

**MICROCONTROLLER-BASED WATER PH LEVEL AND
TEMPERATURE MONITORING DEVICE WITH AUTOMATED
FEEDER FOR KOI (*CYPRINUS CARPIO*)**

A Project Study

Presented to

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ABSTRACT

Title: Microcontroller-based Water pH Level and Temperature Monitoring Device with Automated Feeder for Koi

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Microcontroller-based Water pH Level and Temperature Monitoring Device with automated Feeder for Koi is intended to establish automatic monitoring system that will detect the pH level and water temperature.

It has a pH level sensor and a temperature sensor that is submersible and the measured parameters read will trigger the pH level detector and heater to function. For pH, once it detected that the required pH level of the water is not met, it will automatically stabilize the water through releasing of pH Up Balancer Solution. If the water is basic, otherwise, the system will automatically change the water gradually. Moreover, when the measured temperature is lower than the required, the heater will be triggered, when the temperature is reached, the heater will be turned off.

The device also includes an automatic feeder that release food twice a day and the user shall enter the number of times of dispensing. The purpose of this is to avoid overfeeding the fish, which not only affect their health but the quality of the water as well.

For humans, water is something to drink, take a bath with, or swim in. For the Koi, it is what they breathe and live in, what dictates their bodily functions and, ultimately, what determines whether they will live or die. Indeed, Koi aquarium water quality is something that every Koi enthusiasts and breeders must never take for granted.



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