SYNOPISIS MAJOR PROJECT PHASE – II

PROJECT NAME :- Smart Agriculture Using IOT.

Problem statement :-

Agriculture is done in every country from ages. Agriculture is the science and art of cultivating plants. Agriculture was the key development in the rise of sedentary human civilization. Agriculture is done manually from ages. As the world is trending into new technologies and implementations it is a necessary goal to trend up with agriculture also. IOT plays a very important role in smart agriculture. IOT sensors are capable of providing information about agriculture fields. we have proposed an IOT and smart agriculture system using automation. This IOT based Agriculture monitoring system makes use of wireless sensor networks that collects data from different sensors deployed at various nodes and sends it through the wireless protocol. This smart agriculture using IOT system is powered by Arduino, it consists of Temperature sensor, Moisture sensor, water level sensor. When the IOT based agriculture monitoring system starts it checks the water level, humidity and moisture level. It sends SMS alert on the phone about the levels. Sensors sense the level of water if it goes down, it automatically starts the water pump. If the temperature goes above the level, fan starts. This all is displayed on the LCD display module. This all is also seen in IOT where it shows information of Humidity, Moisture and water level with date and time, based on per minute. Temperature can be set on a particular level, it is based on the type crops cultivated. If we want to close the water forcefully on IOT there is button given from where water pump can be forcefully stopped.

Objectives :-

Here the main objective is to design Smart agriculture to provide easy way to monitor field for farmers. Giving quality and quantityto the crops using sensors to farmers at critical stages with advanced facilities have become one of the major problems in the modern hectic world.

