# ASSIGNMENT-2
# PYTHON PROGRAMMING

| | |
|---|---|
| **Date** | 19 September 2022 |
| **Student Name** | Nivetha.R |
| **Student Roll Number** | 211419106188 |
| **Maximum Marks** | 2 Marks |

## Question:

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

## Solution:

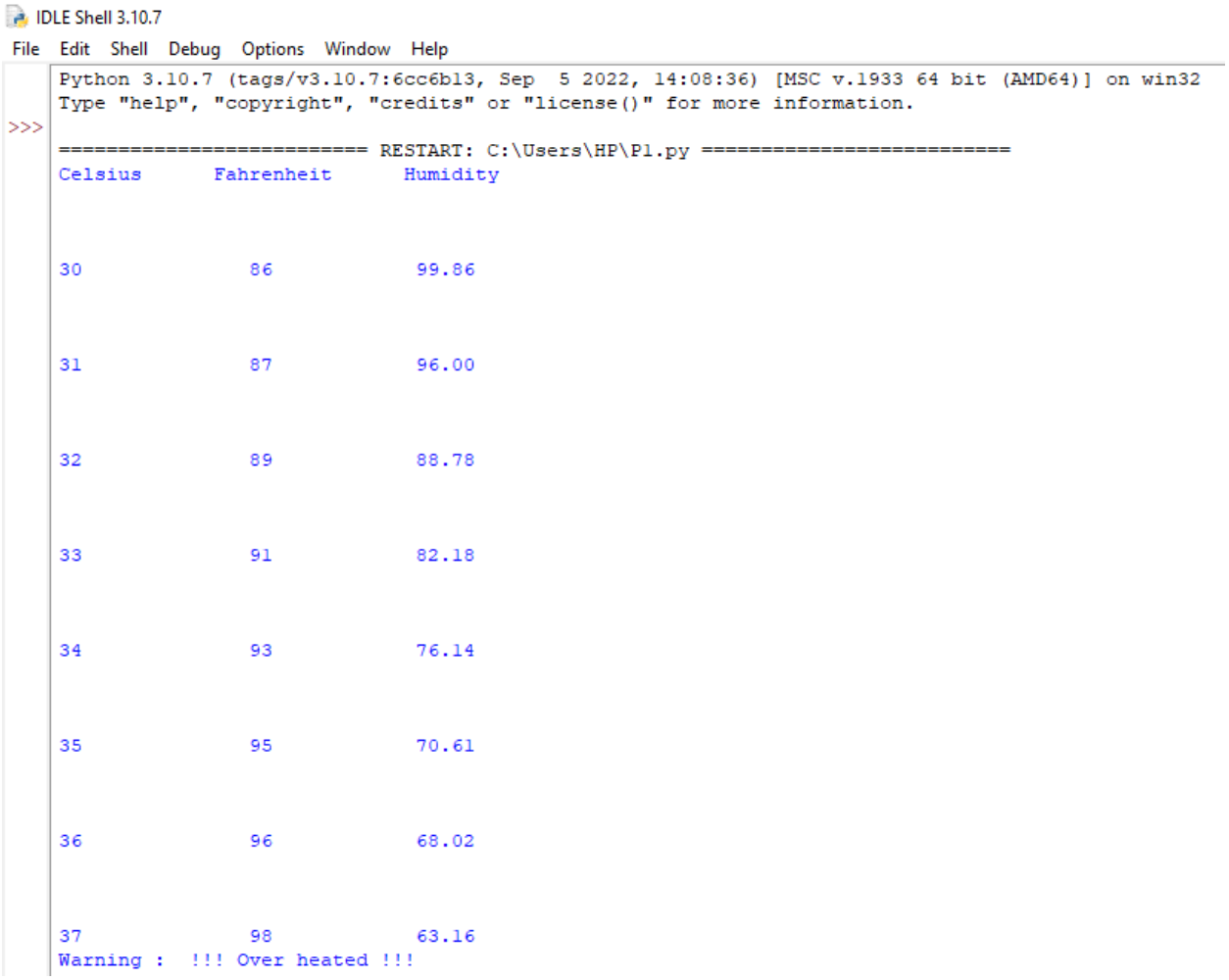
```
import sys
import math

print('Celsius      Fahrenheit      Humidity')
dp=0
c=0
ind=""
def frost_point(c,dpc):
    dpk=273.15 + dpc
    tak=273.15+c
    fpk=dpk - tak + 2671.02 / ((2954.61 / tak)+ 2.193665 * math.log(tak)-13.3448)
    return fpk - 273.15

def dew_point(c,rh):
    A= 17.27
    B= 273.7

    alpha= ((A*c)/(B+c)) + math.log(rh/100.0)
    dp= (B*alpha)/(A-alpha)

for c in range(30,71,1):
    f=int((c*1.8) + 32)
    hum= 100*((math.e**((17.625 * dp)/(243.04+dp))) / (math.e**((17.625 *
f)/(243.04+f))))
    humidity=100*hum
    if f >= 100:
        ind='!!! Over heated !!!'
        print('Warning : ',ind)
```

