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**Group Nice**

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**NiceH&R**

# **Use-Case Specification: Booking Management**

**Version <1.0>**

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# Use-Case Specification: Booking Management

## 1.1 Brief Description

The use case diagram illustrates the primary functionalities of the booking management system for a hotel and restaurant website. Users can perform various actions related to bookings. The Receptionist can manage bookings made by guests, confirm reservations, and update booking details. The Admin oversees the entire system, managing user accounts and handling system configurations.

## 2. Flow of Events

### 2.1 Basic Flow

1. Receptionist/Admin logs into the hotel and restaurant management system.
2. System presents the booking management interface.
3. System displays a list of existing bookings categorized by date, and status.
4. Receptionist/Admin chooses a specific booking to manage (view details, update, confirm, or cancel).
5. System shows detailed information about the selected booking (booking ID, guest details, date and time).
6. System updates the booking information and sends a notification or confirmation to the guest if there are changes.
7. System updates the booking status (confirmed/canceled) and sends relevant notifications to the guest.

### 2.2 Alternative Flows

#### 2.2.1 Handling Booking Conflict

1. Receptionist/Admin elects "Manage Bookings" to modify an existing booking.
2. System displays the list of bookings for the selected date and service type.
3. Receptionist/Admin attempts to modify a booking (e.g., change date/time or merge bookings).
4. System detects a conflict with the requested modification (overlapping bookings).
5. System notifies the Receptionist/Admin about the conflict and presents available options.
6. System offers alternatives such as suggesting alternative timings, splitting bookings, or relocating to resolve the conflict.
7. Receptionist contacts the guest for further discussion and resolution.
8. System adjusts the booking details according to the chosen resolution.
9. System updates the booking status and notifies the guest about the changes made.

## 3. Special Requirements

### 3.1 Data Privacy and Security

Ensure compliance with data protection regulations by implementing data encryption, secure storage practices, and access control measures for guest information, including personal details and payment data.

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### **3.2 Scalability**

The booking management system should be designed to accommodate scalability needs, handling an increasing number of bookings and users without compromising performance. It should effectively scale to meet peak demand periods.

### **3.3 System Availability and Reliability**

Guarantee high availability and reliability of the booking management system by implementing redundancy, failover mechanisms, and regular system maintenance to minimize downtime.

### **3.4 Performance Optimization**

Optimize system performance to ensure quick response times for booking updates, searches, and data retrieval. Implement caching mechanisms and database optimizations to enhance system performance.

## **4. Preconditions**

### **4.1 System Availability**

The booking management system must be operational and accessible to receptionists and administrators. The system should be running without any critical issues that might hinder the management of bookings.

### **4.2 User Authentication**

Receptionists and administrators must have successfully logged into the system with valid credentials and appropriate access rights to perform booking management tasks.

### **4.3 Data Integrity**

The system should have accurate and up-to-date information about existing bookings, services availability, and guest details.

### **4.4 Permission to Manage Bookings**

The logged-in user (Receptionist or Admin) must have the necessary permissions and authorization to access and manage bookings within the system.

## **5. Postconditions**

### **5.1 Updated Booking Information**

The system reflects the changes made during the booking management process, such as modifications, cancellations, or confirmations, in the database and user interface.

### **5.2 Notification Sent**

Notifications are sent to guests to inform them about any changes in their bookings, such as confirmations, modifications, or cancellations.

### **5.3 Status Updated**

If a booking was canceled or a room was booked, the status of rooms or tables should be updated.

### **5.4 Guest Communication Recorded**

Any communication between the receptionist/admin and the guest regarding late cancellations, modifications, or conflicts is logged.

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## 6. Extension Points

### 6.1 Integration with Loyalty Programs

This extension point enables integration with loyalty programs or membership systems, allowing the system to track and apply loyalty points, discounts, or exclusive offers for recurring guests. It extends the booking management process to incorporate loyalty benefits seamlessly.