Smart Farmer - IoT Enabled Smart Farming Application

SPRINT-1

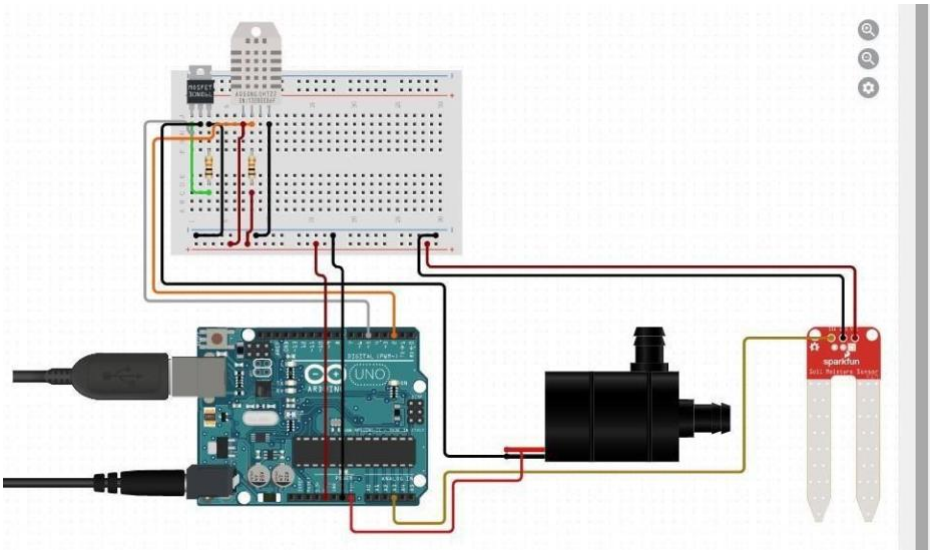
Project ID name	PNT2022TMID50618

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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