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Job Portal Indication Using NodeMCU

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Abstract: ***At this time jobs are the big reason of concern, it is not possible for the every job seeker to view the newspaper daily. Job seekers have to go to the agency and check the available jobs at the agency .People have to visit different places for the jobs which is much time consuming and costly. So to acquire a one this project consists of a website which is hosted and helpful in finding a job but the Indicator system here gives a boom to this project. A hardware device which works on Node MCU ESP8266 contains a LED for indication as well as a LCD display which will display jobs in seconds on submission , it will helps in reducing workload for the person sitting on admin side as well as we can use it on big screens over the public places for thousands of job seekers.***

Keywords: NodeMCU ESP8266, LED, LCD, PHP, Arduino.ino

I. INTRODUCTION

This project is based to minimize the work load of the person who is working on admin side as well as enormous number of job seekers out there. Therefore we have designed this project for saving the time. We have built an Node MCU based Job Portal Indication system using a website composed with HTML, PHP and for indication LED, LCD module is used. When a job is posted on the website LED blinks as well as Details of the job can be seen on the LCD module. NodeMCU ESP8266 makes a Wi-Fi connection with the device it is paired after that it connects to the server. It happens as the node MCU as well as website both are connected to the server, whenever the job is posted the node MCU checks for the entry in table. Data entered is captured and with some delay the LED blinks and after 10 seconds it stops and check for new data if found then it erases last one and blinks again otherwise it shuts low.

II. DESCRIPTION OF THE COMPONENTS

A. NodeMCU ESP8266

NodeMCU is an open-source Lua based firmware and development board specially targeted for IoT based Applications. It includes firmware that runs on the ESP8266 Wi-Fi SoC from Espressif Systems, and hardware which is based on the ESP-12 module. It works as a main brain which controls all the hardware component with the help of software. In this project NodeMCU ESP8266 has following specification Microcontroller: Tensilica 32-bit RISC CPU Xtensa LX106, Operating voltage: 3.3V, Input voltage: 7-12V, Digital I/O pins(DIO): 16, Analog input pins(ADC): 1, UARTs: 1, SPIs: 1, I2Cs: 1, Flash memory: 4 MB, SRAM: 64 KB, Clock Speed: 80 MHz, PCB Antenna.



Fig. 1. NodeMCU ESP8266

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B. LED

LED known as Light emitting diode. It is a semiconductor light source that emits light when current flows through it. Electrons in the semiconductor recombine with electron holes, releasing energy in the form of photon. In this project, LED is used as indicator which blinks when NodeMCU gets response from the server of the data entry. LED is connected with the resistor in series to prevent it from the overload and it works properly. It is connected to the D0 of the NodeMCU ESP8266.



Fig. 2. LED

C. LCD Module

LCD stands for Liquid Crystal Display. It is used for wide range of application, very commonly used in various devices and circuits. It is electronics display module. LCD module used in this project is of 16X2 alphanumeric type which is used to display alphabet, number and special character. The Gnd pin of the LCD module is connected to the GND pin of the NODEMCU. The VCC pin on the LCD display is connected to the VIN pin on NodeMCU. SDA Pin is connected to D1 of the NodeMCU and SDL pin on the display is connected to D2 on the NodeMCU.

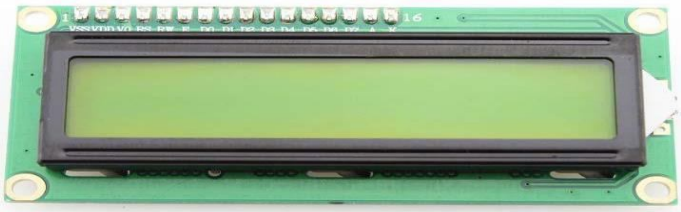


Fig. 3. LCD Module

D. PHP

PHP is a server side scripting language that is used to develop static websites or dynamic websites or web applications. PHP stands for Hypertext Pre-processor. The client computers accessing the PHP scripts require a web browser only. A good benefit of using PHP is that it can interact with many different database language. In this project we make a action page that redirects towards the index page, In action page we make all connections with server and provide username and password to the host. Then we connect our action page to index page or with delete page as well as get page. The index page shows our main job portal in which we make all possible operations where we also able to see all the updates and then moving towards delete PHP file in which in which if we delete any job then this page callout and make a proper connection with index page. Afterwards moving towards the get page, it is also connected with our main index page and when the admin post any job then this page calls and making a successful operations allows us to post a job.

