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Intellectual Home Security System

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ABSTRACT: The Intellectual Home Security System advancement in technology, the number of electronic devices in our day-to-day Life has increased to make life simpler. So there is a necessity to construct a trustable Remote System that will easily control all these devices from a distance and will not only reduce the complexity of handling the number of devices simultaneously, but also save power. This report presents the overall design of the Intellectual Home Security System. We design a Home Automation System where the entire web application item will be controlled. Using the internet people can also monitor room temperature, human in room through the user friendly Web Application and also make an Email notification system. Compared to others this system is low cost, attractive user friendly interface which is platform independent and it's very easy to install. After implementation of all functions, the system is tested in different stages and it works successfully as a web-based Articulations - Can be used in the house for security purposes. Same project can be implemented in industry or educational institutes.

I. INTRODUCTION

The concept of automation. It becomes very much flexible and user interactive. Different types of wireless network technology such as an internet, WIFI, makes the Home Automation system more effective. Using these technologies home applications are easy to control from far distances through the android or web application. To build a smart and intelligent home is now very possible by combining application and home automation systems. Temperature, furthermore, where fundamental, moistness caution frameworksought to be connected to the checking system(s) with high and low alert set focuses. There ought to be a visual caution and furthermore ideally a perceptible alert, along with programmed phone dial-up or mail text admonitions to key work force.

Here we design a Home Automation project based on a web application using the Arduino mega and Ethernet shield to control electronic appliances and devices and make a security alarm .The Arduino is connected to the internet using Ethernet cable and the mobile device or pc is connected to the internet. Using any web browser the user puts a specific IP address to access the Web Application that is directly accessible andthe user can control the electrical devices or pc and Arduino within the same network.User also watches the present condition of electrical devices through this web application. A fire-smoke alarm ,high temperature alarm and a thief alarm were also added in this project. sms alert system that can send sms to users if anyone trying to enter home or fire occurred. temperature checking frameworks and gadgets ought to be introduced in all temperature-controlled rooms, cold rooms, cooler rooms, fridges and coolers used to store TTSPPs. Electronic sensors ought to be exact to 0.5C or better 4. Sensors ought to be situated in regions where the best fluctuation in temperature is required to happen inside the certified stockpiling volume and they ought to be situated in order to be insignificantly influenced by transient occasions, for example, entryway opening.

II. RELATED WORK

This project is about the design and development of an automated home security system.Home a security system should provide security and safety features for those houses that are used. It ought to have the option to caution inhabitants from characteristic, incidental or potentially human threats, for example, fire,theft, creatures attacking, .and so forth The requirement document will include some details about the problem or the need for a home security system as well as the solution specifications or what is expected from home security system.This document, the Software Requirement Specification is used to describe and track the software requirements for home security system. Notwithstanding fundamental prerequisites, this SRS will depict the outer Interface Requirements, nonfunctional necessities. And Overall Description, system.

2.4 Hardware and Software requirements

2.4.1 Hardware requirements

- CPU 2.5GHz clock speed
- 8 GB RAM
- 30GB storage
- Processor: Intel i5

2.4.2 Software requirements

- Netbeans (8.0.1)
- Html CSS and JavaScript
- JSP and Servlets
- *Database:MySql*

Message Expiry: Right now, in MQTT there is no message expiry, so if you put a message in a facilitate and afterward neglect to accumulate it or no one at any point comes to get it, it stays there for eternity. Therefore, the merchant is over-burden with messages and it corrupts the general exhibition. Security: MQTT convention gives username and secret key to validation and different agent executions add various instruments what's more. In this way, security in MQTT relies upon the utilization case and the choice of the intermediary.

Most agents give security dependent on TLS, however, TLS influences the presentation altogether, particularly CPU use during the handshake. Requesting: The vital difficulties for a solid information transmission association in an IoT climate are requesting messages and resending messages which are lost during transmission. MQTT gives ensured conveyance of messages, however, keep up the requesting of messages in MQTT is a difficult assignment.

