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## Implementation of E-Food Ordering System

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**ABSTRACT:** There has been a humongous increase in the food industry as well as the technology industry from the past two decades and both of these sectors have a huge impact on our lives. Our project basically aims in alleviating the tedious food ordering system by replacing it with technology. This system uses smart phones, tablets, notes which connects through WLAN for food ordering & its transactions. The application will be available on the customers(users) mobile phone(android) and will have the detailed menu of the restaurant, thus providing an easy & convenient way to place order and also minimize human errors. The customer will get a token on his/her mobile phone after paying for the order via card or online wallet.

**KEYWORDS:** WiFi, Wireless food ordering system, Android application, Mobile, Tablets, Token.

### I. INTRODUCTION

The traditional way of ordering food is that the customer enters the restaurant/café/canteen, waits for the waiter to get the menu card(which currently is on paper), goes through the menu, decides on what food to order, waits desperately to get attention of the waiter, the waiter finally comes over, notes down the order(on a paper pad), goes to the kitchen & finally the waiter comes back to the table with food. Our system aims to get rid of this tedious procedure by replacing the age old way to order food by technology. The system uses an Android application which must be installed on the customer's(user's) smart phone/tablet/note. The orders can be placed using either the restaurants WiFi or the customer's cellular data network. The customer can pay for the ordered food by credit/debit card, online wallet, ATM card etc. Once the transaction is successful, a token will be sent to the customer's registered phone number. Simultaneously, the order will be displayed on the kitchen's PC where the chef will take a note of the order, start assembling the dish together & when he finishes, a notification will be sent to the customer's mobile phone stating that the order is ready and the customer can collect the order. The system's front end is developed using JAVA Android, XHTML and the backend is developed using PHP, WAMP & MySQL.

Paper is organized as follows. Section II describes the related work wherein, the limitations, the needs & our proposed are described. Section III describes the system architecture with respect to the figure shown.. Section IV presents the technological requirements of the system. Finally, Section V presents conclusion & future scope.

### II. RELATED WORK

#### A. Limitations of the current food ordering system -

The current restaurant or food ordering system is paper based. The major limitations are as follows:

- The orders are noted down on a paper.
- The receipts are provided on paper.
- A lot of manpower is required; we need a waiter to address the customer, a cashier
- The restaurant management records usually are paper based; which causes difficulty in tracking customer's history.

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- The menu modification/correction is a tedious as well as an expensive task.
- Lack of visual confirmation that the order is placed correctly.
- Lack of data security.

### B. Need for EFOS -

In today's digital era, time is money. So, a system will be helpful which can save time, reduce manpower & usage of paper. Reasons for making such a system are:

- Resource like paper which is largely used in restaurant management will be saved.
- Modification/Correction of menu cards will be convenient and cheaper.
- The ordering system will become handy due to convenience of using one's own mobile phones and tablets.
- Payments can be done using online transactions, so there is no need to carry hard cash.

### C. Our proposed system -

We came up with a system which can fulfil the shortcomings of current food ordering system. We've achieved this by developing an application based, user friendly system which caters to the need of customer as well as the restaurant. Our system aims at the following:

- The orders can be placed using the restaurant's WiFi or the customer's cellular data network.
- The customer will place an order using an application that must be installed on customer's smart phone. This will allow the customer to browse through the menu as well as place the order.
- The application will be designed in such a manner that it would be very easy to sort/search an item based on the customer's preferences.
- The payment will be done by online wallets, credit/debit cards.

Once the payment is successfully completed, the customer will receive a token as an acknowledgement.

### III. THE EFOS SYSTEM

#### System Architecture :

The figure below represents the system architecture diagram and its components.

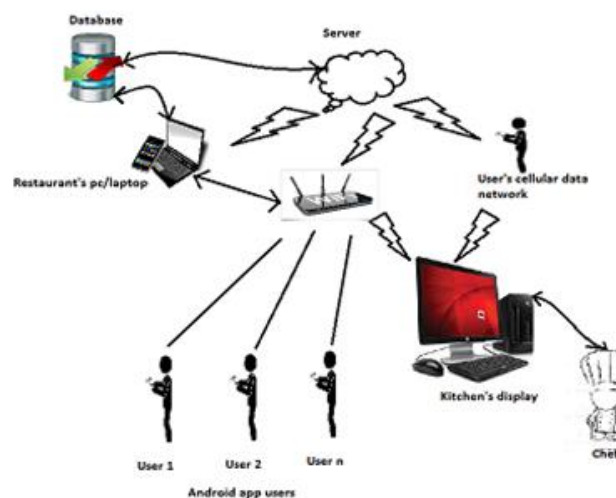


Figure 3.1 EFOS System Architecture

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The system architecture of EFOS consists of three main components – server, application & kitchen display.

- Initially the customer places his order via the application installed on his android device. Once the order is placed and the transaction is completed, order is processed and transferred to the database through the server. The database generates a token which is sent to the user's device. Further, the database processes this order data and sends it to the kitchen's display, where the chefs can access it and start working on the order as seen in the figure. The database is of prime importance as all the order details and customer records are stored securely in it.

Now let us have a look at each of these components individually:

- Server-This server links all the components of the system which ensures that the system works effectively. When the restaurant manager needs to modify the menu or offers displayed on the application, he does the same through the server. The server provides centralized data throughout the system at the same time ensures simple user-interface Admin Panel for configuration.
- Application –The application developed is convenient, effective and easy to use. Customer can place an order using the application installed on their smart phones. The application is developed using Java and XHTML. When the customer places the order via the application, a token is generated once the transaction is successful. The token represents the order number & the time required for the order to be ready.
- Kitchen display- When the order is confirmed, the details of the order are displayed on the display screen placed in the kitchen. The chef refers the order on the display and starts the preparations accordingly. Once the order is ready, the chef notifies the customer.

## IV. TECHNICAL REQUIREMENTS

Let's have a look at the technical requirements of the proposed system.

### - Hardware requirements:

- Phone-512Mb RAM, SD(420P)Display, Dual Core RAM and Above.
- Computer-Minimum requirement is Pentium4 or AMD or Celeron processors.
- Dual core processor, Dual core i3, i5, i7 and AMD Duron.

### - Software requirements:

- WAMP-Web application server needed to run PHP application.
- Android version- Gingerbread & above.
- MySQL, PHP, XHTML, JAVA.
- Designing GUI.

## V. CONCLUSION

By combining Android and Wireless technology, we present an automated food ordering system which is convenient, effective and effortless to use. It addresses many issues in food ordering process and restaurant management by reducing the time taken for customers to place and receive their order, also management of the restaurant by saving cost of paper and excess labor.

## VI. FUTURE SCOPE

In the next phase, we will work on developing the proposed system (EFOS) to incorporate real time customer feedback, which will enhance the quality of service. Also provisions can be made for customer to repeat his previous order without having to repeat the entire course of action again. We also plan to take on the other OS's as well, currently it's just Android but in near future we'll be expanding to iOS & Windows. We also intend to introduce online table reservations & bookings.



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