

MEPCO SCHLENK ENGINEERING COLLEGE

Department of Electronics and Communication Engineering

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PROJECT DEVELOPMENT PHASE

TEAM ID : PNT2022TMID18128

TITLE : Smart Farmer- IoT Enabled Smart Farming Application

DOMAIN NAME : Internet of Things

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SPRINT 1

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); //PIN3 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 theLED/Buzz OFF
delay(100);
}

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





