

Smart Farmer-IOT Enabled Smart Farming Application

IBM NALAIYATHIRAN

SPRINT-1

TITLE	Smart Farmer-IOT Enabled Smart Farming Application
DOMAIN NAME	INTERNET OF THINGS
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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 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

