ABSTRAK

The development of technology of the Internet of Things (IoT) in this digital era is already increasingly advanced. This happens because in this modern era almost of all electronic devices are connected to the internet. Needs in the form of automatic plant watering equipment in the community began to be needed given the increasingly sophisticated technology. Plants are living things that require adequate water consumption, so plants should get regular watering. Seeing the conditions of busy people who do different watering regularly may be difficult to do. Therefore, an IoT-based automatic watering device is required.

The system of automatic watering tools utilizes NodeMcu which is already integrated with the ESP8266 module. This tool uses for servo to open and menutp tap, with rain sensor added the tool can be used for automatic watering control and monitoring of sunny and rainy weather conditions. Data from control and monitoring results will be stored in Firebase and displayed in the application.

The results obtained from the IoT-based automatic watering equipment proved to be helpful in routinely planting plants. In the automatic watering mode of scheduling obtained average delay of 9.65 for 3G connections and 7.35 seconds for 4G connections. As for manual watering mode obtained average delay of 2.79 seconds for 3G and 1.53 connections for 4G connections.

Keywords: IoT, Firebase, Rain Sensor