

ABSTRACT

The increasing number of cases of fraud in filling the volume of the measuring pump machine. One of the frauds is using a special remote that can be controlled remotely, so that the fraud is not known to consumers. This is done to increase the profits of the company that owns the measuring pump machine. To ensure that fraud does not occur, a measuring pump machine will be recalibrated. The maximum tolerance limit for measuring pump engines is $\pm 0,5\%$. Recalibration is carried out using a standard measuring vessel that has a capacity of 10 L and 20 L with the principle of manual work through measurement readings. So we need a prototype device that can measure the volume of fluid that works automatically.

This study aims to create a prototype device for measuring the volume of fluid filled in vehicle tanks. This device is equipped with three displays, namely an OLED LCD, a Bluetooth module, and a WiFi module which can display information in the form of the height and volume of fluid filled in the vehicle's tank. The Bluetooth module and WiFi module will display data via a smartphone with the help of the MIT App Inventor application and the Blynk application. This device is equipped with a capacitance level sensor that can measure fluid level, with a tank capacity of 8,800 ml.

The design of the TDB prototype system provides measurement information with an average accuracy at height of 99,19% with an error of 0,81% and average accuracy at volume of 99,83% with an error of 0,17%. As well as receiving Internet of Things data using the WiFi module on the Blynk application in less than 2 seconds.

Key words : *Fraud, Fluid, Bluetooth Module, Capacitance Level Sensor, Blynk App, MIT App Inventor App.*