

ABSTRACT

Aquascape is becoming a new hobby and more sought after because of the level of interest in people towards ornamental water plants more and more. For the cultivation of aquatic plants and ornamental fish, there are some things that need to be considered, namely water acidity and water temperature. So far, aquascape hobbyists still use manual methods. In this final project will make a solution to the control of water conditions using an internet-based pH and temperature sensor that uses Arduino Uno as a microcontroller, the p sensor is used to detect acidity of the water, and the temperature sensor for temperature reading using DS18B20 and NodeMcu ESP8266 as wifi interface to send data to firebase, as well as the MIT App Inventor application as an application used to display on the user smartphone. Testing of each component uses different methods according to the needs of the component. From the results of testing the accuracy of alkaline water pH sensors obtained an average error of 0,09%, pure water an average error error of 1,40%, and acidic water an average error of 5,41%. The results of testing the accuracy of the hot water temperature sensors obtained an average error of 3,23%, an average error of normal water 2,15%, and an average error of cold water 1,27%.

Keywords : Aquascape, Internet Of Things, Arduino UNO, NodeMCU