## *ABSTRACT*

*Aquascape industry is an industry that is engaged in the art of combining plants, woods, fish, stone, and other components. In order to maintain survival of those aquatic vegetation, aquariums need to be treated by several treatments, such as feeding routines for fish and environmental maintenance (temperature, water turbidity, humidity, and pH). Those treatments are the important things that must be maintained regularly in an aquarium, especially in aquascape-type aquariums. Those mentioned treatments will be more efficient and optimal if it is carried out with technology, such as aquascape with automatic draining and monitoring system in real time and remotely.*

*The system that will be built in this research is a system that can monitor water humidity, turbidity, temperature, and pH in real time and remotely for aquascapes as well as designing an algorithm for automatic draining system based on pH and water turbidity using Fuzzy Logic method. The system uses DFRobot pH sensor with a pH range 6,5 – 8,5 and a turbidity sensor SKUSEN0819 with a turbidity range 5 – 25 NTU, which is then processed using NodeMCU8266 and continued with fuzzy logic programming. The monitoring process of water condition is carried out using the Blynk application that is installed on android smartphones.*

*The result of monitoring system design is functioning well, as indicated by the reading of the aquascape water environmental condition values with a distance 5 – 20 meters between Wi-Fi router and the system successfully displaying data with 100% accuracy through Blynk application. Also, the result of the algorithm design in the automatic draining system is functioning well, indicated by a result of the entire system test where the automatic draining output given goes according to the conditions of the aquascape.*



***Keyword** : Automatic drainage system, Aquascape, Water quality*