International Journal of Information technology and Computer Engineering
ISSN: 2455-5290
Vol: 02, No. 02, Feb- Mar 2022
http://journal.hmjournals.com/index.php/IJITC
DOI: https://doi.org/10.55529/ijitc.22.12.16

Controlling and Scheduling of Homely Devices by Minimizing Power and Traffic Using IOT with Google Assistant

V. Shavali[1*], S. Anees fathima[2], T. Reshma[3]

[1,2,3]Assistant professor ,Department of ECE, Gates institute of Technology, Gooty, Anantapur district, A.P, India.*

Corresponding Email: [1]v.shavali@gmail.com*

Received: 25 October 2021 **Accepted:** 10 January 2022 **Published:** 15 February 2022

Abstract: Different electrical devices can be automatically controlled by moving into ON and OFF state by programming the devices using google assistant and IOT. This work reduces the power consumption and no human interaction of electrical devices Auto process is achieved with the help of Internet of things and hardware circuit of Node Micro controller unit. Hardware circuits are interfaced by using different interfacing devices. Transmission modes that are implemented communicate user control of devices through the Node MCU to the actual appliance the main control system implements wireless technology to allow remote access from Smart Phone. We use cloud server based communication which would increase the practicality of the project by giving the user full access to the appliances regardless of distance factor. We have deployed a data transmission network to create more automation. The designed system is portable and is suitable for all Homely and Industrial applications and find importance for senior citizens and Power minimizing applications.

Keywords: Internet of Things, Node MCU, Transmission Network, Power, Interfacing Devices.

1. INTRODUCTION

Due to increasing of technology with respect to Integrated circuit design where many devices are interfaced and interconnected it is necessary to Automatically built the new system so that the human interaction is minimized. This can be achieved by using Internet Of Things (IOT) which utilizes IP address for identification and serves the unique identifiers for utilizing device. Multi environment like IOT, Google assistant, web based application, Ardunio made less user interaction and deices are Automatically controlled by enabling and disabling the devices

Copyright The Author(s) 2022.This is an Open Access Article distributed under the CC BY license. (http://creativecommons.org/licenses/by/4.0/)

International Journal of Information technology and Computer Engineering
ISSN: 2455-5290
Vol: 02, No. 02, Feb- Mar 2022
http://journal.hmjournals.com/index.php/IJITC
DOI: https://doi.org/10.55529/ijitc.22.12.16

Internet of Things (IoT):-
The main concept in this home automation and vehicle speed detection Google Assistant. IOT Identifies the physical nature of the object by using different technology and utilizing miceo electronics like micro sensore and micro actuators that are connected to Implementing Hardware circuits. Human activity and is corresponding changes can be easily monitored and analyzed by using MEMS technology. Temperature analysis and it changes with motion object can also be finalized with different temperature sensors which comes under MEMS technology. One of the important features of IOT is the allocation and identification of dynamic and static nature of object that changes when input and output levels of devices. Parameters like temperature, speed, Angle, Flux, Location ,movement that changes with fraction of time can ne noted with Multi envinorement like MEMS technology and IOT

Google Assistant:-
Industrial and Homely automation and control of devices uses commands through Google assistant that sent into hardware devices which is deployed into the system for user friendly applications

Infrared (IR) Sensors:-
An Infrared sensor is an electrical device which is used to test object . It is placed at the Receiver when the target object is moving towards the sensor the sensor emits the light the light is reflected back to the original place hence objects are detected.

IFTTT (If This Then That):-
IFTTT "If This Then That It is a method of giving connections to applications. objects, products, electronics devices and is connected to multiple targets this can be operated by sending commands across the created network. By using IOT Automatic and controlling the various home appliances in different areas by using Node Microcontroller along with the Google assistant and IFTTT (If this then that) website. Even though technology is developing there is no other way for the physically unfit people to do the work, here we come up with this solution by using voice commands and also vehicle speed detection along with the door lock status updater have been added to this. Vehicle speeding in front of homes is a very serious problem now-a-days. It's very important to know if someone is entering in home in this busy world. Here we make use of voice commands which can be given by Google assistant. All the controls are done using Google Assistant. IR sensors are used to detect the vehicle speeding and door lock monitoring.

