

ABSTRACT

Public kitchen facilities at The University of Darussalam Gontor are the places where students eat and drink every day, there are water tank facilities for students' drinking needs. Some constraints are the inefficient water and faucet filling devices in the tank with less than optimal. So, a design system is needed to help manage the filling of water and taps automatically. This design system is a prototype that will help to charge automatically by detecting water height using an ultrasonic sensor. If water is too low, the relay that has been combined with the water pump will turn on automatically until the water container is full. Automatic faucet system will work when the glass touches the limit switch, the tap will open the valve and fill the water into the glass. Meanwhile, the ultrasonic sensor will read if the water level in the glass is almost full then the tap will close automatically. The results of the experiment, it can be concluded that the design of the system can detect the water level and fill the water into the tank automatically and the design of the tap that can open or close the valve automatically according to the height of the water in the glass.

Keywords: Level Water, Ultrasonic Sensor, Faucet, Limit Switch.