

IOT Based Smart Labour Work Monitoring System

Swati S. Halunde¹, Pooja S. Chougule², Geetanjali B. Sajane³,
Kiran M. Ghumanna⁴, Arihant K. Patil⁵

¹Ass. Professor Department of E&TC Engineering, SITCOE, Yadrav, MS.

²Department of E&TC Engineering, SITCOE, Yadrav, MS.

³Department of E&TC Engineering, SITCOE, Yadrav, MS.

⁴Department of E&TC Engineering, SITCOE, Yadrav, MS.

⁵Department of E&TC Engineering, SITCOE, Yadrav, MS.

Received 03 August 2020; Accepted 18 August 2020

ABSTRACT: -In this world credit goes to ever growing technology and in past few years automation has reached to new revolution there for designing of system that will monitor different operations in industry by sitting in front of single monitor is very profitable and time saving .This paper describes the system that will record the operation time of the machine and also details of worker operating it. All the system is designed on basis of web server web module and microcontroller.

KEYWORDS: - IOT , Wi-Fi module, RFID reader, Web server.



I. INTRODUCTION:-

Industrial relations is the term that describes how the management and the employees of a company interact with each other. We are going to implement this project in industries with the aim to monitor the work of labours.

It can be used to monitor safety and productivity of employees, but it also may help business financially. From dishonest unethical employee process is monitoring employee action, it allows for growth of financial profile from small investment. Not only does employee monitoring prevent theft of money and resources but it also prevent theft of time and to make sure people are doing what they are supposed to be doing in the workplace.

Employees will spend their time using their work time for personal uses and employee monitoring helps regulate this.

In this project we are going to have an RFID for technicians, which will interface by the microcontroller AT 89C52. The production data will be upload on the Web Server through Wi-Fi module (IOT).

Hardware requirement:-

- Microcontroller 89C52.
- RF-ID Reader.
- Crystal Oscillator.
- Relay Driver Circuit.
- Input Switches
- LCD (16*2).
- Wi-Fi module ESP8266.

Software requirements:-

- Keil.
- HTML and PHP.
- Proteus.

