ABSTRACT

These day the need for light to the lighting of human activity in a certain room can not be separated from lighting by electric lights. The electric lamp in its performance definitely utilizes electrical energy. Sometimes in everyday life we neglect to set or turn off the lights on, even though the lighting around is enough to light up our activities. So as to make electrical energy wasted away for granted. By looking at this situation, then made a tool of setting the intensity of light so that we no longer bother to turn on and turn off the lights. Because the lights will live automatically and the lighting of the lamp can also be set automatically, depending on the intensity of light and human presence in the room.

Based on this problem, the writer wanted to create a light intensity control system using the camera to detect human presence in a room and LDR sensor (Light Dependent Resistor) as light intensity detector, which later work integrated to turn on the lamp and control the intensity of lighting effectively and efficiently so as to save energy.

Overall, this system works by detecting objects in the form of human existence in a room. Detection of this human object using a camera sensor which then performed processing of the image produced by the camera to determine the active control system or not. When the system active, the LDR sensor serves to detect the amount of light intensity in the room then the data is processed by Raspberry Pi microcontroller with fuzzy logic method to determine the condition of the driver relay. Then the driver relay determines the intensity of the lighting exposure.

Keywords: Lamp, LDR (Light Dependent Resistor) sensor, Camera, Raspberry Pi, Fuzzy Logic, Light