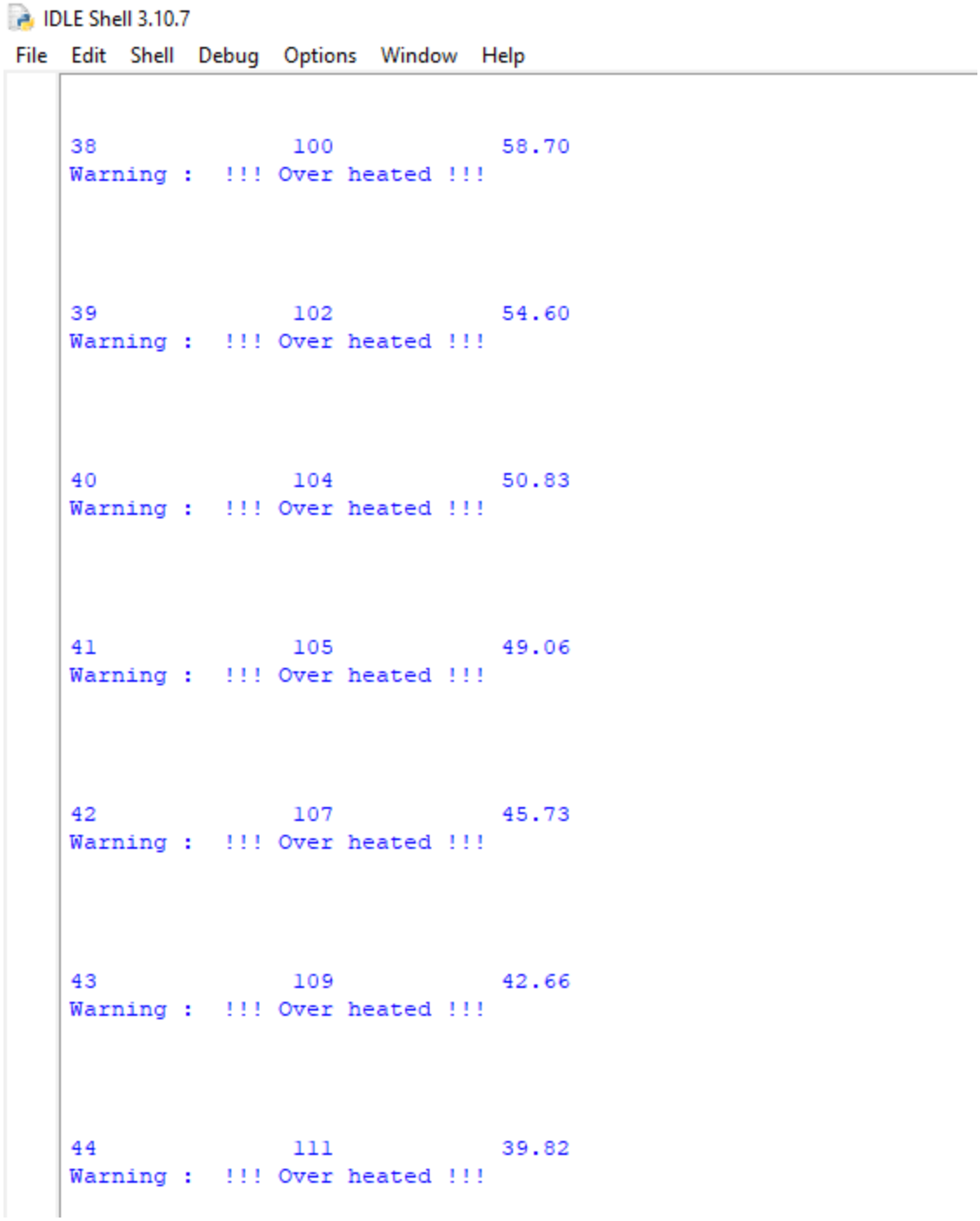
```
    print('''
    ''')
  else:
    print('')
  print('''
  ''')
  print(c,'          ',f,'          %.2f' %humidity)
```

P1.py - C:\Users\HP\P1.py (3.10.7)

File Edit Format Run Options Window Help

```
import sys
import math

print('Celsius      Fahrenheit      Humidity')
dp=0
c=0
ind=""
def frost_point(c,dpc):
    dpk=273.15 + dpc
    tak=273.15+c
    fpk=dpk - tak + 2671.02 / ((2954.61 / tak)+ 2.193665 * math.log(tak)-13.3448)
    return fpk - 273.15

def dew_point(c,rh):
    A= 17.27
    B= 273.7

    alpha= ((A*c)/(B+c)) + math.log(rh/100.0)
    dp= (B*alpha)/(A-alpha)

for c in range(30,71,1):
    f=int((c*1.8) + 32)
    hum= 100*((math.e**((17.625 * dp)/(243.04+dp))) / (math.e**((17.625 * f)/(243.04+f))))
    humidity=100*hum
    if f >= 100:
        ind='!!! Over heated !!!'
        print('Warning : ',ind)
        print('''
        ''')
    else:
        print('')
    print('''
    ''')
    print(c,'            ',f,'           %.2f' %humidity)
```


IDLE Shell 3.10.7
File Edit Shell Debug Options Window Help
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: C:\Users\HP\P1.py ==========
Celsius Fahrenheit Humidity
30 86 99.86
31 87 96.00
32 89 88.78
33 91 82.18
34 93 76.14
35 95 70.61
36 96 68.02
37 98 63.16
Warning : !!! Over heated !!!


IDLE Shell 3.10.7
File Edit Shell Debug Options Window Help
38 100 58.70
Warning : !!! Over heated !!!
39 102 54.60
Warning : !!! Over heated !!!
40 104 50.83
Warning : !!! Over heated !!!
41 105 49.06
Warning : !!! Over heated !!!
42 107 45.73
Warning : !!! Over heated !!!
43 109 42.66
Warning : !!! Over heated !!!
44 111 39.82
Warning : !!! Over heated !!!