**قطعات مورد نیاز:**

1\_arduino101

2\_سنسور دمای DHT22

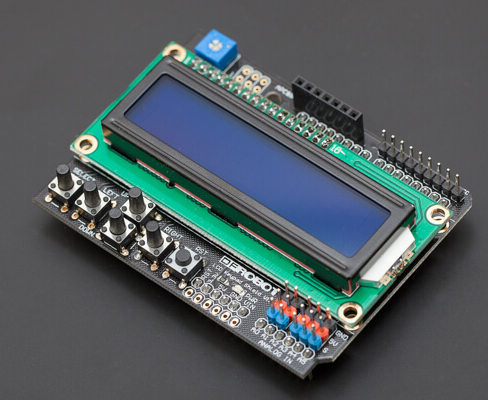
3\_سیم جامپر

4\_ال ای دی (دو عدد)ترجیحا قرمز رنگ

5\_مقاومت 10000 اهمی

6\_مقاومت 330 اهمی

7\_ال سی دی 2\*16



8\_برد بورد

**برنامه :**

/\*By Alexis Santiago Allende \*/

/\*Last update: 12/03/2017\*/

#include "DHT.h"//DHT sensor Library

#include <LiquidCrystal.h>//LCD Library

#define DHTPIN 12 //Define sensor pin(pin 12)

#define DHTTYPE DHT22 //What sensor use

DHT dht(DHTPIN, DHTTYPE);//Create sensor object

LiquidCrystal lcd(8, 9, 4, 5, 6, 7);//Create lcd object using this pins 8,9,4,6,7

boolean a=LOW,b=HIGH;

float h=0,t=0;

const int ledPin = 3; //LED pins for temperature control

const int ledPin2 = 2;

long previousMillis = 0;

long interval = 2000; //Read sensor each 2 seconds

void setup() {

lcd.begin(16, 2); //Start lcd

lcd.setCursor(0,0); //Set in position 0,0

// set the digital pin as output:

pinMode(ledPin, OUTPUT);//Change to output my pins

pinMode(ledPin2, OUTPUT);

dht.begin();//Start DHT22 sensor

digitalWrite(ledPin2,LOW);//Turn off LED

digitalWrite(ledPin,LOW);//Turn off LED

lcd.print("Tempera:");// print in lcd this word

lcd.setCursor(0,1);//Change cursor position

lcd.print("Humedad:");// print in lcd this word

}

void loop()

{

unsigned long currentMillis = millis();//time elapsed

if(currentMillis - previousMillis > interval) //Comparison between the elapsed time and the time in which the action is to be executed

{

previousMillis = currentMillis; //"Last time is now"

h = dht.readHumidity();//humidity value

t = dht.readTemperature();//temperature value centigrades if you want farenheit change to

//t = dht.readTemperature(true);

//Below is for print data sensors in lcd

lcd.setCursor(10,0);

lcd.print(t);

lcd.setCursor(10,1);

lcd.print(h);

if(t>=25 && a==LOW)//if temperature above of 25 degrees

{

digitalWrite(ledPin,HIGH);//Active air conditioner

digitalWrite(ledPin2,LOW);

a=HIGH;

b=LOW;

}

else if(t<=23&&b==LOW)//if temperature is under 23 degrees

{

digitalWrite(ledPin2,HIGH);

digitalWrite(ledPin,LOW);//Turn off air conditioner

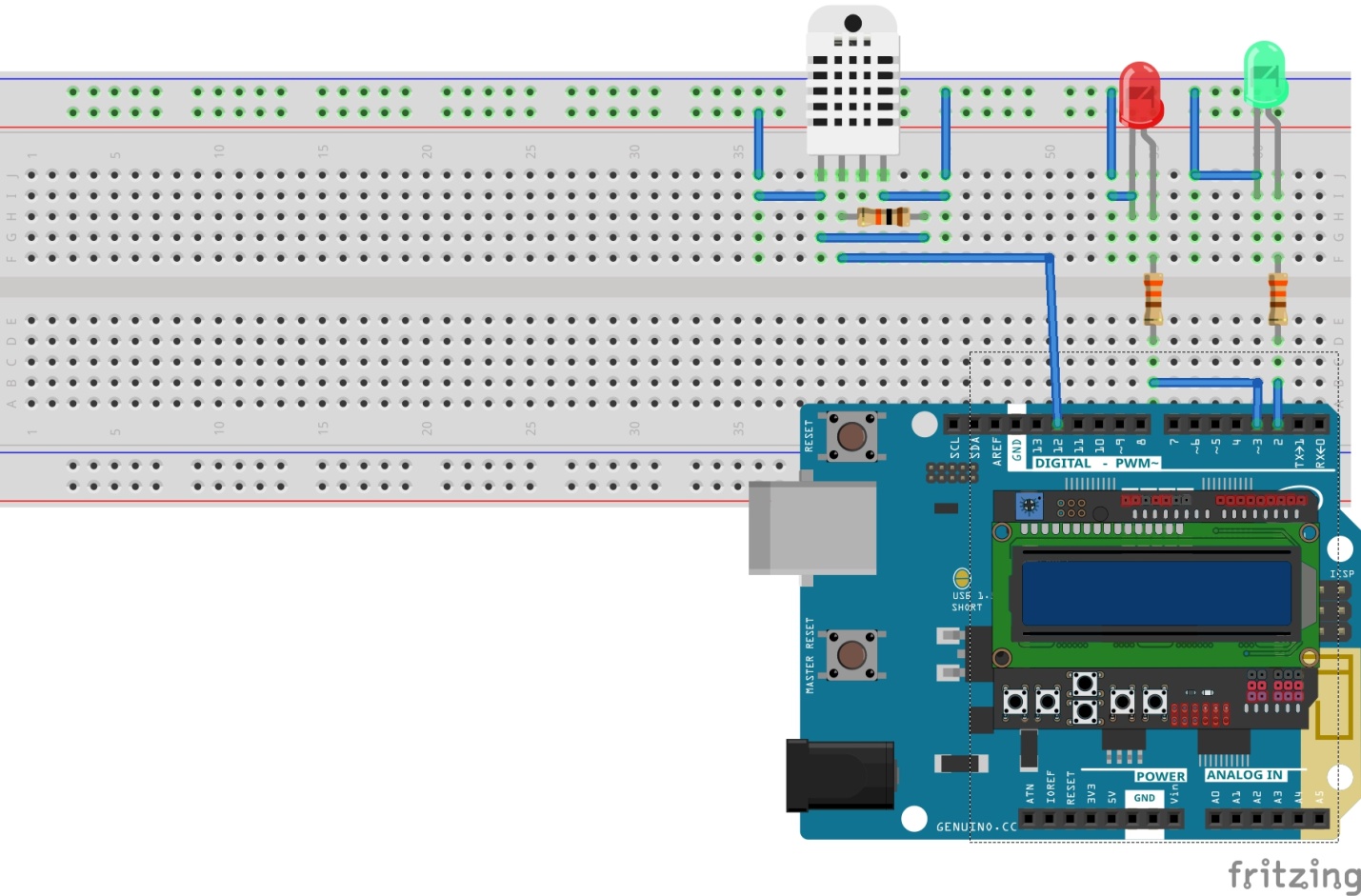
a=LOW;

b=HIGH;

}

}

}

**نقشه: **