Software Requirement Specifications
HotRest
Version: 1.2

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Distribution List

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Ms Faiza Sattar	*Supervisor*
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Document Sign-Off

Version	Sign-off Authority	Sign-off Date
V 1.2	Sir Awais Ahmed	

Table of Contents

1. Introduction

1.1 Purpose of Document

The purpose of this document is to present detailed description of the overall system. The document will explain the purpose and features of the system, the interface of the system, what the system will do, the constraints under which the system should work, and the final if the abnormal situations occurs, what the system should response.

1.2 Intended Audience

The intended audiences of this document are both the stakeholder and developers, and it will be proposed to OOAD Project-Jury.

1.3 Abbreviations

OOAD = Object Oriented Analysis and Design

PC = Personal Computer

1.4 Document Convention

Font: - Times New Roman
Heading Font Size: - 16 with Bold
Subheading Font Size: - 12 with Bold
Paragraph Font Size: - 12

2 Overall System Description

2.1 Project Background

HotRest is front-desk hotel management software designed typically for billing, online food ordering and database management of guests checking in and out of the hotel and restaurants. It also includes options to display the features of the hotel and the restaurants and services offered by it. The feature of adding restaurant's bill in the guest's data and adding it to the final bill on check out has also been provided. It also includes facilities of turning a restaurant into a waiter less management and providing bills on email provided by the users on their online delivery. It can also be customized to display the features of the hotel for the guests with an interactive interface.

2.2 Project Scope

The groups of user that had been identified to use the system are customer and administrator. This user will be able to use the online restaurant booking and hotel room reservation system. The online restaurant management system is further divided into three main parts which are as follows;

- Online Food Ordering
  Customer will be able to order food online by selecting the available items on the menu. This is applicable for home delivery, take away and dine in.
- Online Seat Reservation
  Customer will be able to make a seat reservation online just by picking his desired seat in the restaurant. Confirmation mail will be sent to his email address and once the booking is confirmed through email confirmation customer will successfully reserve his desired seat.
- Online Bill Payment
  Once the order is confirmed an email will be sent to the customer attached with the bill of his order. Customer can then pay his bill at the time of food delivery or when he is taking his order from restaurant.

This online hotel reservation is further divide into two main parts which are as follows;

- Online Hotel Room Reservation
  Customer can pick his desired room from the categories which the hotel provide; namely single, double, twin, presidential suite and master suite.
- Online Hotel Table Reservation
  Customer will be able to make a table reservation online just by picking his desired table form the available table in the restaurant. Confirmation mail will be sent to his email address and once the booking is confirmed through email confirmation customer will successfully reserve his desired table.

Administrator is the person who will manage the entire system. This type of user will also do maintenance and control the application of this system. Administrator takes a responsibility to register

The boundaries of the system are:

    a. User must follow the instruction guide before using the website, instruction guide will be helpful.

The features of the system are:

All the features of the system are explained in detail in 4.1. Refer to that part to find the full features of the system.

2.3 Not In Scope

In the initial stage the system is bound to be used as website. No mobile application is available in the initial stage.

2.4 Project Objectives

The main objective of the project is to provide ease of food ordering and room reservation in the hotel room to customer. By using our system customer can get relief of hectic process of food ordering in restaurants and room reservation in hotel.

2.5 Stakeholders

Primary: Developers of the system and a HotRest user/customer.

Secondary: Administrator/One that manages the system.

2.6 Operating Environment

The system will compatible with Windows 7 and onwards.

The system requires a working Internet connection.

2.7 System Constraints

The most essential system constraints are as follows:

Software constraints

Any Hotel or Restaurant can buy this system to provide ease to their customers.

Hardware constraints

User/Customer must have a PC with (Windows 7 or above) or a Mobile with working internet connection.

Cultural constraints (includes language etc.)

User must be able to read and understand English as our whole system is based on English language.

Legal constraints

All rights are reserved with the developers of the system. Customer can only use our system as a ease of food ordering.

Environmental constraints

Our system can be used in any environment as long as it is visible to the customers.

User constraints

System is designed for user with age of above 18 who has their own email account.

2.8 Assumptions & Dependencies

This system is a website then customers who use smartphone or PC (windows and ios) will be more benefited. Basic password authentication based security mechanism will be used to protect HotRest from unauthorized users. Database will be maintained with all the updates from the administrator to provide best services to the customers.

3 External Interface Requirements

There are many types of interfaces as such supported by this software system namely; Hardware Interface, Software Interface and Communications Interface.

3.1 Hardware Interfaces

3.1.1 Customer End

The user interface will be implemented using any Smartphone or PC app browser. This interface will be user friendly. So that every kind of customer can place the food order easily. Customers can also give feedback through it easily with some demo comment or if they are keen to write their review by own they can do it.

3.1.2 Administrator End

PC with Windows 7 or above with 1 GB RAM and processor of more the 2.6 GHz.

Required devices are: Smart Phone with a working internet connection or PC with Windows 7 or above and a working internet connection.

3.2 Software Interfaces

The system shall communicate with the Configurator to identify all the available components to configure the product. The system shall communicate with the content manager to get the product specifications.

3.3 Communications Interfaces

The Smart Phone device or a PC is required to be connected with Wi-Fi/Data Package for successful communication.

4 Functional Requirements

4.1   Functional Hierarchy

The system is decomposed into main three modules/components.

    a. Hotel

    b. Restaurant

    c. User

Following part of the section briefly describe the above three listed modules.

a. <u>Hotel</u>

Room Reservation
- The system shall record reservations which would include customer's details, room type and dates of arrival and departure.

Check-in customers
- The system shall allow reservations to be modified without having to reenter all the customer information.

Checkout customers
- The system shall display the amount owed by the customer.
- To retrieve customer information the primary keys shall be used
- The system shall record that the room is empty.

Login (Admin Authentication)
- Admin will provide login ID and Password for signing in to account.

Payment records
- The system shall record the payment.
- The system shall record the payment type.

Check Notifications
- Admin will be able to check notifications after successfully login to the account.

b. <u>Restaurant</u>

Food Order
- The system will show all items available.
- The system shall track all meals purchased in the hotel.

Food Delivery
- The system should take proper information about the food delivery location.
- The system will provide estimated time of delivery.

Billing
- The system shall record payment done by customer.
- The system shall record mode of payment chosen by customer.

c. <u>User</u>

Room Reservation
- User will provide his details for the reservation of room which would include his personal information, room type, expected check-in and checkout dates

Table Reservation
- User can reserve table in a restaurant by providing required information to the system.

Order Food
- User can order his food online and can ask for the food delivery.

Pick N Drop Option
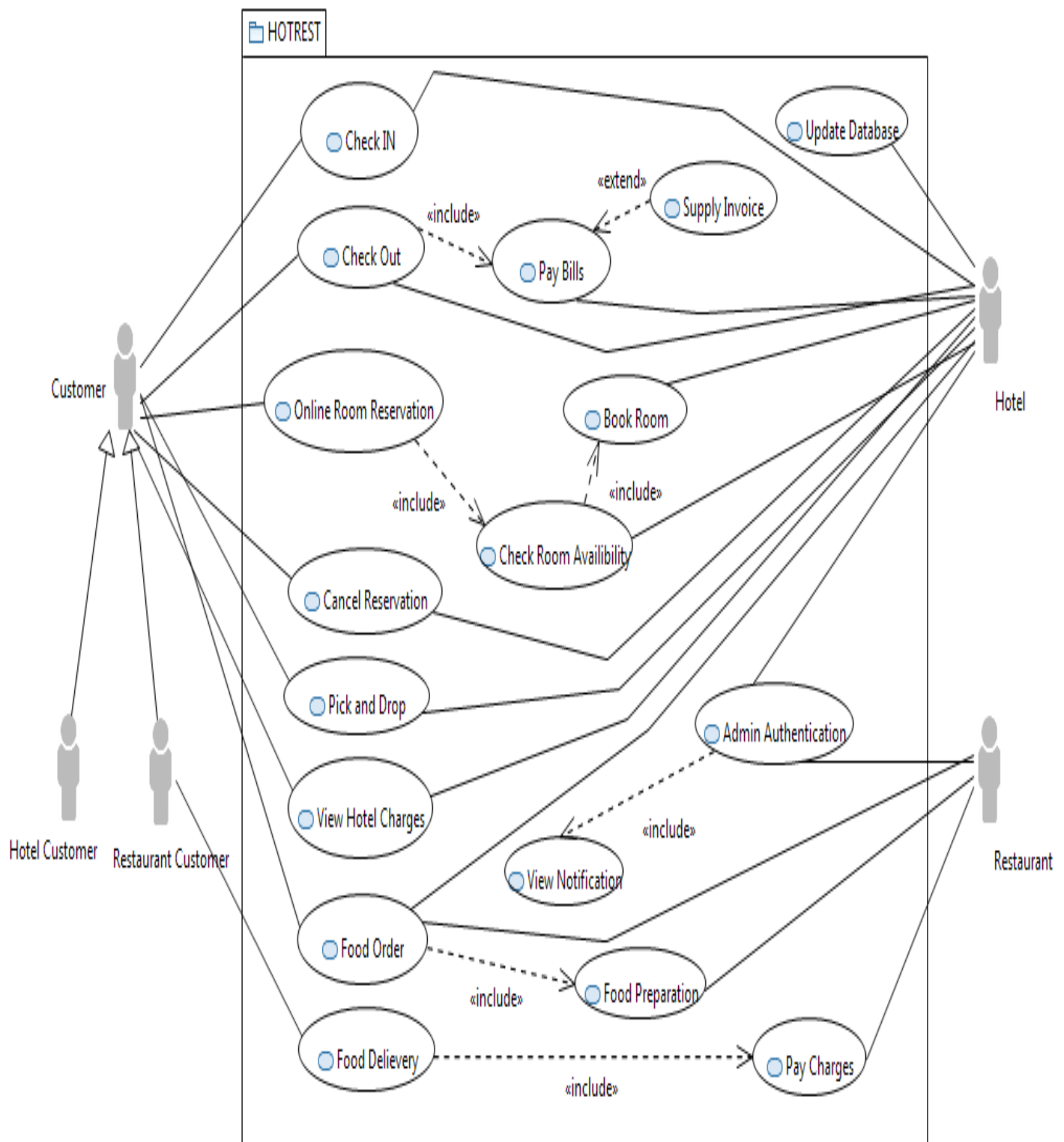- Abroad Customers can avail pick n drop facilities from airport to the hotel.

