ABSTRACT

Aquarium is one of the favorite hobbies of many people, which of them is lacking in the care of the Aquarium itself. Therefore, there have been many latest innovations, which can be easy to maintain fish in the Aquarium, so far in feeding fish is still done directly and monitoring the condition of the Aquarium is still done manually. In the development of providing the application of feeding in the Aquarium, and monitoring the quality of Aquarium water and the availability of feed in the Aquarium with information processing using the implementation of internet-of-things.

The system designed serves to monitor and regulate feed automatically. Arduino IDE and Node MCU function in controllers and informers in the results of monitoring water conditions. In this design there are supporting sensors such as tubidity sensors, pH sensors, temperature sensors. These 3 sensors have their own functions and have an important role in monitoring water conditions. There is also a servo motor for feed controllers.

The test is done with a turbidity sensor as a quality sensor, a pH sensor as an acid sensor, a temperature sensor, an automatic feeder servo motor, then the Aquarium can recognize the level of quality, the level of acidity. The results obtained in the turbidity sensor test of clean water were obtained a value of 0.00 - 25.00 the accuracy of the test of 96.612%, the murky water 50.00 - 100.00. Testing on the pH sensor obtained a value of 7.00 for mineral water with an accuracy rate of 88,852%. Temperature sensor testing was obtained in mineral water with a value of 25 ° C with an accuracy rate of 91.186%. Servo motor has an error rate of 8.33%,

Keywords: Smart Aquarium, Arduino IDE, pH, Turbidity, Monitoring, IoT.