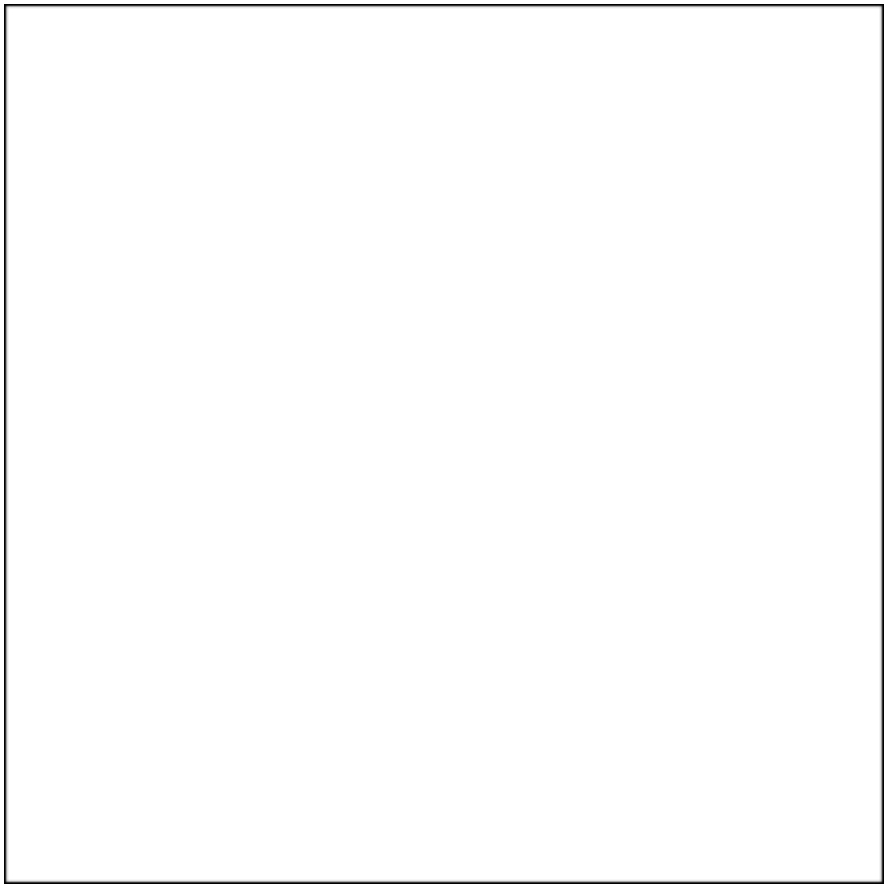
Component Required :-

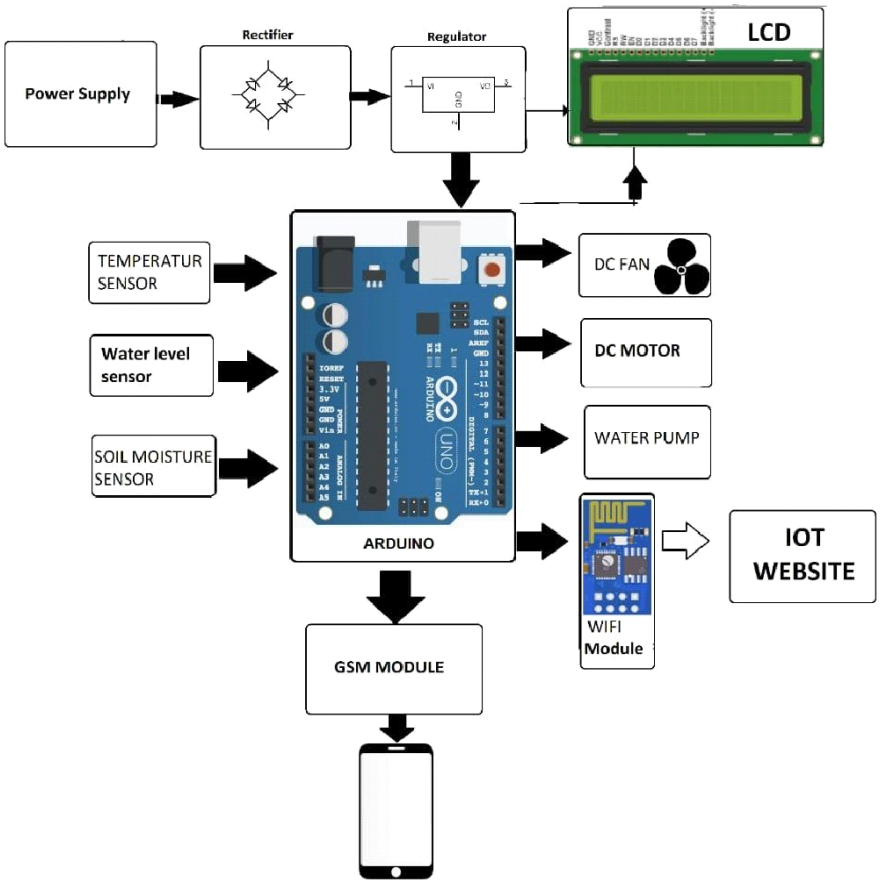
- Moisture Sensor
- Humidity Temperature sensor
- NodeMcu
- Relay

