

## ABSTRACT

In this era technology has developed rapidly, many electronic devices that created as a need in everyone's room such as television, fan, air conditioner, dispenser, and etc. but sometimes most people who have a lot of outdoor activities in a hurry to get out from the room. And they forgot to turn off the electronic devices in the room. So, in this final project I have made the smart switch as a device serves to turn off an electronic devices in the room.

The smart switches that designed in this final project in based on microcontroller arduino uno, PIR sensor and relay. PIR sensor to detect the presence of people in the room that turn on the devices in the room. But when the owner of the room was in the room, the electronic devices in the room will flame automatically. This tools have switches to turn on or turn off the system if the owner of the room is in the room. This final project is using sms gateway which serves as an additional hardware to facilitate the room.

The output of this system is using sensor PIR and SMS Gateway really efficient to handle user negligence to turn off the electronic device which still turn on by using SMS Gateway with the average delay 0,65 second. User can know electronic device which still turn on in the room by using SMS Gateway with the average delay 3,18 second. And Using sensor PIR very effective to turn on the electronic device if user is in the room with the average delay 2,16 second.

Keywords : Smart Switch, PIR Sensor, Microcontroller (Arduino)