ABSTRACT

In an era of rapid technological development, the smart garden concept is becoming increasingly popular due to its ability to automate and control home electronic equipment, including automatic plant watering systems. This project aims to develop IoT-based Automatic Plant Watering System Modeling with Multi-Function Sensors. This system uses the ESP8266 as a microcontroller which is connected to the soil moisture sensor, temperature sensor and air humidity DHT11, as well as devices such as relays and water pumps. The methods used include literature review, tool design, prototyping, and testing. The project results show that the integration of IoT technology and multi-function sensors enables automatic monitoring and watering of plants based on environmental conditions in real-time via the Blynk application. In conclusion, this system can increase water use efficiency and make it easier for users to care for plants, creating a smart and adaptive solution for smart gardens.

Keywords *: smart garden, internet of things (iot), esp8266, dht11, blynk.*