## **Resort Management System**

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A Project

in

The Department

of

Computer Science and Engineering



Presented in Partial Fulfillment of the Requirements

For the Degree of Master of Science in Computer Science and Engineering

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## **Approval Certificate**

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## **Declaration**

This is certified that the work entitled "**Resort Management System**" is the outcome of the research carried out by me under the supervision of Dr. Mohammad Nurul Huda, Professor and Director-MSCSE, UIU, Department of Computer Science & Engineering, United International University (UIU).

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In my capacity as supervisor of the candidate's project, I certify that the above statements are true to the best of my knowledge.

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## **Abstract**

Now a days peoples are want to go different places for relaxation or recreation. As, there are not so many available hotels & Resorts for large number of peoples. In a vacation, Most of the peoples will go different tourist places for relaxation or recreation and have to be faced embracing situation if there is not available room in Hotel & Resort. It will be overcome if the Resort has online booking system. For this reason we think that if the Resort Booking and availability checking system we can provide the customers through Online, then it will be more convenient and helpful for a customer perspective to Book/Reserve a Room or checking the price, availability and other facilities to compare with the other available Resorts at the same places. Moreover, these types of Online Resort Booking system like "Resort Management System" can also help the Peoples who are basically like to confirm the booking before the traveling to minimize the hassle during the traveling. On the other side, If the Hotel Management adopt the Online "Resort Management System" then the management can able to see the availability of the rooms an able to give a prompt response to the customers through the Online system. Moreover, Management also get a view about the Daily/Monthly income from tourist and also able to compare with the costing to find out the Net Income. The Hotel Management also can give the customers the facility to provide feedback/Review or Rating system at the end of the tour. Throughout the Rating the Management can identify that in which categories they need to improve to provide better facility to the customers. Also, if the Customers are provide good review and the reviews are stored and visible to other customer through the online system then other Customers also feel interested to come to the resort.

## **Acknowledgement**

**The Resort Management System** project will be very memorable for me as this project have been helped me to gather lots of experiences and discover my potentials. These experiences and opportunities will help to shape up my professional life.

In this report, I would like to highlight the enormous opportunities I get from my workplace. Like all other human endeavors these few details lead me to realize that this report is not perfect and also may contain human errors and shortcomings.

"The Resort Management System" is A Web Application project which is prepared for the partial fulfillment of MSCSE program. The project completion would be impossible without the contribution and help of the below mentioned Teachers . My sincere gratitude to almighty Allah who granted me the opportunity to complete the project.

I would also like to spread my thanks to all of the Faculties. Especially, I am highly obligated and express my grateful thanks to Prof. Dr. Mohammad Nurul Huda sir for his constant supervision and guidance regarding the project. I am considering myself as a fortunate to receive the opportunity to do this project under the supervision of *Prof. Dr. Mohammad Nurul Huda* Sir at United International University (UIU). I also would like to extend my thanks to my examiner *Prof. Dr. Hasan Sarwar* Sir for examine my project.

At last, I would also give thanks to my colleagues for helping me in various critical situation and also my Family members to give mental support during the project.

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## **Chapter 1**

#### Introduction

Resort Management System is developed for following system development stages for smooth running and management of "milonchori" resort. As a travel lover I have visited different places and most of the time facing different kinds of hassle. To take the decision to develop this type of system we have gathered information for several Resorts Management and found that most of the Resorts are managed by manually. We realize that the Resorts basically need a computerized Resort management system. After the analysis of the collected Data in the problem phase we have found that All of the Requirements like Hardware and Software are available in the current market to implement the Resort Management system. We have also identified that these required things are affordable by the Resort Management. We are trying to identify all of the loopholes of the system and also taking action to resolve the loopholes. The system is developed using Java spring framework language. Hopefully, This system will help the Resort management to realize the maximum potentiality in addition to its competence in the Resort business field.

## 1.1 Existing Practice

As far we know that, Previously The Resort was managed by manually .As the Resort have been managed manually so customers and management both parties' were facing lots of challenges for booking/manages to the Resort. As a Manual process Customers need to visit the resort to get an idea about the Resort Condition and facilities which is really challenging for a Customer. Also, Customers are not able to compare the facilities of the same places Resorts. As a manual management process the Hotel management needs to store the Customer information and booking process though papers which is really challenging for Management group and also Management need to brief to the customer verbally all of the other things like availability, facilities, prices etc.

