

ABSTRACT

Indonesia is known as an agricultural country, which means that most of the population works in agriculture. Indonesia has extensive agricultural land and abundant and diverse natural resources that can be utilized by the Indonesian population, one of which is farming. However, agricultural land is decreasing due to an increase in population so that agricultural land is converted into buildings for residence, especially in urban areas. In addition, the need for food also increases along with the increase in population, especially for vegetables and fruit. With these problems, a system is needed that is able to help meet food needs with limited land and is also time efficient.

This final project will design a smart indoor farming system that focuses on android applications with the aim of monitoring and controlling the smart indoor farming system. The purpose of making this application is to make it easier for users to carry out monitoring and controlling and increase time efficiency in farming activities. This smart indoor farming android application is called HydraC.

The output of this HydraC application is that users can monitor on a mobile basis with additional features that make it easier for users. The parameter values displayed in the application are taken from Firebase which has stored data from smart indoor farming devices. In addition, users can also control the water pump in the application. The results of testing the application functionality show that all application functions have been running well. Android application compatibility test runs well from version 5.1 to 11. The results of qualitative testing using a questionnaire and a Likert Scale with a satisfaction value of 95.22%.

Keywords: Smart Indoor farming, Monitoring, Controlling.