

ABSTRACT

The recommended water requirement for adults is about eight glasses or a total of 2 liters per day. Generally, people take drinking water using a dispenser. Usually, the dispenser can accommodate drinking water containing 19 liters of water which is placed in a gallon. Water intake at the dispenser is generally still manual without any features that can make it easier to take and monitor the use of drinking water consumed every day.

In this study, the author makes a smart dispenser that is connected to a web-server and database, which can monitor and record dispenser activity. Then, users can query information using their browser by accessing the web-server. The sensor data contained in the dispenser will be sent using the connectivity found in the ESP8266 module and parsed to the API (Application Programming Interface), the parsed data will be sent to the webservice database. The DBMS used is MySQL. Furthermore, the data that has been received by the database will be displayed on the website.

The functionality test results show that all the features on the Dispenserku website can be accessed and used properly. The delay test results from client–server show an average delay of 0.138 seconds and server – client shows an average delay of 0.198 seconds. The results of the client-server jitter test show an average jitter of 0.00511 ms and the server-client shows an average jitter of 0.00356 ms. In the performance testing that has been done, it can be concluded that the server can still run well.

Keywords: *Smart Dispenser, Web Server, Website, Drinking Water, MySQL.*