Web Controlled Smart Notice Board using Raspberry pi: A Review

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Abstract: Now a day's universities were hanging the wooden notice boards, it can play vital role in colleges and schools. Automation is very often spelled term in the field of Electronics. Notice Board is the primary factor for public places like bus stations, railway stations, colleges, malls, etc. Sticking out various notices on day to day life would be a tough method. For wireless notice board only one person can be needed to handle. There is no paper use in wireless notice board. In web controlled notice board wirelessly send message from browser to liquid crystal display. Mobile is use for sending notice and raspberry pi is connected to the Liquid crystal display at the receiver side. The data is received from only authenticated user.

Key Words: Raspberry pi 3B, 16*2 LCD display, I2C Serial module, Mobile phone.

Introduction: As notice board is an essential information gathering system in our life. Day to day life, we can see notice board in various places life school, colleges, shopping malls, bus stations, railway station, offices etc. Today we are going to one step ahead and instead of using GSM as wireless medium, this time we are using internet to wirelessly send the message from web browser to the LCD which is connected to the raspberry pi. The message is send through the web browser so it can be using computer, smart phone or tablet. In this web controlled notice board, we have created a local web server for demonstration this can be global server over internet. At the raspberry pi, we have used 16*2 LCD display message and flask for receiving the message over network. Whenever raspberry pi receives any wireless message from web browser, it displays on the LCD .The problems are face by the wooden or conventional type notice boards are resolved by the implementation of digital notice board. It will bring an advance means of passing notices around in the world in a much easier and efficient way. It is easy to install user friendly system which may receive and display notice in specific manner with relevance date and time which will help the user to simply keep the track of notice board each day and time which uses a system.

Objective: The main objective of this system is to design an automatic, self-enabled highly reliable smart notice board. display connected to the server system should be continuously listen for the incoming messages from user, process it and display on LCD screen.

LITERATURE SURVEY:

Ganesh E. N. IRJCET 2019 [1] Wireless technology provide fast transmission over a long range data transmission, used in this paper. It saves time, cost of cables, size of the system. Data

can be sent anywhere in the world. Username and password type authentication system is provided for adding security. Previously the notice board using Wi-Fi module was used. In that, there was the limit of the coverage area, in our system internet is used as a communication medium. So there is no problem with the coverage area. Multimedia data can be stored on a SD card. Text messages and multimedia data can be seen as fast as possible with best quality.

Divyashree M, Harinag Prasad ,Sandeep G T,Bhavya S N,Poornima S IRJET 2018 [2]

In this paper an advanced wireless IoT based Web Controlled Notice Board, internet was employed to wirelessly send the message from browser to the liquid crystal display. A local web server is create this can be a global server over net. In the raspberry pi2, LCD is use to display message and flask used for receiving the message over network.

M.Arun. P. Monika and G. Lavanya IJCAT 2017 [3]IoT based web controlled notice board has the Raspberry Pi2 with LCD display as the smart system acts as the central server of the proposed system and the notice boards are accessible only by logging in with the proper credentials within the raspberry pi server. Raspberry Pi2 acts as the server and is connected to internet employing a correct IP address, so as certified user of this system can login from any place.

S.Rubin Bose and J. Jasper Prem IJRIER 2017 [4] GSM based LED scrolling display board, GSM model communicates with micro-controller through a synchronous serial communication was design in this paper. The micro-controller transmits a set of AT commands to read the

message sent by the user. The GSM based system has the flexibility to display faster than the programmable system. This system is easy to maintain in normal life by any one at anyplace with less errors.

Kruthika Simha, Shreya and Chethan Kumar IEEE 2017 [5] This paper desire to iterating the results of the project focused on developing a wireless electronic notice board each offers the flexibility to regulate information display within a given range on multiple displays. The notice board displays information being transmitted it from a central controlling unit, employing a serial communication protocol.

Neerajkhera and Divyashukla IEEE 2016 [6] It has developed a simple and low cast android based wireless notice board. They offer system uses either Bluetooth or Wi-Fi based wireless serial digital communication. For this design android based application programs of Bluetooth and Wi-Fi communication between android based personal digital assistant devices and remote wireless display board are used.

Dharmendra Kumar Sharma and Vineet Tiwari IEEE 2015 [7] Wi-Fi is using for data transmission. At any time we will add or remove or alter the text consistent with our requirement. At transmitter authorized PC is employed for sending a notices. At receive end Wi-Fi is connected to raspberry Pi. When an authorized user sends a notice from this system, it is received by receiver.

Raspberry Pi 3 Model B


Specifications

This Raspberry Pi 3 model B is the primitive model of the third-generation raspberry Pi. It replace by the raspberry Pi 2 model B in February 2016. see also Raspberry Pi 3 model B+, the latest product in the Raspberry pi 3 range. It has the quad 1.2 GHz broad-com BCM 2837 64bit CPU. It has 1GB RAM..

100 Base Ethernet.40 Pin extended GPIO and 4USB 2 ports. It has 4 pole stereo output and composite video port and Full size HDMI. In this raspberry Pi Micro SD port loading your operating system and storing data. It Enhanced switched micro USB power source up to 2.5A.

Power supply

This project utilizes a controlled 5V, 500Ma power supply, 7805 three terminal voltage controllers is employed for voltage regulation. Bridge type full wave rectifiers is utilized to rectify the ac output of secondary of 230/12V step down transformer.

LCD Display
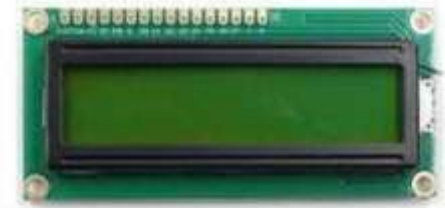
We utilize screen as display. LCD is employed during a project to see the output of application. LCD can likewise be utilized as a part of a task to check the yield of various modules interfaced with the raspberry pi module. LAN assumes an important part during a task to see a yield. For normal utilize you will need to connect the Raspberry Pi to a see display a screen or a TV.

I2C serial interface module

I2C module is a serial protocol for two wire interface to joint at a low speed device like micro-controllers, EEPROMs, A/D and D/A converters, I/O interfaces and other similar peripherals in embedded system.

Acknowledgement

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