

ABSTRACT

Water pH monitoring application is software that functions to measure the acidity level of a solution. Knowing the pH value of the solution is important to adjust the value as needed. In plant cultivation with the hydroponic system, which is one way of farming without using soil. The pH value greatly affects the absorption of nutrients needed by plants.

In this final project, will develop an android application to monitor the pH value of water in the hydroponic system. To facilitate the mobilization of the device will be equipped with wireless communication using Bluetooth. The pH and Bluetooth sensor modules consume power supply heavily while operating, sometimes causing the Arduino to reset due to power shortages. The servo motor will also choke when it is short of power, but when using power input from outside the Arduino it causes the servo to move erratically. Taking pH values using a pH sensor module with Arduino as the control center.

The final results obtained by the application can display the pH value taken using a pH sensor and processed using Arduino. Values can be seen in the application 10 seconds after the probe is lowered. The delay in the value received by the device may vary based on the voltage and current at the time of the test.

Keywords: pH, Arduino, Android, Plant, Hidroponic.