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E. Arduino.ino

It is the code file which is written on Arduino software and burned on the NodeMCU ESP8266.

In this code a Wi-Fi host and a password is created which connects to board, after that the pin which the LCD module or LED is connected is determined and the https server is set through which the device will be connected to the website. Initially the LED is set to Low. When the table is filled in the database the NodeMCU start searching and when it gets the data it blinks the light with 5 seconds of delays and it blinks it till 10 seconds. With in that time it searches for the new data in the table if found then it deletes the previous one and again blinks otherwise it keeps the light low.

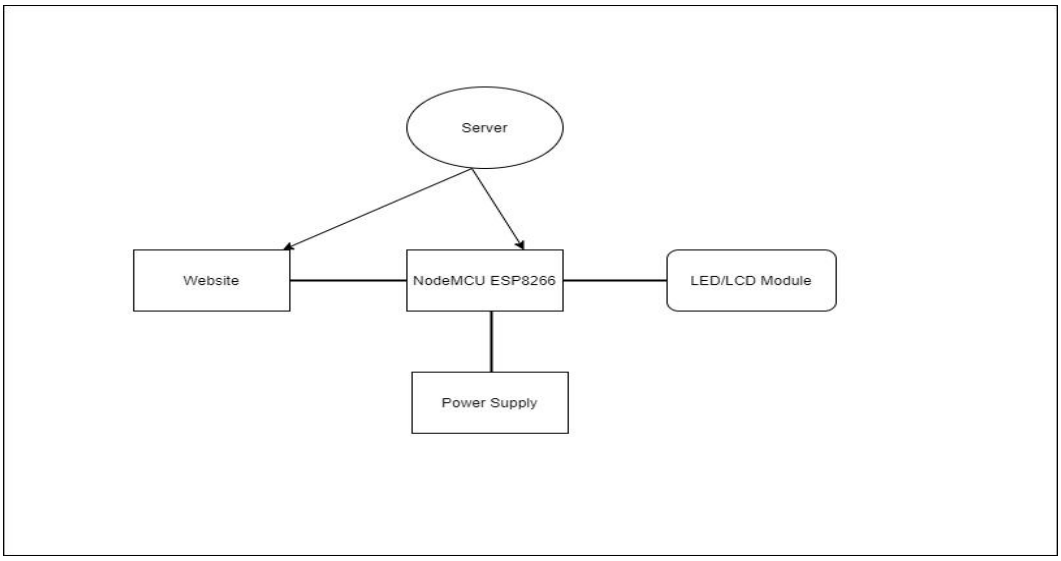


Fig. 4. Block diagram of Proposed Model

F. Working of Proposed Model

The working of the project is that whenever there will be a job posted the data will entered into the database and the table will be created. This data can be deleted also. Now when the data is entered in the table so it will be shown on the website also and is saved in the backend. Now the NodeMCU host which is also connected to the websites server will start searching in the table if it will find data it will blink a light and display the details on the LCD with 5 seconds of delay. After that the LED will blink for 10 seconds and search for the next data in the table if found it will again blink after 5 sec delay otherwise it will be shut low means it will stop blinking.

III. CONCLUSION

One of the major cause of unemployment is not finding the jobs. So to overcome this the jobs will be posted on the site and it will also help the admin to reduce the workload by using the device which we have created which will indicate the job posting and admin will not have to check on the system continuously. By the help of LCD module it can be implemented on the bigger level in public places to show vacancies which are open for job. It will help the needy who is in search of job as well as will save the time of people to search for job here and there.



