

ABSTRACT

Clean water is needed for human as a drinking water, it because around 68% of the human body is composed of fluids. Currently, most of Indonesia's population has a tendency to buy drinking water refilling for reasons of practical and save cost. In order to convince the customers, drinking water filling station promising the quality of the water will be equal as bottled drinking water with relatively cheaper price, however quality and volume of water that is loaded into the gallon is not constant. Due to the volume that goes into the gallon is not constant, it can be a loss either to the customers or the owner of the station, therefore a tool that able to overcome this problem is needed.

One of the tools that contribute to overcome this lack of accuracy is to create a system of standards regulating tap water volume based microcontroller. Moreover, this tool can adjust the total volume of water that released through the tap and will be closed when the volumes of the water have been met. Furthermore, in designing this tool by using a water flow sensor as a detector of volume of water that missed in pipeline, electronic solenoid valve as the valve (faucet) is driven by an electric switch, such as relay, LCD M1632, and 3x4 keypad matrix as an input for volume of water that needed. In addition, to adjust the volume of water, this tool also can send SMS to the owner of the station that contains information about the output of total volume of water per day.

By this design, it produced a prototype system regulatory of standard volume, which can be applicable to the drinking water filling station so the amount of volume in gallons will be charged constantly.

Keywords: Microcontroller, LCD M1632, Water Flow Sensor, Electric Solenoid Valve, Relay, Keypad.