Online reservation system for restaurants and cafes

Project team :

Project name: Online reservation system for restaurants and cafes		
Lecturer: Nissim Brami		
Practitioner: Mira Potyomkin		
Participants:	Lea Nazarov 211481353	Shahar Sade 318674108
	Bar Sade 315340463	Tav Oskar 206871584

Project name and description:

The online reservation system that aims to optimize the process of booking places in restaurants and cafes. It allows users to conveniently place orders, select preferred dining times and manage their orders. The goal of the system is to improve the customer experience by reducing waiting times and providing a user-friendly interface to both customers and business owners.

"RestBook"

RestBook

Applicability research:

The proposed system will integrate seamlessly into various restaurants and cafes, and will serve a wide variety of culinary institutions. By implementing the system, these businesses can effectively manage table availability, optimize seating arrangements and improve overall customer satisfaction. The integration of the system with the existing processes in the factory will lead to a better allocation of resources and an improvement in the quality of service.

Stakeholders :

Direct stakeholders :

- The restaurant owners - restaurant owners looking for improvement in table management and customer satisfaction.
- Restaurant/Cafe Staff - The staff of waiters and hosts who interact directly with the system to manage reservations and seating arrangements.
- Customer support teams - providing assistance to users regarding bookings, cancellations and technical issues.
- Customers - Customers who want hassle-free ordering and reduced waiting times.
- Software developers - interested in creating a system that meets the needs of all stakeholders.

Indirect stakeholders :

- food suppliers and delivery partners - suppliers and partners benefit from efficient operations.
- Restaurant reviewers and bloggers - people who review and promote dining experiences, may leverage the system to improve their coverage.
- Technological partners - companies that provide the basic technological infrastructure, such as servers, cloud services and data storage.
- Investors - interested in seeing a return on their investment.

Functional requirements:

- User Registration and Verification - Ability to allow users to create accounts with their email addresses or social media profiles.
- User Login - Registered users should be able to login to the system with the login credentials provided to them.

- Creating an order - ability to allow users to search for available places based on criteria such as: date, time, quantity, etc. and display relevant options and details.
- Booking Confirmation - After selecting the venue, you can send instant confirmation messages via e-mail or SMS.
- Refund processing - The system will allow users to cancel their orders and request refunds for their purchases, subject to all applicable terms and conditions
- Order management - ability to allow users to view, change or cancel their order.
- Waitlist Functionality - Ability to allow users to join a waitlist for fully occupied time slots or preferred tables. In addition to notify users if a table on the waiting list becomes available.
- Alerts and reminders - Ability to send automatic reminders to users before their reserved time.
- Management control center - provide restaurant owners/managers with a central dashboard for managing orders and availability.
- Reporting and insights - the ability to generate reports for restaurant owners, including order statistics, "peak" hours and revenue insights.
- User reviews and ratings - will allow users to leave reviews and ratings for their dining experiences. will display aggregated ratings and comments for each restaurant.

Non-functional requirements:

- Performance - The system should be able to handle a high volume of users (minimum of 5,000 users) at the same time, especially during peak dining hours.
  - Response time for user actions should be under 2 seconds.
- Use - The user interface should be intuitive, easy to navigate and aesthetic.
  - Users should be able to complete the booking process within 5 minutes without prior training.
- Security - User data, including personal information and payment details, must be encrypted and stored securely. Secure authentication and authorization mechanisms should be in place to prevent unauthorized access.
  - Login - the system will block entry for a customer who fails 3 times in a row.
- Reliability and availability - The system should have an uptime of at least 99.9% to ensure availability to users. Regular maintenance windows and updates should be reported in advance to minimize disruptions.
  - Notify users of planned maintenance windows at least 72 hours in advance.
- Integration - The system should integrate seamlessly with different POS systems, ensuring accurate order processing and payments. Integration with third-party payment processing and messaging services should be reliable.
- Compatibility - The system should work across multiple platforms and devices, including desktop computers, tablets and smartphones. Support for popular web browsers

(Chrome, Firefox, Safari) must be ensured.

- Size - The system will not exceed 1 TB.
- Development -
  - The system will be developed using the Agile method
  - Front - will write in REACT
  - Backend - will be written in Nodejs
  - The system will upload to storage on Heroku