

User Friendly Automated Food Ordering System

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Abstract - In today's world, we have experienced ordering food from our home using any food delivery app as well as making a reservation through the app. Adding excellent user experience into an automated food ordering system in the restaurant will have many benefits. In the automated food ordering system, a tablet is placed on each table where the user can log in using OTP or as a guest. The customer can browse all the menu, check his orders, bills, offers, and ask for help. If the customer logs in using OTP, new recommendations will be suggested based on their previous order. The order placed from each table will directly be sent to the kitchen, where the chef will accept the order and notify about the time it will take to prepare the order. Once ready, the waiter or robotic model can bring the order to serve the customer. The customer will also receive the bill on the table on the tablet screen itself, giving them the option to pay at the table. The customer can finish by giving feedback.

Key Words: User experience, automated, order, table, time, feedback.

1. INTRODUCTION

Today's restaurants offer different types of food and service, which leads to mismanagement and time-consuming. Using a simple automated system can solve most of the problems faced in small and colossal size restaurants. Implementing a user-friendly automated food ordering system will help and make it easy and transparent to track the order and services provided. Customers can quickly browse the menu and place the order, change it, make any addition, and pay the bills just from using one screen. There will be no need to wait for service staff to explain, take, and give updates regarding the orders. The whole process is efficient and less expensive.

2. REQUIREMENTS ANALYSIS

Requirement analysis surrounds those tasks that our project does. Our application meets all the non-functional requirements and hardware requirements, making the project efficient, and the project's performance is spiked. It enables the project to enhance the users' experience.

2.1 Non-Functional Requirements

Scalability - The platform can be easily scalable. The small and huge restaurant can quickly implement and scale this platform. The amount of resources and cost is minimum.

Traceability - Each order and billing history can be easily traced.

Transparency - Using an automated system can help check the bill's information on the bill avoiding any wrong addition of dish or payment in the bill.

UX/UI - It is also significant from a user experience perspective. The first impression is very relevant for a new user. How easily and quickly, the user can find and place an order is essential.

2.2 Hardware Requirements

Any touch screen computer/ tablet.
Minimum 4 GB RAM.

3. PROJECT DESIGN

3.1 Traditional Food Ordering System

As the customer enters the restaurant and grabs a table, a menu card is handed to them. The customer then decided what to order, what ingredient the particular item contains, and the service guy take the order. The order is sent to the kitchen, and the customer is made to wait without giving the approximate time it will take to prepare the order. This process is time-consuming and inefficient, involving issues such as the consumer is not able to view what exactly the particular item looks like and ingredients contained in it. If a particular restaurant is low on staff, the hospitality is not served up to the mark. The order might take a longer time to prepare. In the end, there will be waiting in line for the bill.

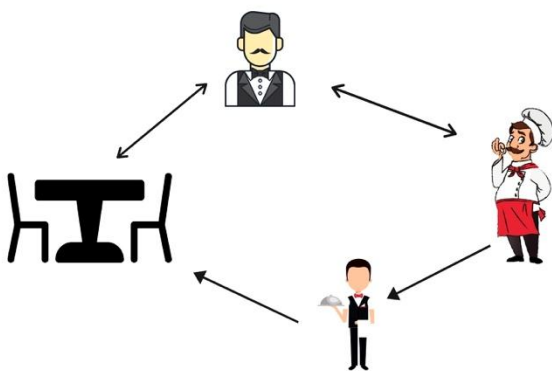


Fig -1: Traditional Food Ordering System

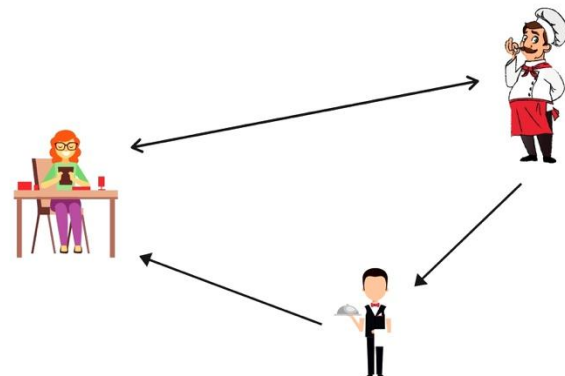
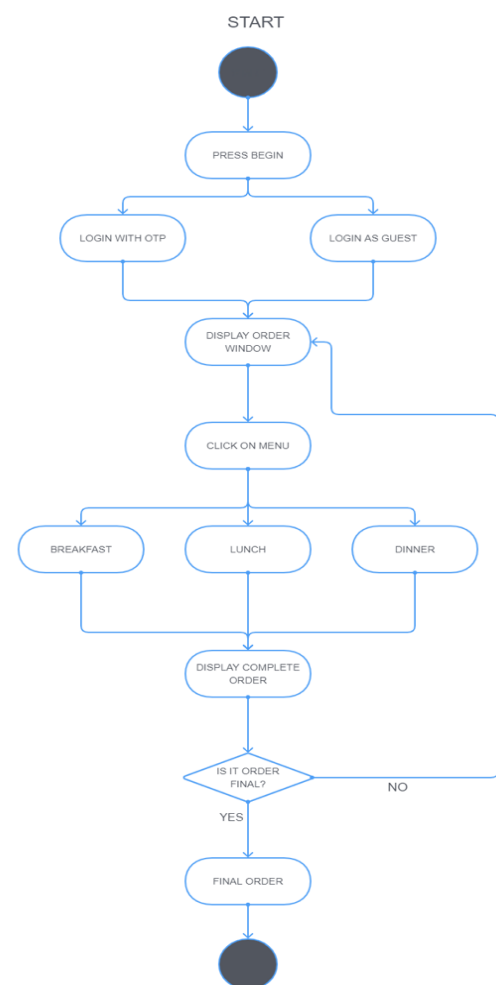


Fig -1: Automated Food Ordering System

3.2 Automated Food Ordering System

A user-friendly system is installed on a tablet on each table. The customer can log in using OTP, assuming the customer is an old customer. Their previous order and billing history can be viewed based on which offers and recommendations can be displayed. Alternatively, the customer can log in as a guest and start browsing the menu. The main contents of the screen will be the menu, my orders, offers, help, and billing. The customer can browse each item listed on the menu. It gives them an idea about what the dish contains, origin, quantity, look, time to prepare, customization, and price. In the "My Order" section, the customer can view their current placed order and how much time is remaining to prepare the order. If the chef has not started to prepare a particular dish and the customer wish to cancel the dish, they can even cancel the particular dish. Inside the "Offer" section, daily offers can be viewed. In case the customer is finding any difficulty in using the system or any other problem, they can tap the "Help" button, and the service staff will guide them. After the order is placed, it will directly be notified to the chef in the kitchen. The chef will be giving information regarding the order and table no. The chef will accept the order and return the "time required to prepare the order" to the customer. In case of emergency, the chef can also inform the cause of emergency and delayed time to the customer. Once the order is ready to service, staff or delivery robot can serve the order on the table. The customer will then receive the bill on the screen, and the feedback form will be displayed after that.

3.3 Project Architecture



4. CONCLUSION

The user-friendly automated food ordering system will play a useful role in the Indian restaurant chain. As many small and medium-scale restaurants are challenging to manage, such technology can help solve the management issues by providing transparency and efficiency. Although this technology can also be easily implemented by large scale restaurant. The feedback received from the customers can help improve service quality. This work can help industry people know the benefit of automation and that implementing such user-friendly automation can provide the best service to the customer.

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