

# **RANCANG BANGUN SISTEM MONITORING DAN KENDALI OTOMATIS KUALITAS AIR PADA KOLAM IKAN MENGGUNAKAN ARDUINO BERBASIS ANDROID**

*(THE MONITORING SYSTEM DESIGN AND AUTOMATIC WATER QUALITY CONTROL FOR THE FISH PONDS USING THE ARDUINO BASED ON THE ANDROID)*

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## **ABSTRACT**

*Water is one of the most important elements and it cannot be separated by human beings and other living things in everyday life. In addition water is also used by other living things such as fish that use water media as a place to live, move, breathe, and breed. Therefore, the clean water is badly needed for life of freshwater fish especially either for ornamental fish or fish for consumption. On the other hand, due to the dense daily routine activities make almost anybody feel lazy to replace the water or clean the fish ponds which is very turbid or quite dirty. Based on the background above the writer will design a device to maintain the water. This device is designed to identify the water easily to its turbidity level. It will automatically circulate from the turbid water into the clean water again. By prototype method, this device combines hardware and software that is the arduino uno R3 as the main control, the turbidity sensor and the water pumps as the regulator for changing into the clean water automatically. It will also be connected to the android smartphone via the ethernet shield that will display information about turbidity levels at any time and the water circulation can also be connected via the smartphone. The purpose of making this device is expected to help to solve a small part of the problems encountered in everyday life, especially for those who have fish ponds at home or who have freshwater fish farming. This device, hopefully, can facilitate the users in controlling the fish-pond water quality at any time through the Smartphone without having to spend time or interfere with daily routines.*

*Keywords: Water quality, Arduino Uno, Ethernet Shield, Android*