Sprint 1

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Project Name	Smart Farmer-IoT Enabled smart Farming Application

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);
 Serialprint((String)"update-
>"+(String)"Temperature="+t+(String)"Humidity="+h+(Str
ing )"Moisture="+m);
```

```
delay(1000);
}
 }
```

circuit diagram: