

ABSTRACT

This study aims to design and develop a web-based monitoring application for an Urban Farming agricultural sistem implemented at the Rooftop Farming Center (RFC) of Telkom University Surabaya. The application is designed to assist users in regularly monitoring agricultural conditions by leveraging Internet of Things (IoT) technology. The sistem is capable of monitoring various critical parameters, including pH, EC, soil temperature, nitrogen, humidity, phosphorus, and potassium. Data is collected through sensors connected to the Antares cloud platform and displayed through an intuitive and user-friendly interface, supporting more accurate decision-making. The application was developed using the Extreme Programming (XP) methodology, which is adaptive and responsive to changing user requirements. The results of this study indicate that the developed application can enhance the monitoring of IoT-based Urban Farming sistems, particularly in supporting sustainable urban agriculture practices.

Keywords: *Monitoring, Website, Rooftop Farming Center, Extreme Programming.*