International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 05 Issue: 04 | Apr-2018 www.irjet.net p-ISSN: 2395-0072

"Hotel Automation Using Arduino"

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Abstract- *Hotel is one where technology and advancements in technology have not been utilized to the fullest potential. Traditional method that is commonly been used in hotels is by taking the customer's orders and writing it down on a piece of paper. Many solutions have been proposed for solving this issue. This project is again one attempt in the same direction. In this paper we discuss the automation for food ordering system. This system makes use of zigbee as a communication device and LCD display module compatible with Aurdino as hardware.*

Keywords - Arduino UNO, Zigbee, LCD display, (4*4 matrics) Keypad, Buzzer.

1. INTRODUCTION-

Automation systems are increase in day to day life. It is the essential part in the field of electronics. It deals with transfer of data from one place to another place. Communication has major role in the successful data transfer and to get the acknowledgement from receiver. There are two mode of transmission; wired and wireless transmission. In wired transmission, data is transferred through a physical medium or a link whereas no physical link is used in wireless transmission. Both mediums have its own characteristics and advantages.

Many times when we visit any restaurants due to overcrowded when order is being placed it takes more time to process and increases the man power to overcome such disadvantages a system is being implemented called as automatic hotel order processing system where users table consists of a keypad and LCD display on pressing the relevant code of the food item user can send that to the kitchen where waiter can take the order and send the acknowledgement to the customer. Then waiter serve the menu to the customer on time.

LTRATURE SURVEY-

Namrata Kakde, Vidula Katambale, Shubham Namaware: "Wireless Hotel Ordering System", International Engineering Research Journal(IERJ), Volume 2 , Issue 2017. This system used to place orders in the restaurants using Touch pad,Zigbee and ARM7 microcontroller. And overcomes the drawbacks such as feedback of order is not obtained, limited distance, System may not work properly if touchpad suffer a defect and also may become a drawback if end users are not able to use the touchpad device.

2. BLOCK DIAGRAM-

2.1 TRANSMITTER SECTION

Customer will observe the menu list of hotel on LCD display. Customer will choose menu of his choice by selecting the respective menu. While doing this, buzzer will ON and LED start blinking which indicates that order has been successfully placed. This order will received by the waiter which will displayed on the LCD placed in kitchen.

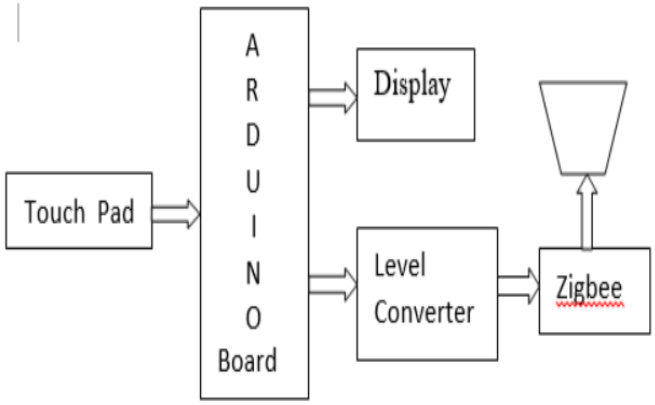

Fig 1. Block Diagram of Transmitter Section

2.2 RESEIVER SECTION

After receiving order waiter will send acknowledgment to the customer. After getting acknowledgement, customer knows about the confirmation order. If respective menu is not present, then waiter press the Reject button which gives the acknowledgement to the customer about the unavailability of menu or item and Re-order. Waiter serves the menu to the customer. Customer can add additional menu if he want. If customer don't want to take any menu he can press "Exit" button and then massage will come "Are you sure to pay bill?" When customer press "YES" bill will generated on table.

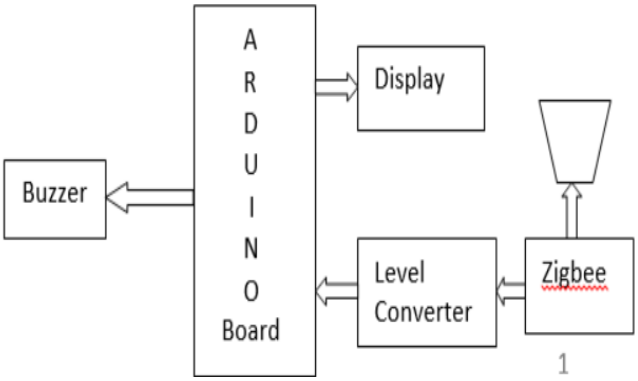

Fig 2. Block Diagram of Receiver Section

3. PROPOSED SYSTEM

The basic principle of working of system is based on use of a handheld device placed on each table which is used to make an order at the hotel. The system uses a LCD display module which is placed on each customer's table for them to make order. Order is made by selecting the items displayed on LCD . The order will be sent from the customer section using zigbee communication and automatically will be displayed on a screen at the kitchen. The bill will be displayed at customer's table as well as at kitchen. The project will reduce the time spent on making the orders and paying the bills, whereby the cost and man power also can be reduced.

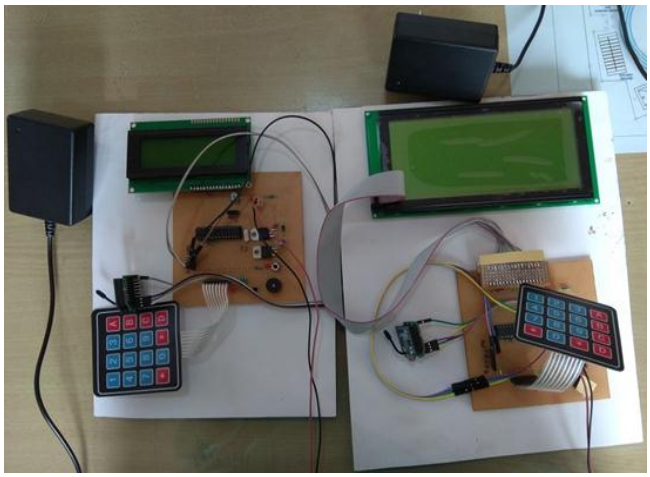

Fig.3 Proposed System of Transmitter and Receiver Section

4. FUTURE WORK

The data transfer using light is possible, this idea can be used in the development of Li-Fi technology. This method of data transmission can be applied where optic fiber and radiation prohibited areas such as chemical plants. Space shuttles are used for wireless communication. For the future development of visible light communication systems this study can be used. This can be applied at the chemical plants where the RF waves and OFC cannot be used. This system you can used into the school, college, lab, hospital, aircraft, air plane, to commanding the robot, mobile to mobile communication, etc. where the RF is ban on some areas and RF is strictly unused on that range like petrol pump which is RF is cause the explosion on this areas.

5. CONCLUSION

This system is convenient, effective and easy to improve the performance of restaurant's staff. In this system we present an automated food ordering system with real time customer feedback Increasing trends towards a smarter world, it will bring in a good profitable business. . It will also provide quality of service and customers satisfaction.

6. REFERENCE

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