

ABSTRACT

Nowadays, electricity is the primary needs. Almost every daily activity carried out human beings is not separated from the role of electrical energy and the appliances that use electrical energy to be able to operate. Almost every house and building multistory use and requires the flow of electricity to operate the electronic appliances that are inside them.

But until now the use of electronic devices such as lights and air conditioners are still operated manually. It is very likely causes a waste of electricity energy use when the room is not being used. It is common in Office buildings or college building that has a fairly high level of activities of its users. This causes them to sometimes forget to turn off electronic devices that are on the room and causing considerable wastage, especially on a building that has a lot of room.

Therefore, in this final project was made an ATMEGA microcontroller based automatic system for controlling power consumption automatically and eliminate human error or human carelessness might cause waste of electricity. The system is capable of detecting the presence of human beings in a room, measuring the intensity of light, measure the room temperature and keeping and controlling the room in order to be in a ideal condition when used and off when not needed.

Keyword: Microcontroller, ATMEGA, smart building, automatic system, PIR sensor