

ABSTRACT

Mineral water is one of the main human needs. Nowadays, people use dispensers to store and collect mineral water. But in its use, dispensers on the market still have limitations. Users can only monitor the volume of water by looking directly at the dispenser. This method is not effective to be applied in a place that has a lot of room with every dispenser in it. Users who are responsible for monitoring the volume of water dispensers have to look directly at each dispenser. This problem occurs, because there is no long-range volume monitoring system that can provide information to user.

Based on these problems, in this final project the design and implementation of dispenser water volume monitoring system based Internet of Things is made. The volume of water is obtained from weight measurements uses a load cell. To determine the feasibility of the room used for weight measurement, DHT-11 is used to measure air temperature and humidity. Data in the form of water volume, air temperature, and humidity are sent to the ThingSpeak database. Users can monitor the data through the ThingView application via smartphone.

The results of the research are the average time required for sending data from the microcontroller to the ThingSpeak database is 15.92 seconds with error average percentage is 0.006% and accuracy percentage is 99.94%. The amount of water consumed in room H118 with 6 people inside it is 9.4 liters in 27 hours.

Keywords : Dispenser, *Load Cell*, DHT-11, Microcontroller, *Internet of Things*