## 1.2 Objective

The Objective of the "Resort Management System" is to provide facility to the customers to reserve the Room for a hassle free tour. Also, Customer able to make a plan about the accommodation cost before start of the tour as the Resort Management System is sharing all of the costs in their system. The Management also get a view about the availability of the rooms and also able to calculate the earnings through the system. If the management would like to achieve the consistency of the business through the system then they can incorporate any kinds of changes in the current system for expending of their business.

## **Chapter 2**

### **Background and Literature Review**

Resort Management System is proposed to overcome the limitation of manual reservation of a Resort. We know that, now a days Internet availability is increased so much in our country. For this perspective we are easily able to convert the Manual Resort Reservation to Automated Resort Management System. If we really able to convert the System into automated system then Customer and the Management both parties will be impacted positively. Through the System, Customers able to Reserve/Book the Resort from anywhere in the Country and also able to know the details facilities of the Resort. As per Management perspective they can update the added facilities into the System each and every day to attract the customer. So using the Technology we can able to improve the lifestyle of the Customer. Using the breakthroughs of technology it's possible to create unbelievable things in the easiest, fastest and efficient possible ways. The main objective of Resort management system is to provide online facility for accessing all the facility of hotel & resort.

#### 2.1 System End Point

This system will covered the following facilities

- Single Room Reservation for customer through online
- Multiple Room Reservation for customer through online
- Sign Up page for user
- Admin can approve sign up user
- Admin can define role of user
- Room create
- Food create
- Reservation create from website
- Room check-in
- Invoice create
- Room check-out
- Report

## 2.2 Design

## 2.2.1 ERD Diagram

Database is absolutely an integral part of software systems. To fully utilize ER Diagram in database engineering guarantees you to produce high-quality database design to use in database creation, management, and maintenance. An ER model also provides a means for communication.

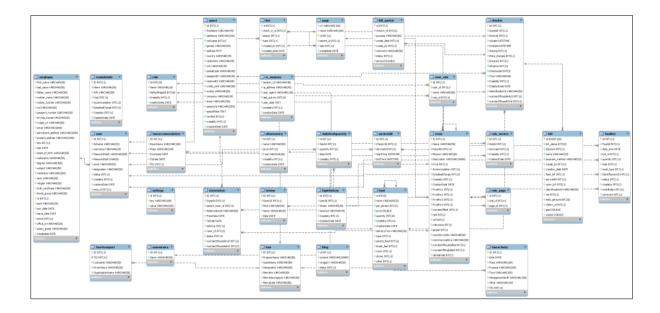


Figure: 2.2.1 ERD Diagram

## 2.2.2 Use Case Diagram

Use case is the combination of set of actions and their actors. It describes which action is being performed by which actors. And also the extended or included actions are described here.

## **Use Case Diagram for Resort Management System**

Use Case Name	Resort Management
Description	Resort Management System is a web
	application where customers can reserve
	the room at anywhere in Bangladesh
	and User can manage the check-in,
	check-out and other activities. Moreover
	admin can manage the all of actions
	also.
Actors	Customers
	Admin
	User
	System
Basic Flow	Alternate Flow
1.Customers Reserve the room	NA
1.Customers Reserve the room 2.User check-in the room for the	NA
	NA
2.User check-in the room for the	NA
2.User check-in the room for the customers	NA
2.User check-in the room for the customers 3.User create Food for customers	NA
<ul><li>2.User check-in the room for the customers</li><li>3.User create Food for customers</li><li>4.User create invoice for customers</li></ul>	NA
2.User check-in the room for the customers 3.User create Food for customers 4.User create invoice for customers 5.User check-out for customers	NA
2.User check-in the room for the customers 3.User create Food for customers 4.User create invoice for customers 5.User check-out for customers 6.User see the report	NA
2.User check-in the room for the customers 3.User create Food for customers 4.User create invoice for customers 5.User check-out for customers 6.User see the report 7.Admin can approve the user role	NA
2.User check-in the room for the customers 3.User create Food for customers 4.User create invoice for customers 5.User check-out for customers 6.User see the report 7.Admin can approve the user role 8.Admin will see all of actions	

