ABSTRACT

Water is essential for daily life, and to distribute it effectively, tools such as water pumps are indispensable. These pumps are used to draw water from a well or other outlet and push it upwards into a storage tank. Usually, it is manually activated when the tank needs to be filled, and deactivated once the tank reaches capacity. Negligence in filling the tank to overflowing is also a household problem that causes water wastage and increased electricity costs. Therefore, this research proposes an Internet of Things (IoT) based water level monitoring system using JSN-SR04T sensor, relay, adapter. This system aims to monitor the water level in the reservoir and use a relay as a switch for the water pump. This system uses an ESP8266 microcontroller as a controller. The designed prototype can provide information on the percentage of water level that has been determined by the maximum limit of water filling based on the container used with a container height of 55 cm, where the pump will be active if the water level is below 25% and inactive if it exceeds 100% with an average error value of 1.94% and the accuracy value of the JSN-SR04T sensor of 98.06%. So it is concluded that this system is connected to the Blynk application to make it easier for users to control water pumps in real-time with the results of reading accuracy classified as accurate..

***Keywords:** Blynk, JSN-SR04T, Water Level, Water Tandon.*