

IOT - Based Restaurant Menu Ordering System





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ABSTRACT



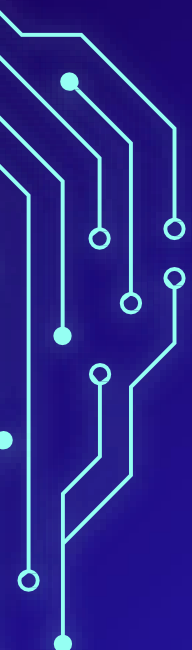
This project's purpose is to develop a Touch-based food ordering system that can be used to transform the traditional ordering system. Generally, in restaurants the menu order system is actually provided in menu card format so the customer has to select the menu item then the waiter has to come and take the order, which is a long processing method. So we designed a Touch Screen-Based Food Ordering System that displays food items for customers on their available devices such as user phone, Tablet etc. to give input their orders directly by touching.

ABSTRACT



The system automatically completes data display, receiving, sending, storage of data and analysis. It is providing many advantages as great user-friendly, saving time, portability, reduce human error, flexibility and provide customer feedback etc. This system required large numbers of manpower to handle customer reservation, ordering food, inquiry about food, placing order on table, reminding dishes of customer. “Intelligent Automated Restaurant” it is all about getting all of your different touch-points working together—connected, sharing information, speeding processes and personalizing experiences. Here we will use RFID module to transmit data to the RFID reader. E-menu is an interactive ordering system with new digital menu for customers.

INTRODUCTION



The IOT stands for Internet of Things. Now-a-days, IOT platform is trending on in IT sectors. Basically, the IOT represents modern approach towards the world which will help to make world digital. IOT represents the boundaries between real domain and digital domains. So now IOT domain is ready to give us such platform where physical devices will be ready to transform in smart device to provide smart services. All things in the IOT such as smart devices, sensors, etc. have their own identity. They are combined to form the communication network and become actively participating objects. These objects include not only daily usable electronic devices, but also things like food, clothing, materials, parts, and sub-assemblies; commodities and luxury items; landmarks; and various forms of commerce and culture. All IOT devices can monitored, tracked and counted, which are significantly decreases waste, loss, and cost.

The IOT introduces a variety of applications for future. The IOT is global infrastructure for the Information Society, enabling advance services by interconnecting physically and virtually with the things based on, existing and evolving, interoperable information and communication technologies.

INTRODUCTION



Now a day, many restaurants around the world using the manual food ordering system. This food ordering system using a waiter with pen and paper and take order from the customers. Actually the system is depends upon the lager number of manpower to manage the customers inquiry, ordering food and placing order in restaurant system. This method is one kind of time consuming. When there are number of customers are coming at a time in restaurant in such condition switching of orders is possible. It causes a misunderstanding between the customer and waiter and it also gives the extra work to the cashier to record whole transaction. So to overcome such problems we are introducing new system i.e. Automated Restaurant System. The aim of this project is automated the food ordering system and billing system in restaurant management as well as to increase the restaurant experience of client or customers. So we will discuss about designing and performance of Automated Restaurant with a Touch Screen Based menu ordering system with Real time customer's Feedback for restaurant as well as to provide extra information to customers. So system will provide user-friendly nature. In this system, user table have all the details of menu. The order details from the table are updated and sent to kitchen and manager also.

INTRODUCTION



After ordering process, the RFID card will be swiped (Recognized to the system or web server) for total amount deduction. The restaurant manager can manage the menu modification easily. The Touch screen provides fast access to any digital media. Faster input means the better quality of service.



