ASSIGNMENT 2

Assume u get temperature and humidity values(generated with a random function to a variable) and write a condition to detect an alarm in case of high temperature continuously.

```
const int trigPin = 7;

const int echoPin =10;

long duration;

int distance;

int ledPin = 13;

int inputPin = 2;

int pirState = LOW;

int val = 0;

float temp;

int tempPin = 0;

float f;

void setup() {

Serial.begin(9600);

pinMode(13, OUTPUT);

pinMode(inputPin, INPUT);

Serial.begin(9600);

pinMode(trigPin,OUTPUT);
```

```
pinMode(echoPin,INPUT);
Serial.begin(9600);
pinMode(12,OUTPUT);
}
void loop(){
temp=analogRead(tempPin);
temp=temp*0.48828125;
f=temp*9/5+32;
digitalWrite(trigPin,LOW);
delayMicroseconds(2);
digitalWrite(trigPin,HIGH);
digitalWrite(trigPin,LOW);
duration=pulseIn(echoPin,HIGH);
distance=duration*0.034/2;
val = digitalRead(inputPin);
if (val == HIGH) {
digitalWrite(ledPin, HIGH);
if (pirState == LOW) {
Serial.println("Motion detected!");
Serial.print("Temperature= “);
Serial.print(temp);
```

```
Serial.print("*C and ");

Serial.print(f);

Serial.print("*f");

Serial.println();

delay(1000);

Serial.print("Someone is at a distace of ");

Serial.println(distance);

pirState = HIGH;

if((temp>=35)||(temp<=25))

{digitalWrite(ledPin, HIGH);

delayMicreoseconds(20);

Serial.print(“ Beware ! Temperature is exceeding the safe range”);}

else

{Serial.print(“HURRY UP”);

}}}

else {

digitalWrite(ledPin, LOW);

if (pirState == HIGH)

{Serial.println("Motion ended!");

pirState = LOW;
}}}
```