

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELAGAVI**



**A PROJECT REPORT ON
“RESIDENCE ENERGY CONTROL SYSTEM BASED ON
WIRELESS SMART SOCKET AND IOT”**

Submitted in partial fulfillment for the award of degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE & ENGINEERING

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CERTIFICATE

This is to certify that the Project entitled “Residence Energy Control System based on Wireless Smart Socket and IoT” has been successfully completed by

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The bonafide students of Department of Information Science & Engineering, Alva's Institute of Engineering and Technology in partial fulfillment for the award of BACHELOR OF ENGINEERING in DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2016–2017. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.


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ABSTRACT

From many years all the appliances used in the homes are controlled manually and with the help of electrical switch systems. But this kind of controlling takes a lot of human effort as different devices are controlled from different points and you have to move to attend every single device. The idea now is to make all this system and fully automated. The information appliance is the main direction of development in the appliance control field. Intelligent appliance network has small amount of data and high speed of data transmission.

To avoid resources on green earth being exhausted much earlier by human beings, energy saving has been one of the key issues in our everyday lives. In fact, energy control for some appliances is an effective method to save energy at home since it prevents users from consuming too much energy. Even though there are numerous commercial energy-effective products that are helpful in energy saving for particular appliances, it is still hard to find a comprehensive solution to effectively reduce appliances energy consumption in a house. Therefore, in this system, an intelligent energy control scheme, named the Residence Energy Control System (RECoS) is proposed, which is developed based on wireless smart socket and Internet of Things (IoT) technology to minimize energy consumption of home appliances without deploying sensors. The RECoS provides four control modes, including peak-time control, energy-limit control, automatic control and user control.

The proposed system a device is controlled in home and ittransmits home environment details through the Wireless Sensor Network. ZigBee technology is used, the microcontroller and Embedded C to synchronize all the nodes and make a self-adjusting network of sensors for our smart home services. Based on the thresholds of the sensors the nodes will be generating a signal that will be transmitted to the server and also some action will be taken. When a person in that particular area. The device should be ON. In this system the sensors are motion sensors they are monitoring the condition accordingly and acting according to their set threshold.