

Arduino code to test the LM35

```
#include <Wire.h> // Comes with Arduino IDE

#include <LiquidCrystal_I2C.h>

float temp; //Variable where we will stock the temperature value

int tempPin = 0; //Pin used with the sensor output here it's A0


// set the LCD address to 0x27 for a 20 chars 4 line display

// Set the pins on the I2C chip used for LCD connections:

//          addr, en,rw,rs,d4,d5,d6,d7,bl,blpol

LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE); // Set the LCD
I2C address

void setup() {

  Serial.begin(9600);

  lcd.begin (20,4);

}

void loop() {

  temp = analogRead(tempPin); //Reading the value from the analog input

  temp = temp * 500/1023; //Sensor calibration to get the real value

  lcd.clear();

  lcd.setCursor (0,0); //Start writing on 0.0 on lcd screen

  lcd.print("Temperature");

  lcd.setCursor (0,1);

  lcd.print(temp); //Temperature value

  lcd.print ((" C")); //Celsius of course :D

  delay(1000); //Refresh every 1s

}
```

Greenhouse ventilation system code

```
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// Get the LCD I2C Library here:

// https://bitbucket.org/fmalpartida/new-liquidcrystal/downloads


#include <Wire.h> // Comes with Arduino IDE

#include <LiquidCrystal_I2C.h>

#include <Stepper.h>


#define STEPS 2038 // the number of steps in one revolution of your motor
(28BYJ-48)


Stepper stepper(STEPS, 8, 10, 9, 11);

float Vout;

float Temp;

// set the LCD address to 0x27 for a 20 chars 4 line display

// Set the pins on the I2C chip used for LCD connections:

//          addr, en,rw,rs,d4,d5,d6,d7,bl,blpol

LiquidCrystal_I2C lcd(0x27, 2, 1, 0, 4, 5, 6, 7, 3, POSITIVE); // Set the LCD
I2C address


void setup()

{ Serial.begin(9600);

  lcd.begin (20,4);

}
```

```

void loop()
{
  Vout=analogRead(A0) ;
  Temp= (Vout*500)/1023 ;
  lcd.clear();
  lcd.setCursor (0,0); //Start writing on 0.0 on lcd screen
  lcd.print("Temperature"); // In Degree Celsius
  lcd.setCursor (0,1);
  lcd.print(Temp); //Temperature value
  lcd.print ((" C")); //Celsius of course :D
  delay(1000); //Refresh every 1s

  if (Temp > 24) {
    stepper.setSpeed(16)

    stepper.step(2038); // do 2038 steps -- corresponds to one revolution in one
    minute
    delay(1000);
  }
  else if (Temp < 20) {
    stepper.setSpeed(16);

    stepper.step(-2038); // do 2038 steps in the other direction with faster speed -
    - corresponds to one revolution in 10 seconds
    delay(1000);
  }
  else { // 20 < Temp < 24
    // Safe! Continue usual tasks.
  }
}

```