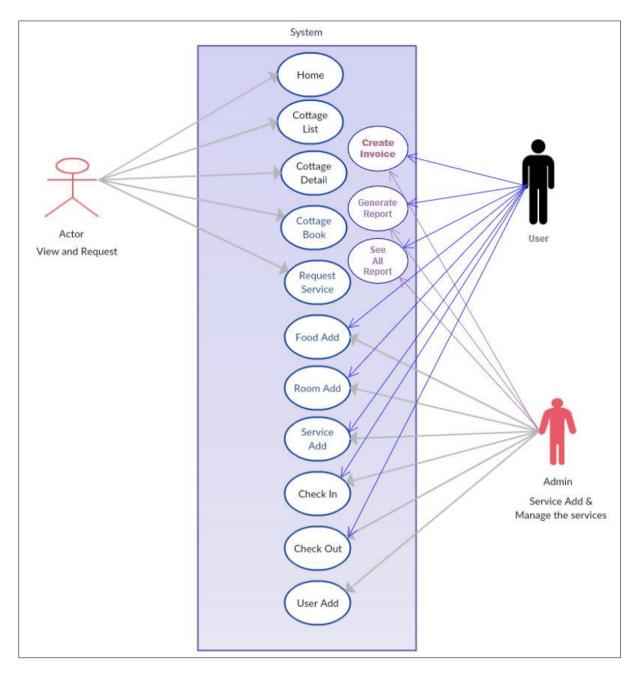
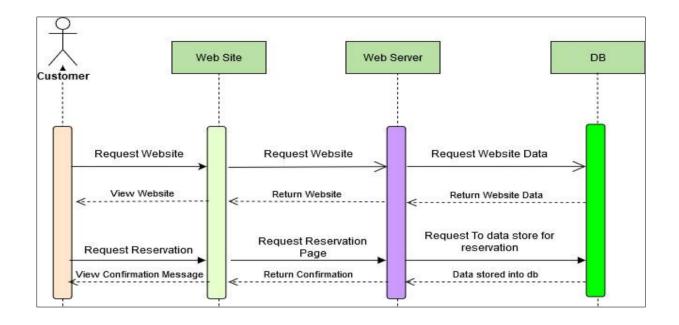


Figure: 2.2.2 Use Case Diagram

## 2.2.3 Sequence Diagram

The Sequence Diagram is the most common interaction diagram. The exchange of messages between different lifelines is the main goal of this diagram.



