Sistem Otomasi Penyiraman dan Pencahayaan Tanaman Buah Naga Berbasis
Internet of Things (*Dragon Fruit Plant Watering and Lighting Automation System Based on the Internet of Things*)
Bety Etikasari, S.Pd., M.Pd.

Achmad Ali Faishol
Study Program of Informatics Engineering
Majoring in Information Technology
Program Studi Teknik Informatika
Jurusan Teknologi Informasi.

ABSTRACT

One of the farmers in Jember who cultivates dragon fruit plants is Naura Farm Jember which is located on Jl. Tidar No. 27, Kloncing, Karangrejo, District. Sumbersari, Jember Regency. Since the past, Naura Farm has used the manual method for watering, namely by using a bucket and irrigation from the fields and using a drip system, while for lighting by connecting an electric cable to a 220 volt voltage source. Reported by the head of the Naura Farm garden, this method is considered less effective in cultivating dragon fruit plants. Therefore, this study aims to create an internet of things-based dragon fruit watering and lighting automation system. This research method includes problem analysis, identification of needs, design of a series of tools, development of fuzzy methods, collection and analysis of data, then drawing conclusions. In this study using fuzzy mamdani to calculate the rotation of the servo and relay on the time duration. 2. Based on the research that has been carried out, it is known that the average accuracy of the hardware is soil moisture of 99.25% with a very accurate grade, light intensity (BH1750) of 89.93% with a accurate grade, output for the time or duration of the flame. 99.99% with a very accurate grade, and the output for the servo rotation is 99.23% with a very accurate grade.

Keywords: Fuzzy Mamdani, Dragon Fruit Plant.