Software Requirements Specification

for

Online Guest House Booking System

Version 1.0 approved

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Revision History

Name	Date	Reason For Changes	Version
Initial Version	18/03/21	Initial version	1.0.0

1. Introduction

1.1 Purpose

The purpose of this document is to create a list of detailed requirements for Online Guest House Booking System (OGHBS). This document will capture interactions between different internal web pages, environment scenarios of usage, constraints and online room booking system prototype.

1.2 Document Conventions

X is a heading index

X - Font size - 18, Bold

X.y - Font size - 14, Bold

X.y.z - Font size - 12, Bold

other - Fonts size - 12

1.3 Intended Audience and Reading Suggestions

This document will capture all stakeholders' preferences, different conflicts and their resolution. Also, it could be used by potential developers, design engineers, testers, project managers, etc. Eventually this document can be used while preparing user documentation.This document will be proposed to different stakeholders for their approval and can be used as a reference guide in different phases of system development.

1.4 Product Scope

The scope of the online room reservation system is to create an online web-interface for the users to check the availability and book the room from anywhere. This system will be an alternative to the traditional offline way of checking available rooms and booking them in IIT Kharagpur. The scope of the sub-system which is described in this document is the user interface. The system will have two major types of users: customers and hotel manager

1.5 References-Last

SRS IEEE Template to construct this document.

2.Overall Description

2.1 Product Perspective

This product provides a user friendly online portal for booking accomodation inside IIT Kharagpur campus for anyone visiting the campus.It also allows users to book food options during the stay.It allows the admin to conveniently process booking requests of the users.

2.2 Product Functions

- **Maintaining Database for**
  - Details of the user
  - Booking queue
  - Booking status of each room
  - Feedbacks from users

- **Manager's End**
  - Access to the database
  - Automatic notification on booking confirmation
  - Verify User

- **User's End**
  - Create an account and login
  - Request booking of room and provide food preferences
  - Make payments

- **Common Interface/Website**
  - It provides an intuitive interface for the user
    - To select a room
    - To select food options
    - To confirm payments
    - Provide feedback
    - Contact us

2.3 User Classes and Characteristics

- Visitors
  - Book a room
  - Make payment
- Hotel Manager
  - Confirm Booking

- View status of rooms

2.4 Operating Environment

Operating environment for this system will be hosted virtually using any cloud service provider.

2.5 Design and Implementation Constraints

- The system has dependency on the database and the hotel's existing traditional system.
- Internet connection is a constraint for this system because system is available from cloud therefore customer needs to have good network connection to connect to our web interface

2.6 User Documentation

A help section would be there to guide the admin or owner of the guest house management system. The site would be sufficiently user friendly to enable visitors to use.

2.7 Assumptions and Dependencies

It is assumed that the user will have the basic resources required for this software, this includes

- Active Internet Connection
- A browser to access internet
- A desktop system or a cell phone to work on
- Other than these, the software depends on a server where all the stuff needs to be stored.

3.External Interface Requirements

3.1 User Interfaces

Works on a simple web browser with all the necessary options are available for the user to choose.

3.2 Hardware Interfaces

The server needs to have a decent CPU (4/6 core with >2.0 Ghz avg clock speed) and a stable internet connection. The user side need not be at all

sophisticated. Any device with an internet access and internet browser will be suitable for using the system.

3.3 Software Interfaces

The GUI will be made by HTML, CSS,Javascript. Python would be used for the processing on the server. Database will be made using MySQL.

3.4 Communications Interfaces

The communication interfaces include e-mail and web browser. E-mail is required for carrying out the necessary communications with the user and the web browser is required to send the notifications to the user..

4. System Features

4.1 Registration and Verifying User

4.1.1 Description and Priority

To create an account for the user and get verified so that he/she becomes eligible for booking.
Priority: High

4.1.2 Stimulus/Response Sequences

The feature will get stimulated when the user clicks on the registration button on the main page. He/ She can enter his/her details and present an id card and get verified. On completion, an account will be created for the given user.

4.1.3 Functional Requirements

REQ-1: Option to register
REQ-2: Option to upload documents
REQ-3: Database of users maintained

4.2 Existing User Login

4.2.1: Description and Priority

Existing users can login into his/her account and look at booking status.
Priority: High

4.2.2: Stimulus/Response Sequence

The user clicks on the login button and enters the login details which if are correct will lead to a screen to display details of the user.

