

Demand of Smart Home in Indian Villages

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Abstract— There is an increasing demand for smart homes. The project is a small part of Home Automation where we are going to make circuit which controls the home appliances using various sensors. A simple graphical user interface is created which interacts between user and appliance so that we make efficient use of electricity.

Keywords—NodeMCU, PIR sensor, LM393 LDR sensor

V. INTRODUCTION

Home Automation is a system used for automating home appliances and controlling devices with the use of IOT (internet of things). The concept of smart home is that which is equipped with lighting, heating as well as electronic devices that can be controlled remotely through some gateway by any smartphone or via the internet or Wi-Fi.

In today's era, home automation is rapidly growing and everyone wants everything to be automated on their fingertips. The major problem faced by the layman is either they feel lazy to switch off the lights or sometime forget to turn off or they sleep which leads to wastage of electricity, money and natural resources. The main objective of developing such a project is to manage energy efficient lights at home so that consumption of electricity is low.

VI. PROBLEM STATEMENT

Main problem of today's generation is that they need to have everything controlled through their mobile phones. The common problem the layman faces is that they cannot keep track whether the appliances are turned on or not. For solving this problem the appliances are connected to the sensors and this appliances can be controlled through user interface by logging in through specific id....Sometimes we forget to switch off the lights are on even if not needed, this causes loss of electricity. Due to this the cost at which it is generated-that is crossing all limits by each passing day thus it puts burden on layman in form of electricity bills. This project is combination of microcontroller (nodeMCU), sensor, relays

and user interface. To overcome this problem we have given the solution which will reduce the human effort.

VII. REVIEW OF LITERATURE

Home automation is growing rapidly and now even in the villages there is requirement of home automation. Home automation can be done using cloud computing, IOT, and many more technologies but now-a-days most of things are being done on IOT. IOT is internet of things which brings the solutions for real world problem. It is the next big thing to automate the electronic industry and human life. The project main aim is to provide efficient, low-cost automated services for laymen on their affordable rates. A smart phone application is used to control the appliances and devices at home and cloud is being used for communication of the devices. Many technologies such as ZigBee, Wi-Fi, Bluetooth and many more we will be using NodeMCU which has inbuilt Wi-Fi module. [7] The sensors and smart devices in home automation help to collect the physical information and convert it into the data that can be used for communication of the devices. The NodeMCU collects the information or gestures to manage the household devices such as fan, tube light, heater. For example if there is no presence of certain person in room then light are automatically turned off. [4]

It's now the era in which the mobile devices are handling the entire task and personal computers are no longer on the leading edge. There is shift of PC to multi-touch mobile devices in the use and implementation of cloud networking. Now as there is rapid integration of mobile devices along with the home appliances and other electronic devices there is rapid growth of cloud networking in home automation. Home automation is the system that brings the integration between cloud computing, wireless network, mobile devices to provide the user with remote control of various appliances and devices within the home. The system is designed as per low cost and allowing variety of devices to be controlled. [1]

Now-a-days home automation is gaining popularity. Smart home automation system ensures security and making life



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