ABSTRACT

The server room has a very important role in an agency or institution that uses information and communication technology as the center of its daily activities, it is impossible to turn off the server itself because if someone needs data, the server must always operate. However, a server that operates continuously will definitely experience an increase in temperature which will cause the server to overheat, therefore, a tool that can monitor the condition of the server room is needed.

The purpose of this research is to build a tool that can monitor temperature, humidity and voltage conditions in the server room automatically and can be accessed anywhere so that users do not have to enter the server room if they want to check temperature, humidity and voltage conditions. To process data using fuzzy logic because fuzzy logic function reasoning is very accurate for results from temperature, humidity, and voltage data.

This tool uses the NodeMCU microcontroller as the main processor using the DHT11 sensor as a temperature and humidity detector while the PZEM sensor is a voltage detector with an LCD output to display data, telegram notifications as an alarm and a website that can display temperature and humidity data in the form of graphs and log tables. previously stored through a database, online and in real time with the application of the Internet of Things so that the website can be accessed anytime and anywhere.

Based on data obtained from various sources, the ideal temperature value for server is in the range of 20°C – 27°C, humidity 40% -60% rH and voltage 200-230 VAC. In this monitoring system, telegram notifications are also made where notifications are sent when the calculation of the fuzzy value exceeds 0.3, it will automatically send information in the form of the state of the server.

Keywords: Server, Internet of things, Wifi, *Fuzzy Logic*