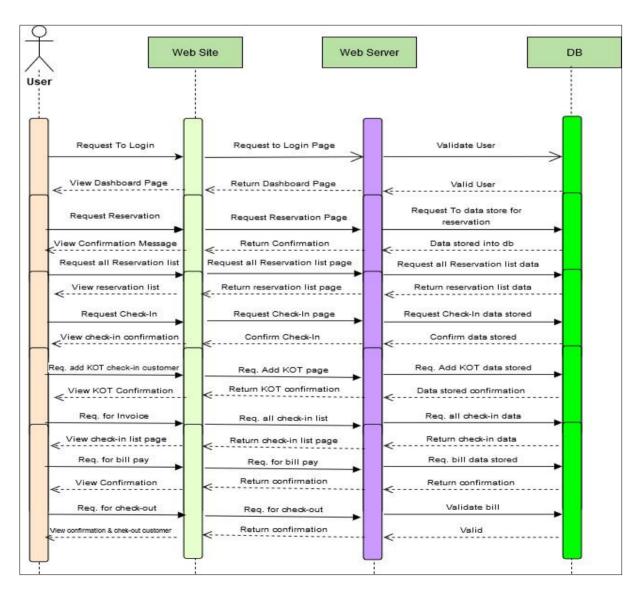


Figure: 2.2.3 Sequence Diagram

## 2.2.4 Activity Diagram

#### 2.2.4.1 Customer Diagram

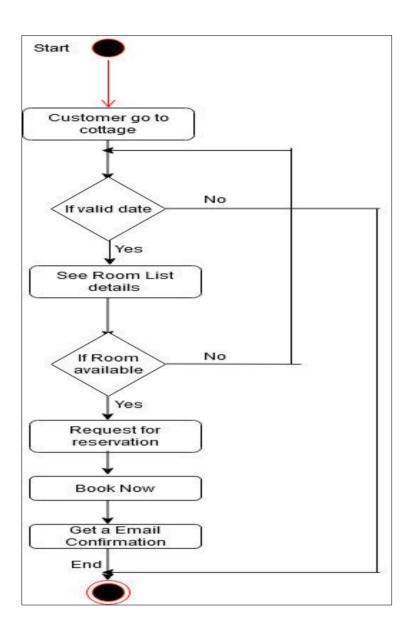


Figure: 2.2.4.1 Customer Activity Diagram

#### 2.2.4.2 User Diagram

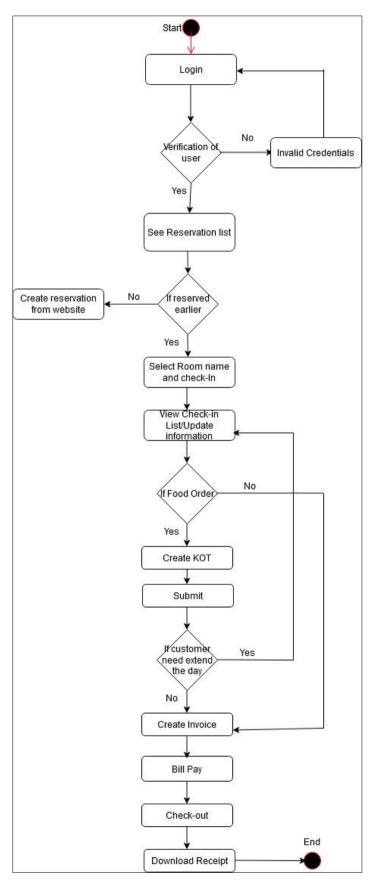


Figure: 2.2.4.2 User Activity Diagram

## **Chapter 3**

## **Implementation & Testing**

### 3.1 Implementation Overview

This project is web based and need to be hosted in any server. As it is developed in Java Spring framework it required Apache Tomcat server and any windows/Linux server as an operating system. Client can access through browser from any location in the world only needed the internet connection. So we need only a server to host and deploy.

### 3.2 Methodology

Agile process is the most sophisticated software development process now a days. By this methodology one member can easily collaborate to others. The customer also be included in this process. It assumed that customer also the part of the project team. In every stage change is acceptable here. And evaluation of a process or feature makes this final deliverable. Every day project team discus each other's by scram meeting. All the member is treated here the important team member. Though this project has no team but I tried to develop following the Agile Methodology in every part of my project.

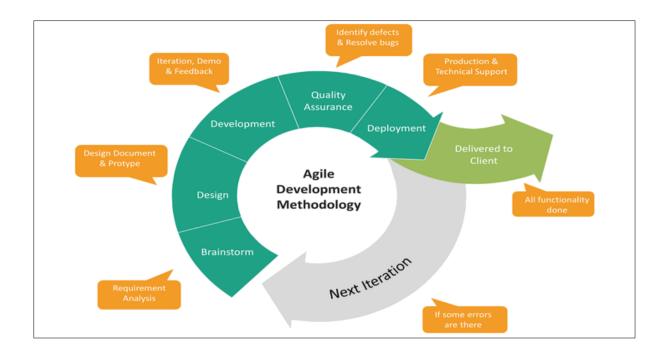


Figure: 3.2 Agile Methodology

#### 3.3 Software Architecture

During the development period the following are the main issues I wishes to focus during development procedure:

- N-tier architecture.
- Secured Data transfer from front-end to database and vice versa.
- Developed with minimal rework to operate

I wish to divide my development process into four layers as follows:

- UI Layer.
- Presentation Layer.
- Business Layer.
- Data Access Layer.

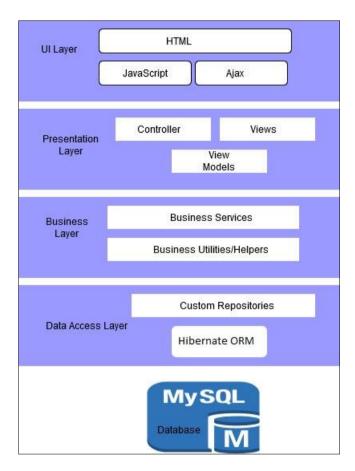


Figure: 3.3 Software Architecture

## 3.4 Technology

Following technologies are used for this project.

- Net beans IDE
- Bootstrap, JavaScript & Jquery for application User Interface
- Java (Spring Framework)
- MySQL for database
- Hibernate ORM
- Data table for Read data and export as .csv, pdf and Excel.
- Ajax Control Toolkits
- Heidi SQL Client.

#### 3.5 Testing

Testing is a process by which we can ensure the developed software product is defect or bugs free. As well as we can measure the software performance also. So in the software development world testing is a very important part. This project is also tested and corrected as per testing. There are two type of testing are performed here.

- 1. Black Box Testing
- 2. White Box Testing

#### **Black Box Testing**

It is known as input/output testing. Sometime it is called behavioral testing. Here we put only the input and check the output is correct or not. If output is ok then the result is passed. But the coding structure and the complexity is not tested here. Following figure illustrate the black box testing.

