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Labour work monitoring system using IOT

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Abstract: In past few years automation has reached to new revolution. Designing a system which easy owner of industry/foundry by sitting in front of a single monitor and monitor its whole system is very profitable and time saving. The title of project is "Labour work monitoring system". This system will record the operation time of the machine and also details of worker who is operation it. All the system is designed on basis of wed server, web module and microcontroller. This system is based on IOT and web server designing.

Keywords: wi-fi module, RFID reader, microcontroller, web server.

I. INTRODUCTION

Industry has become the second largest employment generating sector in the world. Data interpretation system is an Automated Information System which gives better control over production monitoring and takes corrective steps immediately. It provides better control over working process of labours. Continuous performance of every single worker in a mill gives a high productivity. With its increasing growth and demand, textile industry faces many problems which have to be changed. One of the methods to solve those problems is the use of automation in the industries. Automation can be defined as the process of reducing human assistance in the process performed. In most sectors of manufacturing, automation is one of the major key to improvement and maintain working hours of labour. A process control or automation system is used to automatically control an industry. The Process Automation System uses a network to interconnect sensors, controllers, operator terminals and actuators.

During the past 15 years, the Internet revolution has redefined business to Consumer (B2C) industries such as media, retail and financial services.In the next 10 years, the Internet of Things revolution will dramatically alter manufacturing, energy, agriculture, transportation and other industrial sectors of the economy which, together, account for nearly two-thirds of the global gross Domestic product (GDP). It will also fundamentally transform how people will work through new interaction between humans and machines

II.LITERATURE REVIEW

Smart Data Monitoring System for Power Loom Using IOT paper published by SNS College of Technology, Coimbatore, Tamil Nadu, India. Which gave the basic concept of this project. According to this paper Textile industry has occupied the second position next to agriculture. Due to the increase in population growth, textile industry has been increasing a lot in today's world. Power loom is one of the key developments in the industrialization of weaving. It provides employment to over 35 million in the country. The use of man power in the industry can be reduced with the help of automation.

Dubbed the Industrial Internet (of Things), this latest wave of technological change will bring unprecedented opportunities, along with new risks, to business and society. It will combine the global reach of the Internet with a new ability to directly control the physical world, including the machines, factories and infrastructure that define the modern landscape. However, like the Internet wasin the late 1990s, the Industrial Internet is currently in its early stages. Internet of things platform for smart farming paper published by university of technology melborne gave concept of IOT technologies. An IoT-based platform that can automate the collection of environmental, soil, fertilisation, and irrigation data; automatically correlate such data and filter-out invalid data from the perspective of assessing crop performance; and compute crop forecasts and personalised crop recommendations for any particular farm

III.PROPOSED METHODOLOGY

Designing web server and RFID card is prior thing in this system. RFID card when hold by an employee in front of RFID reader will detect the data that which worker is operating on that particular machine. After that themonitoring of on time of machine will start recording up to the machine is turn off this will monitor on and off time of that machine. LCD display will be connected to device which will display all the data. Relay driving circuit is used to switching between the loads applied to the machine. i.e. multiple applications. IR sensors are use to detect the quantity

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of work completed by machine in particular time interval .this will help owner to identify automatically as well as manually amount of work completed. Through wifi the time period of machine operating can be known and through IR sensors quantity of product can be known. By analyasing both the data's idea of how much work can be completed in a day can be known this will help to increase the rate of production.

