المملكة العربية السعودية

وزارة التعليم

جامعة أم القرى

الكلية الجامعية بالجموم

قسم الحاسب الآلي

Software Systems Implementation

Assignment 1

Project Title
Hotel Room and Suite Booking System

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Key Solution Points for the Hotel Booking System:

Key Terms & Concepts:

-Hotel Booking

-Reservation System

-Online Booking Platform

-Room Management

-Availability Check

-Pricing & Rates

-User Interface (UI)

-User Experience (UX)

-Payment Gateway Integration

-Security Measures (e.g., Encryption, Data Protection)

-Database Design

-Scalability & Performance

-User Authentication & Authorization

-Admin Panel

-Booking Confirmation

-Cancellation Policy

-Responsive Design

Functional Areas:

-User Registration & Login

-Room Search & Selection

-Booking Process

-Payment Processing

-Booking Management

-Admin Dashboard

Technical Considerations:

-Programming Languages (e.g., Python, Java, JavaScript)

-Web Frameworks (e.g., Django, Flask, Spring Boot, React)

-Database (e.g., MySQL, PostgreSQL, MongoDB)

-Cloud Services (e.g., AWS, Azure, GCP)

-API Integration

Overview:

This project is a hotel booking system designed to streamline the process of reserving rooms or suites in a single hotel. The system allows users to browse available rooms, check their details, and make reservations online. It targets individual travelers or families looking for a convenient and efficient way to book accommodations. The main objectives are to simplify the booking process, provide clear information about room availability and pricing, and enable secure payment options to confirm reservations.

Project Scope:

In-Scope Features:
The system will provide the following functionalities:

Room Browsing: Users can browse available rooms and suites with pricing information.

Availability Check: Users can select check-in and check-out dates to check room availability.

Booking System: Users can reserve available rooms by providing their details (name, contact info, etc.).

Payment Integration: Secure online payment options for booking confirmation.

Booking Management: Users can view their booking details or cancel reservations.

User Registration/Login: Optional feature allowing users to create accounts for saving booking history.

Admin Panel:

- **Manage room availability and pricing.**
- **View and manage bookings.**

Out-of-Scope Features:
The following features are not included in the current project scope:

Hotel Maintenance Tracking: **The system will not handle hotel operations, such as room cleaning schedules or maintenance requests.**

Multiple Hotels: **The system is limited to a single hotel and will not support bookings across multiple hotels.**

Third-Party Integrations: **No integration with external travel websites or booking platforms.**

Loyalty Programs: **No implementation of discount systems or customer loyalty programs.**

Functional Requirements

The functional requirements define the essential features and operations of the hotel booking system:

1-Room Browsing:
Users can browse available rooms and suites with pricing and details.

2-Availability Check:
Users can select check-in and check-out dates to verify room availability.

3-Booking System:
Users can reserve rooms by providing personal details (name, contact information, etc.).

4-Payment Integration:
Secure online payment options for booking confirmation.

5-Booking Management:
Users can view their booking details or cancel reservations.

6-User Registration/Login (Optional):
Allow users to create accounts to save booking history.

7-Admin Panel:
- Manage room availability and pricing.
- View and manage bookings.

Non-Functional Requirements

The non-functional requirements focus on the quality and performance of the system:

1-Performance:
Ensure fast and responsive operations, especially during booking and payment processes.

2-Scalability:
The system should support future enhancements and handle increased user demand.

3-Security:
Secure payment methods and protect user data.

4-Availability:
The system should maintain high uptime for user accessibility.

5-Usability:
Provide an intuitive user interface and a smooth experience for all users.

6-Maintainability:
Ensure easy management of content, bookings, and updates for the admin.

7-Scope Limitation:
Restricted to a single hotel; no support for multiple hotels or third-party integrations.

User Stories

As a customer, I want to browse available rooms and suites with pricing and details so that I can choose the best option for my stay.

As a guest, I want to select my check-in and check-out dates to verify room availability so that I can confirm if my preferred room is free during my stay.

As a user, I want to modify booking details after confirmation so that I can change dates or rooms if my plans change.

As a customer, I want to pay securely online so that I can confirm my booking with confidence and ease.

As a guest, I want to view my booking details or cancel my reservation so that I can make changes to my plans if needed.

As a returning customer, I want to create an account to save my booking history so that I can easily manage future bookings.

As an admin, I want to manage room availability and pricing so that I can ensure accurate information is presented to customers.

As an admin, I want to view and manage bookings so that I can oversee reservations and handle any issues that arise.

As a guest, I want to receive booking confirmation after making a reservation so that I can be sure my booking is successful.

As a guest, I want an intuitive interface to navigate the system so that I can easily find what I need and complete my booking without confusion.

System Diagram

Hotel Booking System Flowch

- Customer
- Admin
- Browse Rooms
- Manage Rooms
- Check Availabilit
- Manage Pricing
- Make Reservation
- Manage Bookings
- Room Database
- Payment Gateway
- Cancel Booking
- View Bookings
- View Booking
- Payment Gateway System
- Admin End
- Customer End
- Booking Database