Electronics notice board using Arduino

Deshpande Arti Prakash
adeshpande5536@gmail.com
Sandipani Technical Campus,
Latur, Maharashtra

Bhatane Sadhana Gurunath
sadhanagb05@gmail.com
Sandipani Technical Campus,
Latur, Maharashtra

Apsingekar Sayali Jagdish
sayaliru99@gmail.com
Sandipani Technical Campus,
Latur, Maharashtra

ABSTRACT

Electronic or Moving Message Boards are being used in a wide variety of applications for communicating information to people quicker and in a cost-effective manner when compared to traditional posters or paper notice boards. While e-mail is a way to converse privately with one or more people over the Internet, electronic notice boards are totally public. Any message posted on one can be read (and responded to) by everybody else in the organization who has viewed it. This paper focuses on designing an e-display which can accept data wirelessly from any authorized person who has the access of the web terminal; it means integrating the traditional moving message displays with an Arduino so that they can be accessed wirelessly as an application of IoT (Internet of Things).

Keywords: *Arduino Uno, 74Is595,16 PIN IC Base, LED (RED/GREEN/YELLOW/BLUE), Resistor22k, ULN2003, 7805 regulators, DC PIN-Socket, Wire, 1000microfarad/25 Volt (electrolytic cap.), 10 microfarads (electrolytic cap.), Adapter, PCB for matrix controller, Board assembly, Hardware.*

1. INTRODUCTION

A monochrome (single color) LED dot matrix display is used for displaying the Characters and Symbols which is interfaced with a microcontroller. This project will deliberate on displaying a scrolling text message on a 64×8 LED dot matrix display. The microcontroller used is Arduino Uno which is open source prototype Electronic platform. The 64 columns of the LED matrix are driven individually by eight shift registers (74HC595), whereas the eight combined rows are also driven by the Shift register. Here we will be scanning across the rows and feed the column lines with appropriate logic levels. The program in the microcontroller is to determine the speed of the scrolling message as well as Message what we are going to display. The technique will be demonstrated for the right to left scroll but can be easily implemented for scrolling in other directions. The Sketch program for Arduino Uno is developed with Arduino Software.

Electronic or Moving Message Boards are being used in a wide variety of applications for communicating information to people quicker and in a cost-effective manner when compared to traditional posters or paper notice boards. While e-mail is a way to converse privately with one or more people over the Internet, electronic notice boards are totally public. Any message posted on one can be read (and responded to) by everybody else in the organization who has viewed it.

1.1 Block Diagram

Here circuit requires 5V and 12V regulated DC supply. We used 230V to 12V-0-12V step down transformer/ adapter. The output AC of transformer 12V is rectified by center tap rectifier. Rectified output is pulsating it is pure by the capacitor filter

of 1000uf 25V. Now the out of a capacitor is DC 12V-15V given to the Arduino board, which is required to convert in 5V regulated for microcontroller and other devices, here we have used a LM7805 regulator for getting 5V regulated DC, For 74LS595 and ULN2003 driver IC.

In this Arduino board (microcontroller) works with the 16MHZ frequency used for (timer configuration), the unwanted frequency produced is bypassed by the capacitor of the 27pf capacitor. Reset pin is connected to a resistor 10K whenever reset requires the reset switch (2 lead push to ON switch/ micro push to switch) required pressing.
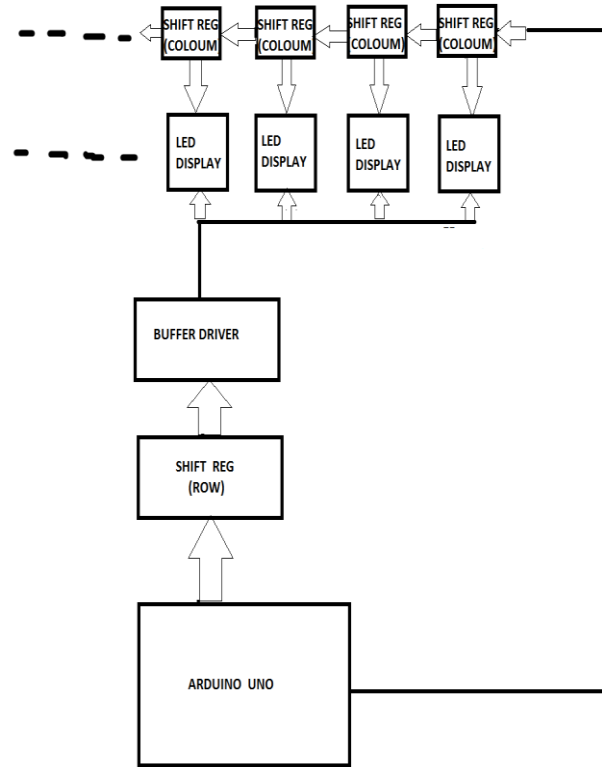
2. CONCLUSION

As the technology is advancing every day the display board systems are moving from Normal hand writing display to digital display. Further to Wireless display units. This paper develops a wireless notice board system with Arduino connected to it, which displays the desired message of the user through a display in a most populated or crowded places. The display can be used to show the message to the public, in bulk amount, with the same time. Our designed system is run with Arduino Uno board interfaced with shift resistor ICs. Work properly with text entered by PC in the program. Also, speed can be controlled by rolling characters by entering numbers in for loop to increase or decrease speed. The display can be visual for 50 meters it is good to see from a longer distance.

3. ACKNOWLEDGEMENT

I drive my great pleasure in expressing my sincere gratitude to our principal Mr.Buke M.V for his timely suggestions which helped me to complete the project. It is very auspicious movement. I would like to express my gratitude to our HOD Mr.Panchal S.D. I take it is a privilege to thank also my guide Mr. Chalkikar G.V of the ideas that led to complete the project and also thank his for continues guidance support and unfailing patience, throughout the project. His valuable comments during this period have been valuable and worth for life time.

I am also thankful for both teaching and non-teaching staff of E&TC department for their kind co-operation and also sorts of throughout this project successfully.

4. REFERENCES

[1] Guifen Gu and Guili Peng The Survey of GSM Wireless Communication System, International Conference on Computer and Information Application (ICCIA 2010).
[2] Foram Kamdar, Anubbhav Malhotra and Pritish Mahadik Display Message on Notice Board using GSM ISSN 2231-1297, Volume 3, Number 7 (2013), pp. 827- 832 Research India Publications
[3] N. Jagan Mohan Reddy and G.Venkeshwaralu Wireless Electronics Display Board Using GSM Technology, International Journal of Electrical, Electronics and Data Communication, ISSN: 2320-2084.
[4] Shruthi K., Harsha Chawla, Abhishek Bhaduri"SMART NOTICE BOARD", Department of Electronics and Communication, Manipal Institute of Technology, Manipal University, Karnataka.