Karnatak Law Society's

GOGTE COLLEGE OF COMMERCE

BACHELOR OF COMPUTER APPLICATIONS

PROJECT SYNOPSIS

On the topic

VOICE CONTOLLED HOME AUTOMATION

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Guide Signature

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INTRODUCTION-

Home automation or domestics is building automation for a home, called a smart home or smart house. A home automation system will control lighting, climate, entertainment systems, and appliances. It may also include home security such as access control and alarm systems. When connected with the Internet, home devices are an important constituent of the Internet of Things ("IOT"). A home automation system typically connects controlled devices to a central hub or "gateway". The user interface for control of the system uses wall-mounted terminals, tablet or desktop computers, a mobile phone application, or a Web interface, that may also be accessible off-site through the Internet. Early home automation began with labor-saving machines. Self-contained electric or gas powered home appliances became viable in the 1900s with the introduction of electric power distribution and led to the introduction of washing machines (1904), water heaters (1889), refrigerators, sewing machines, dishwashers and clothes dryers.

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PROBLEM STATEMENT

The field of Automation has well advanced in Industries, as majority of automobile industry plants as well as bottling plants have Automated assembly lines. But automation has not yet penetrated in the homes especially in India. If automation was to be used in homes than everyday life would be get eased. Simple example of use of automation in home can be seen in the transfer of water from the under-ground water tank to the over-head water tank, by sensing the level of water in both the tanks. This process eases the every time effort the user has to put in for filling the tank and also helps in saving water. Also people are getting more acquainted daily with the use of Smartphone and tablets which are capable of doing much of PC's work handy. So we have decided to make a low cost Embedded System in which the smart phones can be used to help automate entire home. In this system the user will have remote access and control over all the subsystems present in the house.

EXISTING SYSTEM

Currently there exist manual switches to operate home appliances. There were many problems in this existing system like many times it becomes too tiring to operate the electrical switches manually every now and then. This is a big problem epically in the case of elder or handicap people. And while operating switches manually there could be a high risk of getting shock bymanual switches.

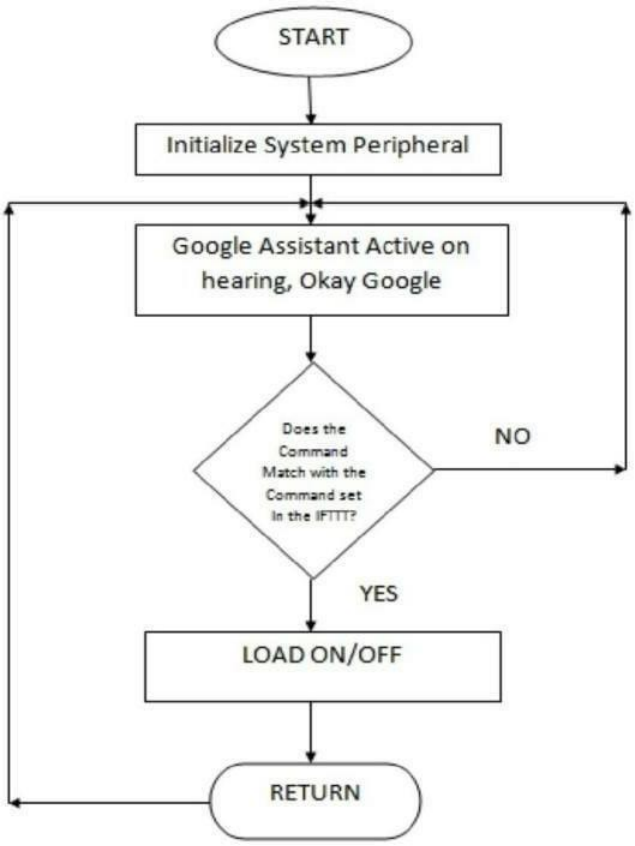
PROPOSED SYSTEM

Nowadays, people have Smartphone's with them all the time. So it makes sense to use those to control home appliances. In this project, we are completely trying to remove all the manual method in operating the electrical home appliances. We are going to make the electrical Switches digitalized from which it can be controlled by a Smartphone with internet and Googleassistant

Voice controlled wireless smart home system has been presented for elderly and disabled people.The concept of controlling home appliances using human voice is interesting. The proposed system has two main components, they are

