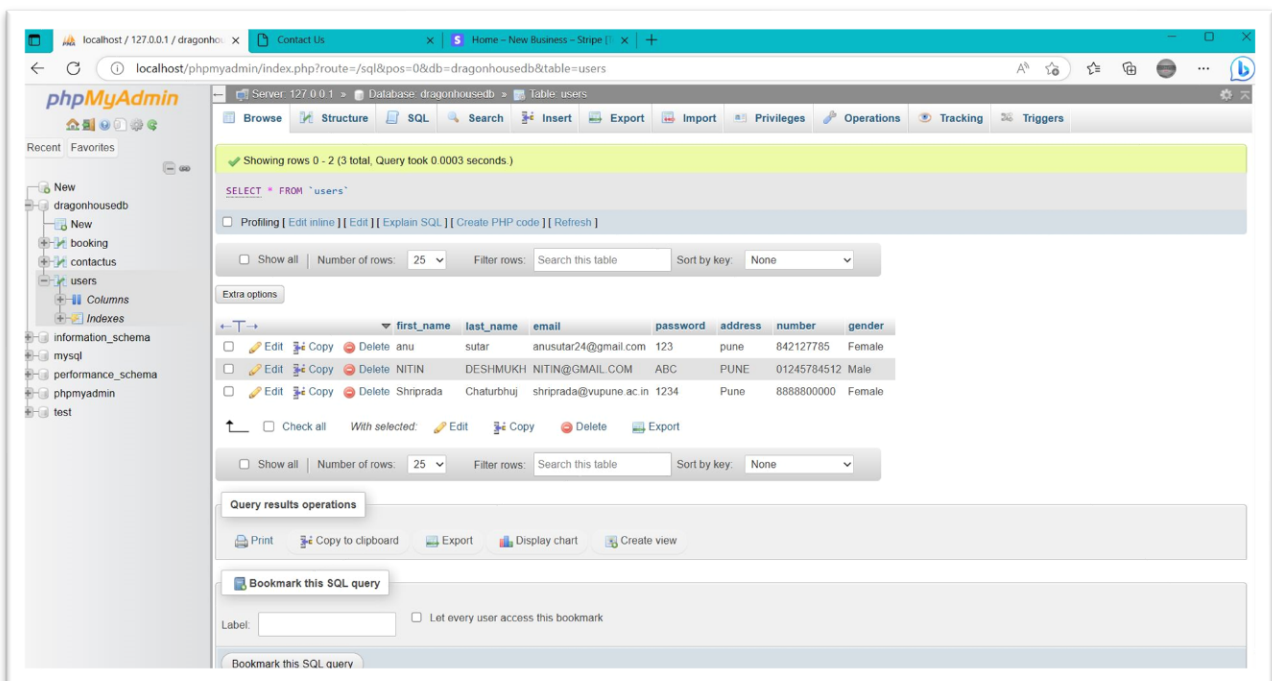
6 results | Previous | Next

(Customers Connections)

