Project Proposal

CMPE 331 - 29/11/2023

Hotel Automation

A web application that reduces the workload at the front desk and improves guest experience in hotels.

Group No: 13

Tolga Çulha, Mustafa Özbalcı,

Ahmet Atum, Doğukan Şaki,

Harun Emre Yıldız

Istanbul Bilgi University

Hotel Automation

Aim of the Project

The aim of the project is to develop a web application that can be used by customers and employees of the hotel for faster, more consistent guest service. Using the application, guests will be able to request a spa appointment, order any product from the hotel stocks, apply for extra accommodation, and request an extension of their stay without speaking to the reception. Employees will be able to see requests from guests, check the product stocks and guide them accordingly. Application will enable new guests to access hotel rooms more easily and make reservations directly at the hotel price.

Importance of the Project

As hotels struggle with labor shortages, automation is essential to delivering a great guest experience. By handling what were traditionally manual tasks, like check-in, hotel technology reduces pressure on staff, helps minimize errors, and improves guest experience.

Roles & Timeline

Tolga Çulha   -   Project Manager

Mustafa Özbalcı   -   Developer

Doğukan Şaki   -   Developer

Ahmet Atum   -   UI Designer-System Designing
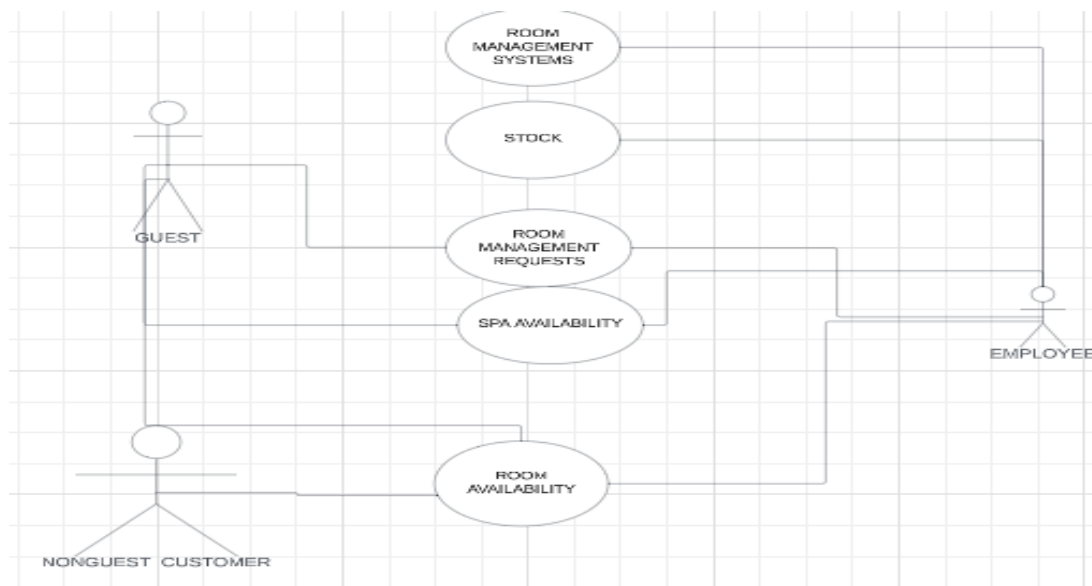
Harun Emre Yıldız   -   Tester-System Designing

Database Designing	1 Week
Backend Development	3 Weeks
Frontend Development-UI Designing	2 Weeks
Testing and Debugging	1 Week

REQUIREMENT LIST

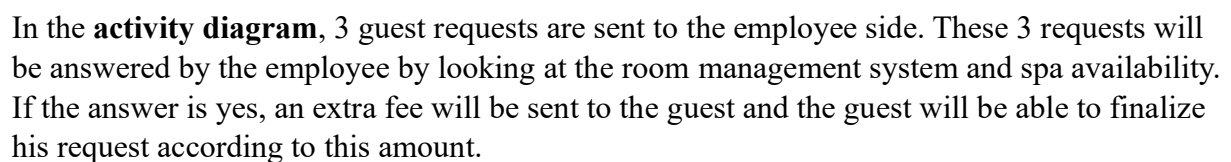| Priority	Requirements
4	Creating and updating customer records.
5	Entering information for customer profiles (name, surname, contact information).
4	Making, changing and canceling reservations.
2	Room status tracking (empty, occupied, cleaned, not cleaned).
2	Room type options and pricing.
3	Making reservations for date ranges.
2	Reservation options according to room type and features.
3	Revenue reports (daily, weekly, monthly).
1	Reservation statistics.
3	Room occupancy rates.
5	Customer requests which are related to rooms, spa-fitness center and extra things.

Design

Hotel Project Use Case Diagram:

Non-guest customer means the person who tries to make a reservation through the hotel's online reservation system, so these people can only view room availability.

Guests represent the customers staying at the hotel. These people can see room management requests because they will be able to add all kinds of extra things to the room from this system and they will be able to do many things, including accommodation extension requests, through this page. In addition, these people will be able to view the availability of the spa service at the hotel and make an appointment as they wish. Finally, by looking at the room status, these people will be able to request a room change from the room management request according to the information they view here.

Employees will have access to all pages. They will be able to check the room and guest status from the room management system, they will be able to keep track of what your guests want extra from the stock section and have it supplied whenever they want, they will be able to see the requests from the room management requests and send them answers, and they will be able to make the necessary checks according to the spa and room availability.

Customer Requests Activity Diagram :

In the **activity diagram**, 3 guest requests are sent to the employee side. These 3 requests will be answered by the employee by looking at the room management system and spa availability. If the answer is yes, an extra fee will be sent to the guest and the guest will be able to finalize his request according to this amount.

Test Cases and Expected System Responses Table

Test Case Objective	Test Case Description	Test Case Expected Result
Validate the transition from log-in to account information	Enter login information and press login button	To be redirected to guests to customer page and the employee to employee page
Validate the new customer request arrive to employee	Customers create a new person request for their room, the employee receives the necessary information	Employee answers yes or no based on room availability
To confirm that the order system is working correctly when customers enter orders.	Checking stock status when customers place orders.	Depending on whether the entered order is in stock, forwarding the order otherwise sending a warning message to the employee.
Guest Check-In	Attempt to check in a guest with valid information	Successful check-in message displayed
Incomplete Check-In Information	Attempt to check in a guest with missing details	Error message prompts user for missing information
Room Availability Check - Fully Occupied Room	Verify room availability for fully occupied room	Alert indicates the room is fully occupied
Room Service Request	Place a room service request	Notification to staff for the requested service
Generate Daily Occupancy Report	Request a report on the daily occupancy	Report displays the number of occupied rooms per day
Room Availability Check - Available Room	Verify room availability for specified dates	Confirmation that the room is available
Guest Check-Out	Attempt to check out a guest	Successful check-out message displayed

References

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