Smart Farmer-IOT Enabled Smart Farming Application

SPRINT-1

TITLE	**Smart Farmer-IOT Enabled Smart Farming Application**
DOMAIN NAME	INTERNET OF THINGS
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Arduino using C++ code To Connect Sensors

```
#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);
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+(S
tring)"Moisture="+m); delay(1000);

}

 }
```

Circuit Diagram :