| **DHT11 Pin** | **Arduino UNO Pin** | | **Function** | |
| --- | --- | --- | --- | --- |
| VCC | 5V | | Power | |
| GND | GND | | Ground | |
| DATA | Digital Pin 2 | | Data Signal | |
|  |  | |  | |
| | **Potentiometer Pin** | **Connects to** | | --- | --- | | One side | GND | | Other side | 5V | | Middle pin | LCD Pin 3 (VO) | |  | |  | |
|  |  | |  | |
|  |  | |  | |
|  |  | |  | |
|  |  | |  | |
|  |  | |  | |
|  |  | |  | |
| **LCD Pin** | **Name** | **Connects To** | |

|  |  |  |
| --- | --- | --- |
| 1 | VSS | GND |

|  |  |  |
| --- | --- | --- |
| 2 | VDD | 5V |

|  |  |  |
| --- | --- | --- |
| 3 | VO | Middle pin of Potentiometer (sides go to GND & 5V) |

|  |  |  |
| --- | --- | --- |
| 4 | RS | Digital Pin 7 |

|  |  |  |
| --- | --- | --- |
| 5 | RW | GND |

|  |  |  |
| --- | --- | --- |
| 6 | E | Digital Pin 8 |

|  |  |  |
| --- | --- | --- |
| 11 | D4 | Digital Pin 9 |

|  |  |  |
| --- | --- | --- |
| 12 | D5 | Digital Pin 10 |

|  |  |  |
| --- | --- | --- |
| 13 | D6 | Digital Pin 11 |

|  |  |  |
| --- | --- | --- |
| 14 | D7 | Digital Pin 12 |

|  |  |  |
| --- | --- | --- |
| 15 | A | 5V (through 220Ω resistor recommended) |

|  |  |  |
| --- | --- | --- |
| 16 | K | GND |

#include <DHT.h>

#include <LiquidCrystal.h>

// DHT setup

#define DHTPIN 2 // DHT data pin connected to Arduino pin 2

#define DHTTYPE DHT11 // DHT11 sensor

DHT dht(DHTPIN, DHTTYPE);

// LCD RS, E, D4, D5, D6, D7

LiquidCrystal lcd(7, 8, 9, 10, 11, 12);

void setup() {

Serial.begin(9600);

dht.begin();

lcd.begin(16, 2); // 16x2 LCD

lcd.print("Initializing...");

delay(2000);

lcd.clear();

}

void loop() {

float temp = dht.readTemperature();

float hum = dht.readHumidity();

if (isnan(temp) || isnan(hum)) {

lcd.clear();

lcd.print("Sensor error");

return;

}

lcd.setCursor(0, 0);

lcd.print("Temp: ");

lcd.print(temp);

lcd.print(" C");

lcd.setCursor(0, 1);

lcd.print("Hum: ");

lcd.print(hum);

lcd.print(" %");

delay(2000);

}