Project 4
Temperature and Humidity Control System

Project Description

- The aim of this project is to design and implement a system that helps to control temperature and humidity with subsequent responses.
- The project uses a Temperature and Humidity sensor, DHT11 to sense any temperature and humidity change on the environment, which uses capacitive humidity sensor and a thermistor to measure the surrounding air and spits out a signal on the data pin.

Components involved

- Arduino UNO R3 Board
- DHT11
- LCD (16x2)
- Jumper wires
- Resistor(220 ohms)
- Potentiometer
- Breadboard

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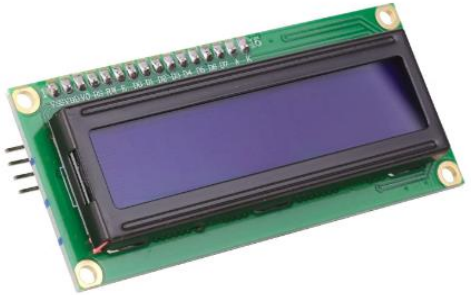
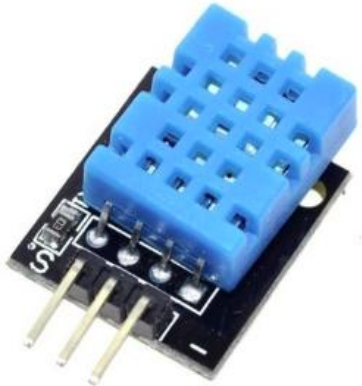


LCD (16x2)

