SRI VENKATESWARA COLLEGE OF ENGINEERING &TECHNOLOGY
(Autonomous)

Applied Industrial IoT

ROOM AUTOMATION SYSTEM

AIM:

Abstract: Technology has become a critical part of our daily activities and routine life in the present day scenario. The need of the hour is to devise a smart room that will be able to control the operation of electronic devices via a remote. This concept, while absurd to imagine, can be easily implemented efficiently using a package tracking software which includes IoT functions for control and simulation of a smart room network. IoT technology has had a huge boom in the tech industry in the recent past. room automation, treatment, campus, office, etc. of our research is to devise a simulation network of smart devices which will be in control of the end-user remotely and implement the concept of smart room automation. This project will make use of the Cisco Packet Tracer to monitor the IoT devices in the smart room network.

INDR

The Internet of Things (IoT), which is made up of two components- web and things, is a system devised to interface everything to the web using remote sensor networks. This new and upcoming field has made ground breaking changes in the technical industry in the recent past. With the use of this technology in which billions of entities have sensors for measuring and determining their status, all linked by common or proprietary protocols over public or private networks, we are able to create a smart room network using the Cisco Packet Tracer software which has all inbuilt functions to provide the necessities needed to build the system. This Smart room includes objects with specific functions designed to improve comfort, increase security and automate day-to-day activities, helping the user in monitoring the room environment with great ease. The most crucial advantage of devising a smart room network is to relieve users of the stress of having to individually operate components of their household. Through the IoT concept, the devices operate together by sharing consumer usage data with each other and follow an

algorithm of automated actions as per the preference of the users of the system. Along with providing this comfort, these smart home networks aim to provide increased security through use of motion detectors and web cameras. This enables the users to monitor their room without having the need to be physically present. The smart room system also aims to improve the consumption of energy by analyzing the conditions and controlling the electric network accordingly, switching off appliances.

SCOPE OF THE SOLUTION:

The simulation in our project is demonstrated using Cisco Packet Tracer, through which we have created a framework for a Smart room automation system. The Cisco Packet Tracer is a system devised by the Cisco Academy to model networks without physical limitations. The interface of this application proves to be highly efficient as it provides the drag and drop function while configuring complex networks. It also operates as a hybrid network to combine real and

virtual networks. The advantages of using the Cisco Packet.

COMPONENTS REQUIRED:

HARDWARE COMPONENTS:

1. sensors
2. Actuators
3. Output devices
4. Input devices
5. Networking components
6. Power supply
7. Wiring and Cabiling
8. Mounting hardware
9. Enclosures

SOFTWARE COMPONENTS:

1. Automation engine
2. User interface
3. Device drivers
4. Communication protocols

5.Data storage

6.security software

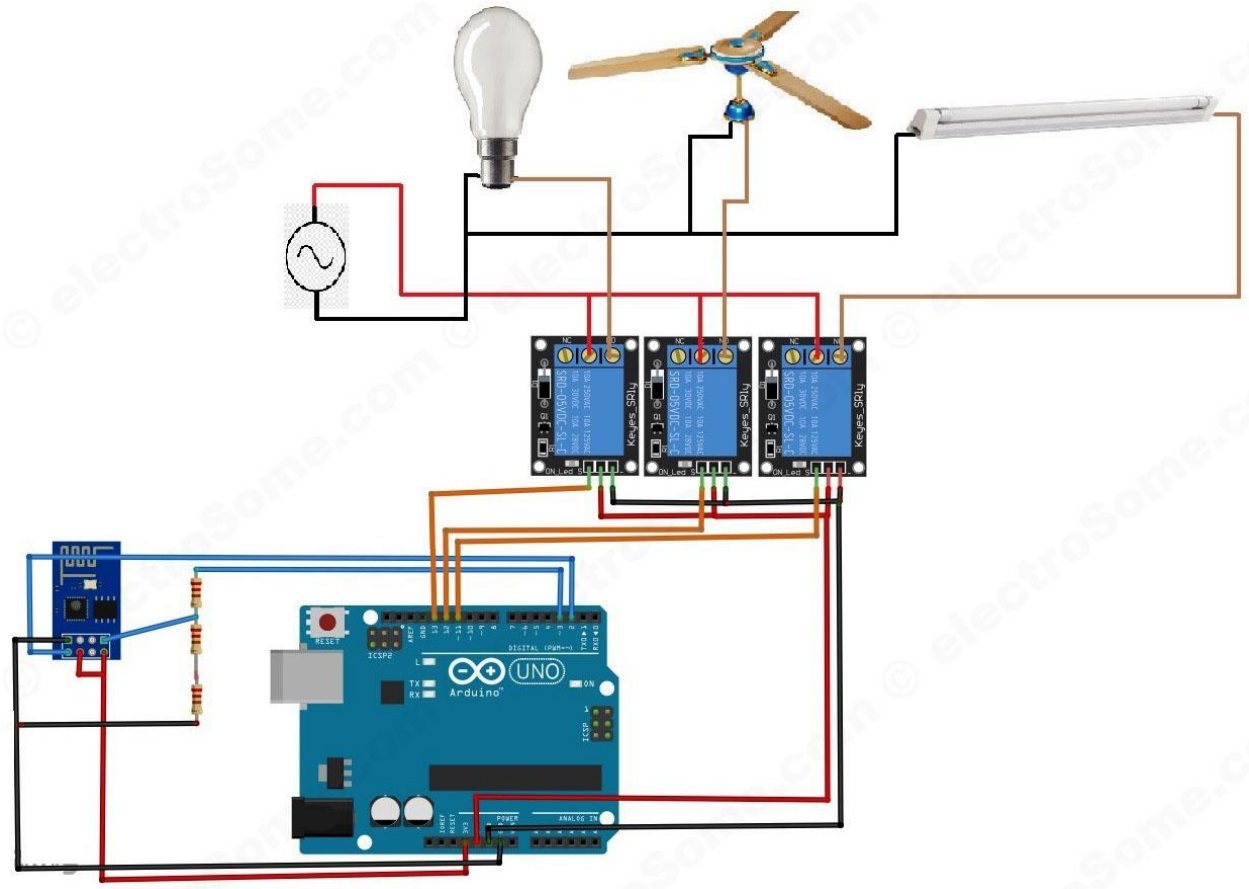
7.Artificial intelligence

8.Voice assistant

9.Scheduling management

10.Energy management software

SIMUTATED CIRCUIT:



VEDIO DEMO:

https://drive.google.com/file/d/1TU_rD2cKofRzBhQ71Uj_q_WKC5k8GUVW/view?usp=drivesdk

SOURCE LINK:

3a)

CONCLUSION:

The work for IoT based room automation is completed successfully using internet source. It is reliable and scalable room automation system with low cost and easy to implement. It makes human life easy and comfortable. It is possible to operate home appliances from any part of the globe.