

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

