Home Automation, Monitoring And Surveillance

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Abstract- *Home automation, monitoring and surveillance gives the sense of smart house. All home automation system controls the lighting, temperature, comfort, entertainment and other appliance inside house and with essential features about security such as door alarm and cc cameras with car which is helpful to the people as security system. The objective of home automation is all about comfort, efficient operation, reduction in energy consumption, savings and making the smart prospective life with increasing the standard*

Keywords- ESP32, ESP8266, Esp32 camera, Blynk , Coding in Arduino, c and c++, various types of sensors, Motors, Connecting wires, Home appliances.

I. INTRODUCTION

Home automation is anything that enables you to use your home's lighting, heating and appliances more conveniently and efficiently. In addition, monitoring provides the video of home and surveillance, work as a door security.
It can be as simple as remote or automatic control of a few lights, or it can be a complete system that controls all major parts of your home, custom set to your own personal preference. Home automation is anything that gives you remote or automatic control of things around the home.

II. LITERATURE REVIEW

1. Wi-Fi based home automation system mainly consist three modules, the server, the hardware interface module, and the software package. The figure shows the system model layout. Wi-Fi technology is used by server, and hardware Interface module to communicate with each other.
2. The same technology uses to login to the server web based application. The server is connected to the internet, so remote users can access server web based application through the internet using compatible web browser. Software of the latest home automation system is split to server application software, and Microcontroller (Arduino) firmware.
3. The Arduino software, built using C language, using IDE comes with the microcontroller itself. Arduino software is culpable for gathering events from connected sensors, then applies action to actuators and preprogramed in the server.
4. Another job is to report the and record the history in the server DB. The server application software package for the proposed home automation system, is a web based application built using asp.net.
5. The server application software can be accessed from internal network or from internet if the server has real IP on the internet using any internet navigator supports asp.net technology. Server application software is culpable of, maintain the whole home automation system, setup, configuration. Server use database to keep log of home automation system components, we choose to use XML files to save system log.

III. STUDIES AND FINDINGS

1. The current system of home automation which is very costly and differ from the others and sometimes it don't work properly and expense of maintenance is extremely high.
2. help many features collaborative with in one type of the system included. So, it can be helped out in new trends that many functions usable to in one web application in these new system. Different kind of a modules and phases are usable in that known as a particular of the fields.
3. It provides highest access of data. It provides secure accessibility.it also provide flexibility of services. It also provides reliable video and give better performance. It also provides a better security of house as well as monitoring.
4. Every user should be comfortable for the working of the known as mobile application Blynk and net browser. They must have basic knowledge of English Language. User have to login one time. User can select the desired appliances by selecting categories. User must have some knowledge of how to use application. They have been some create account of basic needs.
5. The hardware requirement is ESP32, Monitor resolution of 1024*768 or highest access for video of ESP32 camera, Mobile phone with Blynk application.

IV. FUTURE ENHANCEMENT

Best for the home automation. home automation is used to make people life easier and affordable. The system will provide security and monitoring. In future this system might provide next level security and automation which is helpful to the individual as well as company and government.

V. CONCLUSION

Survey of different home automation system shows that there are various kinds of technologies used to implement this type of system. All the proposed systems have been presented and compared in this paper which reveals some merits and demerits of the systems. This review explained different home automation system e.g. Web based, Bluetooth-based, mobile-based, SMS based, Arduino microcontroller based, Android app based, IOT based and cloud-based. Due to its performance, simplicity, low cost and reliability home automation system is making its position in global market, that day is not so far when every home will be the smart home.

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