ABSTRACT

The development of technology and information has changed human life a lot. Many types of technology are created to facilitate the activities around us. One such technology is IoT, or the Internet of Things. IoT is a technology that was created with the concept of machine automation to help human work. This can be used in various activities, one of which is the treatment of mayana plants. In caring for mayana plants, there are several factors that affect plant growth. The factors that became the reference for this research were soil moisture as a planting medium and plant lighting.

Plant watering activities that were previously done manually can now be done automatically. In addition to watering, the device is also programmed to perform automatic lighting using a lamp when the environment is cloudy or dark. The Easy Planty system has a concept for automatic watering using a pump whose motion parameters are affected by the results of soil moisture sensor readings. For automatic lighting, the parameter of whether or not the light is on is influenced by the light sensor (LDR). In addition, air humidity and ambient air temperature can also be known through the DHT11 sensor. This system is also designed to display the results of sensor readings online in real time, which can be accessed through the smartphone applications using Blink and WhatsApp.

Based on thirty rounds of testing, the data obtained for an average soil moisture of 46.2% indicates that the soil has ideal moisture. If the soil moisture condition is less than 40%, the pump will automatically pump water to the ground. As for light measurement, the sensor reading results will issue two outputs, namely 1 and 0. The output result of 0 means that the situation around the plant is sufficiently light. Meanwhile, output 1 means that the situation around the plant is lacking light, so the light will automatically turn on.

Keywords: Internet of Things, Sensor, Easy Planty, Blynk, Whatsapp