Implementasi Sistem IoT untuk Monitoring Jarak dan Tekanan Air di Bak PDAM Wonogiri (Implementation of IoT System For Monitoring Distance And Water Pressure In Wonogiri PDAM Tank) Raditya Arief Pratama, S.Kom., M.Eng. as Academic Supervisor

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ABSTRACT

Manual monitoring of the water distribution system at PDAM Wonogiri often requires significant time and effort. With the advent of Internet of Things (IoT) technology, monitoring can be carried out in real-time, enabling staff to monitor water conditions without the need to visit the site. This study aims to design and build an IoT system that can monitor the water level and pipe pressure, as well as automatically store data in a database that can be accessed at any time. The system will be implemented at seven locations determined by PDAM Wonogiri. Data collection was carried out through discusion with PDAM Wonogiri staff and literature studies to select the appropriate sensors. The testing results showed that the system functions well, with the JSN-SR04T distance sensor achieving an accuracy of 98.66%, the A01ANYUB V2 Waterproof Ultrasonic distance sensor 94.73%, and the Water Pressure Sensor SEN02571 pressure sensor 94.33%. The conclusion of this research is that the developed IoT system provides an efficient and accurate monitoring solution for PDAM Wonogiri.

Key words: Internet of Things, ESP32, PDAM, water level, pipe pressure, realtime monitoring