COMPONENTS



Arduino Uno



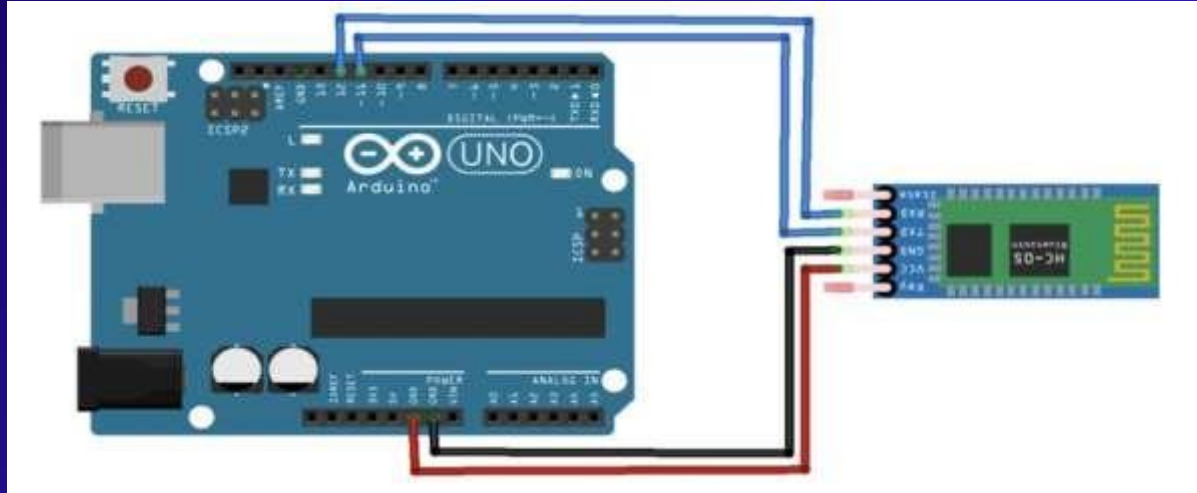
2.4" TFT LCD Display
Shield



HC-05 Bluetooth
Module

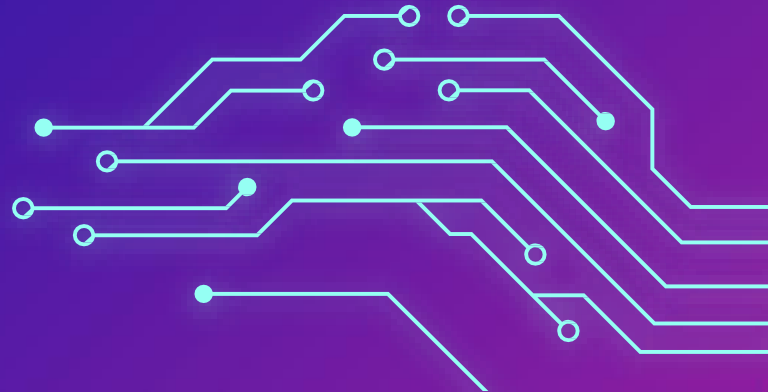


CIRCUIT DIAGRAM



CIRCUIT DIAGRAM

Circuit Diagram for this smart ordering system is very simple as we are only connecting the TFT display and Bluetooth module with Arduino. Vcc and GND pin of Bluetooth module is connected to 5V and GND pin of Arduino while TX and RX pins are connected to digital pin 11 & 12 of Arduino. The 2.4" TFT LCD screen is an Arduino Shield that can be directly mounted on Arduino Uno, as shown in the below image. TFT display has 28 pins that perfectly fit into Arduino Uno, so I had to solder the Bluetooth module backside of Arduino.



CONFIGURATION OF THE APP



Download the Blynk app from the Google Play Store and create a new account or Login into your existing account. After login, first, click on the 'New Project' to start a new project.

Then give a name for your project. Select 'Arduino Uno' in the CHOOSE DEVICE option and 'Bluetooth' in CONNECTION TYPE. Then click on 'Create.' After this, Blynk will send an Authorization to the registered Email id. Note down the Auth Token Code. It will be used in the Program.

Now go to the Widget box and select the 'Bluetooth' widget. Click on Bluetooth and then click on 'Connect Bluetooth Device.' Before that, turn on the Bluetooth of your phone and select 'HC-05', if it asks for a PIN, then enter 1234. Then again, go to the Widget box and select the 'Table' widget. Click on Table widget and select virtual pin 'V0' as INPUT.

Now click on the 'Play' button to run your project.



ADVANTAGES



SAVES TIME



This kind of arrangement saves the time since it allows automatic capture of data. It reduces turn-around and the time taken to serve the customers. It is directly proportional to customer satisfaction, since it takes less time to communicate, prepare and deliver the order.

MINIMIZATION OF TASKS

It reduces the manual tasks at hand and thus the labor costs are lowered as well. In addition it cuts down the problem of wrong delivery, since it contains the token number, which is present on the bill. This is one of the points that advances customer satisfaction.

MINIMIZES REVENUE LEAKAGE



Since it can have everyday sales and stock details on your fingertips, it helps in minimizing revenue leakage. For example, you will know the raw materials, which are there in stock and the ones that will have to be ordered. So, there are less chances of duplicate orders. It can also exercise theft control because you can keep a tab on the inflow and outflow of materials.

ADVANTAGES



REAL TIME MONITORING



It can have a complete control over business through real time monitoring, if having outlets at multiple locations. This becomes possible through cloud back office, which links stores situated at different location.

LOW INVESTMENTS

The billing apps integrated with the feature doesn't require you to invest much. These are usually affordable and rather bring on overall improvement of the business and thus the revenue earned

FOOD SAFETY



Food safety is a scientific disciplines which describing handling, preparation and storage of food in the ways that prevent food- borne illness. Food safety is a global concern that covers a variety of difference are of everyday life. There are many time temperature tracking software systems available to restaurant operators which can dependably track temperatures as well as safety on kitchen equipment, -

ADVANTAGES



FOOD SAFETY



log entries for audit review and alert operators. However, these systems become more powerful if exposed to an IOT connected infrastructure. For example, Radio Frequency Identification (RFID) tag on a case can be tied to temperature sensors in the distributor's truck to insure the case is in temperature during its entire life cycle.

BETTER STOCK MANAGEMENT

Customers now demanding farm-to-table freshness in their dinner and an responsibility on seasonal produce, stock and wastage can be an issues. Restaurants are using connected systems where sensors and stock control are managed in the cloud system, producing warning, alerts and smarter stock management systems.

USER FRIENDLY



order management system software should be easy for customer or client and management system to use. The restaurant staff should be able to change tables, change item quantities, change item prices, repeat drinks or menu items, manage tables, and can change order too. Example owners and managers, need to be able to control refunds, voids, comps, and view order status.

ADVANTAGES

BETTER CUSTOMER SERVICES

Restaurant technology is an integral part of keeping today's selective diners happy as well as enjoyable. Inventory Restaurant management system will ensure that never run out of ingredients. Customers or clients won't take too kindly to finding out that their favorite dishes is off the menu or not.



CONCLUSION



We proposed the automated food ordering system for the restaurant. The system is compared to earlier food ordering traditional method is pen and paper. Now a day, people are very familiar to touch screen. It will be easier for the users to simply touching the display screen. It is more comfortable and easy for the customer to place the orders of their choice. By using this system, there are no possibilities of human error during the taking order and calculations. System provides efficient, convenient, low cost and easy to use the system for placing the order of food in restaurant. Its saves the time. System is user-friendly and provides good quality of service and customers satisfaction. We also present automated food ordering system with feature of feedback and wireless communication.



REFERENCES



- <https://iotdesignpro.com/projects/iot-based-restaurant-menu-ordering-system>
- <https://ijrti.org/papers/IJRTI1906003.pdf>



THANK YOU

PRESENTED BY -

PREETI YADAV
21BEC0815

