

**SPRINT 1**

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Project Name	Project – 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);

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

## Circuit Diagram