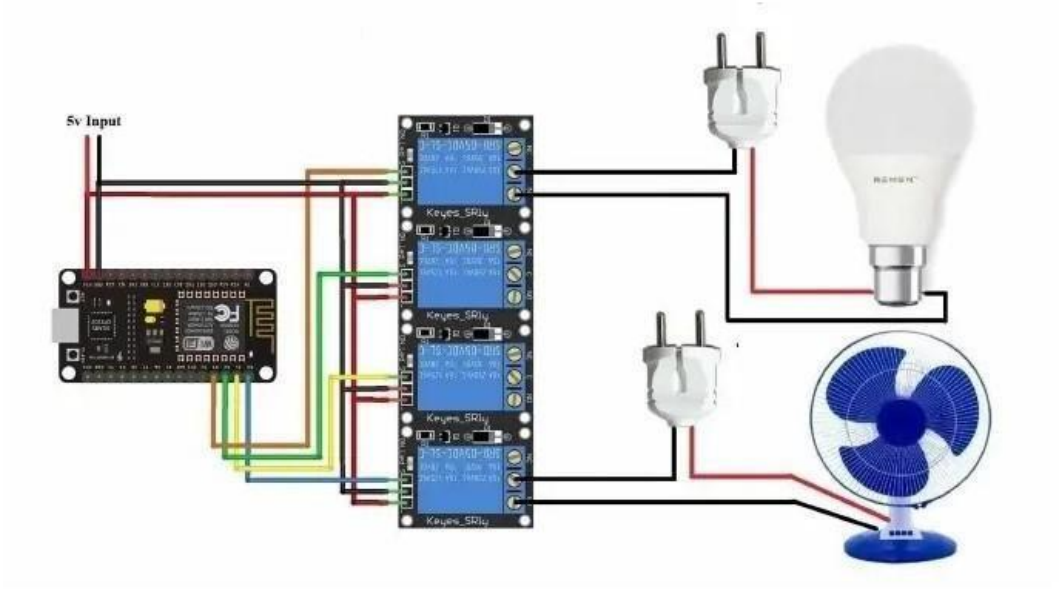
(a) Voice recognition system

(b) Wireless system


START
Initialize System Peripheral
Google Assistant Active on hearing, Okay Google
Does the Command Match with the Command set In the IFTTT?
NO
YES
LOAD ON/OFF
RETURN

Circuit diagram

A circuit diagram (also known as an electrical diagram, elementary diagram, or electronic schematic) is a simplified conventional graphical representation of an electrical circuit. Unlike a block diagram or layout diagram, a circuit diagram shows the actual wire connections being used



LITERATURE SYSTEM

Tan, Lee and Soh (2002) proposed the development of an Internet-based system to allow monitoring of important process variables from a distributed control system (DCS). It proposeshardware and software design considerations which enable the user to access the process variables on the DCS, remotely and effectively rent designations. Potamitis, Georgila, Fakotakis, and Kokkinoss, G. (2003) suggested the use of speech to interact remotely with the home appliances to perform a particular action on behalf of the user.

The approach is inclined for people with disability to perform real-life operations at home by directing appliances through speech. Voice separation strategy is Withings Home, a HD security camera equipped with environmental sensors, by connecting with IFTTT app to make household automation a reality.

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- R. J. C. Nunes and J. C. M. Delgado, An Internet Application for Home Automation, 10th Mediterranean Eletro-technical Conference, MeleCon 2000,Vol. I. pp. 298-301.
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No. 2, June 2004, pp. 228-250.

- C. Douligeris, Intelligent Home Systems, IEEE Communications Magazine, Vol. 31, Issue 10, October 1993, pp. 52-61.
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OBJECTIVE

The main objective of this project is to design a voice recognition home automation system. This project will enable the user to control the electrical application in home using their voice asthe medium that will control the power system. This project also aim to allow not only the user that have train the system with their voice to control the system but in extend to the other user who also can use the system without do the training process again

HARDWARE REQUIREMENTS

- ESP8266
- RELAY BOARD
- 9v Battery
- Jumper wire
- Bulb
- Fan
- Relay Board

SOFTWARE REQUIREMENTS

- Arduino IDE
- Adafruit.IO
- IFTTT Web Site
- Google Assistance