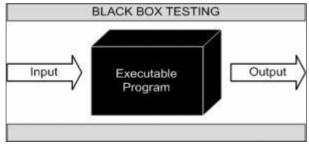


Figure: 3.4 Black Box Testing

#### **White Box Testing**

White box testing is the type of testing which testing is carried out based on the knowledge of the internal architecture of the application. In white-box testing, the tester analyzes the quality of source code on different parameters like code optimization, code coverage, code reusability etc. It is applicable for lower levels of testing types - unit testing and integration testing where we have to deal with individual modules of the application and their interfacing.

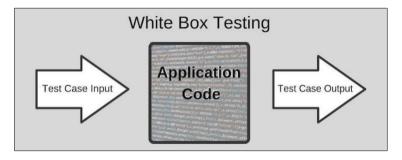


Figure: 3.5 White Box Testing

## **Chapter 4**

## 4.1 Major Features

#### 4.1.1 Website Interface

To reservation the room, User will explore the website. Under cottage section user will see the room list. User can search available room to enter from date to to date. User will also see the room details and take a reservation to click on Request for a reservation button.

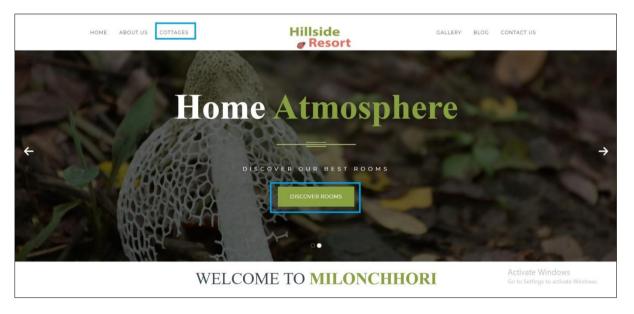


Figure: 4.1.1 Resort Management Website

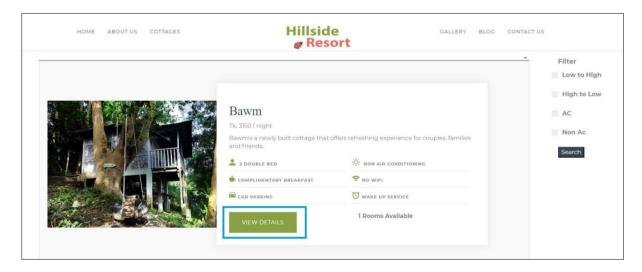


Figure: 4.1.1 Website Cottage Interface

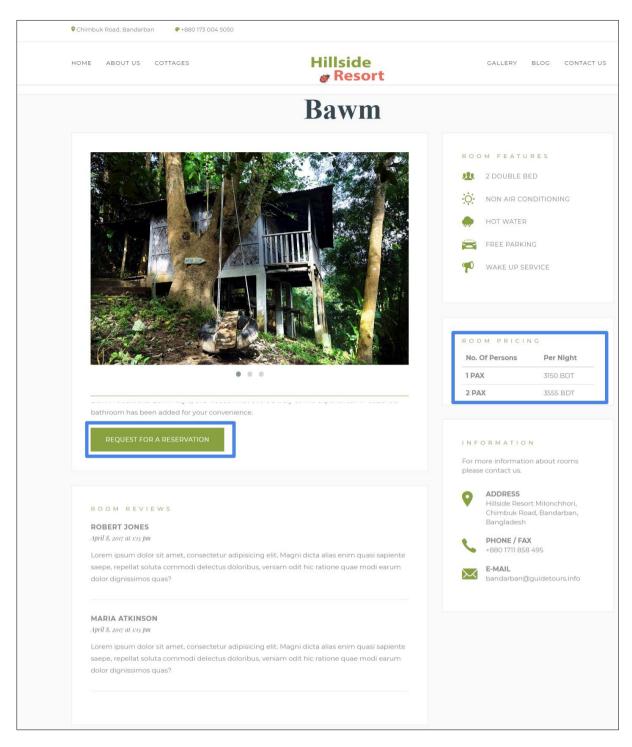


Figure: 4.1.1 Resort Reservation Request Interface

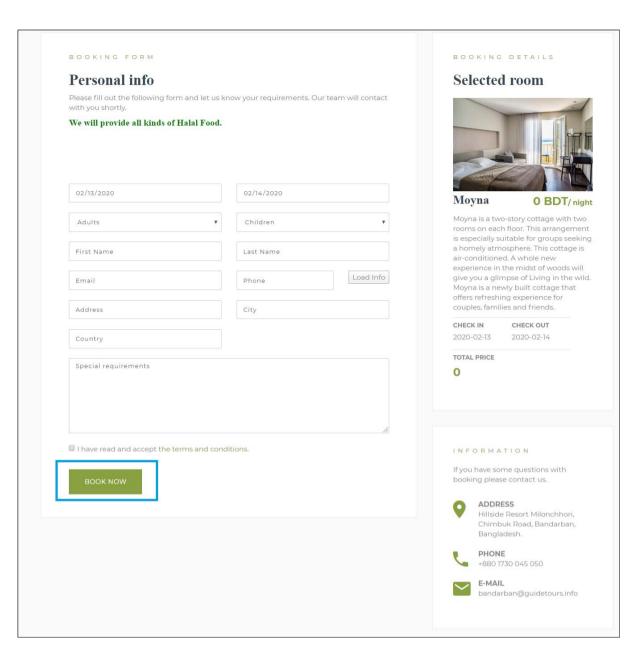


Figure: 4.1.1 Resort Reservation Request Form

