ABSTRACT

Periodic and real time weather monitoring is very informative to know, seeing many important aspects that use weather data for certain aspects, for example in the agricultural, transportation, telecommunications and tourism sectors. Observations of weather elements in the form of temperature, humidity, air pressure and light intensity are also very important to observe changes in the ecosystem of an area where these elements will be appointed as parameters for the weather station this time.

Therefore, the development of a Website-based Weather Station System using a microcontroller will be one solution to determine real-time weather conditions. The development of a website-based Weather Station system this time using microcontroller Arduino Mega 2560. Weather parameters measured in the Weather Station system this time are air temperature and humidity using an SHT20 sensor, air pressure using a BMP280 sensor, light intensity using a BH1750 and to store data in real-time using a datalogger module. The measurement results of the three sensors will be displayed on the website using the WiFi module.

This study succeeded in designing a Web-based Weather Station system for temperature, humidity, light intensity and air pressure which is equipped with a datalogger system and database using MySQL. Based on the results of research using the three sensors of weather elements, namely humidity, temperature, light intensity and air pressure, the overall average accuracy is above 96%. For testing the data logger is able to record for more than a week and for the database from MySQL it can store data properly and display it on localhost in the form of graphs.

Key word: *Weather Station, Datalogger, Database,Weather*