

ABSTRACT

Weather stations have become important instruments in measuring environmental parameters such as air temperature, air humidity, wind speed, and soil moisture. However, most conventional weather stations do not allow flexible sensor control and operation mode changes through an online platform. Therefore, a website system capable of directly managing data acquisition and changing the operation mode of weather stations was designed.

In order to enable the weather station to be controlled directly through the website, it requires an integration system between the website and the weather station device. Integration between devices and websites is known as a system, namely the Internet of Things (IoT), this integration allows users to control a device through the firebase database connectivity. In addition to controlling the device, the firebase database has the ability to accommodate parameter data measured by the weather station. The measurement data collected by the weather station device will be displayed on the monitoring page of the weather station website. The addition of acquisition mode and operation mode in the web has an impact on wider storage space capacity, because the operation and acquisition modes regulate the interval and on-off state of the weather station device.

The weather station website sets the on-off state of the weather station sensors in acquisition mode. In addition to setting on-off, the website can set the time interval for measuring environmental parameters in operation mode. Integration of the two modes in a weather station website system is expected to display measurements and increase storage capacity in the database.

Keyword: *Automated weather station, IoT, data acquisition, weather measurement.*