Arduino UNO R3 board

220 ohms

Potentiometer



DHT11

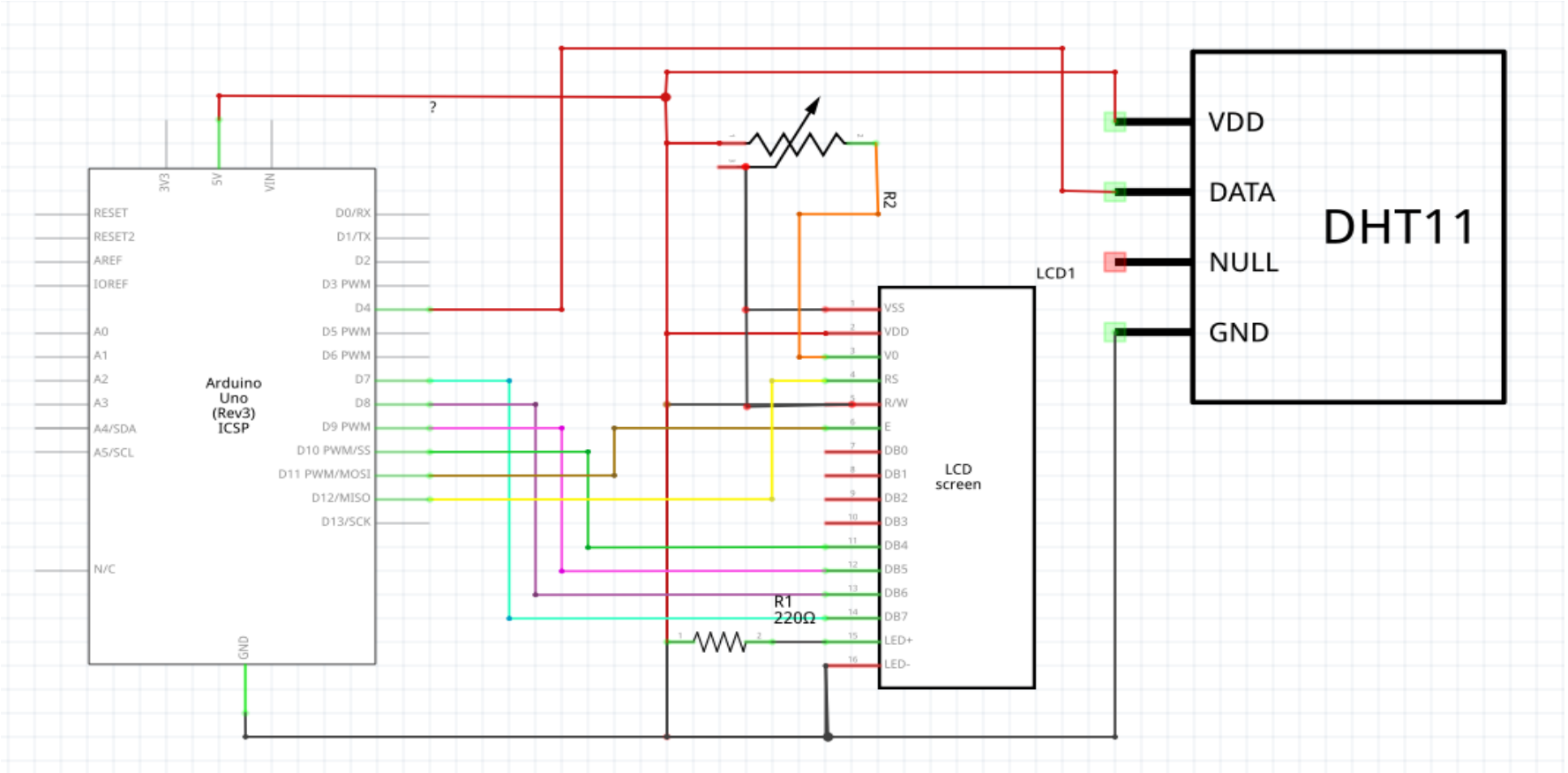
Breadboard

Jumpers

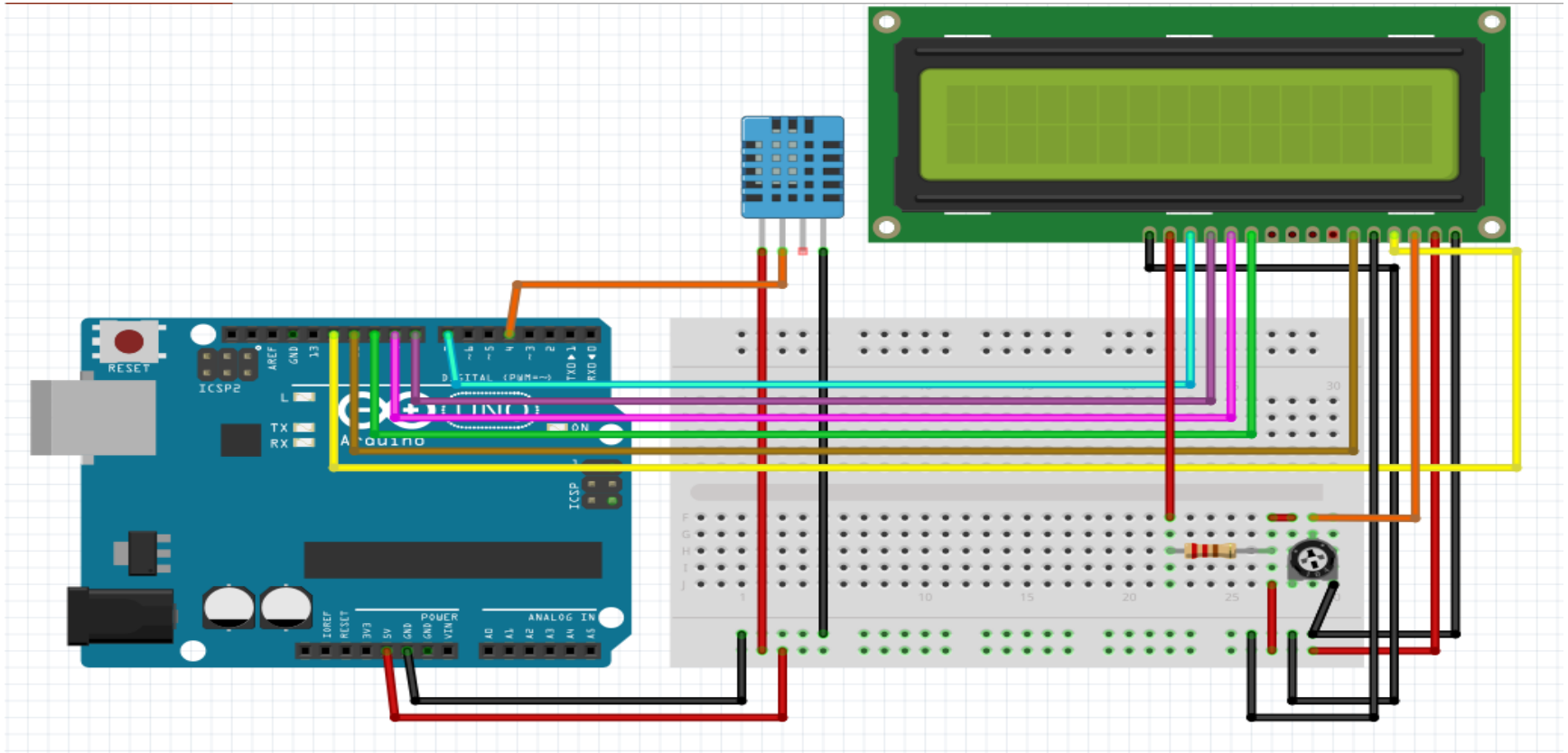
Working principle of DHT11

- DHT11 calculates the relative humidity by measuring the electrical resistance between two electrodes.
- The humidity sensing component of the DHT11 is a moisture holding substrate with the electrodes applied to the surface.
- The change in resistance between two electrodes is proportional to the relative humidity.

Schematic circuit



Breadboard Circuit



Applications of the Project

- It can be used to controll the electric fan and A/C machines
- It can be used in large electrical circuits and systems used in communications that require regular components, devices and system maintanance due to overheating and water vapour
- It can be used in weather forecasting


Thank you!