

ABSTRACT

Bean sprouts are a popular type of vegetable in Indonesia. These vegetables are often used as food and are classified as vegetables that are rich in nutrients, many parties and farmers manage these vegetables into an economic activity (business).

Generally, the current way of watering bean sprouts is still done manually. This drains a lot of time and energy, especially if the amount of production of the cultivator is quite a lot, so it is very necessary to implement an embedded system so that the watering or production process can be operated automatically with a smartphone based on an Arduino IDE microcontroller, namely the bean sprout temperature and humidity sensor as the main control in this device.

In this final project research, researchers will make a tool using sensors and components of NodeMCU ESP8266 as a controller, DHT11 sensor as a temperature sensor, soil moisture sensor as bean sprouts moisture, relay with 12v pump to operate the water pump, water pump is used to pump water from the reservoir to the watering media, paralon pipe is used to drain from the pump to the watering eye and the handmade watering eye is used to remove water from the pump to the watering media so that it spreads, and will also display humidity and temperature on the LCD.

Kata Kunci: *Bean sprouts, Internet of Things, NodeMCU ESP8266, Arduino IDE*