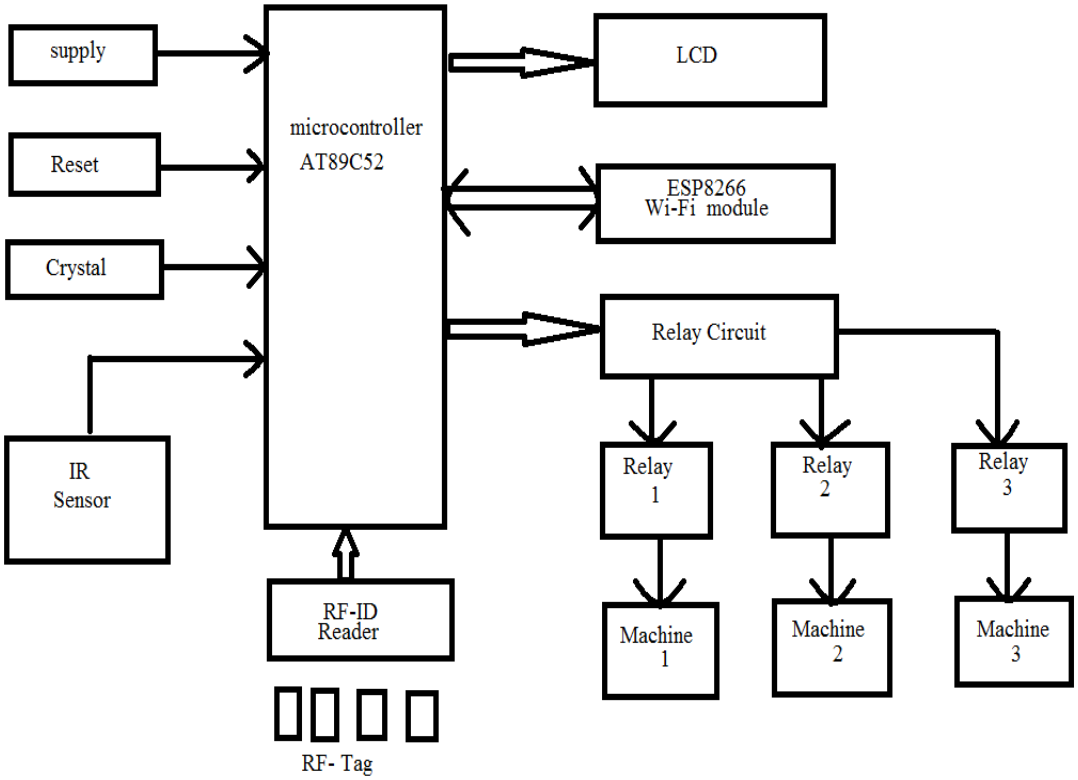
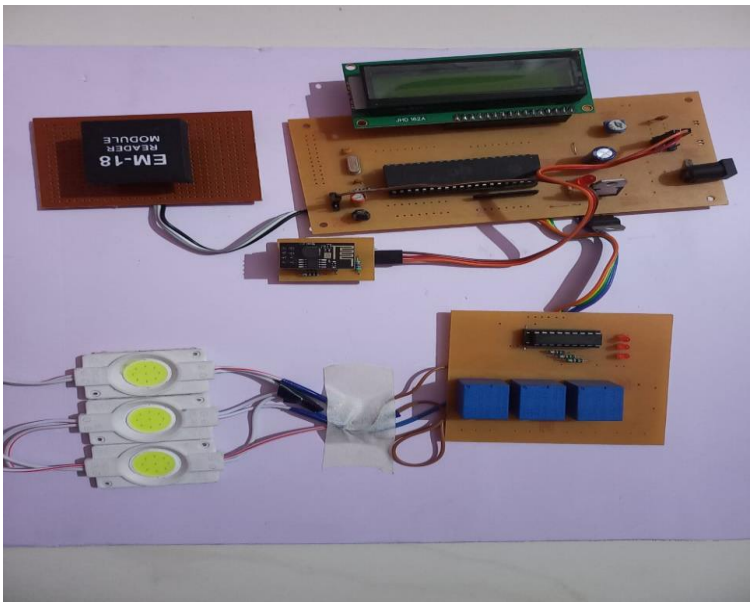


Fig.Block Diagram

All this data will be transmitted to the host computer of the company through wifi module. Web server will be required to intake all the data from the unit. Web page screen will display data like worker identity,time slot, amount of work completed in single day.



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IV.CONCLUSION

In big industries where huge and multiple machines are used it is very difficult to monitor daily work manually. Hiring a person of supervising also will increase pay scale. Also it is not assuring of efficient work. This system also is applicable where workers attendance needs to monitor by changing in design. Productivity increases as analyzing time slot, quantity of products is possible through this system. Workers will me more caution. Leads to company development

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