PROTYOPE OF AUTOMATIC MONITORING AND CONTROL SYSTEM FOR WATERING PALM SEEDLINGS USING MICROCONTROLLER

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ABSTRACT

This final project aims to develop a design for an automatic monitoring and watering system for oil palm seedlings based on the Internet of Things (IoT) using the NodeMCU ESP8266 device and a soil moisture sensor. The aim is to make it easier to monitor soil moisture on oil palm seedlings and make it easier to determine watering times. right. This monitoring system allows users to monitor soil moisture remotely via a website that can be accessed via the internet anytime and anywhere. With an automatic watering system, the efficiency of maintaining palm tree seedlings increases because users can water automatically, saving time and energy. This project is also expected to provide benefits to other users who face difficulties in caring for palm tree seedlings optimally. In this system design, an ESP8266 microcontroller, relay, and soil moisture sensor are connected to the website. This system functions to read data from humidity sensors, send it to a database, display the data on the website. With IoT technology, this system increases the efficiency and effectiveness of watering, and ensures that the seedlings receive optimal humidity levels.