

PROTOTYPE OF ROOM TEMPERATURE CONTROL SYSTEM USING ARDUINO BASED FAN

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ABSTRACT

The fan is a conventional electronic device that is often used as a regulator of air circulation during hot weather. At this time the ON/OFF control and fan speed on the fan are mostly still controlled manually with a switch or remote control, which feels less efficient. Therefore we need a system that can control ON / OFF and the fan rotation speed automatically by adjusting people and the air temperature in the room so as to save the use of electrical energy, time and energy so that users no longer need to bother to adjust the fan rotation speed. the wind manually. By utilizing Arduino wemos D1 as a controller and a DHT11 sensor that functions to measure the air temperature in the room, a passive infrared (PIR) sensor to detect the movement of people in the room, a Relay module to control ON/OFF the fan according to the sitting position of the person, and the motor driver. to control the fan rotation speed according to the air temperature in the room with fan speed level in mode 1 for temperatures below 30C, mode 2 speed for temperatures above 30C, and mode 3 for temperatures above 32C, if there is no movement in the room, the fan will OFF even though the temperature in the room is hot. In addition, this system can be controlled by the Blynk application via a smartphone to control ON/OFF the fan manually or automatically, and can monitor the air temperature in the room and find out the movements in the room. From the results of the tests carried out this system works well, so that with this system, controlling the fan is easier because the system can control the fan manually or automatically.

Keywords : *Automatic Control, Fan, Arduino Wemos D1, Motor Driver*