ABSTRACT

At this time, the community's need for clean water sources is getting higher. This is because each daily activity requires water. One of the agencies managing clean water sources in Indonesia is PDAM (Regional Drinking Water Company). PDAM treats river water and then distributes it to all Indonesian people. Although the coverage area is not evenly distributed, it is reliable enough to supply clean water for use by the community. There are several obstacles in the distribution of clean water, such as water that comes out only at certain times or doesn't even come out at all. In this final project, the authors make miniaturization of a clean water controller distribution device using Arduino to simplify the problem model in water distribution using the fuzzy logic method. This design uses an ultrasonic sensor as a water level reader, then uses a submersible water pump to fill the distributed water reservoir. The LCD as the control center in this design displays and provides information to the ultrasonic sensor to turn on the water pump and then the blynk platform only displays information received from the LCD via the NodeMCU ESP8266. The result of this design is the creation of a better water distribution system. The pump in the water reservoir can turn on and fill the water according to the water level read by the ultrasonic sensor. The height is determined using fuzzy logic so that the water in the reservoir will always be filled. The water in the reservoir can be monitored via the provided LCD and can also be seen via the blynk platform. The existence of this system is expected to facilitate the work of distributing water from sources to water reservoirs.

Keywords: Arduino, Fuzzy Logic, HC-SR04, NodeMCU.