MSC CS – I

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Advanced Embedded System

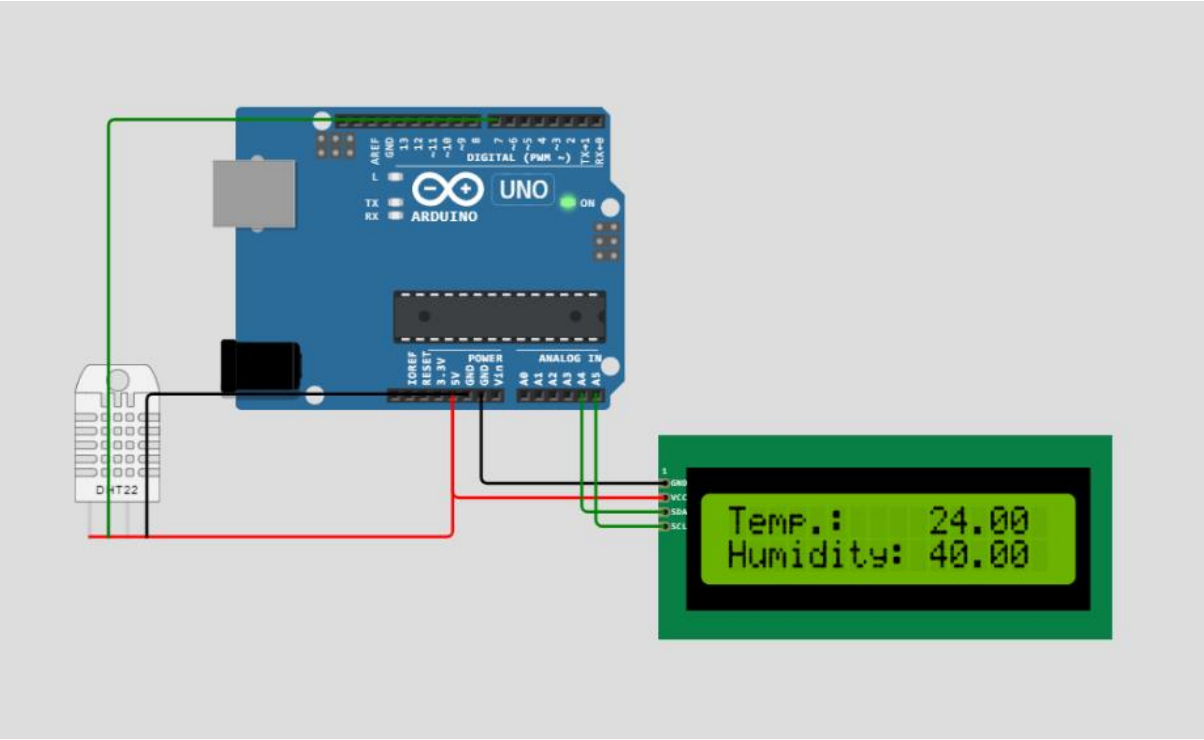
Mini Project

Aim: Using Arduino UNO, display temperature and humidity on LCD display which is being sensed by DHT11

Components:

- Arduino UNO (1x).
- USB A-B cable (1x).
- LCD I2C (2 rows, 16 columns) (1x).
- DHT11 temperature and humidity sensor (1x).
- Jump Wires (Male / Female) (7x).

Circuit Diagram:



Connections:

DTH22

Pin1 --> 5v and 10k ohm resistor

Pin2 --> Arduino Pin8 and 10k ohm resistor

Pin3 --> no connection

Pin4 --> Gnd

LCD Screen

Pin1 --> Gnd

Pin2 --> 5v

Pin3 --> Arduino Pin A4

Pin4 --> Arduino Pin A5

Source Code:

```
#include <dht.h>
#include <LiquidCrystal_I2C.h>
#define DHT22_PIN 7
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("Temp.: ");
  lcd.setCursor(10, 0);
  lcd.print(DHT.temperature);
  lcd.setCursor(0, 1);
  lcd.print("Humidity: ");
  lcd.setCursor(10, 1);
  lcd.print(DHT.humidity);
  delay(1000);
}
```