Smart Farmer-IOT Enabled Smart Farming Application

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SPRINT-1

TITLE	**Smart Farmer-IOT Enabled Smart Farming Application**
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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);
//PIN 3 as OUTPUT pinMode(9, OUTPUT);//output for pump
}     void loop()
{
  if (digitalRead(2) == HIGH)
  {
  digitalWrite(3, HIGH);                    // turn the LED/Buzz ON
  delay(10000); // wait for 100 msecond digitalWrite(3, LOW); // turn the
  LED/Buzz OFF delay(100);
  }
   Serial.begin(9600);
     delay(1000);
    DHT.read11(dht_apin);          //temprature     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