4.2.3: Functional Requirements:

REQ-1: Identify user for verification
REQ-2: Option to sign-up and fill in the details
REQ-3: Allocation of username, password and allocating memory in the database.

4.3 Check Availability and Select a room

4.3.1:Description and Priority

Allows users to enter booking dates and check availability of various rooms and select a room of his/her choice.
Priority: High

4.3.2 Stimulus and Response

When a user chooses the book room option on his dashboard and enters the dates of booking, the system searches whether any room is available and displays the options and allows the user to choose one.

4.3.3: Functional Requirements:

REQ-1: Database of rooms with availability status
REQ-2: Option to enter User preferences for rooms

4.4 Food Booking

4.4.1 Description and Priority

Allows the user to choose whether food is to be included in the package or not.
Priority: Medium

4.4.2 Stimulus and response

When the user proceeds with selection of rooms food options are displayed and leads to the confirmation of food optio**n**

4.4.3 Functional Requirements

REQ-1: Option to enter preference
REQ-2: Details of which rooms offer food

4.5 Room recommendation

4.5.1 Description and Priority

We recommend the closest vacant date for a room selected by the user
Priority: Medium

4.5.2 Stimulus and response

When user enters a non vacant date for room, we notify the closest available date for the room

4.5.3 Functional Requirements

REQ-1: Method to select nearest available slots from the database

4.6 Price based sorting

4.6.1 Description and Priority

Helps the user to sort the rooms based on price on a given date
Priority: Medium

4.6.2 Stimulus and response

When the user selects the sort option while displaying the available rooms.
Sorts the rooms as specified by the user.

4.6.3 Functional Requirements

REQ-1: List of rooms along with their prices
REQ-2: Option to include food prices

4.7 Payment Gateway

4.7.1 Description and Priority

To enable the user to do the payment after making the desired booking.
Priority: High

4.7.2 Stimulus/Response Sequences

The feature will get stimulated when the room selection is confirmed.On completion the user will be directed to the payment gateway.

4.7.3 Functional Requirements

REQ-1: Price of room
REQ-2: External payment vendor

REQ-3: Mode of payment

4.8 Waiting List

4.8.1 Description and Priority

It is list of rooms which have not been yet allotted stored in a queue(FIFO)
Priority: High

4.8.2 Stimulus/Response Sequences

The feature will get stimulated when the user does not want to accept a recommendation and is willing to add his room booking to a waiting list(queue). On completion the user will be directed to the payment gateway and get added to the waiting list.

4.8.3 Functional Requirements

REQ-1: Memory to store the list of rooms in the queue
REQ-2: Details of the selected room to be added in the queue.

4.9 Cancellation and Refund

4.9.1 Description and Priority

In case the user decides to cancel his/her visit, then he can cancel the booking and avail a refund.
Priority: High

4.9.2 Stimulus/Response Sequences

The feature will get stimulated when the user chooses to cancel the booking or does not get room from the waiting list.In response the room will be removed from the waiting list then the user will get the refund back and then the room status gets changed.

4.9.3 Functional Requirements

REQ-1: Bank details of user and payment status
REQ-2:External payment vendor
REQ-3:Fraction of money to be deducted

4.10 Feedback

4.10.1 Description and Priority

This is the last step for the user before exiting from the online portal.The visitor would be asked to fill up a form with experience details, which would be helpful to upgrade the service quality.
Priority: High

4.10.2 Stimulus/Response Sequences

The feature will get stimulated when the user will be leaving the guest house.On completion the feedback will be shown to the manager and saved.

4.10.3 Functional Requirements

REQ-1: Memory to store the feedback details in the room database
REQ-2:Feedback form to collect database

5.Other Nonfunctional Requirements

5.1 Performance Requirements

The response time should not be more than 5 seconds from the server end.

5.2 Safety Requirements

- The payments made by the user are secured against any mal-practices.

5.3 Security Requirements

- The system is safe as only the admin has access to the database.
- Parts of data can be accessed by user after verifying credential of user

5.4 Software Quality Attributes

The software should run smoothly on popular browsers like chrome, firefox.

5.5 Business Rules

The software is to be used by IIT Kharagpur Guest Houses. It can also be extended to be used to provide accommodation in other IITs. The software cannot be outsourced without the permission of the project manager.

6. Other Requirements

- Licencing and copyright is required.
- Database will be required to be hosted in an online platform