

ABSTRACT

Ornamental fish is one of the pets that is quite popular with the public during the pandemic. One owner of an ornamental fish shop in Banjarbaru city experienced problems in raising ornamental fish, feeding and draining aquarium water is difficult to control regularly. To overcome these problems, an aquarium system is needed that is able to feed and drain water automatically. This research will design a Smart aquarium with Internet Of Things technology based on Wemos D1 Mini connected to a servo motor that functions as an automatic fish feeding system, and Turbidity sensor SKU SEN0189 which functions to detect water quality by measuring Turbidity levels with a maximum value of 50 NTU, Wemos D1 Mini will connect the system to the internet. With this system, feeding and draining water in the aquarium can be monitored through the Telegram platform . This research successfully implemented the Internet of Things (IoT) in Smart aquariums using Wemos D1 Mini as the main component that regulates various functions and interactions in the system. Automatic feeding of ornamental fish using servo motors has been successfully carried out, servo motors are active every eight hours for a week, feeding fish 3 times a day automatically. The implementation of Turbidity sensors in automatic water dewatering was also successful, water drained from the aquarium was only 50%, Turbidity sensors were tested with three different water samples, namely clear water (value 0 NTU), water stored for one week (value 852 NTU), and water stored for two weeks (value 1272 NTU). This Smart aquarium system provides an effective and efficient solution in keeping ornamental fish.

Keywords: *Aquarium, Internet Of Things, Motor servo, Turbidity sensor, Wemos D1 Mini.*