

ABSTRACT

Urban farming (urban farming) is an effort to utilize minimal space in urban areas in order to produce agricultural production using technology. One of the problems in urban farming especially potato plant is the difficulty to see the development of potato plant. An alternative solution that can be done to solve this problem is to create a system that can monitor the development of potato crops directly using aeroponic system.

The system that has been applied consists of several components namely Light Sensor (LDR), Temperature and Humidity Sensor (DHT22), Relay, and Camera NoIR. The sensor will read the intensity values of light, temperature and humidity around the plant and transmit data to the Arduino Microcontroller UNO. Then Microcontroller will process the data and will send information according to the time specified. In addition, this tool is also designed to monitor the development of plants using Android applications on smartphones.

The experimental results show that the system can only be configured in one operation mode ie manual. When manual mode is enabled, then the microcontroller will receive commands and send sensor and camera data to android app.

Keywords: Temperature and Humidity Sensor (DHT22), Light Sensor, and NoIR Camera.