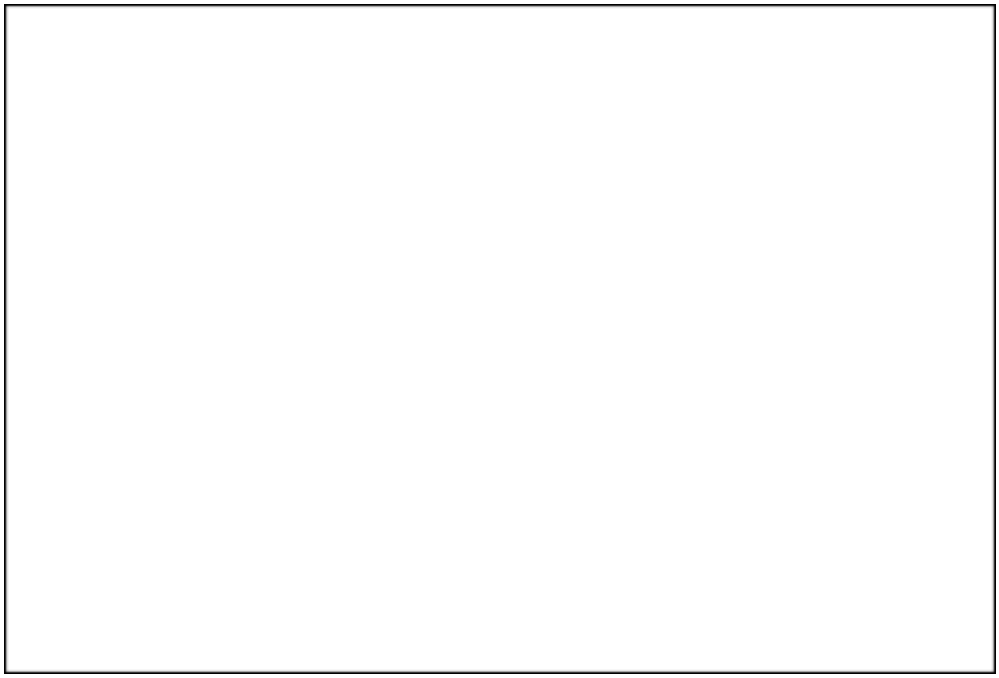
- Pump+Pipe
- Jumper wire
- Power supply
- Arduino UNOSoil
- LCD display
- Potentiometer(For LCD)
- Breadboard
- Test setup with 3 cups of soil
- Battery(9V)

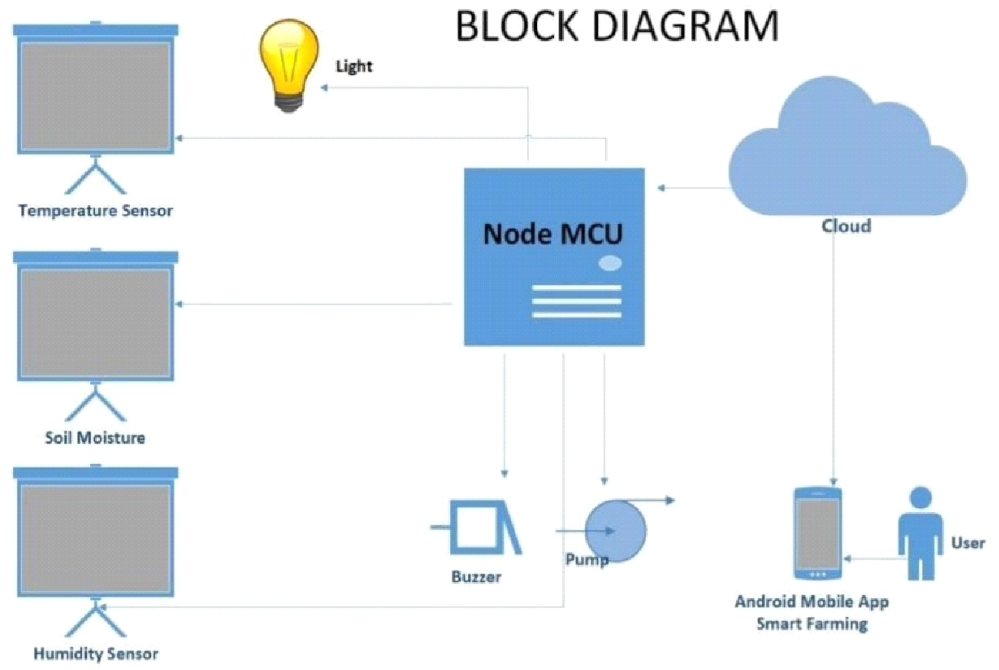
CONCLUSION :- IoT changes the way the facilities are delivered to the Agriculture industry. These technologies improve the product, causing a larger effect by bringing together minor changes.

Circuit Diagram of Existing System :-




Power Supply
Rectifier
Regulator
LCD
TEMPERATUR SENSOR
Water level sensor
SOIL MOISTURE SENSOR
ARDUINO
DC FAN
DC MOTOR
WATER PUMP
WIFI Module
IOT WEBSITE
GSM MODULE





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