Assignment:2

Assignment date	28-09-2022
Student roll number	912619106006
Student name	S.Manisha
Maximum mark	2 Mark

Question-1:

Build a python code, Assume u get temperature and humidity value(generated with random function into a variable) and write a condition to continuously detect alarm in case of high temperature

Solution :

```
  #include "DHT.h"

#define DHTPIN 2

#define DHTTYPE DHT22   #include "DHT.h"

#define DHTPIN 2

#define DHTTYPE DHT22
```

```
DHT dht(DHTPIN, DHTTYPE);

void setup() {
  Serial.begin(9600);
  Serial.println("DHTxx test!");

  dht.begin();
}

void loop() {

  delay(2000);
  float h = dht.readHumidity();
  float t = dht.readTemperature();
  float f = dht.readTemperature(true);
```

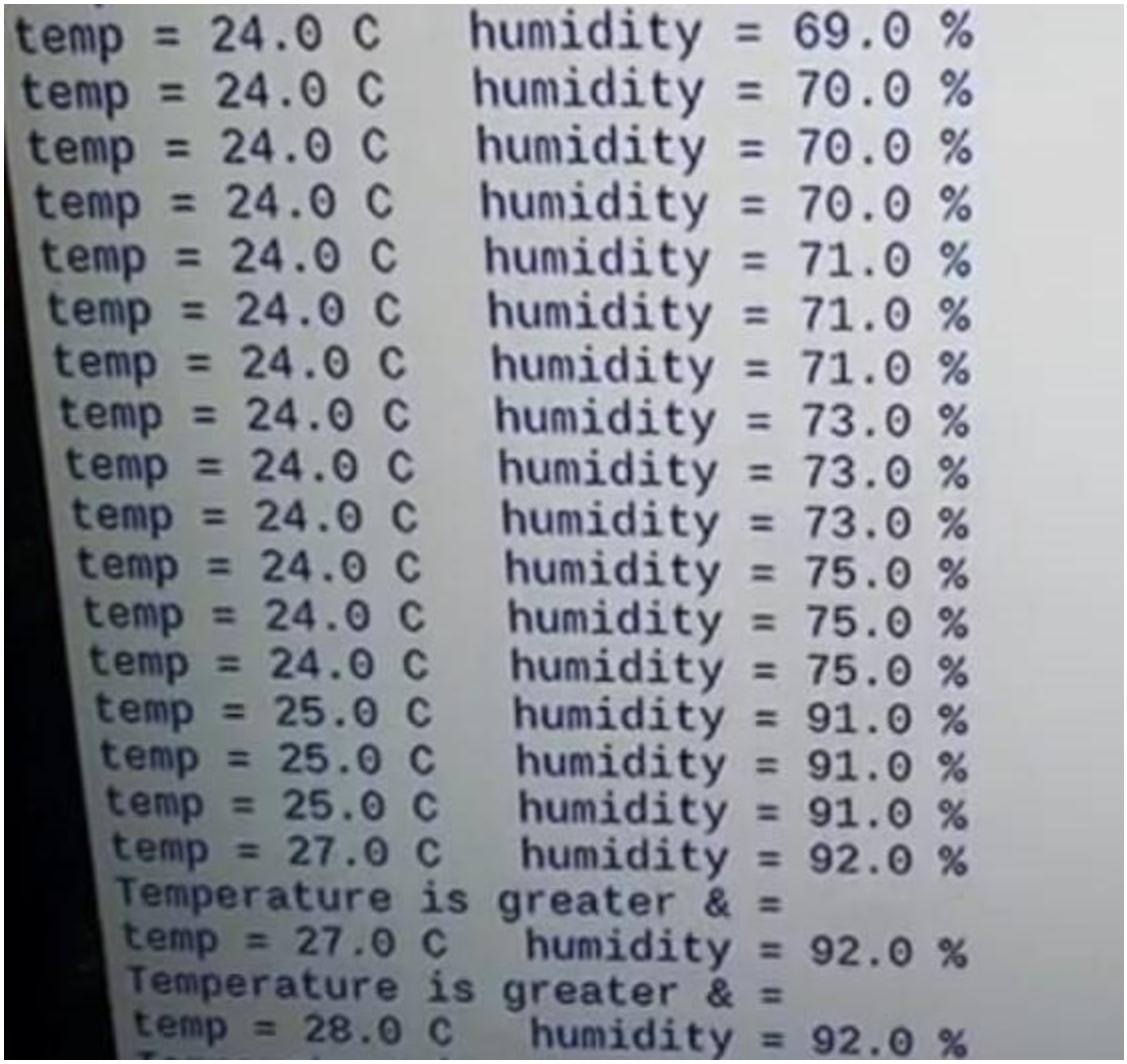
```
if (isnan(h) || isnan(t) || isnan(f)) {
  Serial.println("Failed to read from DHT sensor!");
  return;
}

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

DHT dht(DHTPIN, DHTTYPE);

void setup() {
  Serial.begin(9600);
  Serial.println("DHTxx test!");

  dht.begin();
}

void loop() {
```

```
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;
}

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

Output:


temp = 24.0 C humidity = 69.0 %
temp = 24.0 C humidity = 70.0 %
temp = 24.0 C humidity = 70.0 %
temp = 24.0 C humidity = 70.0 %
temp = 24.0 C humidity = 71.0 %
temp = 24.0 C humidity = 71.0 %
temp = 24.0 C humidity = 71.0 %
temp = 24.0 C humidity = 73.0 %
temp = 24.0 C humidity = 73.0 %
temp = 24.0 C humidity = 73.0 %
temp = 24.0 C humidity = 75.0 %
temp = 24.0 C humidity = 75.0 %
temp = 24.0 C humidity = 75.0 %
temp = 25.0 C humidity = 91.0 %
temp = 25.0 C humidity = 91.0 %
temp = 25.0 C humidity = 91.0 %
temp = 27.0 C humidity = 92.0 %
Temperature is greater & =
temp = 27.0 C humidity = 92.0 %
Temperature is greater & =
temp = 28.0 C humidity = 92.0 %