

# AES Mini Project

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

## **Description:**

### **1.Arduino:**

- Arduino is an open-source platform used for building electronics projects.
- Arduino consists of both a physical programmable circuit board and a piece of software, or IDE runs on your computer, used to write and upload computer code to the physical board.
- Arduino UNO has 14 digital pins and 6 analog pins.

### **2.DHT11:**

- DHT11 is a low cost digital sensor for sensing temperature and humidity.
- This can be easily interfaced with any microcontroller like Arduino, Raspberry Pi etc to measure humidity and temperature instantaneously.

### **3.LCD:**

- A liquid-crystal display (LCD) is a flat-panel display or other electronically modulated optical device that uses the light-modulating properties of liquid crystals combined with polarizer.
- Liquid crystals do not emit light directly, instead using a backlight or reflector to produce images in color or monochrome.
- It is a 16 x 2 LCD display. That is, it has 16 columns and 2 rows.

**Required Components:**

- Arduino Uno (1x)
- LCD 16 x 2 (1x)
- DHT11 (1x)
- Jump Wires

**Connections:**

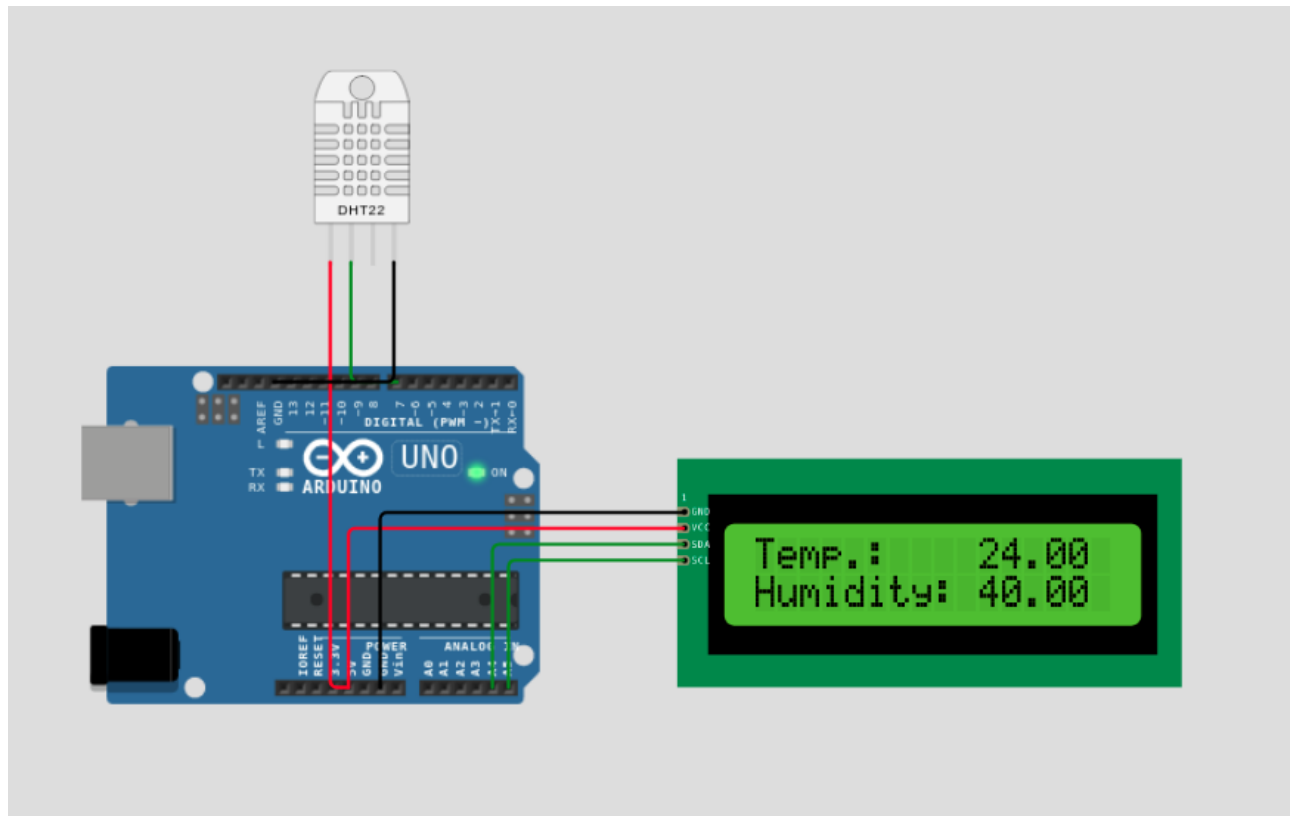
1. Between Arduino and DHT11

Arduino	DHT11
DP 7	SDA
GND	GND
5V	VCC

2. Between Arduino and LCD

Arduino	LCD
A4	SDA
A5	SCL
GND	GND
5V	VCC


## Circuit Diagram:



## Project Link:

[Click here to check project](#)

## Code:



```
#include <dht.h>
#include <LiquidCrystal_I2C.h>
dht DHT;
LiquidCrystal_I2C lcd(0x27, 16, 2);

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(7);
    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);
}
```