Need: MQTT doesn't uphold an element called the need of messages. On the off chance that.If any system has more important data then it must be immediately available to all the subscribers, for example, the data which is gathered from the fire alarm system is more important than temperature or pressure sensor data so it must be available first to all receivers.Thus, for that need of messages are required then sending information all together.

Benefits and Drawbacks of EDC systems

Benefit

- Controlling all electrical appliances
- Increase home security
- Decrease the waste of electricity
- Drawbacks
- Secured system
- Better design and less complexity
- Available on Android. Mac or Windows

The main objective of this project is remote controlling of any household device and ensuring security. Users can remotely switch off or on any appliance through a web based application.Save the waste of electricity by automatically controlling night light.Detect thief in night and create siren. Detect temperature and makes emergency sound which can prevent massive fire accident. I also saw the room temperature through the web application. Email alert system that can send sms to enter if any security attack is found. Makes The system interface is so interactive that it can help to control electronics devices of elder people. Makes The web application is secured so that everyone cannot allow controlling devices. The goal of the Technical Supplement is to give direction on themost proficient method to shield the Home from harm by the right utilization of electronic temperature observing frameworks. It depicts how to build up

necessities and characterize details for these frameworks and how to guarantee discernibility of the information that is produced.

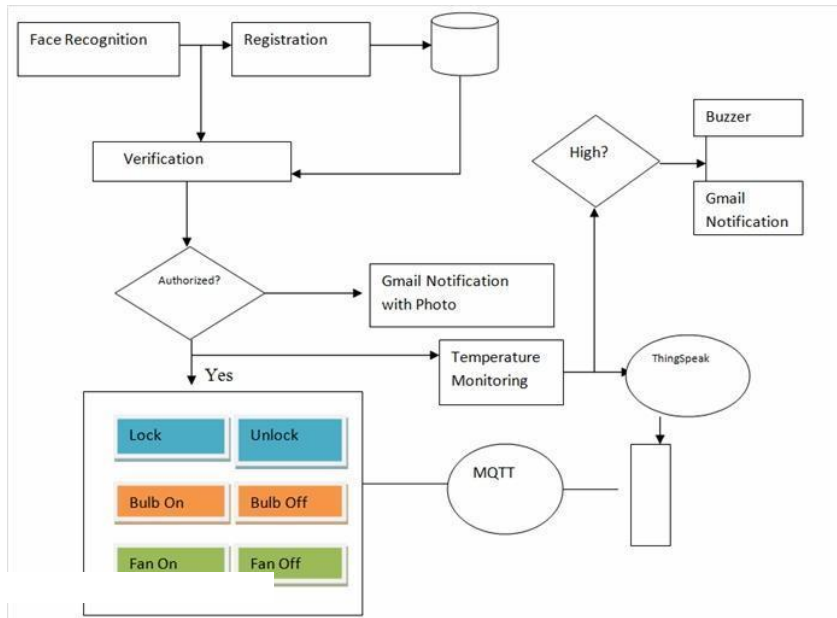


Figure 4.1: Architectural Diagram

When it comes to security and safety, commercial and residential architecture requires a balance of design and construction elements — all of which are established by the architect and before they are carried out by the building construction team. The Architect's Role in Personal Security and Safety There are two broad categories an architect focuses on when ensuring their design is safe and secure: the design phase and the construction phase. A building's security depends on the type of building, the location of that structure, and what needs to be secured. An engineer should evaluate what a structure should be gotten and shielded from. While a security system will protect employees or residential occupants, the issue of "security" goes well beyond this and encompasses areas like access control, building orientation, building materials, and more.

III.CONCLUSION

In this project we have a large scope to develop and work with this project. We try to list some tasks which will be added in the future. If it detects a known face system can send sms and email with pictures and information about this face which was stored in previous.

We can make the web application more user friendly. Voice commands technology can be added to voice commands technology. Adding some safety issues like when gas leakage or smoke is found the system automatically takes necessary steps to reduce the losses. We can send this data to a remote location using mobile or internet. We can implement other related modules like fire sensor, wind sensor. We can add the module of voice alert framework to show burglary section or gas spillage.

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