ABSTRACT

In the cultivation of wood trees, land managers or farmers must pay attention to two things in the cultivation of wood trees, namely the selection of seeds that have superior heredity and hormones. Another thing to note is the condition of the plantations that support the growth of seedlings properly and quickly. The condition of plantations that support the growth of seeds well and quickly consists of several factors, namely nutrition, sunlight, temperature, pH, water and soil moisture. By considering the effectiveness and ease of access to information for land managers or farmers in monitoring the conditions supporting the growth of tree seedlings, create a three-factor monitoring system that supports tree growth, that is sunlight, soil pH and soil moisture that can be accessed by monitoring results using a mobile application. Measurement of sunlight conditions using Ultraviolet light sensors, measurement of soil pH conditions using a soil pH sensor and measurement of soil moisture using a soil moisture sensor, reading values from each sensor will be uploaded to the database using raspberry pi. To measure the accuracy of the sensor used calibration tests were performed on each sensor by comparing sensor readings using a soil meter tester for the pH sensor and soil moisture weather forecasts on the ultraviolet ray index for sunlight for UV sensor.

Keywords: Monitoring Systems, Databases, Mobile Applications