ASSIGNMENT 2

PYTHON CODE TO MONITOR TEMPERATURE AND HUMIDITY

Assignment Date	21 September 2022
Student Name	BHARANEESH S
Student Roll Number	MECR19EC010
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 and alarm in case of high temperature.

Solution:

```
import random
import time


def Temp_Humidity_Monitor():
    humidity=random.randint(0,100)
    temp=random.random()*100
    temp_format="{:.2f}".format(temp)
    if(temp>45 and humidity>55 ):
        print("Humidity is ",humidity,end="%")
        print("\nTemperature is ",temp_format,end=" deg celsius")
        print("\nTemperature is high...Humans can't withstand this")
    elif((humidity>30 and humidity<55) and (temp<45 and temp>18)):
        print("\nEverything looks Fine")


while True:
    print("*****Calculating Temperature and Humidity*****")
    Temp_Humidity_Monitor()
```

```
        time.sleep(3)
        print("..........END..........");
        print("\n\n")
```

SIMULATED OUTPUT:

ass2.py - F:/PYTHON EXERCISES/ass2.py (3.7.0)

File Edit Format Run Options Window Help

```
import random
import time


def Temp_Humidity_Monitor():
    humidity=random.randint(0,100)
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    temp_format="{:.2f}".format(temp)

    if(temp>45 and humidity>55 ):
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    elif((humidity>30 and humidity<55) and (temp<45 and temp>18)):
        print("\nEverything looks Fine")


while True:
    print("*****Calculating Temperature and Humidity*****")
    Temp_Humidity_Monitor()
    time.sleep(3)
    print("-------------------END-------------------");
    print("\n\n")
```
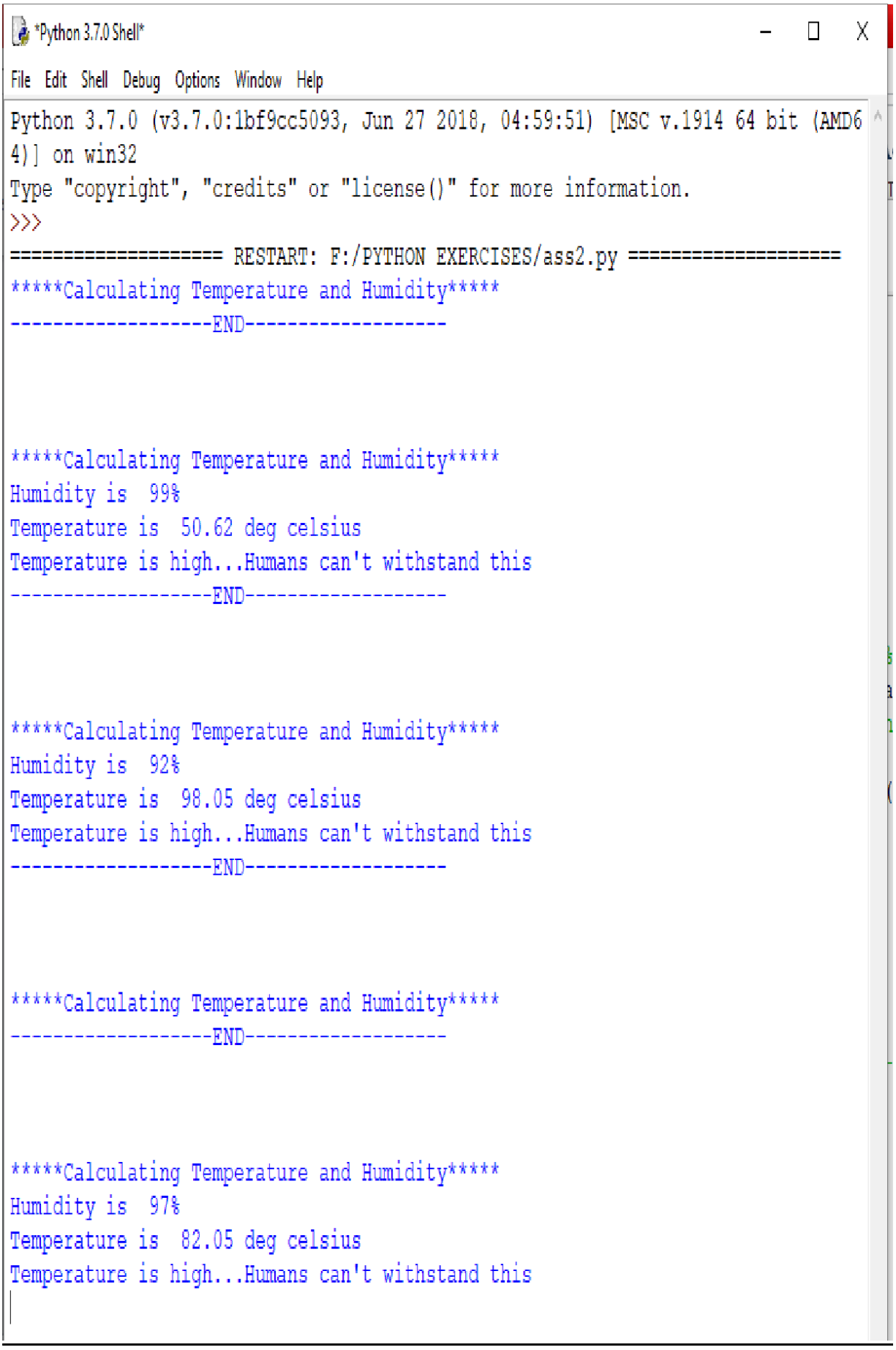
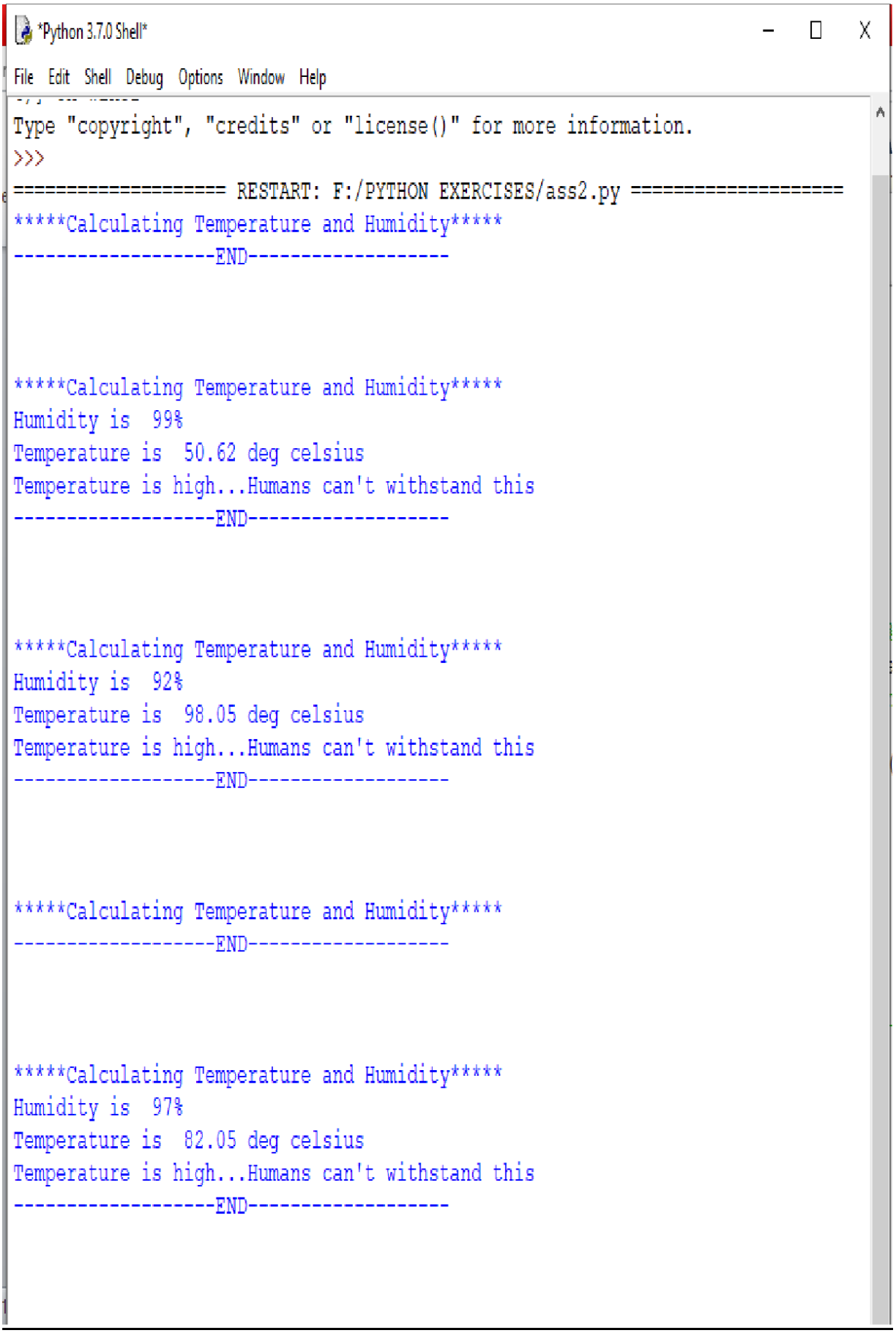


Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: F:/PYTHON EXERCISES/ass2.py ==========
*****Calculating Temperature and Humidity*****
----------END----------
*****Calculating Temperature and Humidity*****
Humidity is 99%
Temperature is 50.62 deg celsius
Temperature is high...Humans can't withstand this
----------END----------
*****Calculating Temperature and Humidity*****
Humidity is 92%
Temperature is 98.05 deg celsius
Temperature is high...Humans can't withstand this
----------END----------
*****Calculating Temperature and Humidity*****
----------END----------
*****Calculating Temperature and Humidity*****
Humidity is 97%
Temperature is 82.05 deg celsius
Temperature is high...Humans can't withstand this


Python 3.7.0 Shell
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*****Calculating Temperature and Humidity*****
----------END----------
*****Calculating Temperature and Humidity*****
Humidity is 97%
Temperature is 82.05 deg celsius
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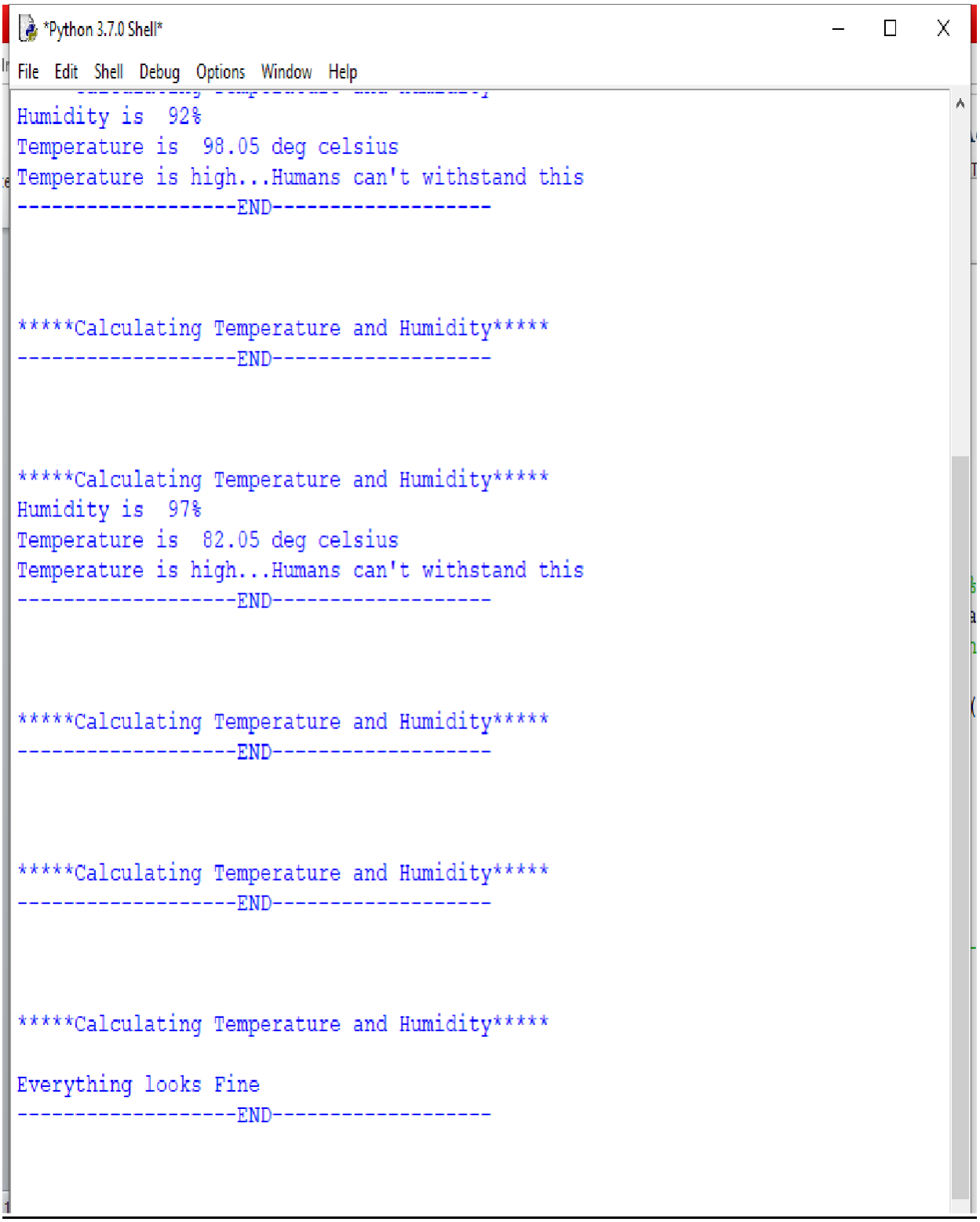

CONCLUSION:

Thus the python code is built to monitor temperature and humidity of the environment using random functions. The measurement is done continuously and an alarm message is send to the user if the temperature and humidity exceeds the limit.