

ABSTRACT

A dispenser is a tool that serves to place gallons of drinking water which so far is generally only used as a place to take drinking water alone, without automation features such as sensor elements, auto pick up, etc. In this advanced era, many housing or other places have a large number of dispensers, requiring management or management of drinking water usage that requires exact data.

This research we designed a smart dispenser based on Internet of Things to monitor drinking water in humans every day. The sensors used in this design is water flow sensor which functions to calculate the water discharge coming out of the dispenser, then uses fingerprint sensor to identify that the data in database and applications are not confused, 16x2 LCD for knowing how much air is taken, the solenoid valve as a barrier so that the air does not flow continuously, this design uses a NodeMCU ESP8266 microcontroller and one relay as a controller and flows electricity.

From the test results that have been done, the system can work well. In addition, Quality of Service testing was also carried out on sending data from the tool to the database an average delay of 0,06889 s was obtained, the average jitter is 0,01451 ms and the average throughput is 11891,2 bps. Fingerprint sensor testing, water flow sensor and ultrasonic sensor get 99%, 91.5% and 96,9% accuracy values.

Keywords: Database, Dispenser, ESP8266, Internet of Things (IoT)