ABSTRACT

In the current technological era, the Internet of Things is growing rapidly in various fields, including in this field, namely animal husbandry, where the use of the internet of things is for monitoring and controlling catfish ponds. The importance of monitoring and controlling catfish ponds so that the habitat inhabited by catfish can be in good condition and provide catfish production in optimal conditions.

In this final project, a monitoring system is made that is used to unify the water quality of catfish ponds. The monitoring system in this Final Project is based on the Internet of Things where the microcontroller, namely the Node MCU ESP8266, will read the temperature value from the temperature sensor and the pH value from the pH meter sensor, and the data that has been read will be sent to the website database using the HTTP Request method. For controlling the temperature using a Peltier Thermo Electric Cooler, DC water pump, and also a DC fan.

Based on the results of the sources obtained the ideal temperature in catfish ponds using a temperature sensor is 25-30 degrees Celsius and the ideal pH value in catfish ponds using a pH sensor is the value at 6.5-8. In this case, a temperature controller is also made where when the temperature of the catfish pond exceeds 30°C, the water pump will turn on as well as the cooler will also turn on, so that the temperature will remain at the ideal temperature.

Keywords: *Catfish, Sensors, Internet of Things, pool*