Project Title: Wireless Alerting System for Industrial Application

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KLE Technological University
Creating Value Leveraging Knowledge

Need statement

Develop a wireless alerting system that

- Is reliable and accurate in providing timely alerts. Easy to install and maintain.
- Track the efficiency of the service provider.
- Track the date, time, and origin of the alert

Literature Survey

1. The existing literature and technological options for developing a wireless alerting system suitable for industrial applications were reviewed.
2. Suitable Microcontroller which has the Wi-Fi module with efficient cost was reviewed.

Problem statement

Alerting System for Industrial Application

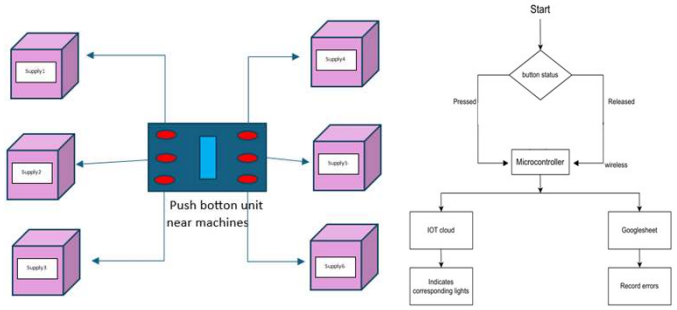
Objective

1. Design the circuit that works on 220V AC supply, takes inputs from the push buttons, and sends data to the dashboard, and Google Sheets using ESP32.

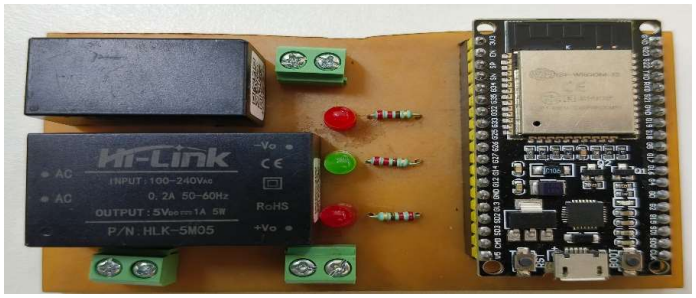
Requirements

1. ESP32 wroom32
2. 220V AC to 5V DC converter
3. 220V AC to 3.3V DC converter
4. Push Botton
5. Arduino IoT cloud

System Block Diagram



System Setup



Challenges and Considerations

- Choosing the correct components going into the circuit as well as the cloud service available.
- Solving all the problems that occurred while using wired systems.
- Resolved the issue of tracking the efficiency of each machine and the efficiency of workers.

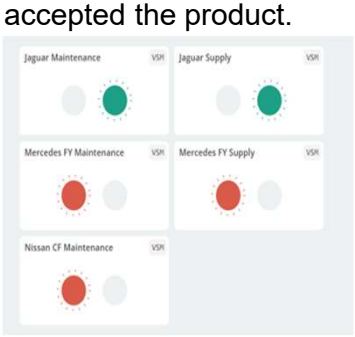
SDG Connect

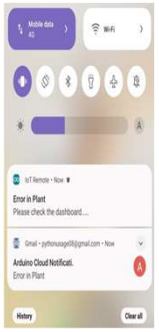
The project can help in addressing SDGs related to

- SDG 9: Industry, Innovation, and Infrastructure.
- SDG12: Responsible Consumption and Production.
- SDG 8: Decent Work and Economic Growth.

Results

The product is working as per the requirements in the industrial environment. The Industry has accepted the product.





Conclusion and Future Scope

In conclusion we are able to build a complete system which satisfies the industry needs. The project gave us lots of learnings and in-hand experience of working with the Industry. The product built is working well in the Industry environment and helps the workers to detect the need and efficiency of each machine placed in a plant. It also helps the manager to track service providers efficiency.