ASSIGNMENT 2

PYTHON CODE TO MONITOR TEMPERATURE

AND HUMIDITY

Assignment Date	29-09-2022
Student Name	SOURAV SARDAR
Student Roll Number	410619104037
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("------");
print("\n\n")
```

SIMULATED OUTPUT:

```
ass2.py - F:/PYTHON EXERCISES/ass2.py (3.7.0)
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File Edit Format Run Options Window Help
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="%")
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   elif((humidity>30 and humidity<55) and (temp<45 and temp>18)):
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while True:
   print("*****Calculating Temperature and Humidity*****")
   Temp Humidity Monitor()
   time.sleep(3)
print("-----");
   print("\n\n")
```

```
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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 (AMD6 ^
4)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
*****Calculating Temperature and Humidity*****
-----FND------
*****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
```

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*Python 3.7.0 Shell*
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File Edit Shell Debug Options Window Help
Type "copyright", "credits" or "license()" for more information.
>>>
*****Calculating Temperature and Humidity****
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Humidity is 97%
Temperature is 82.05 deg celsius
Temperature is high...Humans can't withstand this
-----FND------
```

```
*Python 3.7.0 Shell*
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File Edit Shell Debug Options Window Help
                       -----
Humidity is 92%
Temperature is 98.05 deg celsius
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*****Calculating Temperature and Humidity****
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*****Calculating Temperature and Humidity****
Humidity is 97%
Temperature is 82.05 deg celsius
Temperature is high...Humans can't withstand this
-----END-----
*****Calculating Temperature and Humidity****
-----END------
*****Calculating Temperature and Humidity****
-----END-----
*****Calculating Temperature and Humidity*****
Everything looks Fine
-----END-----
```

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.