ABSTRACT

Drinking water is very important for the human body. If we lack drinking water, what happens then the body will experience a loss of concentration. Nearly 80% in the human body is water. Therefore drinking water is an important nutrient for the human body. It is recommended to consume 1 to 2.5 liters of mineral water every day. In general, we take drinking water in a place that has been provided. There is a tool called a water dispenser to pour water in a gallon into a glass without us experiencing any hassles.

In this study, automatic smart dispensers take advantage of technological developments to carry out the process of pouring water. Water in gallons will flow automatically into the designated glass and will stop flowing when the glass is filled with 250 ml of water. So that there is no spill of water which can cause the floor to become wet and slippery. The automatic smart dispenser will utilize the NodeMCU ESP 8266 microcontroller as the brain of this project and also utilize a load cell sensor which will be converted into a digital signal via the HX711 module. The digital signal will be received by NodeMCU ESP8266 so that the data can be read and when the data has been received, NodeMCU ESP8266 will turn on the relay as a switch to turn on the dynamo so that it can flow water automatically when the initial load reaches the specified weight and will stop when the total load has been reached. When the data has reached a predetermined point, the NodeMCU ESP8266 will send the data to Thingspeak as a web service so that it can be read as a monitoring of the user's daily drinking water consumption.

The purpose of this final project research is to add an automation system using the NodeMCU ESP8266 microcontroller to pour 250 ml of water from a gallon into a glass in one operation. NodeMCU ESP8266 will also communicate with the Thingspeak web service so that in testing it can monitor the amunt of daily drinking water consumption of 2000 ml or the equivalent of 2 l.

Keywords: Drinking water, Automatic Dispenser, NodeMCU ESP8266, Load Cell, Internet of Think (IoT)