Flow chart:-

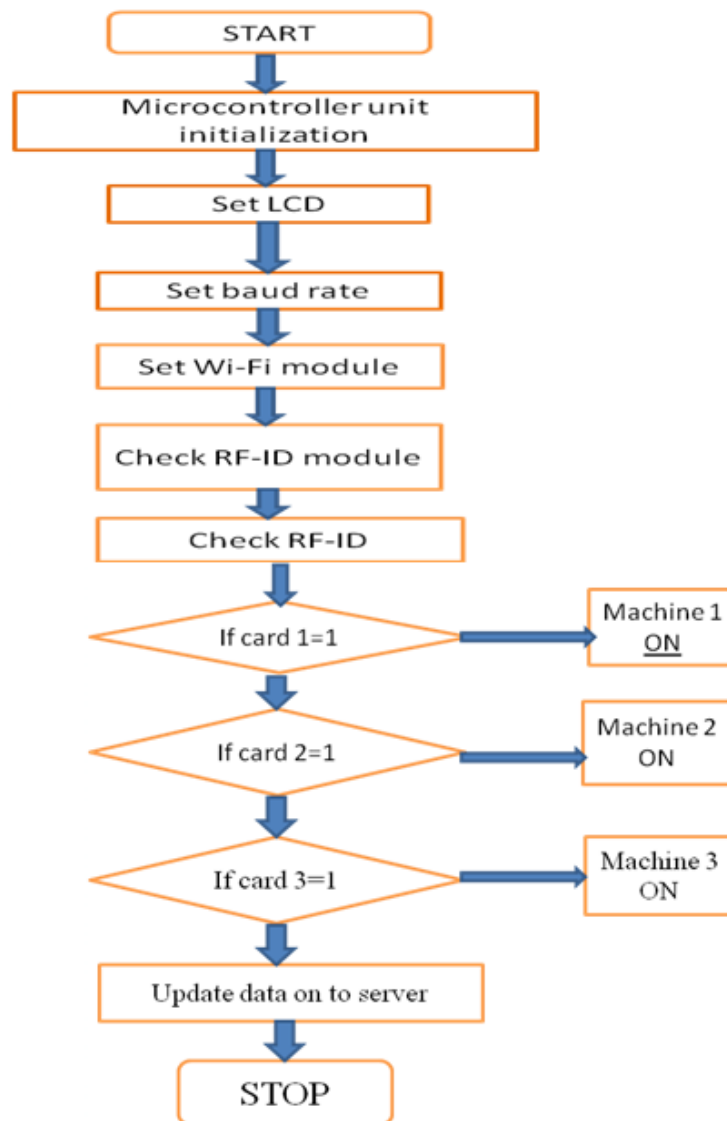


Fig. Flow chart

Block diagram:-

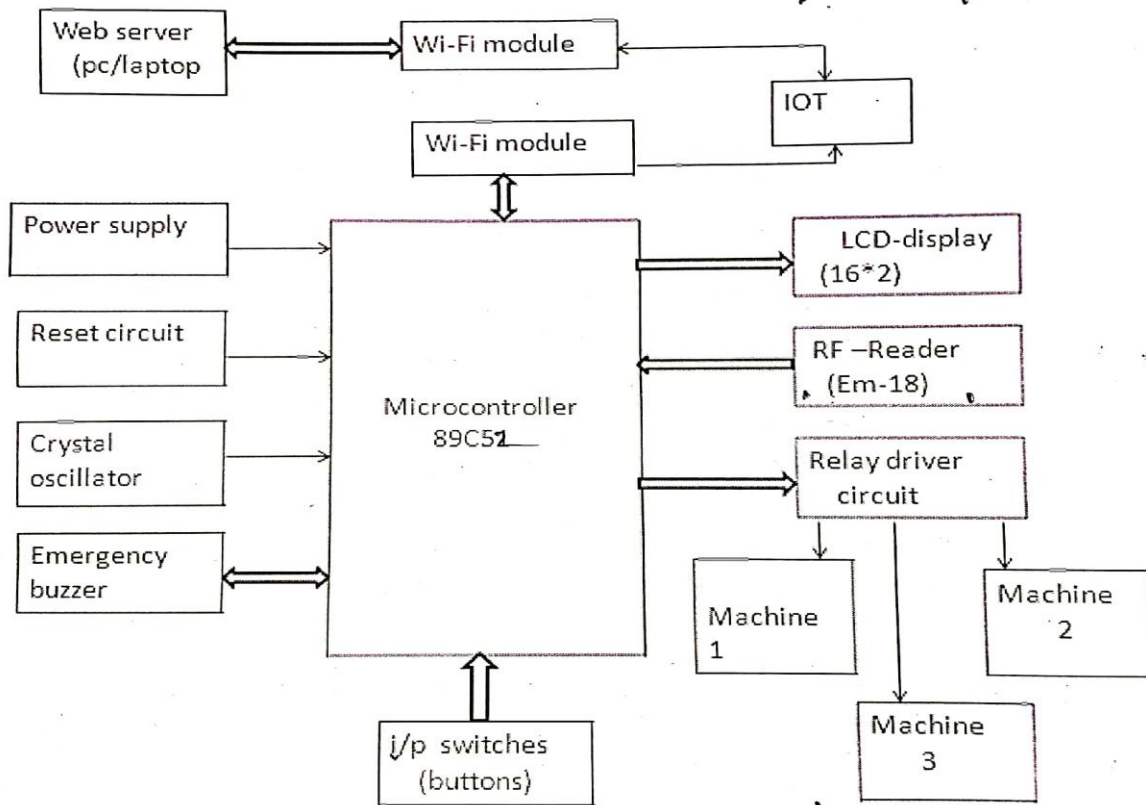


Fig. - General Arrangement

II. WORKING:-

The above block diagram contains microcontroller AT89c52, RFID reader, LCD display, relay driver circuit, Wi-Fi module, power supply. RF reader will detect the card when it is swiped by particular labour. This input will be shown by LCD display. The relay driver circuit is used for switching in between RF reader and Wi-Fi module. The Wi-Fi module is used for sending input information to the system (like computer, mobile).

