Smart Farm Project - 2020

Guide for Connecting Parts

1. **DHT11 Sensor** (Temperature and Humidity):
    - TEMP_PIN to analog pin A0.
    - HUM_PIN to analog pin A1.
2. **Soil Moisture Sensors**:
    - Connect 5 soil moisture sensors to analog pins A0 through A4.
3. **Relays**:
    - Relay for temperature control connected to digital pin 3.
    - Relay for humidity control connected to digital pin 4.
    - Relay for water pump connected to digital pin 13.
4. **Bluetooth Module** (e.g., HC-05 or HC-06):
    - RX pin of the module to TX pin on Arduino (pin 11).
    - TX pin of the module to RX pin on Arduino (pin 10).
    - Use Bluetooth for manual relay control by sending '1' to turn on and '0' to turn off the water pump. Send 't' to test Bluetooth connection by ringing the buzzer.
5. **Buzzer**:
    - Connect the buzzer to digital pin 9.
6. **LED Indicators**:

- **Temperature High**: Digital pin 6.
- **Temperature Low**: Digital pin 7.
- **Humidity High**: Digital pin 8.
- **Humidity Low**: Digital pin 5.
- **Soil Moisture High**: Digital pin 10.
- **Soil Moisture Low**: Digital pin 11.

Code : https://github.com/dasitha-dinith-dilshan/Smart-Farm-Project-Arduino.git

Explanation

- This code will show real-time readings for temperature, humidity, and soil moisture on the serial monitor.
- LED indicators will light up depending on whether the temperature, humidity, and soil moisture levels are high or low.
- Bluetooth allows manual control of the water pump (on with '1', off with '0'). The buzzer can be tested by sending 't'.