Advanced Embedded Systems

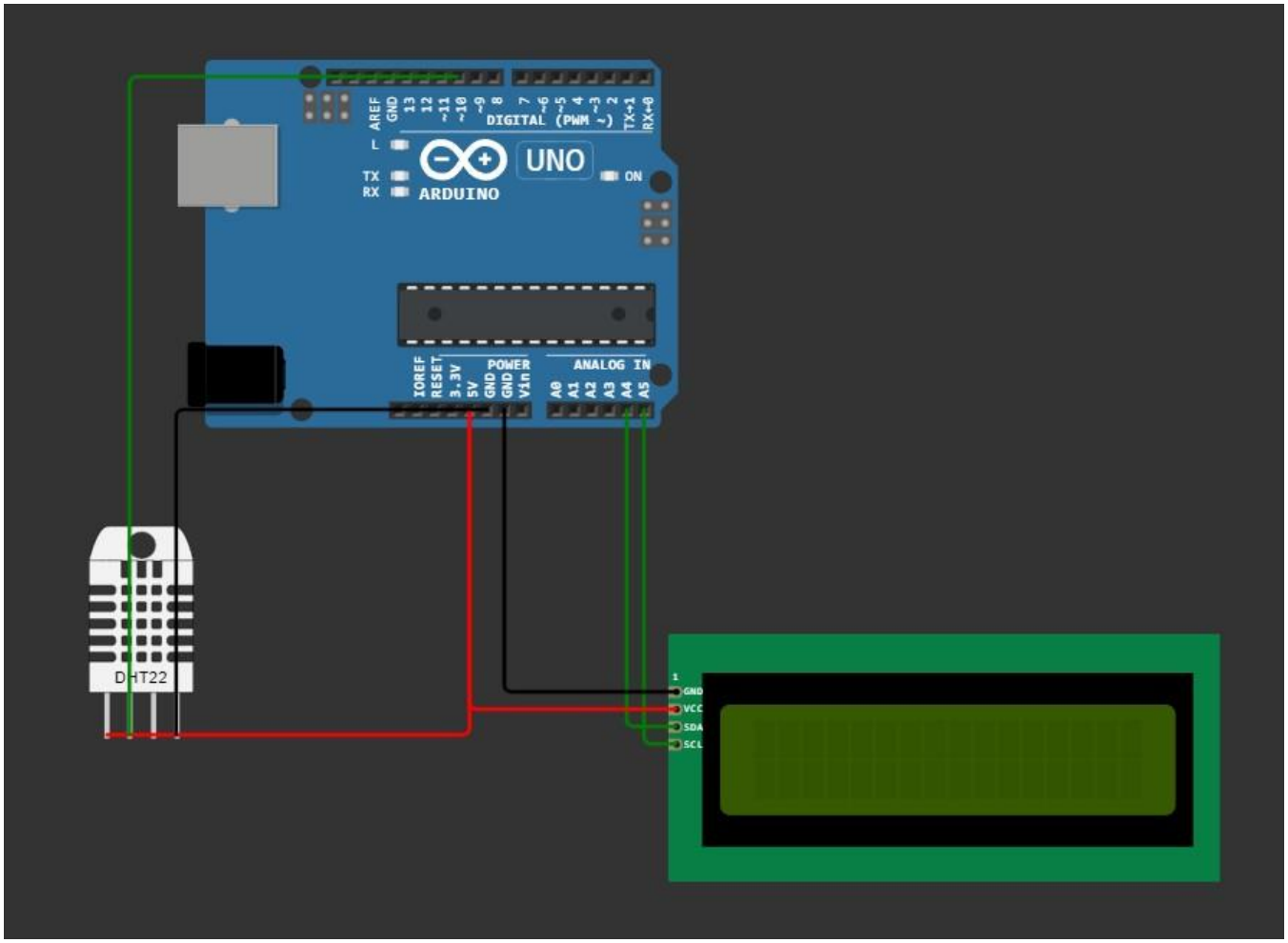
Mini Project

Aim: Using Arduino UNO, display temperature and humidity on LCD display which is being sensed by DHT22.

Components:

- Arduino UNO
- USB 2.0 Cable Type A/B
- LCD I2C (16 rows, 2 columns)
- DHT22
- Jump Wires (Male / Female)

Circuit Diagram:



Connections:

Groups	Pins	
	From	To
Arduino to DHT	10	SDA
	5V	Vcc
	GND	GND
Arduino to LCD	5V	Vcc
	GND	GND
	A4	SDA
	A5	SCL

Source Code:

```
#include <dht.h>
#include <LiquidCrystal_I2C.h>
#define DHT22_PIN 10
dht DHT;
LiquidCrystal_I2C lcd(0x27, 16, 2);
int cursorColumn = 0;
void setup() {      // put your setup code here, to run once:
  lcd.init();
  lcd.backlight();
}

void loop() {      // put your main code here, to run repeatedly:
  int chk= DHT.read(DHT22_PIN);
  lcd.setCursor(0,0);
  lcd.print("Temperature: ");
  lcd.setCursor(12,0);
  lcd.print(DHT.temperature);
  lcd.setCursor(0,1);
  lcd.print("Humidity: ");
  lcd.setCursor(12,1);
  lcd.print(DHT.humidity);
  delay(500);
}
```