

INTELLIGENT E-RESTAURANT USING ANDROID OS

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ABSTRACT

Over the years, technology has tremendously revolutionized the restaurant industry. Standard of living of people has also improved. Now more and more people are willing to spend money on food in restaurants, because of which competition in the catering industry is becoming increasingly intense. This increases the need of proper management into the restaurant system. This paper is about orders made by the customers will be instantly reach the kitchen module. Android based application is user-friendly, improves efficiency and accuracy for restaurants by saving time, reduces human errors. Also Hardware system through which the user can order the food like normal restaurant system.

The simplicity and ease of access of a menu are the main things that facilitate ordering food in a restaurant. A Tablet menu completely revolutionizes the patron's dining experience. Existing programs provide an app that restaurants can use to feed their menus into iOS & Android based tablets and make it easier for the diners to flip, swipe & tap through the menu. We here aim to provide the restaurants with a tablet menu that would recommend dishes based on a recommendation algorithm which has not been implemented elsewhere. In addition to this we run the app on an Android based tablet & not on an iOS based tablet which is more expensive alternative. We

use a cloud-based server for storing the database which makes it inexpensive & secure.

Keywords: Recommendation, Tablet, menu, Intelligent, Android application, restaurant.

Introduction

Over the years, technology has tremendously revolutionized the restaurant industry. But much of the innovation has been with point-of-sale (POS) operations. Yet other areas of a restaurant are ripe for innovation, such as the menu. Traditional restaurant service requires waiters to interact with customers directly before processing their orders. However, a high-quality recommendation service system would actively identify customers and their favorite meals and expenditure records. The restaurant menu has evolved from its humble beginnings on carte chalkboards and imageless print to today's detailed, colorful displays. With the emergence of digital tablets and user-friendly touch screen technology menus can move to a whole new surface. With this electronic menu, orders can be taken correctly the first time. There is no need to run back and forth to a distant terminal, because the terminal is always with the server. Every order is associated with an individual seat at the table, and orders are built one customer at a time, just like on paper, but with greater accuracy. Items can also easily be shared by

the whole table, moved or modified, and noted and the cost can be calculated in real time.

The Recommendation algorithm suggests dishes to the patrons based on previous orders. It makes it easier for the customer to build his/her order and also view the most popular dishes. Moreover, various dimension filters can be used according to individual preferences e.g. Price, taste, quantity, etc. There are several restaurants in Mumbai which have replaced the traditional paper menus with the digitized tablet menu. But none of the apps let the patron place an order directly to the kitchen. The tablet's use is restricted to simple viewing of the menu.

EXISTING METHOD:

Conventional systems like restaurant services such as making reservations, processing orders, and delivering meals generally require waiters to input customer information and then transmit the orders to kitchen for meal preparation. When the customer pays the bill, the amount due is calculated by the cashier.

Electronic POS Terminals like the servers/waiters generally take the order from the customer and head onto a terminal, where they can feed the order into a computer. The order can then be transmitted to the kitchen automatically via the terminal through a network, or it may even be delivered manually by the server to the kitchen.

PROPOSED METHOD:

The e-menu provides additional information about menu items and drinks than a traditional paper menu. With interactive pictures it gives additional information about the food item. Here we require a mobile with android application. When the customer

gets login into the app, he can find a wide variety and colorful images of all the menu items which will be helpful in selecting the exact item which gives the customer a great satisfaction. Bluetooth will be acting as an interface in between ARM and Android application. The billing process will be controlled with the help of PC and Printer.

System block diagram:

The system block diagram of Touch and Order in restaurants is shown in figure. The android application on tablets at the tables. The tablets will be provided to customers, at their tables, allowing them to directly view the menu card and order immediately from their respective tablets. The tablets are the property of the establishment and are kept at each table.

KITCHEN/ADMIN SECTION:

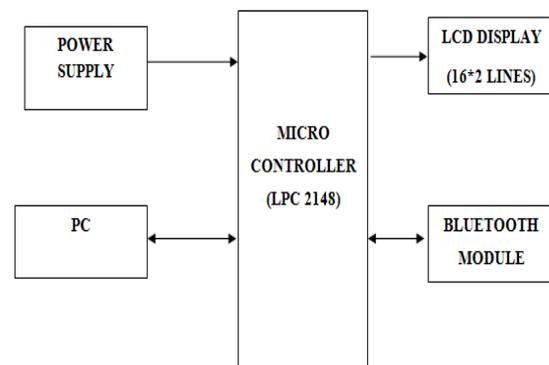


Fig.(1) Kitchen Section

LOGIN DEVICE:



System Overview:

Microcontroller: This section forms the control unit of the whole project. This section basically consists of a Microcontroller with its associated circuitry like Crystal with capacitors, Reset circuitry, Pull up resistors (if needed) and so on. The Microcontroller forms the heart of the project because it controls the devices being interfaced and communicates with the devices according to the program being written. The microcontroller used in this project is ARM LPC2148. It is a 64 pin Microcontroller which comes under ARM 7 version of ARM controllers. This is intended for high end applications involving complex computations. It follows the enhanced RISC architecture. It has high performance and very low power consumption.

Bluetooth: AUBTM-22 is a Bluetooth v1.2 module with SPP profiles. The module is intended to be integrated into another host system which requires Bluetooth functions. The HOST system could send commands to AUBTM-22 through a UART. AUBTM-22 will parse the commands and execute proper functions, e.g. set the maximum transmit power, change the name of the module. And next the module can transmit the data receive from the UART with SPP profiles.

LCD Display: This section is basically meant to show up the status of the project. This project makes use of Liquid Crystal Display to display / prompt for necessary information.

PC Section: This section basically contains a PC with Serial communication associated hardware. Apart from this, the web cam is also connected to the PC. The serial communication associated hardware

circuitry includes the bus (DB 9) connector from PC to Microcontroller.

Conclusion

Integrating features of all the hardware components used have been developed in it. Presence of every module has been reasoned out and placed carefully, thus contributing to the best working

ndly, using highly advanced IC's with the help of growing technology, the project has been successfully implemented. Intelligent E-Restaurant using android OS is developed in order to provide easy interaction between customers through wireless technology. Thus the project has been successfully designed and tested.

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