

ABSTRACT

DESIGN AND DEVELOPMENT OF THE ADOSISTERING WEB PLATFORM: IRRIGATION CONTROL AND MONITORING FOR LAND WATERING OPTIMIZATION USING WATERFALL METHOD

One of the main challenges in the agricultural sector in Indonesia is the limited availability of water resources, especially on dry land. To address this issue, a system called ADOSISTERING (Adoption of IoT-Based Drip Irrigation System and Rainwater Harvesting Reservoir) was developed as an efficient land irrigation solution. ADOSISTERING consists of two main components: IoT devices that control and monitor irrigation conditions in real-time, and a web platform that serves as a user interface for monitoring and controlling the irrigation system. This research aims to design and develop the ADOSISTERING web platform, enabling users to access sensor data, control irrigation, and monitor irrigation conditions online. The system was developed using the Waterfall method, which includes the stages of requirement analysis, system design, implementation, testing, and maintenance. The result of this research is a web platform integrated with IoT systems that can display irrigation condition information and provide control over field irrigation devices. With this platform, the irrigation process becomes more efficient, measurable, and remotely accessible.

Keywords: ADOSISTERING, Irrigation, Website, Waterfall