Smart plant Surveillance Using Blynk IOT and Thingspeak Node MCU

Connect to a mini up because the system consumes only less power or once the power reconnects; Water management systems to be efficient are a major concern in many agricultural fields. This paper deals with the control of an irrigation system by designing the variable rate irrigation with the help of a wireless sensor network, and software for real-time in-field sensing are implemented. This irrigation system is made of two various sensors and a micro-controller unit with an embedded cloud communication module. The communication among the sensors, microcontroller, and farmer is established by their respective Login ID using Internet of Things (IoT). In this project the farmer can communicate to this irrigation system through android mobile application. The farmer can check the status of their land at any time using the app.

The implementation of a sensible irrigation system in a very land is simple and therefore the value to put in is additionally less. In this system we need of soil sensors, DHT11 (humidity & temperature) according to the size of the agriculture land. Equally irrigated land is monitored by remote location system. The various mode of operations can be achieved through the android mobile application. The user interface is provided to them by the utilization of Android Mobile Application. The most contribution of this paper is to develop hardware and software for the farmer's irrigation system.

The Proposed system is to eliminate the manual operation and to implement an entire automatic irrigation system. This system requires additional sensors with respect to the size of the farmer's land. By the implementation of this system, the farmers can able to know about their crops health in all seasons by login with their respective user id into the mobile app to check the status of their irrigation system. In case of power cut, the system can the system will automatically connect to the Wi-Fi and starts operating automatically. The values from the sensors are sent to the microcontroller. The microcontroller will send this information to the cloud which is connected to the mobile app.

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The main controlling device of the whole system is NodeMCU. Soil moisture sensor, DHT11 sensor, water motor and LED are fed to the Node MCU. The Node MCU continuously read the data from sensors and takes the necessary action accordingly. To perform this task, nodeMCU is programmed using embedded C language and Software is Arduino IDE.

Features:

1. Using IOT technology for the communicating the system and farmers.
2. The wastage of excess water in traditional system has been triumph over by using proposed system
3. Highly sensitive.
4. Power saving.

The main blocks of this project are:

1. Regulated power supply.
2. Microcontroller (NodeMCU).
3. Motor with driver.
4. Soil moisture sensor.
5. DHT11.
6. LED.

Software used:

- ARDUINO IDE STUDIO Compiler

Block diagram of the project:

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BLOCK DIAGRAM

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