Project description:

Usually farmers go a long way to their fields to water their crop land.Adequate water supply is

essential for agriculture. Crops can be damaged by either water excess or shortage, inorder to avoid

the damage smart agriculture is used.

Usually farmers this method the fields can be watered automatically when the moisture content

of the soil is below the threshold value.

Farmer gets the notification about the status of his field in the moisture content, humidity and

temperature is below threshold value, in the form of message, after viewing the message with the

help of user interface, farmer can turn on motor which supply water to the field, if the water content

is equal to threshold value then he will get a message to turn off the motor. Even farmer can view

the status in the form of graph.

The basic things that will be tried to be monitored in this research are moisture, temperature and

humidity content of the soil. The sensors used in the research will work in following steps:

1. The sensors will send the data collected from the soil in a regular basis after definite span of time.

2. The data thus collected will undergo a comparison with the given threshold value to the system.

3. If the data collected from sensors is below or above threshold value then farmer receive the

notification about soil.

4. Based on the data, farmer will on/off the motor.

Existing System:

Usually farmers go a long way to their fields to water their crop land. Adequate water supply is

essential for agriculture; crops can be damaged by either water excess or shortage.It is tedious to go

near the field and on the water supply whenever moisture content is low.

Proposed System:

• using smart agriculture method the fields can be watered automatically when the moisture

content, of the soil is below the threshold value

• The farmer gets the notification about the status of his field if the moisture content, humidity

and temperature is below threshold value, in the form of message, after viewing the message

with the help of user interface, farmer can turn on motor which supply water to the field, if

the water content is equal to threshold value then he will get a message to turn of the motor.

Node JS:

Node.js is an open-source, cross-platform JavaScript run-time environment that executes

JavaScript code outside of a browser. JavaScript is used primarily for client-side scripting, in which

scripts written in JavaScript are embedded in a webpage&#39;s HTML and run client-side by a JavaScript

engine in the user&#39;s web browser. Node.js lets developers use JavaScript to write command line tools

and for server-side scripting—running scripts server-side to produce dynamic web page content

before the page is sent to the user&#39;s web browser. Consequently, Node.js represents a &quot;JavaScript

everywhere&quot; paradigm, unifying web application development around a single programming

language, rather than different languages for server side andclient side scripts

MONGO DB:

MongoDB is a cross-platform document-oriented database program. Classified as a NoSQL

database program, MongoDB uses JSON-like documents with schemata. MongoDB is developed by

MongoDB Inc. and licensed under the Server Side Public License

MOSQUITTO

Eclipse Mosquitto is an open source (EPL/EDL licensed) message broker that implements the

MQTT protocol versions 3.1 and 3.1.1. Mosquitto is lightweight and is suitable for use on all devices

from low power single board computers to full servers.

The MQTT protocol provides a lightweight method of carrying out messaging using a

publish/subscribe model. This makes it suitable for Internet of Things messaging such as with low

power sensors or mobile devices such as phones, embedded computers or microcontrollers.