#### **4.1.2 Resort Contact Information**

User can see the resort contact information under Contact Us tab. To click on Contact Us tab, User will see the route detail information with Google maps.

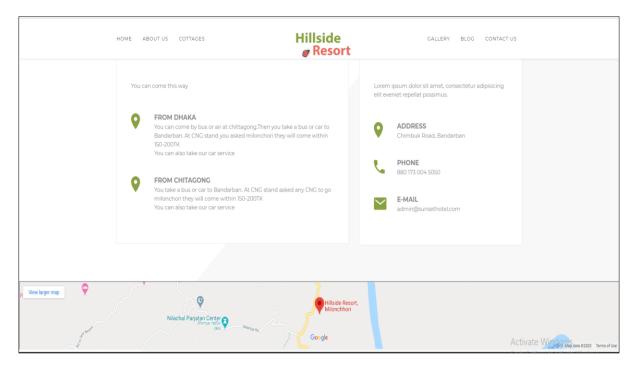


Figure: 4.1.2 Resort Contact Information Interface

#### 4.1.3 Login Interface

For security purpose almost every system has to have a login system. For this system following is the login page. In database password is encrypted using hash technology. So that no one can retrieve password through database access.

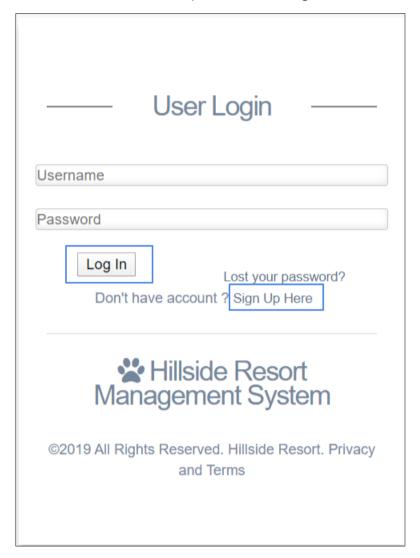


Figure: 4.1.3 Back Office Login Interface

#### 4.1.4 Sign Up Interface

For New user, User needs to sign up first. User needs to click on Sign Up here button and the following page will be appeared. After successfully registered user will not login the system until allow the user from admin user.

FULL NAME		
User Name		
EMAIL		
Email		
PASSWORD		
Password		
☐ Agree the terms and policy		
REGISTER		
Already have account ? Sign in		

Figure: 4.1.4 Back Office Sign Up Interface

#### 4.1.5 User List

Admin user will see the all of user list and approve the user who hasn't approved yet.

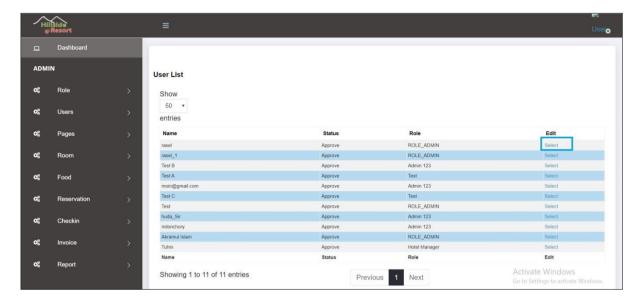


Figure: 4.1.5 Resort Management User List Interface

#### 4.1.6 Room

Every hotel needs to large their capacity, so user will create new room under Room group to use this page. User will select room under room group and inputted information in text field.

