ABSTRACT

Weather and clean air are important to support the performance of human life in daily activities. But at this time the weather and clean air are getting more and more in a bad condition. This is due to the impact of globalization and the amount of air pollution. With weather fluctuations as above, people will have difficulty in observing the weather which they will use as a reference in their various activities. Air pollution can be caused by industrial activities and the amount of open waste burning. This is very worrying because the smoke released from burning trash is very dangerous for public health.

Therefore, this final project has developed a web-based weather and air quality monitoring system. This system has six sensors, namely temperature and humidity sensors, air pressure, wind direction, wind speed, rainfall and carbon monoxide. So that will be able to present parameter weather and the air quality accessible to all persons by using the internet network.

From the results of the testing that has been carried out show testing functionality are all sensor has been running as well as it should. The average DHT11 sensor data error is 0.63 % for temperature and 3.2% for humidity, the BMP180 sensors is 7.46 %, the wind speed sensor is 37.9 %, the rainfall sensor is 0% because there was no rain during the test, and the wind direction of 10 attempts occurs 3 times error. This system has a delay of 2.08 to send data from the device to the database and web monitoring.

Keywords : *weather station*, *weather, air, microcontroller*