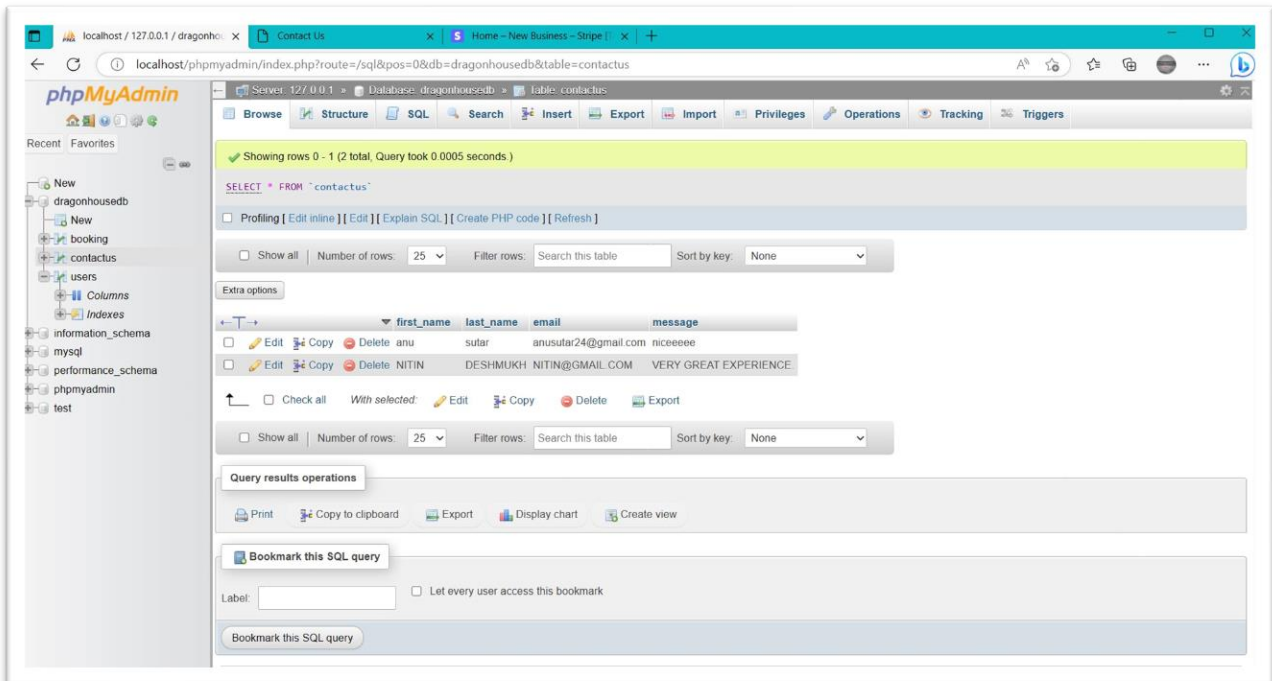


6.Database:

It stores all details of customers including customer signup, booking and feedbacks.



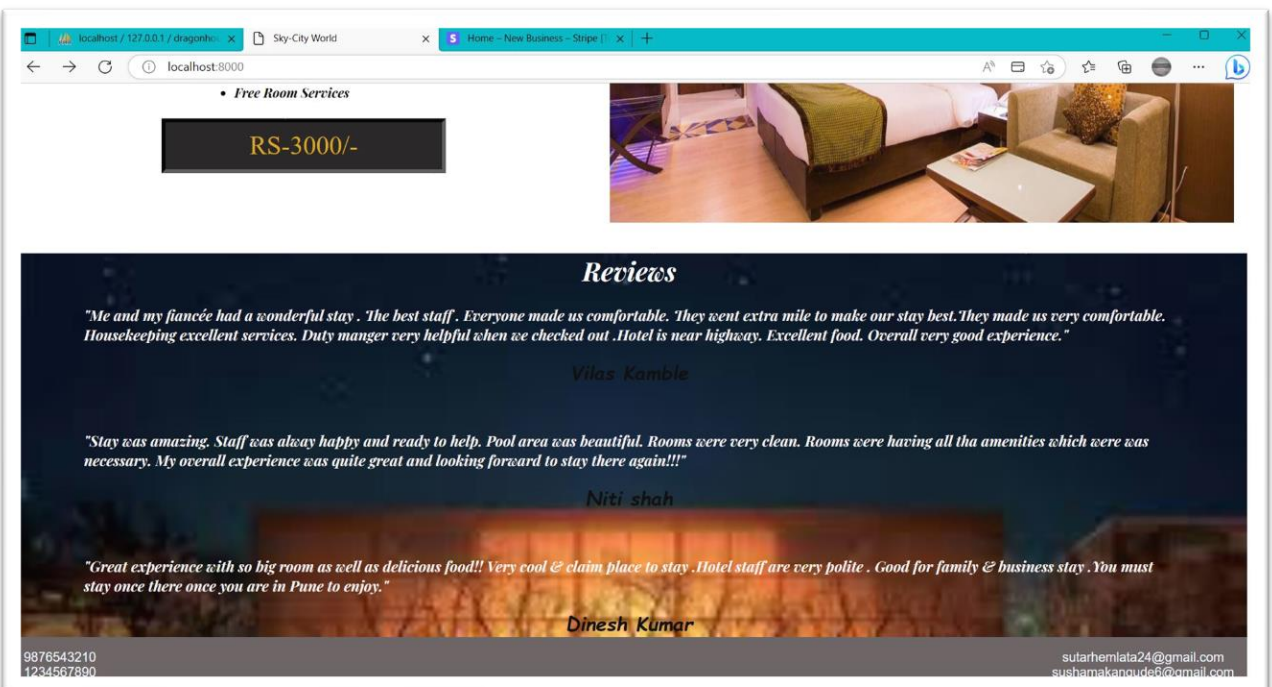
(Database connectivity – Sign up page details in User table)



