

ABSTRACT

Seeing koi fish swimming in a pond can help lower blood pressure & heart rate, and can function as a stress relief & can increase levels of oxytocin (causing happiness) in the human body. In Indonesia, koi fish ranks number one for the most ornamental fish species exported, this shows that the koi fish market in Indonesia is very good and also affects the availability of koi in foreign markets. However, in terms of export competition, Indonesia is still the 4th place country under Malaysia, this is because many koi fish quality are still below export quality standards.

In this study, what was observed was the quality of koi pond water, pond water quality is very influential on the quality of fish. Koi fish are also fish that are very sensitive to water quality, therefore water quality is very important in the koi fish ecosystem. This study uses two testing parameters (temperature & pH) to observe the quality of fish pond water, the ideal temperature parameter is in the range of 20-26 ° C, while for the ideal pH is in the range of 6.6 - 7.5. This smart system is able to restore the temperature of pond water by using a water heater if the water temperature is below the ideal range.

The results of observation of pool water quality are connected to firebase and displayed using an android application installed on the smartphone, users can monitor the quality of pond water from anywhere in real time. From the results of testing the tool it is known that the reading on the application can run well. The accuracy level obtained at the temperature sensor is 0.5 ° C with a sensor response time of 750 ms. As for pH, the accuracy value is up to 0.8 with a sensor response time of 1.30 s. For the average value of the end to end delay itself obtained results of 1.10 s.

Keywords : Water Quality, Koi Fish Pond, Android, Water Temperature, Water pH, Firebase.