Smart Farmer - IOT Enabled Smart Farming Application

SPRINT -1

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Connecting Sensors with Arduino using C++ code

```
#include "Arduino.h" #include
"dht.h"
#include "SoilMoisture.h"
#define dht_apin A0
const int sensor_pin = A1;
//soil moisture int pin_out = 9;dht DHT;
int c=0;
void setup()
{
pinMode(2, INPUT); //Pin 2 as INPUT
pinMode(3, OUTPUT); //PIN3 as OUTPUT
 pinMode(9, OUTPUT);//output for pump
}
voidloop()
{
  if (digitalRead(2) == HIGH)
  {
  digitalWrite(3, HIGH);                    // turn the LED/Buzz ON
  delay(10000); // wait for 100 msecond
  digitalWrite(3, LOW); // turn theLED/Buzz OFF delay(100);
  }
   Serial.begin(9600);
   delay(1000);
      DHT.read11(dht_apin);            //temperature
      float h=DHT.humidity;
```

```
float                   t=DHT.temperature;
delay(5000);
Serial.begin(9600); float
moisture_percentage;
int sensor_analog;sensor_analog          =
analogRead(sensor_pin);
moisture_percentage = ( 100 - ( (sensor_analog/1023.00) * 100 ) );
float m=moisture_percentage; delay(1000); if(m<40)//pump
{ while(m<40)
{
digitalWrite(pin_out,HIGH);      //open pump sensor_analog =
analogRead(sensor_pin);
moisture_percentage = ( 100 - ( (sensor_analog/1023.00) * 100 )
); m=moisture_percentage; delay(1000);
}
digitalWrite(pin_out,LOW);                          //closepump
} if(c>=0)
{
mySerial.begin(9600);
delay(15000);
Serial.begin(9600);
 delay(1000);
Serial.print("\r"); delay(1000);

Serial.print((String)"update-
>"+(String)"Temprature="+t+(String)"Humidity="+h+(String
)"Moisture="+m);
delay(1000);
    }

}
```

Circuit Diagram