**Hotel Management System - Swimlane Diagram Documentation**

**Overview**

This swimlane diagram models the Hotel Management System process, from guest reservation through check-out. The process emphasizes interactions among the *Guest*, *Front Desk*, *Housekeeping*, and *Billing* departments, incorporating a decision point for room availability.

**Swimlanes and Their Roles**

**1. Guest**

Acts as the primary user of hotel services, initiating the reservation process, checking in, enjoying the amenities, and completing payment at check-out.

**2. Front Desk**

Oversees key operational tasks, including managing room availability, confirming reservations, checking in guests, assigning rooms, updating bills for any additional charges, and ensuring a smooth check-out process.

**3. Housekeeping**

Plays a vital role in guest satisfaction by preparing rooms for check-in, performing regular cleaning during the stay, and responding to specific cleaning requests.

**4. Billing**

Ensures accurate financial transactions by creating and maintaining billing records, generating the final invoice, and processing payments efficiently during check-out. In a well-coordinated hospitality system, these roles work in tandem to deliver a seamless experience for guests while maintaining operational efficiency.

**Step-by-Step Flow Description with Decision Point**

**1. Guest Makes a Reservation**

The journey begins when a guest submits a reservation request, either online or in person. At this stage, key details such as room type, check-in and check-out dates, and any special preferences are collected. If the requested room is available, the reservation is confirmed, and the guest receives a confirmation message. In case the room is unavailable, alternative options are presented to the guest, such as adjusting the stay dates or selecting a different room type. This step sets the foundation for the guest's overall experience, making accuracy and responsiveness crucial.

**2. Front Desk Checks Room Availability**

The front desk checks for room availability on the requested dates.

**3. Decision: Room Availability Check**

* *If rooms are available*, the front desk proceeds to confirm the reservation, recording all relevant booking details.
* *If no rooms are available*, the front desk informs the guest of unavailability, ending the process here for that reservation attempt.

**4. Front Desk Confirms Reservation**

Upon confirming room availability, the front desk finalizes the reservation and sends confirmation details to the guest.

**5. Housekeeping Prepares Room for Guest**

Housekeeping prepares the room by ensuring it is clean and stocked with necessary amenities, marking the room as “ready” for guest arrival.

**6. Guest Arrives and Checks In**

The guest arrives at the hotel and checks in at the front desk.

**7. Front Desk Assigns Room and Checks In Guest**

The front desk assigns the room to the guest, updating the room’s status to “occupied.”

**8. Billing Initiates Billing Record**

The billing system creates a new record for this reservation to track all charges associated with the guest’s stay.

**9. Guest Uses Hotel Amenities**

During their stay, the guest may use additional services like dining or spa treatments, which incur extra charges.

**10. Front Desk Updates Billing with Amenity Charges**

The front desk adds charges for amenities used by the guest to the billing record.

**11. Housekeeping Schedules Room Cleaning**

Housekeeping monitors room usage and schedules cleaning during or after the guest’s stay as necessary.

**12. Guest Requests Check-Out**

The guest requests check-out at the front desk when ready to leave.

**13. Front Desk Finalizes Billing**

The front desk reviews the billing record to ensure all charges are accurate and complete.

**14. Billing Generates Final Invoice**

The billing department generates the final invoice, detailing all room charges and additional service costs.

**15. Billing Processes Payment**

The guest pays the final invoice, completing the financial transaction.

**16. Guest Receives Invoice and Pays**

The guest receives a copy of the paid invoice as a receipt, concluding the check-out process.

**Purpose and Benefits**

This swimlane diagram clarifies roles and responsibilities within the hotel management workflow, ensuring smooth guest experiences and efficient departmental coordination. Key benefits include:

* **Billing Accuracy**: The decision point ensures accurate room availability during booking, preventing overbookings and streamlining guest check-in.
* **Efficient Room Turnover**: Updating room status after check-out aids housekeeping in managing room readiness.
* **Enhanced Guest Experience**: Collecting feedback from guests supports ongoing service improvements, promoting overall satisfaction.