

DESIGN AND CONSTRUCTION OF IoT-BASED MAHSEER FISH MAINTENANCE MONITORING SYSTEM WITH EMERGENCY BACKUP AERATOR AND HYDROELECTRIC GENERATOR AS SENSOR

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ABSTRACT

In maintaining fish in an aquarium, the aquarium condition monitoring system is very important, especially in maintaining mahseer fish. In maintaining this fish, an oxygen aeration system is needed which must be supplied continuously according to the needs of the mahseer fish. In this final project, the monitoring system project that is assembled can automatically turn on the oxygen aerator if the aquarium filter pump is off. The component used as a reading of the condition that the aquarium filter pump is off is a hydroelectric generator. In addition, this project is also equipped with a monitoring system for the quality and temperature of the water in the aquarium by utilizing the Blynk application to monitor the condition of the water parameters remotely. This system is made in stages starting from mechanical design, electronic design, to pin configuration on the microcontroller using NodeMCU ESP-32 as the main control for program processing. The monitoring system project that was implemented successfully monitored the condition of the aquarium water with a sensor accuracy level of more than 98%.

Keywords: *Internet of Things, Mahseer, ESP-32.*