ABSTRAK

RANCANG BANGUN ALAT PENGONTROL SUHU AIR PADA TANAMAN AQUASCAPE BERBASIS IOT

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Aquascape adalah seni mengatur tanaman air, batu, batu karang, koral, dan kayu apung, secara alami dan indah didalam akuarium sehingga memberikan efek seperti berkebun dibawah air. Ada beberapa faktor yang harus diperhatikan dalam proses fotosintesis antara lain yaitu pencahayaan/*lighting* sebagai pengganti sinar matahari, tingkat kekeruhan air dan suhu air pada *aquascape*. Untuk mendapatkan hasil yang maksimal pada proses fotosintesis tumbuhan *aquascape* maka perlu dilakukan perawatan secara intens dan rutin. Dari permasalahan diatas, maka peneliti ingin membuat sebuah **Rancang Bangun Alat Pengontrol Suhu Air Pada Tanaman Aquascape Berbasis Iot.** Dengan tujuan untuk membantu pemilik dalam monitoring suhu pada *aquascape* secara terus menerus Dari hasil pengujian yang didapat, dapat dianalisa bahwa semua sensor dan komponen lainnya dapat berfungsi secara otomatis. Hasil pengujian suhu ideal untuk tanaman berada di 25° C - 28° C. Jika suhu dibawah 25°C ada beberapa tanaman yang layu dan mati, namun masih ada sebagian tanaman yang masih hidup. Begitupun dengan suhu diatas 28°C ada beberapa tanaman yang layu dan mati, tapi masih ada beberapa tanaman yang hidup.

Kata Kunci : *Aquascape, Sensor DS18B20. Blynk*

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ABSTRACT

THE DESIGN OF TOOLS FOR CONTROLLING WATER TEMPERATURE IN AQUASCAPE PLANT BASED ON IOT

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Aquascaping is the art of arranging aquatic plants and rocks, rock, coral, or driftwood, naturally and beautifully in an aquarium, giving it the effect of underwater gardening. There are several factors that must be considered in the photosynthesis process, including lighting as a substitute for sunlight, the turbidity level of the water, and the water temperature in the Aquascape. To get maximum results in the photosynthetic process of Aquascape plants, intense and routine maintenance is needed. From the above problems, the researcher made a design for controlling water temperature in IOT-based Aquascape plants. The aim was to assist the owner in monitoring the temperature in the Aquascape continuously. As the result, the test result was analyzed that all sensors and other components functioned automatically. The ideal temperature test results for plants were at 25° C - 28° C. If the temperature is below 25 ° C there are some plants that wilt and die, but there are still some plants that were still alive. Likewise, temperatures above 28° C there were some plants that wither and die, but there are still some plants that live.

Keywords: Aquascape, DS18B20 Sensor. Blynk