The particular labour will turn ON or turn OFF the machine using the RFID tag, due to this the system will save the ON time and OFF time of the machine. Using this two times we can find out the operating time of machine, by comparing this with standard time and production, we can monitor the labour work.

Due to our system(project) is IOT based the owner can monitor the work of labour, anytime and anywhere.

Advantages:-

1. It provides better control over working process of labours.
2. It give better control over production monitoring.
3. With the help of this system owner of industry can monitor work form any place.
4. Reduced energy and power consumption.
5. It is time saving.

Applications:-

1. To monitor working process of labours.
2. To calculate working hours of machine.
3. To monitor amounts of production.

III. CONCLUSION:-

The goal of the project was to design a system, which should be easy to implement, and short ranged. The project is implemented through onboard Wi-Fi, which is inbuilt in the mobile phones having an Android as its system.

In industries to reduce manual overhead we have implemented Internet of Things (IOT) in Industry to monitor as well as to inform the responsible person to take appropriate measures, but this will partially fulfill our requirement of company.

Future scope:-

It can be implemented in any company which use big machinery where rate of product is very prior thing. It is a real time application.

REFERENCES:-

- [1]. <https://www.google.com/search?q=iot+ieee+xplors&aq=chrome..69i57j017.17427j0j1&sourceid=chrome&ie=UTF-8>
- [2]. <https://www.google.com/search?q=iot+based+ieee+papers+2019&aq=chrome.1.013j69i57j014.28351j0j9&sourceid=chrome&ie=UTF-8>
- [3]. https://www.google.com/search?sxsrf=ALeKk00eCUGeVzNwpPXkmf1_y-iPzeUwjw%3A1590511369402&ei=CUfNXrqMGJrdrQH2qofwAw&q=ieee+papers+on+iot+2020&aq=iot+based+ieee+papers+2019&gs_lcp=CgZwc3ktYWlQARgAMgQIABBBHMgQIABBBHMgQIABBBHMgQIABBBHMgQIABBBHMgQIABBBHMgQIABBBHUABYAGD ugRoAHABeACAAQOCIAQC SAQCYAQcAQdnd3Mtd2l6&slclient=psy-ab
- [4]. <https://www.google.com/search?q=iot+information&aq=chrome.5.69i57j017.21505j0j9&sourceid=chrome&ie=UTF-8>
- [5]. <https://www.google.com/search?q=microcontroller+89c52&aq=chrome..69i57j017.27666j0j9&sourceid=chrome&ie=UTF-8>
- [6]. <https://www.google.com/search?q=rf+reader+module&aq=chrome.2.69i57j017.15360j0j9&sourceid=chrome&ie=UTF-8>
- [7]. <https://www.google.com/search?q=wifi+module+esp8266&aq=chrome.2.69i57j017.12051j0j9&sourceid=chrome&ie=UTF-8>
- [8]. https://www.google.com/search?sxsrf=ALeKk00QNSCPObMfiENmRl-tP64OwXJkzA%3A1590511590812&ei=5kfNXtCiMYrorQG4moiQDg&q=esp8266+serial+wifi+wireless+transceiver+module+for+iot&aq=wifi+module+esp8266+for+iot&gs_lcp=CgZwc3ktYWlQARgCMgYIABAWEb4yBggAEBYQHjIGCAAQFhAeOgQIABBHOGQIABBDogcIABAUEIcCOgIIADoICAA QFhAKEB5QnihYmlABYKQqAWgAcAF4AIAB8RGIAcQ8kgETMC4xLjAuMS4wLjIuMS4xLjEuMzgBAKABAaoBB2d3cy13aXo&slclient=psy-ab
- [9]. <https://www.google.com/search?q=lcd+16x2&aq=chrome.2.69i57j017.4508j0j9&sourceid=chrome&ie=UTF-8>
- [10]. <https://www.google.com/search?q=crystal+oscillator&aq=chrome..69i57j017.17459j0j1&sourceid=chrome&ie=UTF-8>