(Contact Us page details in contact us table)

7. Review page:

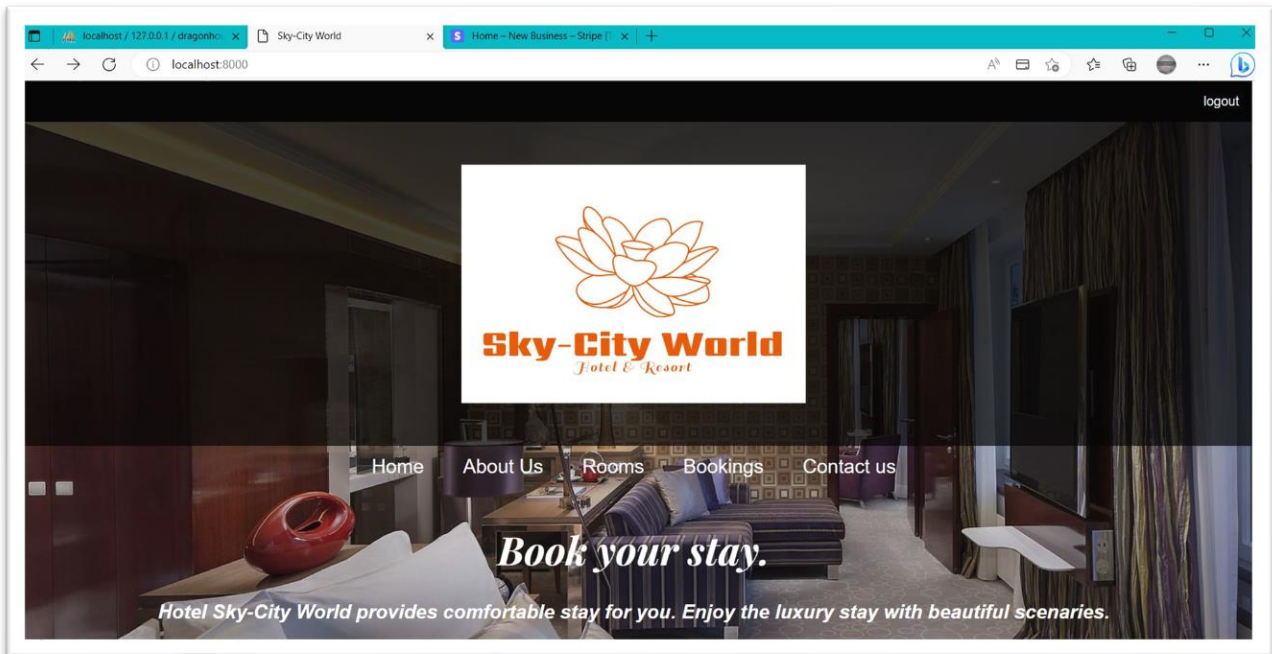
It gives the customers feedbacks with their respective name.



(Reviews Page)

8.logout page:

After successful completion of reservation user can logout safely.



(Logout Page – After successfully room booking, user can logout)

12.Conclusion

This project is designed to meet the requirements of Online Hotel Management. It has been developed in PHP & MySQL keeping in mind the specifications of the system. It is user friendly website. For designing the system we have used simple data flow diagrams.

Overall the project teaches us the essential skills like:

- Using system analysis and design techniques like data flow diagram in designing the system.
- Understanding the database handling and query processing

13.References

The following references have been used by me, during all the phases of the project:

- <http://www.tutorialspoint.com/csharp/index.htm>
- Xian - Hotel Management System with Website by bdtask | codeCanyon
- Hotel websites – OpenHotel
- <http://www.shangri-la.com/singapore/shangrila>, Accessed on 15/12/12.[20]
- <http://www.swissgarden.net/>, Accessed on 15/12/12.[21]
- <http://www.hansbotelghana.com/>, Accessed on 15/11/12.;[22]
- www.hansonichotel.com, Accessed on 15/12/12.[23]
- www.hotelbookers.com, Accessed on 15/12/12.