M.KUMARASAMY COLLEGE OF ENGINEERING , DEPT OF CSE – B.E

(18CSP202L) MINOR PROJECT I - FINAL REVIEW

Class : CSE-A

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AUTOMATED SECURITY SYSTEM

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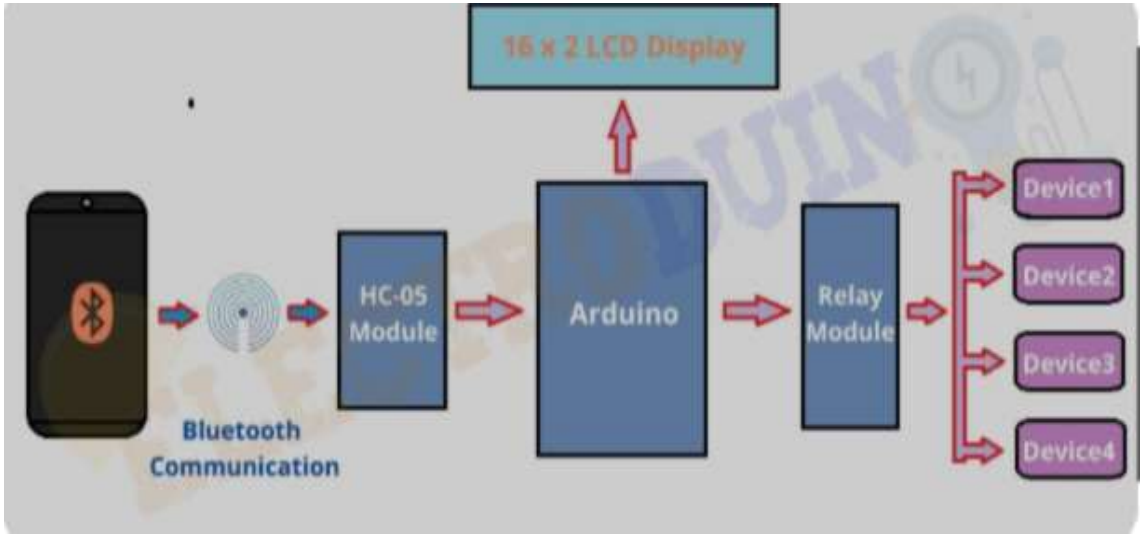
Objectives of the Project

- To increases the security level to prevent an unauthorized unlocking done by attacker.
- To provide more flexibility to the user.
- To improve more secure way of locking-unlocking the system.

Literature Review

Author	Year	Title	Techniques	Disadvantages
John Smith	2020	Advancements in Automatic Security Systems	Biometrics, Motion detection,Encryption	Vulnerability to spoofing attacks ion biometrics system, potential risks of encryption being compromised.
Emily Johnson	2019	Integrated Solution for Automatic Security System	Access control, Remote Monitoring	Complexity in integrating diverse systems, potential compatibility issues between different technologies, increased cost of implementation and maintenance.
Michael Brown	2018	Emerging Trends in Automatic Security Systems	Artificial intelligence, machine learning, cloud-based solutions	Privacy concerns related to AI-driven surveillance, potential biases in machine learning algorithms, security risks associated with cloud-based storage and processing.

Existing System Architecture



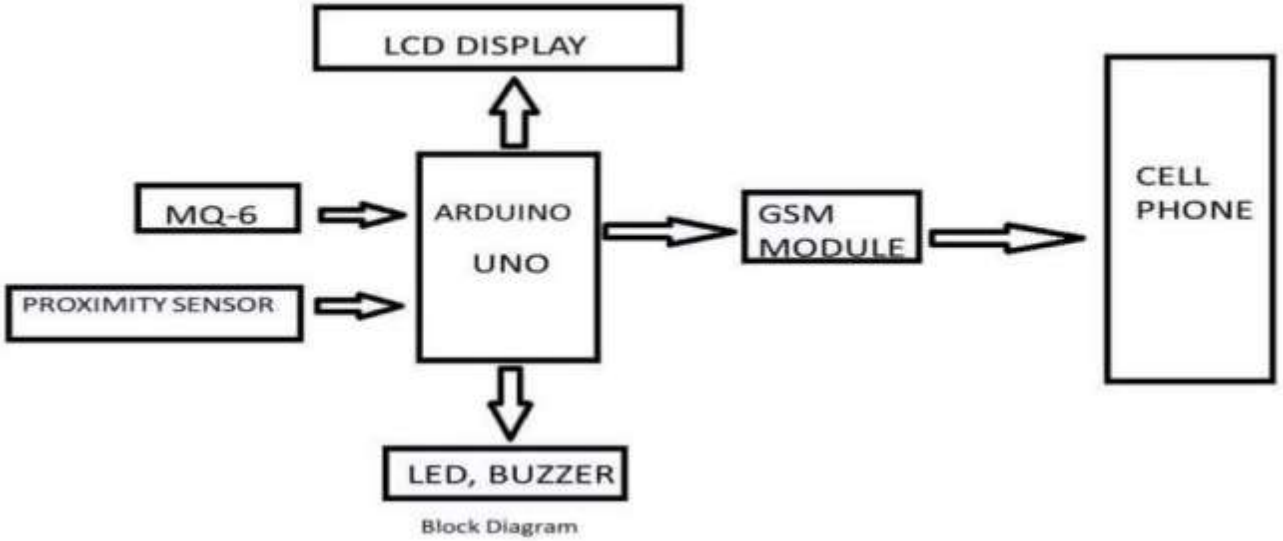
Existing System Architecture-Findings

- Hardware Layer
- Data Collection Layer
- Communication Layer
- Processing Layer
- Application Layer
- Integration Layer
- Security Layer

