SPRINT DELIVERY – I

Project Name: SmartFarmer-Iot Enabled SmartFarming Application.

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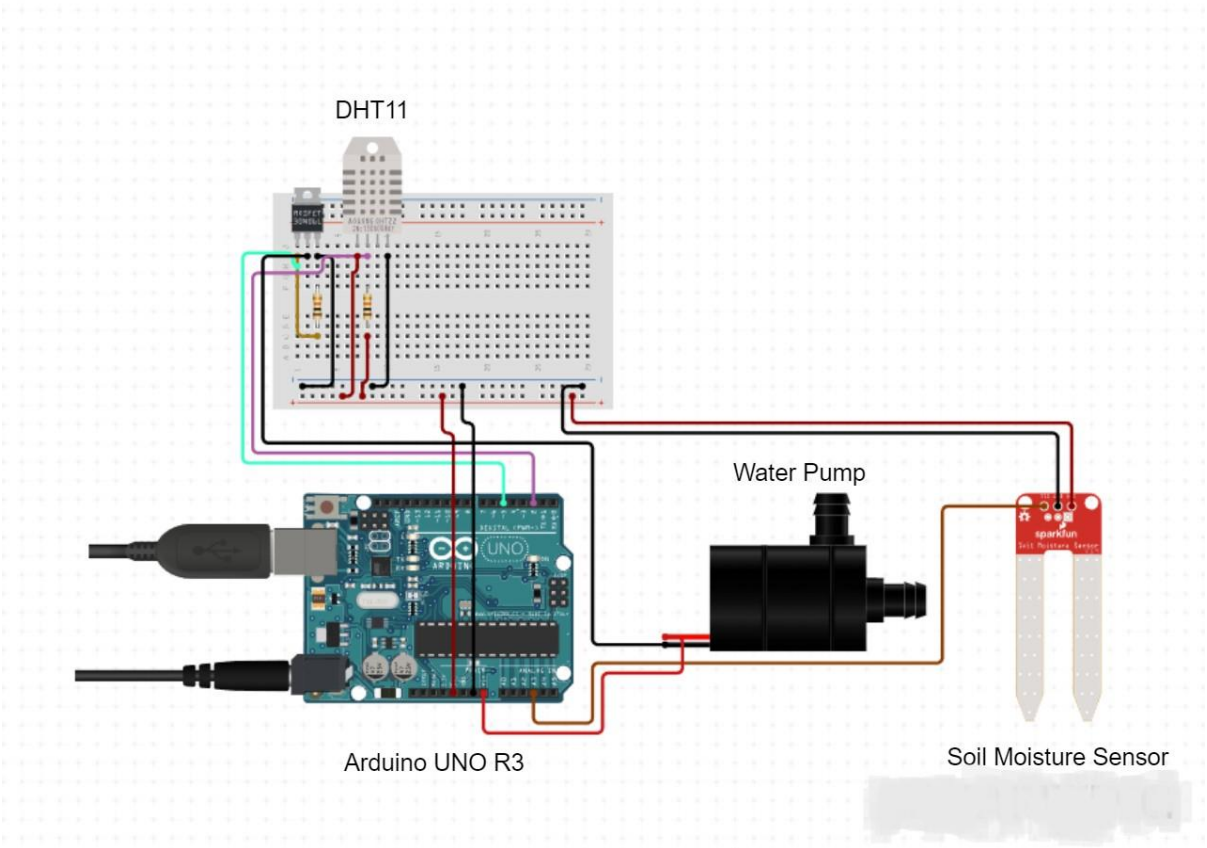
CONNECTING ARDUINO WITH SENSORS

Program:

```
#include "DHT.h"
#define DHTPIN 2     //DHT sensor is connected to digital pin 2
#define DHTTYPE DHT11 //DHT type is DHT11
DHT dht(DHTPIN,DHTTYPE)
int soilMoisturePin = A3;
float moistureValue;
float moisturePercentage;
void setup(){
    Serial.begin(9600);
    pinMode(5,OUTPUT);  //N-channel MOSFET is connected digital pin 5 to which
submersible pump is connected
    dht.begin();
}
void loop(){
    float h = dht.readHumidity();  //Read humidity value from dht
    float t = dht.readTemperature();  //Read Temperature value from dht
    Serial.print(F("Humidity:"));
    Serial.print(h);
    Serial.print(F("Temperature:"));
    Serial.print(t);
    Serial.print(F("°C "));
    moistureValue = analogRead(soilMoisturePin);  //Read SoilMoisture value
from SoilMoistureSensor
    moisturePercentage = (100-((moistureValue/1023.00)*100)); //Calculates the
SoilMoisture in percentage
    Serial.print(F("Moisture:"));
    Serial.print(moisturePercentage);
    Serial.print(F("%"));
    while(moisturePercentage<40){
        digitalWrite(5,HIGH);  //Turns MOTOR PUMP ON
        moistureValue = analogRead(soilMoisturePin);
        moisturePercentage = (100-((moistureValue/1023.00)*100));
        delay(1000);
    }
    digitalWrite(5,LOW);
}
```

Circuit Diagram:



Output:

Humidity:50% Temperature:75.5°C Moisture: 45%

Humidity:55% Temperature: 72.5°C Moisture:40%

Humidity:65% Temperature: 73.5°C Moisture:50%

Humidity:75% Temperature: 75.2°C Moisture:60%

Humidity:95% Temperature: 75.4°C Moisture:70%

Humidity:80% Temperature: 75.7°C Moisture:80%

Humidity:75% Temperature: 76.5°C Moisture:90%