



Computer science project

2023-24

Synopsis

XI - G

Team name: Spring breeze

Spring breeze Team members:

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Project : Hotel management System using telegram bot (app)

App name: fika

****Project Title: Telegram-based Hotel Management System****

****Introduction:****

In the era of digital transformation, the hospitality industry is increasingly relying on technology to streamline operations and enhance guest experiences. This project aims to develop an Online Hotel Management App integrated with a Telegram bot, offering users a convenient and efficient platform for booking, inquiries, and communication.

****Objective:****

Create a comprehensive system that facilitates hotel management through a Telegram bot, enabling users to make reservations, check room availability, and access essential services seamlessly

**** modules****

- Telebot
- pdf
- sqlite3

Key Features:

1. *User Authentication:*

- Implement secure user authentication for both guests and hotel staff.
- Ensure user privacy and data security through encryption protocols.

2. *Room Booking and Availability:*

- Develop a user-friendly interface on the Telegram bot for guests to check room availability.
- Allow users to book rooms, specifying dates, room types, and additional preferences.

3. *Reservation Management:*

- Design a backend system to manage reservations, ensuring real-time updates on room availability.
- Implement reservation confirmation and cancellation functionalities.

4. *Inquiry and Assistance:*

- Enable users to make inquiries about hotel facilities, services, and local attractions through the Telegram bot.
- Implement a chatbot feature to provide automated responses to common queries.

5. *Payment Integration:*

- Integrate secure payment gateways for online transactions.
- Ensure the confidentiality of financial data and provide payment confirmation to users.

6. *Admin Dashboard:*

- Develop an admin dashboard for hotel staff to manage reservations, check occupancy rates, and handle customer requests.
- Implement role-based access control to ensure the security of administrative functions.

*Development Process:

1. *System Architecture Design:*

- Define the architecture of the online hotel management system, outlining the interaction between the Telegram bot, frontend, and backend components.

2. *Database Design:*

- Design the database schema to store user information, reservations, and other relevant data.

3. *Telegram Bot Integration:*

- Integrate the Telegram API to create a responsive and user-friendly bot interface for guests.

4. *Reservation Logic:*

- Develop the backend logic to handle room reservations, ensuring accurate availability tracking.

5. *Payment Integration:*

- Implement secure payment processing using a reputable payment gateway API.

6. *User Authentication and Security:*

- Implement robust user authentication mechanisms and ensure data security throughout the system.

7. *Testing and Debugging:*

- Conduct thorough testing to identify and resolve any bugs or issues.

8. *Deployment:*

- Deploy the online hotel management app on a server, making it accessible to users.

Conclusion:

This project aims to enhance the hotel management process by providing a user-friendly and efficient platform through the integration of a Telegram bot. It not only streamlines reservation processes but also facilitates seamless communication between guests and hotel staff, ultimately improving the overall guest experience.



Thank you!