Hotel Reservation System

System-Wide Requirements Specification

Revision History

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1.   Introduction

The purpose of this document is to define system-wide requirements of the Hotel Reservation System. In this tool, users will be able to perform and make reservations, manage their accounts, make payments and order other hotel facilities. This specification defines the non-functional requirements of the system such as reliability, usability, performance, and supportability as well as functional requirements that are common across a number of use cases. (The functional requirements will be defined in the Use Case Specifications.)

2.   System-Wide Functional Requirements

Functional requirements are captured via the defined use cases. The software product shall fulfil the functions below:

1. Remote access to the system such as PCs and smart phones.

2. Sending a request message to the receptionist with the touch screen in the room.

3. Make a room service request from the touch screen.

3.   System Qualities

This section lists all of those requirements that relate to, or affect, the usability, reliability, performance, supportability of the system.

3.1   Usability

Ease of use; the system shall not require user training beyond that of using a desktop application.

3.2   Reliability

The System shall ensure that the data loss rate is no bigger than 0.01% per year for all the data files.

3.3   Availability

The system should not be down for more than 1 hour in a day due to software or database related errors.

3.4   Performance

1. The system shall support up to 500 simultaneous transactions against the database at any given time and up to 200 simultaneous users against the server at any one time.
2. The system shall provide access to the database with no more than 2 seconds latency.
3. Additionally, the system must be able to complete 75% of currently active transactions within 2 seconds.
4. The minimum system prerequisites for the server are as follows:
   - 1 GHz Processor
   - 2 GB RAM
   - 100MB Hard disk
5. For client computers, any configuration that is capable of running Java applications shall be sufficient.

3.5   Supportability

At least 20% of the code (i.e. classes and methods) shall be commented.

4.   System Interfaces

4.1   User Interfaces

Hotel Reservation System interface shall be unambiguous: users shall be able to understand how to achieve the desired result without additional help.

4.1.1   *Look & Feel*

The app's color scheme shall match the hotel's color scheme and include the hotel's branding.

4.1.2   *Layout and Navigation Requirements*

On each screen of the application (except for sign in/sign up screens and payment screen) the menu with all services that users may order (such as meal, cleaning, etc.) should be available. This way the paid services shall be always easy to access.

4.1.3   *Consistency*

There are no particular demands of consistency. Therefore, the consistency properties (Navigation controls, Screen areas sizes, shapes, etc...) shall be discovered during the development phase.

4.1.4   *User Personalization & Customization Requirements*

There shall be no personalization and customization in the Hotel Reservation System tool.

However, the system should be available for three types of users: hotel managers, receptionists and hotel guests.

4.2   Interfaces to External Systems or Devices

In the following sections interfaces to external systems are described in details.

4.2.1   *Software Interfaces*

1. System shall provide an interface for other applications used in the hotel. A web service access shall be provided in order to give other applications in the hotel (e. g. application that is used in the accounting department) an access to necessary information. Through the web service other applications can access the history of reservations, that describes with Hotel Guest stayed in which room in which period of time.
2. Payment mechanism should be implemented using the interfaces provided by financial institutions through which payment is made.

4.2.2   *Hardware Interfaces*

No custom hardware interfaces are required.

4.2.3   *Communications Interfaces*

The Hotel Reservation System shall be connected to the Internet. Since the Hotel Reservation System is a desktop-based tool, TCP/IP protocols shall be used for remote access.

5.   Business Rules

Business rules may evolve during the iterations.

5.1   User Account Rules

5.1.1   Three levels of access should be available.

5.1.2   Receptionists should be able to manage guest accounts.

5.2 Reservation Rules

5.2.1 Only users who are authorized in the system as hotel guests can make reservations.

5.2.2 Hotel guests should be able to perform a reservation of the room for the desired number of days. Maximum number of days – 180, minimum number of days for reservation is 1.

5.2.3 Hotel guests are restricted to make reservations for only one room at a time.

5.2.4 Cancellation of the reservation can be done only by Hotel Receptionist.

5.3 Supplementary Service Rules

5.3.1 Hotel guests should be able to make a reservation of supplementary service, available in the hotel.

5.3.2 Hotel guests can make only one reservation of supplementary service at the same period of time.

5.4 Cleaning Service Rules

5.4.1 Hotel guests should be able to make a request for changing a room.

5.4.2 Hotel guests are restricted to order no more than one cleaning service per day.

5.5 Payment Rules

5.5.1 Hotel guests should be able to perform payment operations through the Hotel Reservation System with cash.

5.5.2 Hotel guests should be able to perform payment operations through the Hotel Reservation System with a credit card.

5.5.3 Only MasterCard and Visa credit cards are allowed for the payment process.

5.5.4 Hotel guests can choose only one payment method: payment cannot be made in parts - one part in cash, another part by card.

6. System Constraints

1. The technologies that must be used by developers of the Hotel Reservation System are Java and SQLite.
2. he additional application server software must be used, such as Apache Tomcat.
3. The user shall be able to utilize the system through commercially available operating systems, such as Windows, iOS and Linux, and Java JDK/JRE 8 custom software shall be required to reside on the computer.
4. Free version of Java shall be used.

7. System Compliance

7.1 Licensing Requirements

User computers must include Java. No client licenses are required.

7.2 Legal, Copyright, and Other Notices

Copyright statements indicating content ownership shall be included in content as required by policy.

7.3   Applicable Standards

The Unified Software Development Process (UP) guidelines for the documentation of software systems shall be followed.

8.   System Documentation

Online user guides shall be provided for the Hotel Reservation System.