

```
75 then it will show on LCD „Be ware! Temp. too high” or
76 humidity is higher than 70%, but
77 temperature is lower than 30 degrees Celsius, then
78 it will show on LCD „Be ware! Hum. too high”*/
79 if(H < 70.00 && T >= 30.00){
80     digitalWrite(9, LOW); digitalWrite(10, HIGH); digitalWrite(11, LOW);
81     lcd.println("Be ware! "); lcd.setCursor(0, 1);
82     lcd.println("Temp. too high! "); lcd.setCursor(0, 0);
83     digitalWrite(buzzer, 1); tone(buzzer, 400, 400); delay(400);
84     digitalWrite(buzzer, 0); tone(buzzer, 400, 400); delay(400);
85 }
86 if(H >= 70.00 && T < 30.00){
87     digitalWrite(9, LOW); digitalWrite(10, HIGH); digitalWrite(11, LOW);
88     lcd.println("Be ware! "); lcd.setCursor(0, 1);
89     lcd.println("Hum. too high! "); lcd.setCursor(0, 0);
90     digitalWrite(buzzer, 1); tone(buzzer, 400, 400); delay(400);
91     digitalWrite(buzzer, 0); tone(buzzer, 400, 400); delay(400);
92 }
93 }
94
```

```

59     digitalWrite(buzzer, 1); tone(buzzer, 900, 100);
60     delay(400);
61     digitalWrite(buzzer, 0); tone(buzzer, 900, 100);
62     delay(400);
63 }else{
64     /*If humidity is lower than 70% &
65     temperature is lower than 30 degrees Celsius
66     then it will show on LCD „Temp. & hum. are in normal limits”*/
67     digitalWrite(9, LOW); digitalWrite(10, LOW); digitalWrite(11, HIGH);
68     lcd.println("Temp. & hum. are"); lcd.setCursor(0, 1);
69     lcd.println("in normal limits"); lcd.setCursor(0, 0);
70     digitalWrite(buzzer, 0);
71 }
72
73 /*If either humidity is lower than 70%, but
74 temperature is higher than 30 degrees Celsius,
75 then it will show on LCD „Be ware! Temp. too high” or
76 humidity is higher than 70%, but
77 temperature is lower than 30 degrees Celsius, then
78 it will show on LCD „Be ware! Hum. too high”*/
79 if(H < 70.00 && T >= 30.00){
80     digitalWrite(9, LOW); digitalWrite(10, HIGH); digitalWrite(11, LOW);
81     lcd.println("Be ware! "); lcd.setCursor(0, 1);
82     lcd.println("Temp. too high! "); lcd.setCursor(0, 0);
83     digitalWrite(buzzer, 1); tone(buzzer, 400, 400); delay(400);
84     digitalWrite(buzzer, 0); tone(buzzer, 400, 400); delay(400);
85 }
86 if(H >= 70.00 && T < 30.00){
87     digitalWrite(9, LOW); digitalWrite(10, HIGH); digitalWrite(11, LOW);
88     lcd.println("Be ware! "); lcd.setCursor(0, 1);

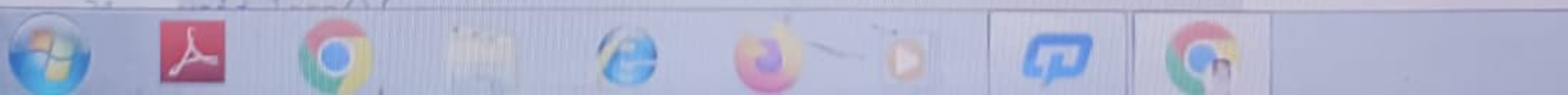
```




```
30
31 void loop(){
32     delay(2000);
33     //Read data and store it to variables hum and temp
34     H = dht.readHumidity(); T = dht.readTemperature();
35
36     //Print temp and humidity values to serial monitor
37     Serial.print("Humidity: ");
38     Serial.print(H);
39     Serial.println(" %; ");
40     Serial.print("Temperature: ");
41     Serial.print(T);
42     Serial.println(" Celsius.\n");
43
44     /*If humidity is higher than 70% &
45     temperature is higher than 30 degrees Celsius
46     then it will show on LCD „Too warm! Cool down!“*/
47     if(H >= 70.00 && T >= 30.00){
48         digitalWrite(9, HIGH); digitalWrite(10, LOW); digitalWrite(11, LOW);
49
50         lcd.println(" Too warm! ");
51         lcd.setCursor(0, 1);
52         lcd.println(" Cool down! ");
53         lcd.setCursor(0, 0);
54
55         digitalWrite(buzzer, 1); tone(buzzer, 900, 100);
56         delay(400);
57         digitalWrite(buzzer, 0); tone(buzzer, 900, 100);
58         delay(400);
59         digitalWrite(buzzer, 1); tone(buzzer, 900, 100);
```



```
1  /* How to use the DHT-22 sensor with Arduino uno.
2     Is a temperature and humidity sensor!
3     See it in original form:
4     https://create.arduino.cc/projecthub/mafzal/temperature-monitoring-with-dht
5  */
6  //LCD I2C library:
7  #include <LiquidCrystal_I2C.h>
8  //DHT22 sensor library:
9  #include <DHT.h>;
10 //LCD I2C address 0x27, 16 column and 2 rows!
11 LiquidCrystal_I2C lcd(0x27, 16, 2);
12
13 //Constants:
14 #define DHTPIN 2           //what pin we're connected to
15 #define DHTTYPE DHT22     //DHT 22 (AM2302)
16 DHT dht(DHTPIN, DHTTYPE); //Initialize DHT sensor for normal 16mhz Arduino
17 //Variables:
18 int chk;
19 float H; //Humidity value
20 float T; //Temperature value
21 int buzzer = 12;
22
23 //Initialize LCD, DHT22 sensor and buzzer:
24 void setup(){
25     lcd.init(); lcd.backlight(); dht.begin(); pinMode(buzzer, OUTPUT);
26     //Print some text in Serial Monitor
27     Serial.begin(9600); Serial.println("DHT22 sensor with Arduino Uno R3!");
28     pinMode(9, OUTPUT); pinMode(10, OUTPUT); pinMode(11, OUTPUT);
29 }
30
```



Simulation



```
digitalWrite(11, LOW);  
1);  
0);  
delay(400);  
delay(400);
```

```
digitalWrite(11, LOW);  
1);  
0);  
delay(400);  
delay(400);
```

