**ABSTRACT**

Now a days energy efficient home automation become necessary one because of energy saving purpose which saves money and reduces the human activity. Home automation or domotics is [building automation](https://en.wikipedia.org/wiki/Building_automation) for a home, called a smart home or smart house. A home automation system will control lighting especially if compared to other energy efficiency measures making building automation even more attractive. It also offers your tenants more comfortable living conditions and a working environment that fosters productivity. The automation can be described as a process following predetermined sequential steps with a little or without any human exertion. Automation is provided with the use of various sensors suitable to observe the production processes.  In this project work , the automation system developed is an automatic lamp and an automatic fan on the smart home. The lamp can turn on automatically when there human present inside the room, and the lamp can also turn off automatically when there is nobody present inside by sensors placed in the room. This is because the light intensity received by the existing sensor in the room is blocked by the wall of the house or by other objects. Then for the fan, it can also turn on automatically when the temperature is greater than 25°C, and the fan speed can also be adjusted.

**INTRODUCTION**

Electrical appliances account for over 30% of the [energy bills charges](http://energy.gov/energysaver/estimating-appliance-and-home-electronic-energy-use) you receive on monthly or annually basis. Many home appliances manufacturers, as well as the government, have shifted their focus into saving energy. Thus, they have invested in producing energy efficient appliances. These appliances include refrigerators, air conditioners, water heaters, lighters, dishwashers, clothes washing machines and dryers, and other electrical items used at home or workplaces like room lights,fans. These items are used for purposes such as laundry, cooking, and making the home a comfortable place. Therefore, they are important in our homes. Many households are comfortable with their energy bills. However, you can save a lot of money spent on paying bills. Energy efficiency is the only way to achieve this goal. Recently, many homes have embraced energy efficiency in a bid to save money as well as conserve energy and the environment.