

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 moistureint pin_out = 9;  
dht DHT; int c=0;  
void setup()  
{  
pinMode(2, INPUT); //Pin 2 as INPUT pinMode(3, OUTPUT);  
//PIN 3 as OUTPUTpinMode(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 OFFdelay(100);
}

Serial.begin(9600);
    delay(1000);
    DHT.read11(dht_apin); //tempraturefloat
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

