ABSTRACT

When a population is increasing, then the need for vegetables is also increasing. To store their harvest a vegetable needed storage that is fresh and hygienic, for cleanliness and freshness of vegetables are maintained. But now there are many vegetable storage areas that have not been maximized in maintaining the quality of vegetable crops of the farmers. Therefore it takes storage that can make vegetables to last longer and fresher.

With the rapidly growing technology today it is possible to design a prototype of moisture regulator on vegetable storage based arduino and Monitoring data with the concept of internet of things (IOT). This prototype uses arduino uno as the main controller DHT11 as the main sensor reads humidity and temperature, as well as relay as automatic watering regulator. To transmit data to the internet this prototype uses NodeMcu ESP8266 wifi module using HTTP and MQTT protocol.

Based on testing and analysis of Quality of Service (QoS) conducted on prototypes using the MQTT and HTTP protocol methods. In the MQTT protocol the value of the delay obtained is 157.749772 ms and the jitter value is 5.8323392. Whereas in the HTTP protocol the delay value is 156.436981 ms and the jitter value is 5.79794392 ms. In testing this prototype is able to keep cabbage and spinach conditions fresh within 4 days.

Key words : IoT, NodeMcu ESP8266, Arduino Uno, HTTP, MQTT, DHT11.