MONITORING AND CONTROLLING SYSTEM FOR WATERING AND PLANT FERTILIZATION BASED ON THE INTERNET OF THINGS

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ABSTRACT

Knowledge and technology are developing very rapidly. Therefore, we must be able to master technology and be able to compete with other countries. Currently, convenience and efficiency of time and energy are the main considerations for humans in carrying out daily activities. However, the watering carried out by plant owners is still done manually, such as someone having to hold a hose to water the plants one by one and then having to wait until all the plants are wet. Based on these problems, the author will take the title "Design of an Internet of Things-Based Plant Watering and Fertilization Monitoring System". The author will create a tool that can help someone with watering and fertilizing plants. The design of this tool works to answer problems by providing direct notifications such as soil moisture, plant watering, plant fertilization and liquid fertilizer weight via Android smartphone. In this design, a monitoring system has been successfully designed as well as automatic watering and fertilization by reading moisture levels and fertilizing according to schedule. The result is that this system can provide the right water and fertilizer requirements for plants. Then, the system sends information to an Android smartphone that has been built so that it can monitor the plants anytime and anywhere.

Keywords: Internet of Things, smartphone, plants $\longrightarrow$