Wireless Notice-Board using Node MCU

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Abstract—The main objective of this project is to develop a Wireless Notice Board that will be used by the faculty in order to display latest Notice and Announcements. It is a smart board developed as user friendly notice board with wireless concept that offers the flexibility to control the notice board. The notice can be delivered with help of Node MCU and a webpage. This notice board is made to overcome the messy wiring of earlier electronic wired model. It's one objective is to increase the speed of communication and saving time and resources. It can also be used to promote the reusability of existing design and decrease the area required which will manage the cost factor.

Keywords – Node MCU, LCD

Introduction:

In this project, the development of simple and low-cost Smart Board is presented. The proposed system uses Wi-Fi based wireless serial data communication. For this purpose, Node MCU which is WIFI communication and LCD display are used. At receiver end, a low- cost LCD board is programmed to receive and display messages. Using the developed system, two different applications for displaying messages on a remote digital notice board and wireless person calling has been implemented. The developed system will therefore aim in wirelessly sharing the information with intended users and also helps in saving the time and the cost for paper and printing hardware.

Traditionally, there were notice boards where any information or notice had to be stick daily. This becomes tedious and requires daily maintenance. The objective of this project is to develop a wireless notice board that displays notices when a message is sent from the user's android application device. Smart Board is an electronic based project. This automated system can reduce the manual work.

This electronic system is a combination of software and hardware. In this paper, to design a model messages are sent through an Internet from an authorized transmitter and then message is transmitted to the microcontroller and the message is read and sent to digital display board.
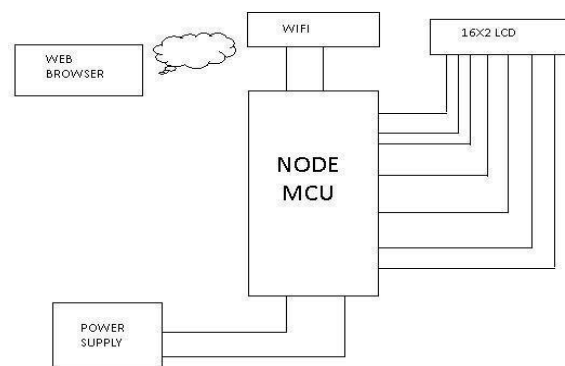

Proposal of the project:

The main aim of the project is to implement the notice board in low coast using Node MCU, with reducing the usage of physical manpower. There will be a moving message display, which might be utilized as the digital notice board, and moreover a WI- FI transceiver that will be that the most recent innovation utilized for communication between the mobile and also the embedded devices. System can work like once the user desires to display or update the notice board, that is unimaginably useful to show the circulars, day by day occasions, plans are to be shown. At that point the WI-FI will receive the message in notice board system, the Node MCU chip has been inside the system is programmed in such a way that when the coding is written in embedded system Language receives any message it will browse the message form serial port through WI-FI transceiver, if the message is writing in any PC then it will begin displaying the information within the display system. The messages are displayed on the liquid crystal display. This system is to cut back the time wastage and update with any time is to terribly

simply. The serial WI-FI has been utilized it can be used to transmit an information from serial port communication. It implies that to display the information from to a tiny bit at a time to get the notice load up then stores it, messages are then shows it in the LCD module.

Hardware:

1. Node MCU:
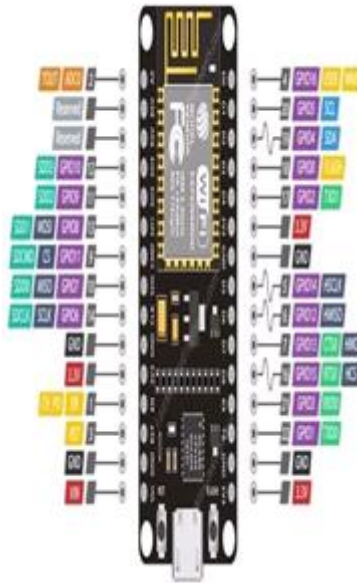
Switches and Indicators:

RST-: Reset the ESP8266 chip. **FLASH** - : Download new programs. **Blue LED**- : user programmable.

Power parameters:

Operating voltage: 2.5V to 3.6V On board 3.3V 600mA regulator 800mA Operating Current

20 microAmps Sleep mode

Pheripherals and I/O:

ADC channel – A 10-bit ADC channel. **UART interface** – UART interface is used to load code serially.

PWM outputs – PWM pins for dimming LEDs or controlling motors.

SPI, I2C & I2S interface – SPI and I2C interface to hook up all sorts of sensors and peripherals.

I2S interface – I2S interface if you want to add sound to your project.

TheESP8266's pin multiplexing feature

(Multiple peripherals multiplexed on a single GPIO pin). Meaning a single GPIO pin can act as PWM/UART/SPI.

Serial communication port:

CP2102 USB- to-UART Converter

4.5 Mbps Communication speed Flow control support.

2. LCD:

We utilize screen as display. LCD is utilized in a project to visualize 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 Node MCU Pin module. LAN assumes an indispensable part in a task to see a yield. For normal utilize, you'll need to connect the Node MCU to a visual display a screen or a TV.

Result:

Conclusion:

Hence, we will be concluding that, by introducing the concept of smart wireless notification board which will make the communication more efficient and faster, with great efficiency we can display the message with less errors and maintenance.

References:

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