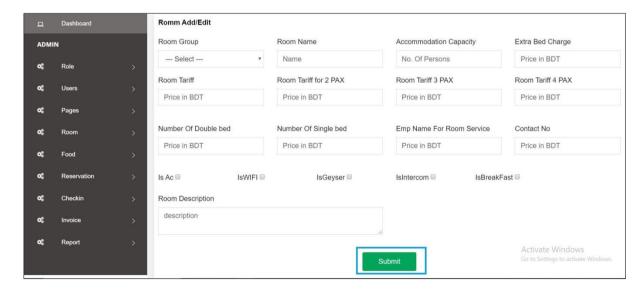


Figure: 4.1.6 Resort Room Create Interface

#### **4.1.7 Room List**

Every system needs to update their existing data so user will see all of room list from this page. User can update the room information also to click on Edit button.

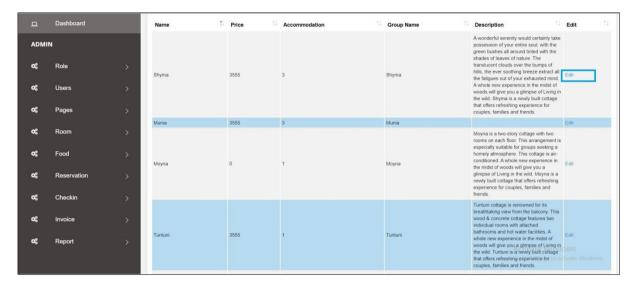


Figure: 4.1.7 Resort Room List Interface

#### 4.1.8 Food

This system has extra facility to manage food item for customers. Moreover user can add new food item into system. To add a food item user needs to click on Food and the following page will be appeared

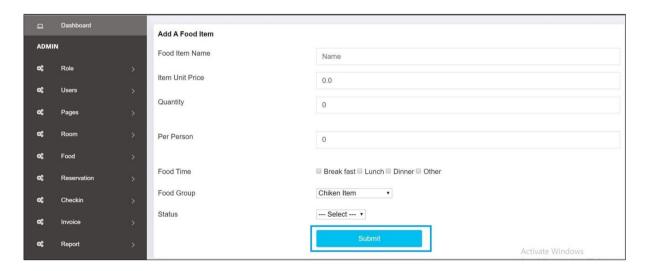


Figure: 4.1.8 Resort Food Create Interface

#### 4.1.9 Food List

User will see all of Food list from this page. User can update the food information also to click on Edit button.



Figure: 4.1.9 Resort Food List Interface

#### 4.1.10 See all reservation

Customer or user will reserve the room from website and user needs to check-in the rood for customers. For that reason user needs to see the reservation list. To view reservation list, user need to click on See All Reservation list and the following page will be appeared.



Figure: 4.1.10 Reservation List Interface

#### 4.1.11 Check-In

As the customer or user will reserve the room so need to check-in the room. In that case for reservation, user needs to click on "Edit" button from reservation list and the following page will be appeared. User will change the room for customer during check-in.

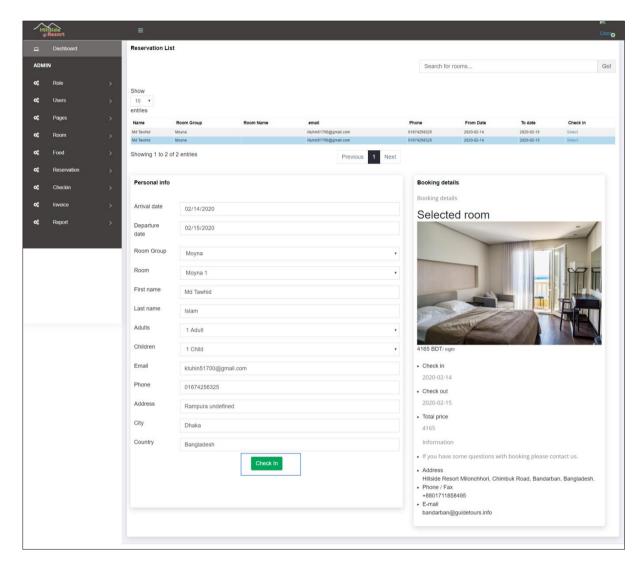


Figure: 4.1.11 Check-In Interface

#### 4.1.12 Check-In List

Moreover User will see the all of check-in list. To view check-in list user need to click on See All Check-in and following page will be appeared.