Fig. 5. Circuit diagram of proposed model

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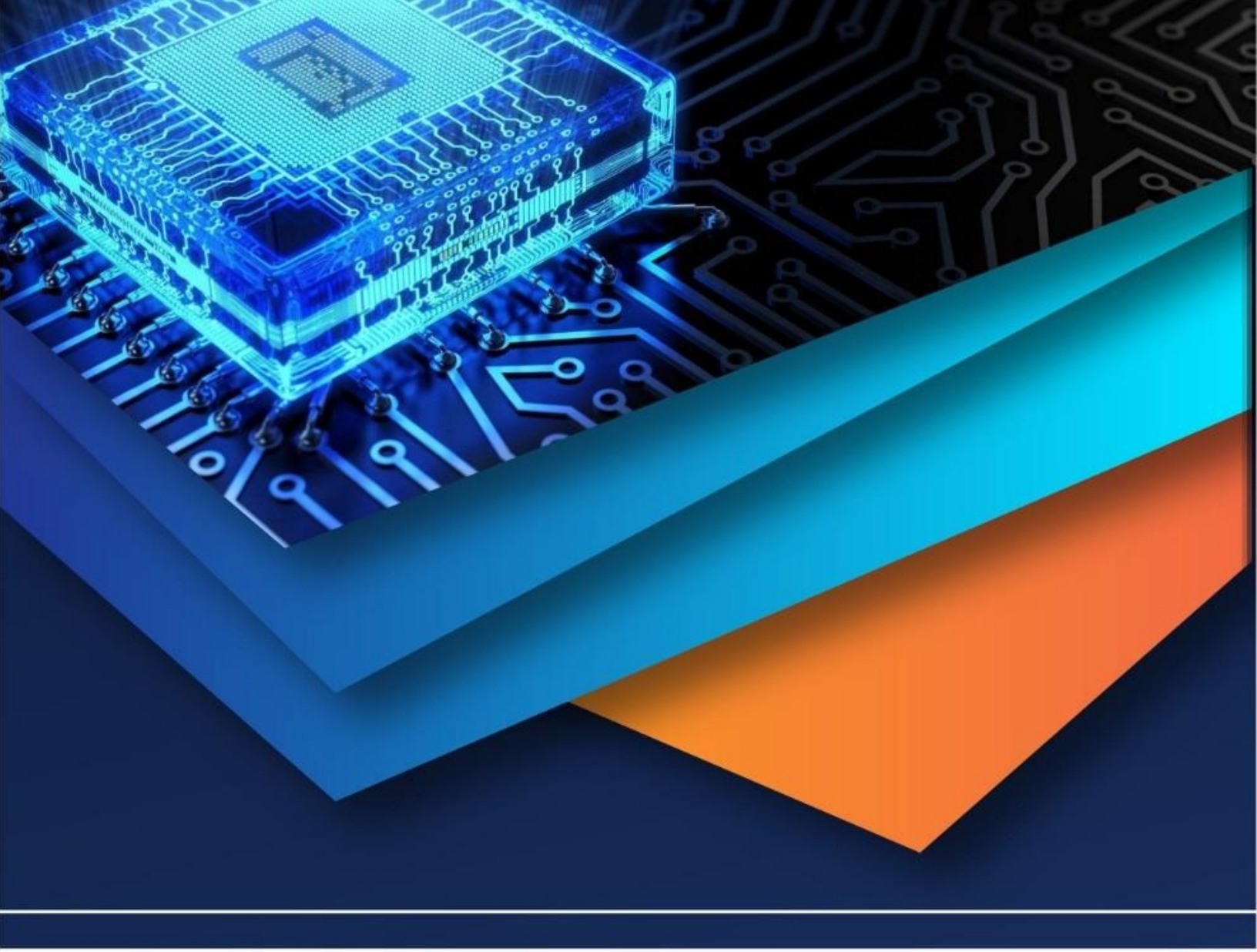
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[11] https://arduinodiy.wordpress.com/ Very well documented Blog about electronic and Arduino digging a bit more in the theory.

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