**Software Requirements Specification**

**for**

**Hotel Management System**

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**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# Introduction

## Purpose

*This mini project aims to handle and create a user-friendly database system for a hotel with the help of interactive UI that provides core hotel functionalities, including reservations, guest management, room management, billing. With the help of database management systems, the project intends to improve efficiency and enhance guest experiences.*

## Document Conventions

*Topic headers are represented by bold letters font sized 18 and subtopics by font size 14. Navigation for subtopics have been mentioned for a detailed reading experience along with descriptive subtitles for the same.*

## Intended Audience and Reading Suggestions

*This document is intended towards professors for grading of this project and for users (preferably developers) to get an insight about requirements to run our application or to get an abstract idea on running similar products based on similar ideas and technologies.*

## Product Scope

*The primary objective of this mini project is to track all the reservations made, availability of rooms, maintenance of rooms, billing, staff management for a hotel.*

## References

*For system requirements:*

* *<https://help.syncfusion.com/windowsforms/installation-and-upgrade/system-requirements>*
* *Any up-to-date chromium based browser in desktop view mode.*

*For source code and additional resources used in this code:*

* *<https://github.com/JangamKarthik/HotelManagementDBS>*

# Overall Description

## Product Perspective

*The "Hotel Management System" aims to streamline hotel operations through an interactive UI driven database system. It covers reservations, guest management, room maintenance, billing, and staff coordination, improving efficiency and guest experiences.*

## Product Functions

*We are targeting three classes of actors:*

*For Guests:*

* *Effortlessly reserve room online.*
* *Check room availability and pricing.*
* *View booking details.*
* *Access to the billing amount.*
* *Application for early check-in and checkout.*
* *Give feedback to hotel staff.*

*For Hotel Staff:*

* *Manage and update room availability.*
* *Access and view guest details.*
* *Monitor room maintenance and housekeeping schedules.*
* *Generate bill amount and manage guest payments.*
* *Get and view guest feedback.*

*For Admin:*

* *Modify room rates and special offers.*
* *Access and view guest details.*
* *Access guest feedback.*
* *View staff details and staff timings.*

## User Classes and Characteristics

*The different types of users expected to use this product are:*

1. *Guests: Can manage their personal room booking and provide feedback.*
2. *Hotel Staff: Access to data pertaining to room availability, guests, maintenance, billing and feedback.*
3. *Admin: Access to guest data and feedback, room rates and staff details.*

## Operating Environment

*The executable file may be executed on any operating system without fail if a local constant backend is supported otherwise only on host server.*

## User Documentation

*For any help regarding understanding of logical code segments, refer to:*

* [*https://www.w3schools.com/sql*](https://www.w3schools.com/sql)
* [*https://react.dev/learn*](https://react.dev/learn)
* *https://tailwindcss.com*

## Assumptions and Dependencies

*It is assumed that the software used to run and manipulate the code is Microsoft Visual Studio Code. The backend opted for is MySQL/Oracle workbench integrated accordingly.*

# External Interface Requirements

## User Interfaces

*The website’s user interface is designed with a clean, modern aesthetic that prioritizes usability and user experience. The color scheme is pleasing to the eye, promoting a sense of calm and relaxation, which aligns with the hotel’s brand image. The typography is clear and legible, ensuring that users can easily read and understand the information presented.*

*The layout is intuitive, with a clear navigation menu at the top of the page that allows users to easily navigate between different sections of the website. The homepage features a large, eye-catching banner image that showcases the hotel’s facilities, followed by a brief introduction to the hotel and its services.*

*The room reservation section is designed with simplicity in mind. It features a calendar for selecting dates and a dropdown menu for choosing room types. The booking details and billing information are presented in a clear and concise manner, making it easy for guests to review their reservation.*

*The admin panel and staff dashboard are designed with functionality and efficiency in mind. They feature a simple layout with clearly labeled sections for different tasks*

*Overall, the website’s user interface is designed to provide a seamless and enjoyable user experience for guests, hotel staff, and admins alike.*

## Hardware Interfaces

*Hotel Management System is solely dependent on frontend and backend through HTML, CSS, Javascript and React as frontend and MySQL/Oracle, Node.js as backend service and is in no way or form integrated with any hardware components.*

## Software Interfaces

*Operating System: Windows 10/11, Linux, MacOS*

*Database: MySQL/Oracle*

*GUI: HTML, CSS, JavaScript and React*

*and many more.*

*Tools: MySQL Workbench, Visual Studio Code, GitHub, Git.*

## Communications Interfaces

*Users are to submit their booking preferences and contact data through a user-friendly web page which will store the data entered the database and will be permanently retained. If the guest user wants to change their preferences and contact information they can edit before booking. For hotel staff and admin, the webpage will be different and can only be accessed via staff and admin login.*

# System Features

*The system provides functionalities for guests, hotel staff, and admins. Guests can easily reserve rooms online, check room availability and pricing, view booking details, access billing information, apply for early check-in or checkout, and provide feedback. Hotel staff can manage room availability, access guest details, monitor room maintenance and housekeeping schedules, manage guest payments, and view guest feedback. Admins have the ability to modify room rates and special offers, access guest and staff details, view guest feedback, and manage staff timings. This system aims to streamline hotel operations and enhance the guest experience.*

**Functional Requirements**

## Specific to Guests:

* + 1. **Reserve room online:**

*Guests should be able to easily reserve a room online through the hotel’s website. The reservation process should be user-friendly and intuitive, allowing guests to quickly and easily select their desired room type, dates, and any additional options or services.*

* + 1. **Check room availability and pricing**:

*Guests should be able to view real-time room availability and pricing information on the hotel’s website or mobile application. This information should be clearly displayed and easy to understand, allowing guests to make informed decisions about their reservation.*

## Hotel staff:

**4.2.1** **Manage and update room availability and maintenance**:

*Hotel staff should be able to manage and update room availability information in real-time. This information should be easily accessible and updatable through a staff-facing interface. Hotel staff should be able to monitor room maintenance and housekeeping schedules to ensure that rooms are properly cleaned and maintained. This information should be easily accessible through a staff-facing interface.*

**4.2.2** **View guest details and feedback (shared with Admin)**:

*Hotel staff should be able to access and view guest information, including reservation details, personal information, and any special requests or needs. This information should be easily accessible through a staff-facing interface.* *Hotel staff should be able to access and view guest feedback submitted through the hotel’s website or mobile application. This feedback should be reviewed by hotel staff to improve the guest experience.*

**4.2.3** **Manage Billing and Payments**:

*Hotel staff should be able to generate bills for guests and manage guest payments through a staff-facing interface. This interface should allow staff to view guest charges, apply payments, and generate receipts or invoices as needed.*

**4.3 Admin:**

**4.3.1**  Modify room rates and special offers:

*Admin users should be able to modify room rates and create special offers or promotions through an admin-facing interface. This interface should allow admin users to set room rates, create promotional codes, and manage availability for special offers.*

# Other Nonfunctional Requirements

## Performance Requirements

*For optimum performance, the minimum system requirements are as follows:*

* *1.0 GHz or faster processor. Intel dual core or better recommended.*
* *2 GB of RAM or above.* *Needed for running on the chromium-based browser.*

## Safety Requirements

*MySQL/Oracle database should have correct root passwords and login IDs for proper connectivity.*

## Security Requirements

*While downloading the executable file, care should be taken to locate it inside of a safe folder free of viruses or collaborative spaces so that passwords are safe and if the file opens in restricted mode, the user should contact his/her authorities to resolve issues.*

# Other Requirements

*No external requirements other than the ones already mentioned.*