

Study of Smart Room

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Abstract- In our project we are trying to make a Smart Home than what is it now-a-days. We have developed a system that will control and adjust smart devices and also some non-smart devices opening and closing of curtains according to our convenience. We have developed an alarm that sprays fragrance in the room as per time set. Apart from that we have also developed a system that will control speed of fan and light intensity and also some smart boards.

All these tasks are done with the help of Internet of things and a medium device that can create a network between all smart devices, so that user can control system from remote place and monitor it too.

Keywords- Internet of Things, Home appliances, Sensors, Lights.

I. INTRODUCTION

Home Automation via vocal and voice control with some smart device is smart room. It Includes lights, Fan, some, sensors, etc. All the smart devices are connected to the internet and all of them can be accessed at any place and any time via smart application and virtual devices.

The web server is simultaneously updated by sensing the device which are connected to the network. The devices and all smart devices are control by through the virtual assistant. It also provides the security, energy efficient, and ease of use, hence it is more adopted. All the Devices are controlling and monitoring on web browser and through a virtual assistant like Google assistant and Alexa. The main objective of the project is to help handicapped people and aged people by alerting in the critical situations. All the devices can be used for controlling the devices by voice controls. The smart room is generally implemented by using WIFI through our PC.

The Device Alexa/Google Assistant which is the virtual assistant used to access the all devices through creating a network between all of them. Where all the device are interconnected with each other thew the virtual assistant.

II. VIRTUAL ASSISTANT

Virtual assistant is AI software is to use for perform task or services for based on commands

III. LITERATURE REVIEW

Home automation is a challenging one not only to the developer but also to the consumer. Developer has to choose the component as per the customer requirement. Due to all the customer demands are not equal hence we have to compromise with the existing products. Through detailed study of “Home Automation Using Internet of Thing” proposed by ShopanDey. We have used virtual assistant (Alexa\Google assistant) connect to the internet. Through this module we are controlling various devices through android application. We have used various sensors for various purpose. Also we have provided real time notification, feedback on webserver in which customers can see what is happening in their home. With the help of Virtual Assistant logic gates, a Raspberry pi, 555 timer and flip-flop also the devices are controlled from web app. International Journal of Pure and Applied Mathematics Special Issue 770 “Programmable Infrared Accessory Light Switch” by Warsuzarina Mat Jubadi and NormaziahZulkifli shows how TV remote is used to control room light and other appliances. Here IR remote and one IR Receiver is used and programmed in such a way that it stores the frequency of the existing remote and use them directly to control appliances .

IV. PROPOSED SYSTEM

The aim of the project is to give user both the option to either control various appliances through the app interface or through physical touch. The user first needs to authenticate by press the button. The application on your smart device acts as a central means through which the user communicates with the appliances. The application sends the signals to the Virtual assistant which in turn send the appropriate command to the Relay through which the appliances are controlled, this demonstrates the concept of IOT. The Virtual assistant is programmed to send controls to relay which in turns control the appliances. With the help of this project, you will be able

to Operate every Devices which are connected with virtual assistant, which will helping us for reducing power consumption.

The user was also given the option to control the devices automatically using the input provided by the different types of sensors that are interfaced with the virtual assistant. The sensors provide the virtual assistant readings from the surrounding, the virtual assistant is in turn connected to the Relay which is in turn connected to the appliances, and so the devices were able to be controlled automatically using the input from the sensors.

METHODOLOGY ALGORITHM

- 1) START
- 2) Sensor will sense at the door unit and glows a small light.
- 3) As the person is detected by PIR sensor, the light of the room and kitchen will be ON.
- 4) If the room or kitchen is smelled badly then the fragrance unit will be enabled.
- 5) Daily the alarm is set in the system which enables the fragrance unit which freshens the room.
- 6) Any form of disturbances (sunlight, air/rain) while sleeping in holidays then curtains part is enabled.
- 7) Fan dimming is to be controlled remotely.
- 8) While going to the washroom the switch enables the exhaust fan and after this fragrance unit is enabled which is placed inside the washroom.
- 9) The things are controlled by remote and web server.
- 10) END

Flow Chart

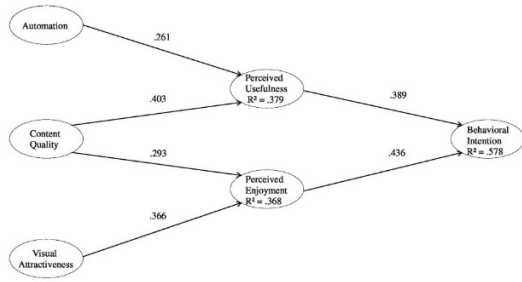


WORK OF VIRTUAL ASSISTANT (ECHO SYSTEM)

Alexa processes your requests using Amazon’s cloud-based voice service, Alexa Voice Services (AVS)..Virtual assistant and Amazon Alexa is smart speaker that are used to accept voice commands and command the devices which are connected to the virtual assistant. When the blue ring stops glowing, the smart speaker is again in its dormant state, waiting to hear “Alexa” again.

Virtual assistant is created a network between all the devices that are operated and access by application and voice control. Virtual assistant is creating a virtual network .

Smart Room are operated by user threv voice command through Alexa voice command and eco system where all the smart device are connect with Alexa app and Alexa app is connected with Alexa echo. We have any other virtual assistant like Google assistant and Siri, that can use for connect all devices but we use Alexa echo because of its Echo System



V. RESULTS

Smart Homes:In the coming years, All Homes and Rooms will Fully smart and high-tech and develop rapidly. Due to good user convenience, smart homes are appealing a wide range of people all over the globe. The User can check for the electricity usage, the condition of his devices and get notification accordingly



(Smart Homes)

AGRICULTURE

The proposed system can be used in Agriculture as well. The various devices used in fields can be operated from any remote location. Equation or Math



VI. CONCLUSION

The main barrier towards the acceptance of home Automation system. These systems require additional network devices like hubs for their working, which in turn increase their cost. By the use of NodeMCU and the Internet of Things platform, these devices can be made cost-effective. Above all, it will provide great user convenience as it will be possible to control the devices from a remote location. Using a web page or an application, the system has been made platform independent. There is no need for any particular system. The system will provide optimal results



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