ABSTRACT

Infusion is part of treatment to getting drugs or vitamins into the body of patient. This method is efficient to accelerate treatment because the drugs faster while absorbed in body and can avoid impact on digestion. If the dose given does not match or fluids into the body getting too much, causing disruption to the patient's health.

The main purpose of this final project is to provide information to nurses or doctors to use the infusion of each patient with form of speed and volume of the infusion using fotodiode sensor

Node.js server can distinguish each incoming data by utilizing features such as topics on MQTT. Feature topics are used to exchange data based on the ID ESP8266 used with data being exchanged is volume and velocity of each ESP8266. Based on the features of the topic volume, the server can provide fluid warning had expired, while topics feature velocity, the server can warn infusion rate.

The main task was able to capitalize on the topic MQTT features for managing data from multiple infusions into Node.js server using the ESP8266. In addition, the system providing a warning to limit residual volume specified by the user and speed warnings when the infusion rate exceeds the normal limit that has been done initiated.

Keyword: WiFi, MQTT, LED, Photodiode.