PROTOTYPE OF AUTOMATIC PLANTS WATERING MONITORING BASED ON ANDROID

ADI NUGROHO

Informatics Study Program Faculty of Science and Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor, Sleman, Yogyakarta
E-mail : adinugroho91539@gmail.com

Watering plants is the most important part to help plant growth. Watering plants so far still uses the manual method by watering without knowing how much water is being watered. Sometimes humans do not have time to water plants regularly and do not know how much water is needed by plants. This research was carried out by designing a system that can water plants automatically using a soil moisture sensor which is controlled by the NodeMCU ESP8266 microcontroller then the data is stored in a realtime firebase database and the data is processed to be sent to android to display the soil moisture value according to soil pH. The hardware device used is a microcontroller using NodeMCU ESP8266 which is equipped with a Wifi module and a soil moisture sensor that can detect soil moisture values. The results of this research are a soil watering system that is made to automatically water the soil and monitor soil conditions, android will receive soil moisture value data sent from the soil moisture sensor, whether dry, moist soil or wet soil with readings from the humidity sensor.

Keywords*: Microcontroller, NodeMCU ESP8266, Firebase Realtime, Soil Moisture.*