**Liquid Crystal:**

**Connection:**

\* LCD RS pin to digital pin 12

\* LCD Enable pin to digital pin 11

\* LCD D4 pin to digital pin 5

\* LCD D5 pin to digital pin 4

\* LCD D6 pin to digital pin 3

\* LCD D7 pin to digital pin 2

\* LCD R/W pin to ground

\* LCD VSS pin to ground

\* LCD VCC pin to 5V

\* 10K POT:

\* ends to +5V and ground

\* wiper to LCD VO pin (pin 3)

**General**

**//includes**

#include <LiquidCrystal.h>

#include <Servo.h>

#include "DHT.h"

//

char Incoming\_value = 0;

void setup()

//Bluetooth

pinMode(13, OUTPUT);

//ultasonic

#define echoPin 6

#define trigPin 7

const int trig = 1;

const int echo = 0;

long duration;

int distance;

//LCD

LiquidCrystal lcd(12, 11, 5, 4, 3, 2);

//temperature sensor

int val;

int tempPin = 1;

//humidity

#define DHTPIN 2

#define DHTTYPE DHT11 // DHT 11

DHT dht(DHTPIN, DHTTYPE);

//Servo

Servo myservo1;

Servo myservo2;

int pos = 0;

void setup() {

lcd.begin(16, 2);

myservo1.attach(9);

myservo1.attach(10);

pinMode(trigPin, OUTPUT); // Sets the trigPin as an OUTPUT

pinMode(echoPin, INPUT); // Sets the echoPin as an INPUT

Serial.begin(9600);

lcd.clear();

lcd.setCursor(5,0);

lcd.print("WELCOME");

lcd.setCursor(0,1);

lcd.print("360 Degree Radar");

//humidity

dht.begin();

delay(500);

}

void loop(){

//Bluetooth

if(Serial.available() > 0)

{

Incoming\_value = Serial.read();

Serial.print(Incoming\_value);

Serial.print("\n");

if(Incoming\_value == '1')

digitalWrite(13, HIGH);

else if(Incoming\_value == '0')

digitalWrite(13, LOW);

}

//temperature

val = analogRead(tempPin);

float mv = ( val/1024.0)\*5000;

float cel = mv/10;

float farh = (cel\*9)/5 + 32;

delay(1000);

//humidity

delay(2000);

float h = dht.readHumidity();

float t = dht.readTemperature();

float f = dht.readTemperature(true);

if (isnan(h) || isnan(t) || isnan(f)) {

Serial.println("Failed to read from DHT sensor!");

return;

//servo

for(pos = 0;pos<=180; pos++){

lcd.clear();

lcd.setCursor(0,0);

myservo1.write(pos);

digitalWrite(trig, LOW);

delayMicroseconds(2);

digitalWrite(trig, HIGH);

delayMicroseconds(10);

digitalWrite(trig, LOW);

duration = pulseIn(echo, HIGH);

distance= duration\*0.034/2;

lcd.print("Distance: ");

lcd.print(distance);

lcd.print("cm");

}

for(pos = 180;pos>=0; pos--){

lcd.clear();

lcd.setCursor(0,0);

myservo2.write(pos);

digitalWrite(trig, LOW);

delayMicroseconds(2);

digitalWrite(trig, HIGH);

delayMicroseconds(10);

digitalWrite(trig, LOW);

duration = pulseIn(echo, HIGH);

distance= duration\*0.034/2;

lcd.print("Distance: ");

lcd.print(distance);

lcd.print("cm");

}

// Compute heat index in Fahrenheit (the default)

float hif = dht.computeHeatIndex(f, h);

// Compute heat index in Celsius (isFahreheit = false)

float hic = dht.computeHeatIndex(t, h, false);

Serial.print ("Humidity: ");

Serial.print (h);

Serial.print (" %\t");

Serial.print ("Temperature: ");

Serial.print (t);

Serial.print (" \*C ");

Serial.print (f);

Serial.print (" \*F\t");

Serial.print ("Heat index: ");

Serial.print (hic);

Serial.print (" \*C ");

Serial.print (hif);

Serial.println (" \*F");

}

}