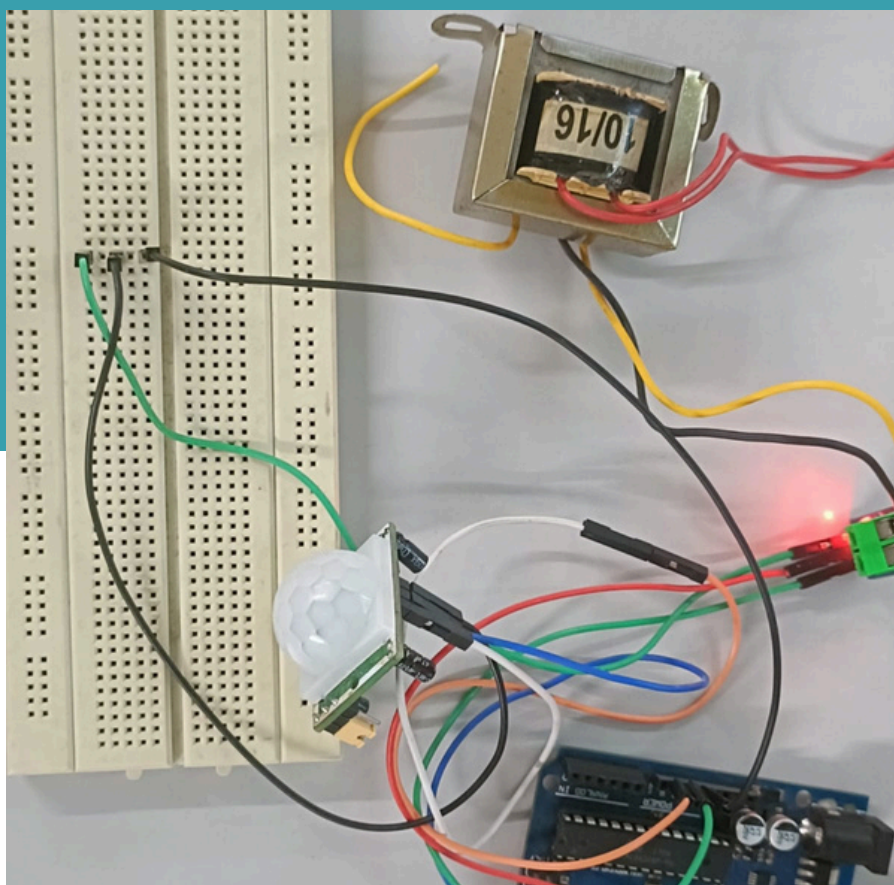
YEAR 2023

LIFT SAFETY MONITORING SYSTEM

PRESENTED TO DR.SANTOSH BISWAS



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INTRODUCTION

This presentation will explore the importance of lift safety and the need for an automated detection and notification system for trapped individuals. We will discuss the current challenges and the potential of technology to improve lift safety.

The Lift Safety Monitoring System is designed to enhance the safety and security of individuals in elevators by detecting the presence of a person in the lift during power outages. In the event of a power failure, the system is programmed to send an alert message to a pre-defined contact, notifying them of a potential emergency situation.

PROJECT OBJECTIVE

- Detect the presence of a person in the lift during power outages.
- Send an alert message to a designated contact in case of a person being trapped in the lift.
- Ensure a quick and efficient response to lift emergencies.

SYSTEM COMPONENTS

- PIR Motion Sensor: Installed within the lift to detect the presence of individuals.
- AURDINO : Controls the overall operation of the system.
- Backup Power Supply: Ensures continued functionality during power outages.
- ESP 32 Communication Module: Facilitates the transmission of alert messages.
- User Interface: Allows users to set emergency contact information.
- ACS 712 Current Detection Sensor
- Step Down 6-0-6 V Transformer

SYSTEM OPERATION

When the system detects a power outage, the PIR motion sensors within the lift are activated to determine if a person is present. If an individual is detected, the system triggers the communication module to send an alert message to the designated contact, providing information about the potential emergency.

EMERGENCY CONTACT CONFIGURATION

Users can configure the Lift Safety Monitoring System by providing contact details for the desired emergency contact. This information is stored in the system and used to send alerts in case of an emergency.

BENEFITS

- Enhanced Safety: The system ensures that individuals trapped in lifts during power outages are promptly identified.
- Quick Response: Immediate notification to the designated contact allows for a swift response to lift emergencies.
- Minimized Risks: Mitigates potential risks associated with extended periods of time spent in a confined space during a power failure

CHALLENGES AND SOLUTIONS

- False Alarms: Implementing advanced algorithms in the motion detection system to reduce false alarms.
- Power Consumption: Optimizing power consumption to prolong the life of the backup power supply.

FUTURE ENHANCEMENTS

- Integration with Building Management Systems: Seamless integration with building management systems for centralized monitoring and control.
- Remote Monitoring: Incorporating remote monitoring capabilities to allow for real-time assessment of lift conditions.

CONCLUSION

The Lift Safety Monitoring System is a crucial advancement in ensuring the safety of individuals using lifts during power outages. By providing a reliable means of detecting the presence of a person in the lift and alerting designated contacts, the system contributes to a safer and more secure environment in buildings equipped with elevators.