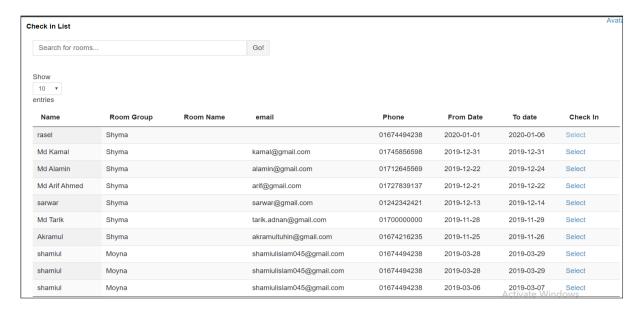


Figure: 4.1.12 Check-In List Interface

#### **4.1.13 Invoice**

Every hotel has a check-out system. So before check-out customer need to pay his/her bill. In that case our system has been check customer total bill and due bill. The user doesn't check-out the customer until the customer doesn't pay his total bill. To check-out the room, User needs to generate invoice. To generate invoice user need to search the room first. User will see all of check-in and need to click on Create Invoice button to check-out.

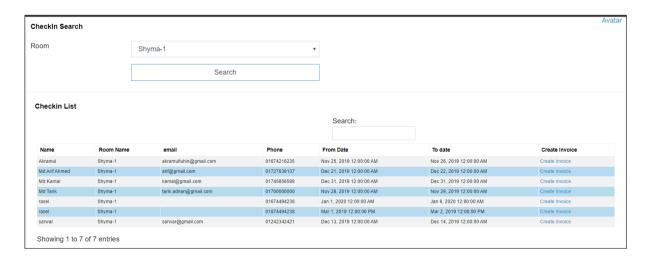


Figure: 4.1.13 Reservation List to Create Invoice Interface

#### 4.1.14 Check-Out

User will see Total bill and due dill during check-out. Users have to pay all of bill during check-out. User will see the food bill also.

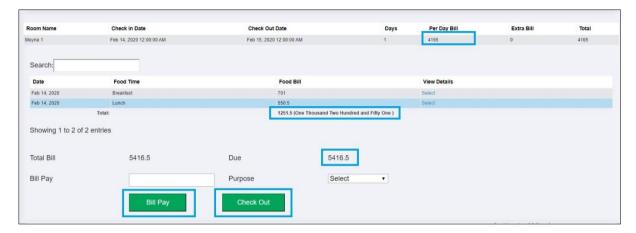


Figure: 4.1.14 Bill Pay and Check-out Interface

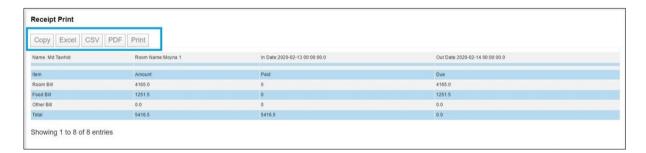


Figure: 4.1.15 Receipt Interface

#### **4.1.15 Report**

Every user needs to see the report and our system has a report facility and user can see the report as date wise. To see all of bill report user need to click on bill report and the following page will be appeared. User will see the report as date wise to set the date from date calendar. User will print the bill to click on Print button. Moreover user will download the bill as Exel,Csv and Pdf format to click on button with format user needs.

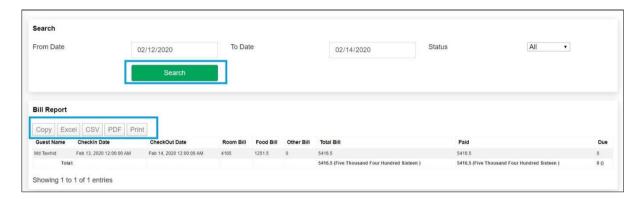


Figure: 4.1.16 Report Interface

## **Chapter 5**

#### **Conclusion and Future Works**

#### 5.1 Conclusion

This project is basically developed for Online Reservation and to avoid manual process in resort business. It eliminates the 3rd party completely. This software aims to reduce the paper work and provides multiple facilities to the customer with less efforts and accessing the portal according to choice and availability.

#### **5.2 Future Works**

We have a plan to enhance this project in a very short time. Especially, we would like to implement the payment gateway for (visa card, bkash ctc). Moreover, we also have a plan to implement the dashboard system which is not implemented yet because lack of time. We will also added some extend feature like Laundry facility, swimming pool facilities so the customer can fully enjoy the tour.

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