Block Diagram

Copyright The Author(s) 2022.This is an Open Access Article distributed under the CC BY license. (http://creativecommons.org/licenses/by/4.0/)

International Journal of Information technology and Computer Engineering
ISSN: 2455-5290
Vol: 02, No. 02, Feb- Mar 2022
http://journal.hmjournals.com/index.php/IJITC
DOI: https://doi.org/10.55529/ijitc.22.12.16

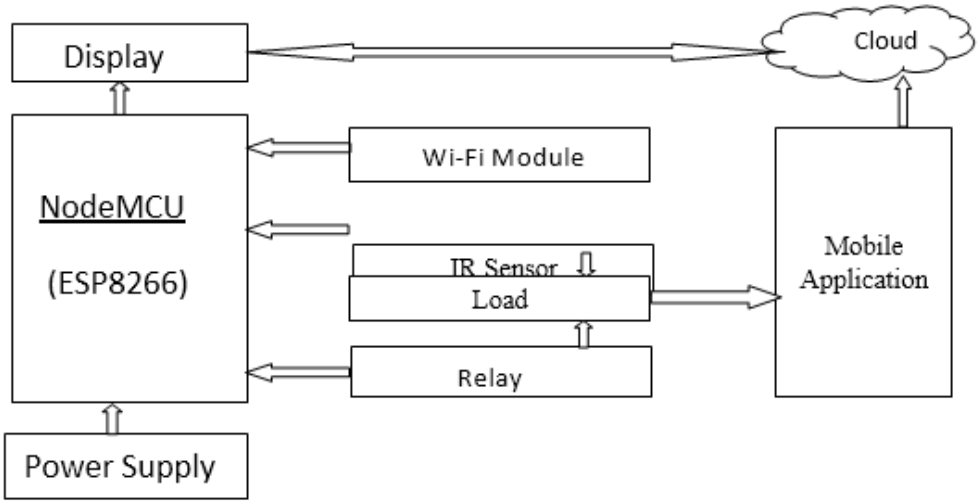


Figure 1:- Basic Proposed Diagram

Circuit Diagram

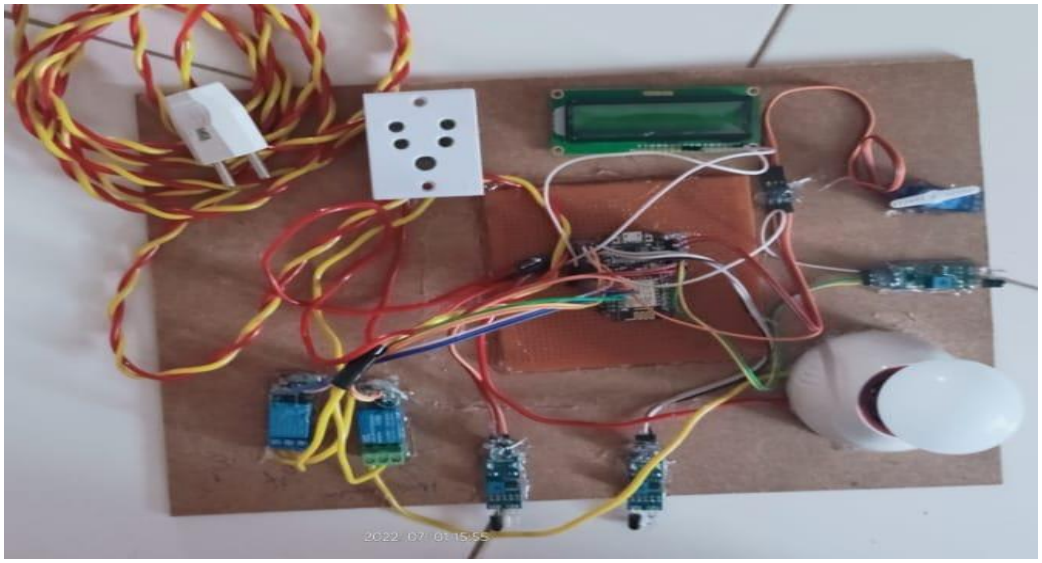


Figure 2:- connection view of Implementing System

- This method uses relays to connect the electrical devices to Hardware unit.
- The WiFi module in the NodeMcu chipset helps the system connect to the cloud.
- All controls can be done using the Blynk application and Google Assistant. 5v relays are used during implementation.
- IR sensors detect vehicle speeds and door lock monitoring and implemented target devices .
- The whole system is powered by a 9V power supply.

