ABSTRACT

Cultivation of crops using greenhouse is one method to be applied in some types of plants. Basically parameter used on greenhouse is condition environment as temperature, humadity, and light intensity so that plants can growth optimally. However that condition can not still yet monitoring goodly so that the growth of the plants can not maximum. Therefore, made a system can automatically control and can long distance monitoring greenhouse. The system using NodeMCU as the microcontroller and using DHT11 sensor for measure temperature and humadity in the greenhouse and using LDR sensor for measure light intensity. Output from the system is fan, lamp, servo motor and water sprayer. Value of the sensor will compare with value of plants needed for moving output. On the measuring light intensity using control system PID. Setpoint light intensity that using 65 lux. Other than that, this system also using IOT method with data sending to NodeMCU and the data will processing by system interface so that greenhouse can long distance monitoring. This system can automatically control the greenhouse corresponding with value required by mustard greens plants temperature are 15°C - 25°C, on the humadity is 80%RH – 90%RH and on the light intensity value required 65lux.

Keywords: Greenhouse, Temperature, Humadity, NodeMCU