

## ABSTRACT

The dry season occurred in the period May - October with the dry period, there were problems with plants in Telkom University's boarding park, based on a questionnaire that had been distributed and filled out of a total of 30 respondents that included Telkom University dormitory employees 2018/2019 that 90% of the hostel employees agreed to lack watering schedule of plants at Telkom University boarding park. The lack of rainfall in May to October caused many plants to suffer from drought which caused the plants to wither to death.

In this final project, an Internet of Things-based garden system was developed. With the title "Implementation of Smart Garden Watering at Dormitory Garden Of Telkom University Using Ethernet Module on IoT-Based Raspberry Pi". The way this system works is, When sensor Soil Moisture detects soil moisture more or less than the average that has been determined, the servo will open / close the water tap on the channel. Then when the water channel is open, the Water Flow Meter will detect the water discharge released during watering. Then the data on the device is connected with Antares so that all data received by the tool can be displayed in realtime.

From the results of tests performed on the system functionality testing all functions have been going well. Then testing the functionality of the soil moisture sensor has an average value of accuracy of 100% while the water flow sensor has an average value of accuracy of 83.6%.

**Keywords:** *Garden, Internet of Things, Sensor Soil Moisture, Servo Motor, Water Flow Meter, Antares, Realtime Database, Raspberry pi.*