Copyright The Author(s) 2022.This is an Open Access Article distributed under the CC BY license. (http://creativecommons.org/licenses/by/4.0/)

International Journal of Information technology and Computer Engineering
ISSN: 2455-5290
Vol: 02, No. 02, Feb- Mar 2022
http://journal.hmjournals.com/index.php/IJITC
DOI: https://doi.org/10.55529/ijitc.22.12.16

Data Flow of Proposed System

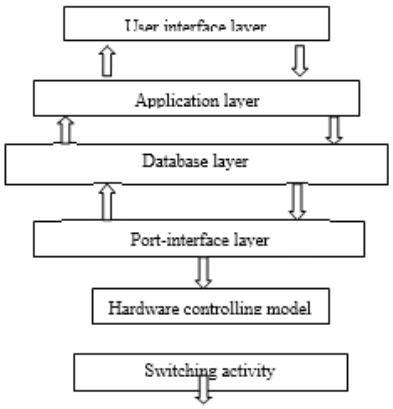


Figure 3: Data Flow of Proposed System

User interface layer is the interfacing layer that interface with user and device example Tab, System, Mimi portable devices. Application layer is the wireless network and wired network which are Wi Fi, Routers, Bluetooth, Modems. Data base layer act as a Server which stores operation performed on the proposed model. Hardware controlling model is Node MUC or set of controllers which sends commands and receives the commands that acts as interface with human interaction and target. systems and devices. Switching activities are the ON and OFF devices which works on the command given by Human and controlled by Hardware unit

2. RESULT



Figure 4:- Result of Proposed system

The proposed system is analyzed in a Hardware Board by connecting devices. The Blynk application is also connected to analyzing the output. The voice and text can also be utilized for the operation of devices connected across the network

Future Scope

Artificial intelligence and devices operations without human interaction can be implement for all homely house hold devices by using different network and provides security and saves

Copyright The Author(s) 2022.This is an Open Access Article distributed under the CC BY license. (http://creativecommons.org/licenses/by/4.0/)

International Journal of Information technology and Computer Engineering
ISSN: 2455-5290
Vol: 02, No. 02, Feb- Mar 2022
http://journal.hmjournals.com/index.php/IJITC
DOI: https://doi.org/10.55529/ijitc.22.12.16

the power when human is not utilizing the devices

3. CONCLUSION

The devices are placed in cloud computing when the devices are activated they are seen virtually in the executation of task. When the task is completed they automatically moves in the cloud computing area
The accidents can be reduced and a safe environment is implemented. This device is suited for all roads which saves the lives of many people and is also used to find the stolen vehicles by using the registered vehicle number. The goal of the project is to save many lives and reduce accidents in a better way. Early days, the paper represents the aerial tracking in the hyper spectral domain.

4. REFERENCES

1. Satyendra K. Vishwakarma, Prashant Upadhyaya, Babita Kumari, Arun Kumar Mishra proposed "Smart Energy Efficient Home Automation System using IOT". Conference: 2019 4th International Conference on Internet of Things: Smart Innovation and Usages (IoT-SIU), April 2019.
2. Shardha Somani, Parikshit Solunke, Shaunak Oke, Parth Medhi, Prof. P. P. Laturkar proposed "IOT Based Smart Security and Home Automation".2018 Fourth International Conference on Computing Communication Control and Automation (ICCUBEA). IEEE, 2018.
3. Suraj, Ish Kool, Dharmendra Kumar, Shovan Barman proposed "Visual Machine Intelligence for Home Automation". 2018 3rd International Conference On Internet of Things: Smart Innovation and Usages (IoT- SIU), February 2018.
4. Santhosh Kumar proposed "Voice Controlled Home Automation System using Natural Language Processing and Internet of Things". 2017 Third International Conference on Science Technology Engineering & Management (ICONSTEM), 23 March 2017.
5. Tui-Yi Yang, Chu-Sing Yang, Tien-Wen Sung proposed "A Dynamic Distributed Energy Management Algorithm of Home Sensor Network for Home Automation System". 2016 Third International Conference on Computing Measurement Control and Sensor Network (CMCSN), May 2016.
6. v shavali, Sree rama Reddy G.M, P. Ramana Reddy proposed "Data encoder-decoder pipelined architecture design for on-chip interconnect power reduction in very deep submicron technology". Journal – Design engineering, Pages 11768-11786, 2021.
7. v shavali, Sree rama Reddy G.M, P. Ramana Reddy proposed "Reduction of Coupling Transitions by using Encoding Techniques Methadology And its Time Delay Analysis". Journal – International journal of research, Pages 1752-1756, 2018.
8. V. Shavali, G. M. Sreerama Reddy, and P. Ramana Reddy, "Reduction of Coupling Transition by Using Multiple Encoding Technique in Data Bus and Its Power Analysis." Lecture Notes in Networks and Systems, pp. 345-353, 2019, doi: 10.1007/978-981-13-3765-9_36.
9. v shavali, Sree rama Reddy G.M, P. Ramana Reddy proposed "Reduction of coupling Transition By Using conditional varying code for data a data bus circuits". Journal – merging technology and innovation research, Pages 351-355, 2019.

Copyright The Author(s) 2022.This is an Open Access Article distributed under the CC BY license. (http://creativecommons.org/licenses/by/4.0/)