

# **DESIGN OF WATER USE MONITORING PROTOTYPE IN BOARDING ROOMS WITH REAL – TIME MONITORING SYSTEM ON ANDROID SMARTPHONES**

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## **ABSTRACT**

*The use of water is a very important human need for the life of living things. Sometimes the use of water in boarding rooms with private bathrooms uses water excessively and never pays attention to how much water is used. Making this final project using a flowmeter sensor as a measure of the amount of water discharge and the volume of water used and then sent to Wemos D1 Esp8622, then RTC (Real Time Clock) is used to send data in the form of time and date, ultrasonic sensors are used to detect the distance of the water surface to controls the solenoid valve which functions as an automatic faucet. After the flowmeter takes the water discharge data and water volume, the Wemos D1 Esp8622 sends the data via the internet network which will be displayed on the blynk android application and the data is displayed in graphical form. Ultrasonic sensor testing shows an accuracy rate of 90.8% from 20 times of testing and solenoid valve testing shows a success rate of 80% from 20 times of testing. Data from the flowmeter sensor is successfully sent to the blynk application and displays data from water usage on a graph.*

**Keywords :** *Flometer sensor, Wemos d1 esp8622, Solenoid valve, Blynk, Rtc*