ABSTRACT

To obtain optimal plant growth in greenhouses, spraying pesticides, and water as well as keeping the humidity and temperature of the room is absolutely done. Yet today there are still many farmers who spray crops and regulating the circulation of the air by hand. It would require considerable effort and time as well as very dangerous, especially if the substance is sprayed a toxic substance. In addition, the limitations of the human senses are also causing conditions of humidity and temperature in the greenhouse can not be known precisely so that the intake system is based on estimates.

In this final project designed a prototype atomizer plant and control systems of air circulation in the greenhouse so that farmers can control the spraying and monitoring temperature and humidity wirelessly. The system consists of DC pumps are connected to a channel of distribution of fluid, the DC fan as a means of regulating the circulation of air that is connected to a motor driver controlled using fuzzy logic, temperature and humidity sensors are connected to the microcontroller as well as a wireless module to be connected via a smartphone device Android or computer.

From the test results , the system can work well at a distance of between 0-15 m . In addition , this system can control the temperature and humidity in accordance with the expected conditions , namely at a temperature of 250C and a humidity of 70 % RH with the fastest time towards the set point is 649 seconds and the longest time to reach the set point is 2181 seconds.

***Keywords**: Sprayer, water, pesticide, temperature, humidity, wireless, Android*