

## **ABSTRACT**

In cultivating chili and tomato plants, special attention is needed, because if the plants do not get good conditions, the plants cannot grow and develop properly, for example if the soil moisture conditions are not suitable, the plants will be slow to bear fruit and make the scheduled harvest process delayed, wrong. One factor that affects plant development is watering, irregularities in watering can have a bad impact on plants, especially tomatoes, because tomatoes need enough water to grow, irregularity in watering is a problem in the wiwin vegetable garden. With the system built, it is hoped that it can provide a solution in monitoring and watering chili and tomato plants on a regular basis, without having to be in a location. The method used is the prototype method where the process in progress always cycles to get the expected results. From the results of the tests that have been carried out, namely automatic plant watering based on humidity, it gives a response of about 1 second. Watering using the Blynk application gives a response of about 1-2 seconds depending on the condition of the internet network used. Besides that, the value of humidity and soil pH is displayed in the Blynk application in real time, and if the humidity is  $< 60\%$ , the pump will turn on, and will stop when the humidity is  $> 65\%$ .

**Keywords:** Farmer, Microcontroller, Soil moisture, soil pH