Iot Based Home Automation

Prof. Madhav J. Salunkhe[1], Mr. Abhishek Chirmade[2], Mr. Ashish Singh[3], Mr. Macchindranath Kalimbe[4]
Dept of Electronics and Telecommunication
Bharati Vidyapeeth College of Engineering, Belpada, Navi Mumbai

Abstract- *With advancement of automation technology, life is getting simpler and easier in all aspects. In today's world Automatic systems are being preferred over manual systems. Wireless Home Automation System using IOT is a system that uses computers or mobile devices to control basic home functions and futures automatically through internet from anywhere around the world, an automated home is sometimes called a smart home. The home automation system differs from other systems by allowing the user to operate the system differs from other systems by allowing the user to operate the system from anywhere around the world through internet connections. In this paper we present a Home Automation System using ESP8266 , wireless communication, to provide the user with remote control of various lights, fans, and appliances within their home and anywhere. This system is designed to be low cost and expandable allowing a variety of devices to be control.*

Keywords- Home Automation System, Internet of Things, Wi-Fi network,ESP8266.

I. INTRODUCTION

IOT or Internet of Things is an upcoming technology that allows us to control hardware devices through the internet. Here we propose to use IOT in order to control home appliances, thus automating modern homes through the internet. IOT is defined as an environment in which objects are given unique identifiers and the ability to transfer data over a network without having human to human or human to computer interaction. The internet of things is the network of everyday objects physical things embedded with electronics, softwares, sensors and connectivity enabling data exchange.In this project we are going to make a home automation system using ESP8266 WiFi module and Arduino uno. Using this we will be able to control lights, electric fan and other home appliances through a Android app as well as web browser using your PC or mobile. ESP8266 is the one of the most popular and low cost wifi module available in the market today.

II. LITERATURE SURVEY

1. A literature review by Somayya Madakam,R.RamaSwami,Siddharth Tripathi Journal of computer and communication 2015.

2. In this paper, Definition status, components and standards of IOT are introduced and possible business models that can implement in a smart city are examine there are many research data on IOT and IOT case studies have been conducted in other countries as well. This study was conducted to present practical service models using IOT in line with domestic circumstances and therby it is expected to contribute to academic circles.

3. Review on IOT technologies GovindaK.,SaravanaguruR.A.K.,International Journal of applied Engineering Research ISSN,Vol 1 In this paper, we learn that IOT which includes the manifold definition, enabling technologies and other applications and open research issues with efforts.

4. IOT an overview Anupama Kaushik international journal of advanced research in March 2016.In this paper we learn that IOT involves a complex and evolving set of technological,social and policy consideration across a diverse set of stakeholders but it will be a boon for us in future.

5. In this paper , home automation is presented using Intel Galileo that employs the Integration of cloud networking,wireless communication to provide the user

6. IOT, update on technology, Prof.Thamodhiran.V, Ponvannan.V, Jino James Joseph, G.V.Jason Jebasingm, International Journal of Advanced Research in Computer and Communication Engineering, March 2016

7. Byeongkwan Kang,Sunghoi park,Tacklim Lee and Sehyun Park, "IOT based Monitoring system using Tri-level context making model for smart homes services",2015IEEE international conference on consumer Electronics(ICCE),2015.

III. WORKING
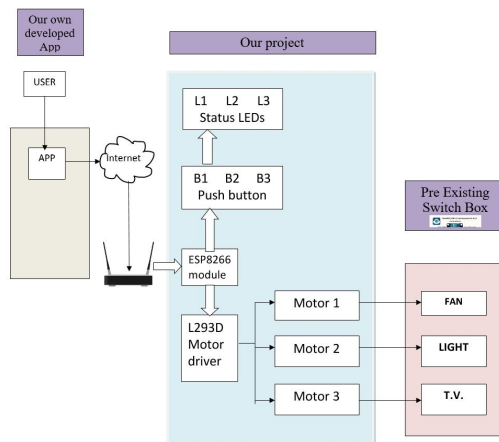
5. Battery.
6. Battery Holder.
7. Momentory Switch.

SOFTWARE:

1. Arduino IDE

IV. CONCLUSION

This is our approach to how we wish to make our project. Our project will help us to adapt to the futuristic concept of IOT without having to invest a lOT of money and without having to commit to the concept of IOT, by that we mean that if user is having problem using our project there is no hassle in uninstalling our project. Our project will be a standalone device that doesn't need any other device and we wish to add more features.

a) Scope:- The portability, Low cost and a user friendly interface can help Indians be more accepting of home automation. Our smart switch will be installed by sticking it on the existing conventional switch. The smart switch will have a small mechanical arm that will move up and down to flick the switch.

b) ESP8266 Module:ESP-01 is the one of the most popular ESP8266 module available in the market. ESP8266 is a self contained SoC with integrated TCP/IP stack which helps any microcontroller having UART to access a wifi network. It can act as both WiFi access point as well as a WiFi client. It is pre-programmed with AT commands, so we can easily access and configure it using a microcontroller.

c) Servo Motor: The Esp8266 will connect to the L293D motor driver to operate the servo motor. The motor we are using is servo motor; it required power via power terminal and pwm signal.

d) Arduino IDE: The Arduino IDE is a cross platform Java application that serves as a code editor and compiler and is also capable of transferring firmware serially to the board.

Components requirements:

1. ESP8266 Module.
2. Jumper Cable.
3. Servo motor.
4. Gears**.**

REFERENCES

[1] Byeongkwan Kang,Sunghoi park,Tacklim Lee and Sehyun Park, "IOT based Monitoring system using Tri-level context making model for smart homes services",2015IEEE international conference on consumer Electronics(ICCE),2015.

[2] Review on IOT Technologies,Govinda ,K. Saravanaguru R. A. K, International Journal Of applied Engineering Research ISSN, Volume 11.

[3] IOT an overview,Anupama Kaushik

[4] International journal of advanced Research in communication engineering, March 2016.

[5] www.ieeexplore.ws/browse

[6] Satisfiers and dissatisfiers of smart IOT service and customer attitude Won-Jun Lee.

[7] IOT:A vision architectural elements and future directions Jayvardhana Gubbi,Rajkumar buyya,Slaven Marusic, Marimuthu Palaniswamia.

[8] IOT update on technology,Prof. Thamodhiran V., Jino James Joseph, G.V.Jason Jebasingm ,March 2016.

[9] Mr. Pranay P. Gaikwad, Mrs. Jyotsna P. Gabhane, Mrs. Snehal S. Golait,"A Survey based on Smart Homes System Using Internet of things", 2015.

[10] AndreasKamilaris,AndresPitsillides,"Towards Interoperable and sustained smart homes",2013.

[11] www.developer .android.com/tools

[12] J. Jeyapadmini, K.R.Kashwan, "Smart homes using IOT",2015 International Conference.

[13] Internet of Things:A literature review by Somayya Madakam,R. RamaSwammy,SiddharthTripathi, Journal of computer communication 2015.