Proposed System

- User Management
- Alerting System
- Remote Access
- Integration with External Services

Proposed System Architecture



Block Diagram

Modules in Project

- Authentication module
- Access control module
- Alarm module

Summary of Modules -1

Authentication module:

This module verifies the identity of users trying to access the security system or lock. It ensures that only authorized individuals can gain entry by requiring them to provide some form of proof of identity, such as a password, fingerprint scan, or RFID card. This verification process helps prevent unauthorized access and ensures the security of the system or locked area.

Summary of Modules 2

Access control module:

This module manages who can enter specific areas or rooms by setting permissions for different users. It determines who is allowed access based on predefined rules or criteria set by administrators. By controlling who can enter certain areas, it helps enhance security and ensures that only authorized individuals can gain entry.

Summary of Modules 3

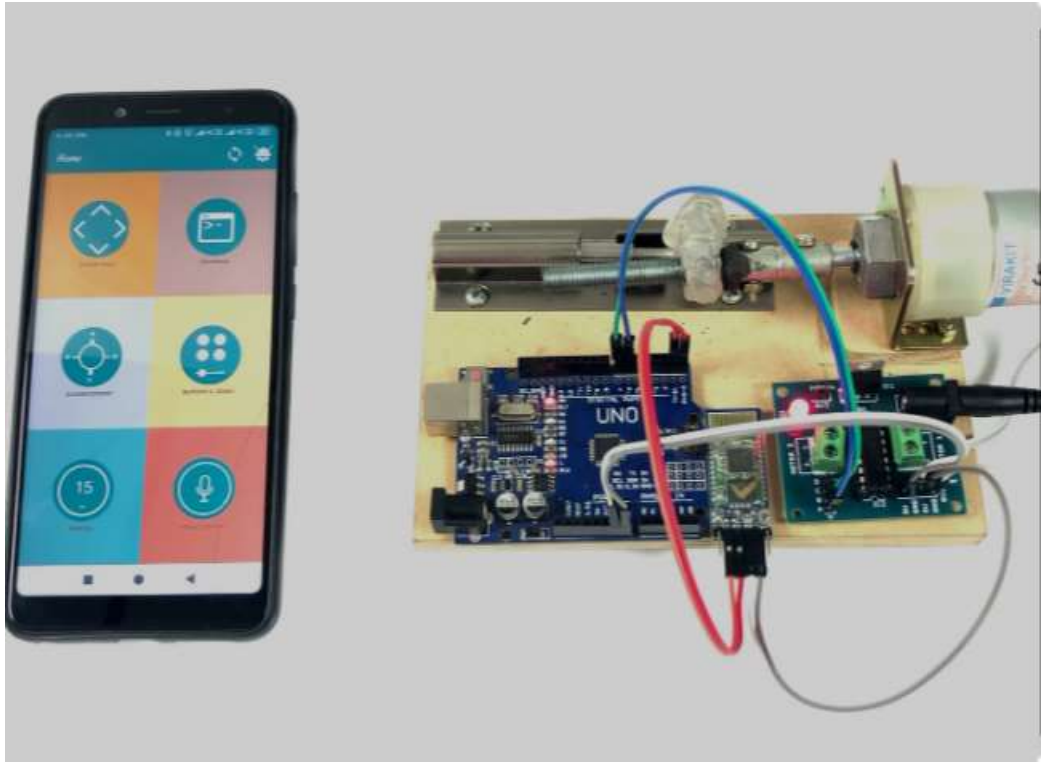
Alarm module:

This module is responsible for triggering alerts in case of security breaches or tampering with the lock. It can sound audible alarms to alert nearby individuals or activate silent alarms to notify authorities discreetly. By promptly notifying users or authorities of potential threats, it helps deter intruders and ensures a swift response to security incidents.

Software & Hardware Requirements Specification

Language	: C
IDE	: Arduino IDE
Application	: Security
Controller	:ATmega
RAM	:2kb
Flash Memory	:32kb

Full Implementation of Modules



Conclusion

Security and automation are terms that go together where one without the other in IT is redundant in the present age. As such, it is always prudent to establish automated processes where ever possible to ensure security teams on deck can deal with the more vital security concerns on priority. This article has discussed in detail what security automation is, its different types, capacities, and major signs of needing it. With the continuously progressing towards newer technologies, security automation will quickly become the driving force that ensures the protection of all cyber assets.This automated security system serves as a reliable and efficient system and corrective action can be taken. Continuous wireless monitoring reduces human power

Reference

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