

ABSTRACT

Plants like chrysanthemum are regarded as having great beauty and financial worth. Cultivating chrysanthemums is difficult because the country of origin has four seasons and 16 hours of sunlight. The greenhouse can control the temperature and humidity of the surrounding air resembling the temperature and climate needed by plants to live well. The temperature in the greenhouse can exceed 30°C when the light intensity is high so that the growth of chrysanthemum plants is inhibited. Technology makes it easy for a horticulturist to cultivate chrysanthemums in a greenhouse. The greenhouse air temperature and humidity are stable and automatic additional lighting uses the NodeMCU ESP32 microcontroller which is integrated with the DHT21 sensor and LDR sensor as well as actuators in the form of fans, water pumps, and LED lights. System development is carried out by providing notifications via Telegram to users when conditions of temperature and humidity are abnormal as a warning. Utilizing Firebase as an Internet of Things (IoT) platform, you may remotely and in real-time monitor data on temperature, humidity, and light intensity. The use of this device should improve chrysanthemum growth

Keywords: *Chrysanthemum, Firebase, Telegram, DHT21, LDR, Greenhouse*