View Bills
- Customer billing records are mailed to the customer on their email address.

Pay Bills
- Customer would pay bills at the time of checkout.

4.2   Use Cases (Diagram)

4.2.1   Use Case : Admin-Authentication

Use case Id 01:Admin-Authentication	
Use case Id:	01

Actors: Hotel Administrator	

Feature: Sign-In	

Pre-conditions:

Step #	*Description*
01	Admin must have account to view the details of the hotel.

Scenarios:

Step#	*Action*	*Software Reaction*
1.	Admin will fill login credentials.	Verification of username and password
2.	System will verify username and password	Admin will be directed to admin screen of HotRest.
3.	Admin will update reserved rooms.	Available rooms will be highlighted to the customers.

Alternate Scenarios:

1a: Admin will be asked to re-enter fields if not entered correctly.
2a: Admin can be asked to re-set password.

Post Conditions:

Step#	*Description*
01	After successfully login to the system admin will be able to view all the features.
02	Admin can update the reserved and vacant rooms.
03	Admin can view the records of customer and hotel.

Use Case Cross referenced	UC-01

4.2.2   Use Case: Online Room Reservation

Use case Id 02: Online Room Reservation		
Use case Id:	02	
Actors: User		
Feature: Room Booking		
Pre-conditions:		
Step #	*Description*	
01	User must have an internet connection and aware of the website.	
02	User must have the details required for the room reservation.	
Scenarios:		
Step#	*Action*	*Software Reaction*
1.	User will provide his details.	The system will verify his details.
2.	User will enter the room type and dates of arrival and departure.	The system will send room confirmation mail if the room is available.
Alternate Scenarios:		
1a: If user is facing some problems regarding the room reservation user is requested to read instructions carefully. *2b:* If the rooms are not available user won't be able to reserve the room.		
Post Conditions:		
Step#	*Description*	
01	Room confirmation mail would be sent to the user on his email address.	
02	User will verify the email address.	
03	Room will be reserved after the confirmation.	
Use Case Cross referenced	UC-02	

4.2.3 Use Case: Online Food ordering

Use case Id 03: Online Food Order	
Use case Id:	03
Actors: User	
Feature: Food ordering	
Pre-condition:	

Step #	*Description*
01	User must have an internet connection.
02	User must be aware of the website.

Scenarios:		
Step#	*Action*	*Software Reaction*
1.	User will select the food items to be prepared and time to be delivered.	System will inform the restaurant department about the order.
2.	User will wait during the preparation time of the food.	System will inform the user when their order is ready.

Alternate Scenarios:	
1b: Dinner is not ready within the time of delivery and the user has to wait.	

