Temperature and Humidity Monitoring with Email and SMS Alerts

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Abstract - Temperature and Humidity Monitoring with Email and SMS Alerts is a system used to measure environmental conditions in real time. It uses sensors to monitor temperature and humidity levels. When the values go beyond the set limits, the system automatically sends alerts through Email and SMS. This helps in taking quick action to protect equipment, products, and surroundings. The system is useful in industries, hospitals, laboratories, and storage areas. It is reliable, easy to use, and cost-effective.

1.INTRODUCTION

Temperature and humidity are important factors in many places like industries, hospitals, and storage areas. Maintaining proper levels is necessary to protect equipment and products. Manual checking is not accurate and continuous. This project monitors temperature and humidity in real time using sensors. If the values go beyond the set limits, it sends Email and SMS alerts. The system is simple, reliable, and helps in quick action.

2. Body of Paper

The Temperature and Humidity Monitoring System consists of sensors, a microcontroller (or IoT module), and a communication system for sending alerts. The temperature and humidity sensor continuously measures environmental conditions and sends the data to the microcontroller.

The microcontroller processes the data and compares it with predefined limit values. If the temperature or humidity exceeds or falls below the set range, the system automatically triggers Email and SMS alerts to the authorized person. This ensures immediate action can be taken.

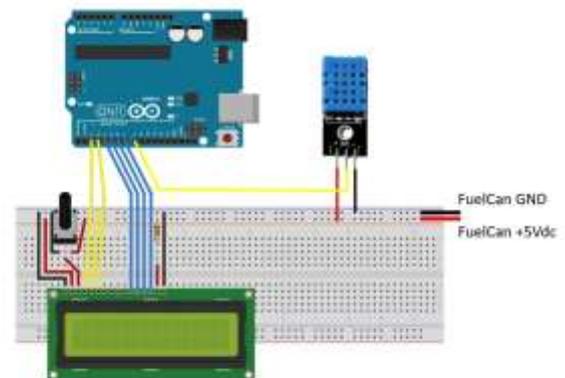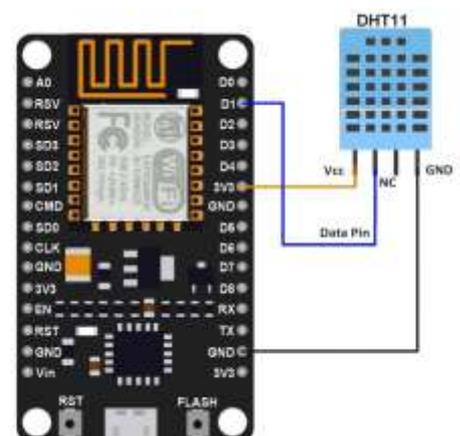The system can also display real-time readings on an LCD or mobile application. With internet connectivity, users can monitor data remotely from anywhere. The system is cost-effective, energy-efficient, and easy to install.

This monitoring system is useful in industries, hospitals, laboratories, greenhouses, and cold storage units where maintaining proper environmental conditions is essential for safety and quality.

Overall ciruit -1

Fig -1: Figure

Circuit

3. CONCLUSIONS

The Temperature and Humidity Monitoring System with Email and SMS Alerts provides a reliable and efficient way to monitor environmental conditions in real time. It continuously measures temperature and humidity and sends instant alerts when the values exceed the preset limits.

This system reduces manual effort, improves safety, and helps prevent damage to equipment and stored products. It is cost-effective, easy to install, and suitable for industries, hospitals, laboratories, and storage areas where maintaining proper environmental conditions is essential.

ACKNOWLEDGEMENT

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