

## ABSTRACT

The safe atmosphere , comfortable, and energy efficient at home this time is needed for each office. This is because the level of safety, comfort and a source of electrical energy on the wane. Nowadays a lot of elites who modifies his office into a very powerful high office (Smart Home) which would expend a lot of money. While at the end of the project created an automated system that lights can meet the above criteria that is comfortable, safe and efficient at an affordable cost.

In this time the project has made smart use of light with a motion sensor and a temperature sensor so that the light will turn on automatically when the activity and will shut itself down when the absence of human activity. In this system uses motion sensor NaPIOn, LM35 temperature sensor, relay driver L293D, and minimum system used is the Arduino Pro Mini.

The results of this study is the accuracy of the smart lights capable of reading the movement with a maximum distance of 3 meters, while the temperature sensor output voltage smoothly at  $\pm 10$  mV / ° C.

***Keywords:*** *Smart lights, motion sensor, temperature sensor.*