Post Conditions:	
Step#	*Description*
01	User will get the food on time.
02	User will get the bill of their total amount.
Use Case Cross referenced	UC-03

4.2.4 Use Case: Pick and Drop Facility

Use case Id 04: Pick and Drop		
Use case Id:	04	
Actors: User		
Feature: Pick and Drop		
Pre-condition:		
Step #	*Description*	
01	User must provide all his information.	
02	User must provide details about the pickup time and location.	
Scenarios:		
Step#	*Action*	*Software Reaction*
1.	User will be given pick and drop facility to the hotel.	System will inform the transport department about the user pick and drop details.
2.	Driver will be notified about the ride	Driver will reach the location.
Alternate Scenarios:		
1a: It may possible that, the car is late due to any reason.		
Post Conditions:		
Step#	*Description*	
01	Customer will drop to the hotel.	
02	Customer will be notified of his charges.	
Use Case Cross referenced	UC-04	

4.2.5   Use Case: View Hotel Charges

Use case Id 05: View Hotel Charges		
Use case Id:	05	
Actors: User		
Feature: View all the bills of the customer.		
Pre-condition:		
Step #	*Description*	
01	User must be logged in to his email address.	
Scenarios:		
Step#	*Action*	*Software Reaction*
1.	User will be able to see his all the charges which include room reservation charges, food charges and others.	System will show all the billing records of the user.
2.	User will select payment option to pay his charges.	System will clear his billing records.
Alternate Scenarios:		
1a: Customer did not avail any service. *K82a:* System may fail to display charges.		
Post Conditions		
Step#	*Description*	
01	User will receive the bill through email.	
02	User will select the payment option.	
02	Verification will be done through email.	
Use Case Cross referenced	UC-05	

4.2.6   Use Case: View Notification

Use case Id 06: View Notification		
Use case Id:	06	
Actors: Admin		
Feature: View Notification.		
'2Pre-condition:		
Step #	*Description*	
01	Admin must be logged in system.	
Scenarios:		
Step#	*Action*	*Software Reaction*
1.	Admin will click the option of view notifications.	System will show notifications to the admin about the hotel.
Alternate Scenarios:		
1a: It may possible that, there is no new notification.		
Post Conditions:		
Step#	*Description*	
01	Admin will be notified about status of room reservation.	
02	Admin will be notified about status of food ordering and other features.	
Use Case Cross referenced	UC-06	

4.2.7 Use Case: Food Delivery

Use case Id 07: Food Delivery	
Use case Id:	07

Actors: User

Feature: Food Delivery

Pre-condition:

Step #	*Description*
01	User must select the food items and provide details about the delivery.

Scenarios		
Step#	*Action*	*Software Reaction*
1.	User will select items from the provided menu.	System will add the item to cart and add its price in total amount.
2.	User will provide details about the food delivery time.	System will inform restaurant department about the delivery of the order.

Alternate Scenarios:
1a: It may possible that, delivery gets late due to many possible reasons.

Post Conditions:	
Step#	*Description*
01	The requested item will be added to cart.
02	Amount of item will be added to total amount.
03	Estimated time of food delivery will be provided to the customer.
Use Case Cross referenced	UC-07

5 Non-functional Requirements

5.1 Performance Requirements

The product will be based on local server. The product will take initial load time. The performance will depend upon hardware components. Payment system will be fully secure. Different database for Admin and User.

5.2 Safety Requirements

The source code developed for this system shall be maintained in configuration management tool. The whole system is secured. Only Admin can access all the data. This system will use HTTPS since this protocol is more secure.

- **Server Crash/Failed/Overwhelmed**
  Too many request at one time might cause the server to be failed, the system should behave accordingly with the error and generate an error message for it.

- **Database Error**
  The system should generate error, if any error is occurred.

- **Application might failed to respond**

  System will have to get maintenance on monthly basis to provide best services to both the users and administrators.

5.3 Security Requirements

The main security concern for end users is user authentication; hence system will use login-authentication mechanism for administrator to ensure security of the database.

5.4 User Documentation

User manuals including all the instruction to run and execute the system will be provided to both the user and the administrator.

5.5 Other Requirements

5.5.1 Legal, Copyright, and Other Notices
All right reserved by our team.

5.5.2 Applicable Standards
It should be as per the industry standard.

6   References

[1] Robin Nixon, "Learning PHP, MySQL & JavaScript: With JQuery, CSS & HTML5, O'Reilly Media, December 2014

[2] Luke Welling, "PHP and MySQL Web Development, 4th Edition" ,Laura Thomson ,2009

[3] Rasmus Lerdorf, "Programming PHP" ,2002

[4] Brett McLaughlin, "PHP & MySQL: The Missing Manual" ,November 2011

[5] https://www.lynda.com/PHP-training-tutorials/282-0.html

7   Appendices

Appendix A: Project proposal (signed by supervisor)

Appendix B: Project SRS