

Abstract

The lighting system is one of the most important aspects of human life. In general, lighting systems in a building consumes 25% - 50%, this resulted in an increase in power consumption of the building only from the lighting system. There has been much research to perform efficiencies such as using dimmers, light control independently by utilizing microcontroller and wireless-based control. To solve the problem, this final project research developed an IoT switch for a lighting system called SIoT. SIoT is a switch controller that can automatically save power consumption. The system is a blend of microcontroller with a light sensor. The proposed SIoT can be remotely controlled via smart phone by utilizing the internet network and SIoT can be programmed to switch on and off the switch automatically by adjusting the ambient light conditions using fuzzy logic. The applied fuzzy logic will regulate the number of lights illuminated in order to perform electrical power efficiency. The test results on SIoT prove that the proposed system is more efficient as much as 41,22 % using automatic mode.

Keyword : Switch , Microcontroller, Light Sensor, SmartPhone, Fuzzy Logic