

## ABSTRACT

Chrysanthemum plants are included in the floriculture group, which is a type of horticultural plant as an ornamental plant or cut flower. The need for water and light intensity are very important in the flowering period of chrysanthemum plants. The construction of a greenhouse for chrysanthemum plants with a plant watering system and artificial lighting can automatically meet the needs of suitable plants. The design of this system is based on the Internet of Things (IoT).

In answer to the problems found, this final project aims to make it easier for farmers to meet the needs of chrysanthemum plants, so that they can produce maximum flowering. Farmers can also save time by monitoring chrysanthemum plants in the greenhouse remotely. The proposed system was developed using the prototyping method and the system modeling was designed using the Antares LR-ESP201 Board, which can store sensor value data and become a reference for automatic plant watering and automatic lighting work that can be monitored remotely using the Android application and LoRa network connection.

The result of this final project is an Internet of Things (IoT) based system that can perform automatic watering and automatic lighting in the greenhouse and can be monitored remotely via an Android application using a LoRa connection network. This system will later become a reference for farmers for the development of other systems.

**Keywords:** *Chrysanthemum, Horticulture, Greenhouse, LoRa, Internet of Things (IoT).*