

ABSTRACT

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*" DESIGN AND DESIGN OF AN ORNAMENTAL FISH MONITORING SYSTEM
IN AQUARIUM USING NODEMCU ESP8266 BASED ON INTERNET OF
THINGS "*

*Final Project. Computer Systems. Faculty of Computer Science and Information
Technology. Gunadarma University. 2024*

Keywords: ESP8266, LCD, RTC, Servo, Telegram, Turbidity, Ultrasonic.

(xiii + 60 + Appendix)

Fish is one of the types of farming that is of great interest to the public. Fish farming activities carried out by the community are very diverse, one of which is ornamental fish. Ornamental fish are a type of fish that have relatively high economic value, and ornamental fish also have different aesthetic values which can be observed from their color and body shape, for example the goldfish which is one of the most popular ornamental fish among fish lovers. decorate now. This is because goldfish have attractive colors and shapes compared to other ornamental fish. For some people, many people who have or have a hobby of keeping fish are often confused if the house is empty, especially when traveling long distances. The main factors in keeping fish in an aquarium are providing fish food, water clarity and regulating the amount of fish food. Therefore, the author created a monitoring system for ornamental fish in aquariums. It is hoped that this research can provide an effective solution to overcome problems in keeping ornamental fish in aquariums. And it can also provide benefits for aquarium owners in facilitating the process of feeding fish and knowing the water conditions in order to reduce the risk of fish death. This system uses NodeMCU ESP8266 as the main control which processes data from the Turbidity Sensor and Ultrasonic Sensor. It is also equipped with an LCD which will display notifications when the feed has been given and when the feed container is empty or finished or the water is cloudy or clear. The author also uses the Telegram application to be able to monitor remotely by providing several menu options, one of which is providing automatic fish food based on predetermined hours, then later the servo will open to provide food, as well as providing notifications if the fish food is running out and the water quality is poor. the aquarium is getting cloudy.

Bibliography (2018 - 2023)