

ASSIGNMENT-II

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Problem:

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.

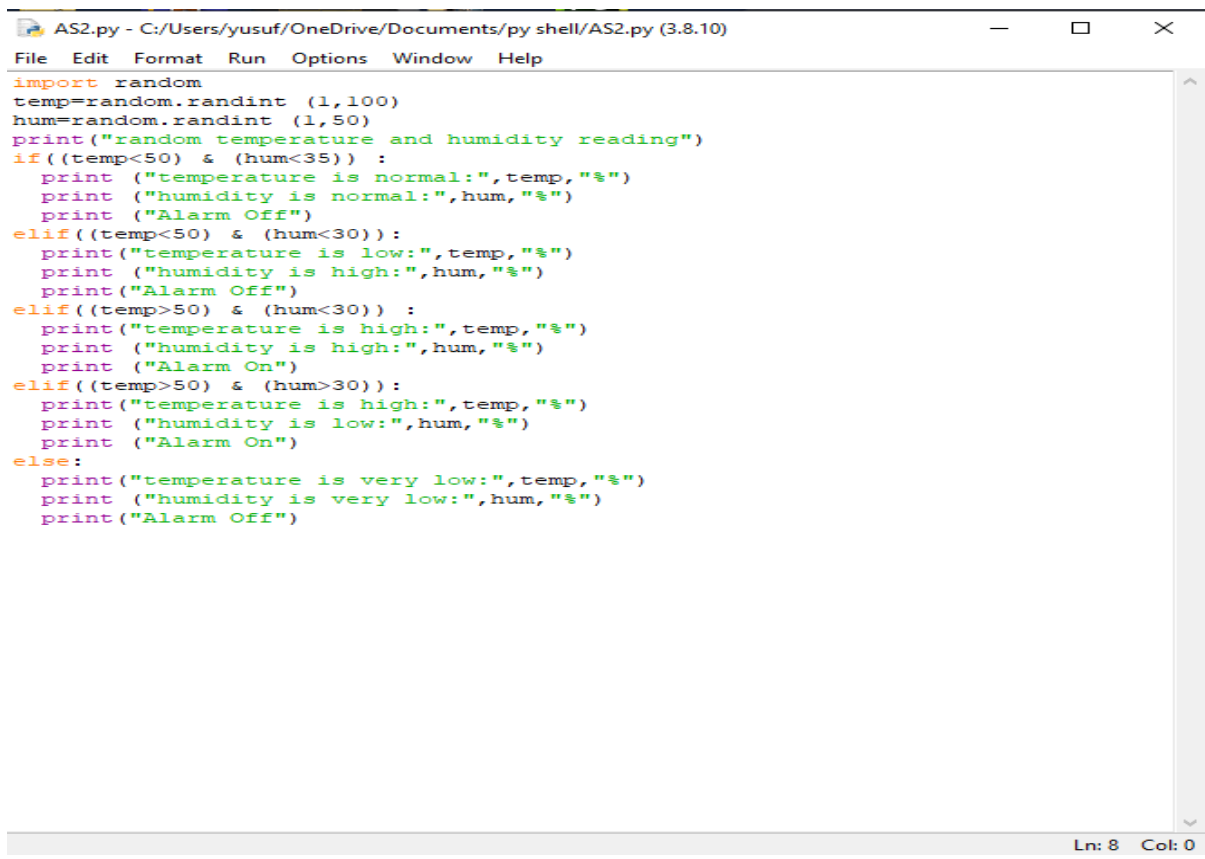
Python code:

```
import random

temp=random.randint (1,100)
hum=random.randint (1,50)
print('random temperature and humidity reading')
if((temp<50) & (hum<35)) :
print ("temperature is normal:",temp,"%")
print ("humidity is normal:",hum,"%")
print ("Alarm Off")
elif((temp<50) & (hum<30)):
print('temperature is low:',temp,"%")
print ("humidity is high:",hum,"%")
print('Alarm Off')
elif((temp>50) & (hum<30)) :
```

```
print("temperature is high:",temp,"%")
print ("humidity is high:",hum,"%")
print ("Alarm On")
elif((temp>50) & (hum>30)):
print("temperature is high:",temp,"%")
print ("humidity is low:",hum,"%")
print ("Alarm On")
else:
print("temperature is very low:",temp,"%")
print ("humidity is very low:",hum,"%")
print("Alarm Off")
```

code execution:



The screenshot shows a Python script named AS2.py running in a window titled "AS2.py - C:/Users/yusuf/OneDrive/Documents/py shell/AS2.py (3.8.10)". The script uses the random module to generate temperature and humidity values and prints messages based on these values. The output of the script is displayed in the console area at the bottom of the window.

```
AS2.py - C:/Users/yusuf/OneDrive/Documents/py shell/AS2.py (3.8.10)
File Edit Format Run Options Window Help
import random
temp=random.randint (1,100)
hum=random.randint (1,50)
print("random temperature and humidity reading")
if((temp<50) & (hum<35)) :
    print ("temperature is normal:",temp,"%")
    print ("humidity is normal:",hum,"%")
    print ("Alarm Off")
elif((temp<50) & (hum<30)) :
    print("temperature is low:",temp,"%")
    print ("humidity is high:",hum,"%")
    print("Alarm Off")
elif((temp>50) & (hum<30)) :
    print("temperature is high:",temp,"%")
    print ("humidity is high:",hum,"%")
    print ("Alarm On")
elif((temp>50) & (hum>30)) :
    print("temperature is high:",temp,"%")
    print ("humidity is low:",hum,"%")
    print ("Alarm On")
else:
    print("temperature is very low:",temp,"%")
    print ("humidity is very low:",hum,"%")
    print("Alarm Off")
```

Ln: 8 Col: 0

Output:

```
IDLE Shell 3.8.10
File Edit Shell Debug Options Window Help
Python 3.8.10 (tags/v3.8.10:3d8993a, May 3 2021, 11:48:03) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/yusuf/OneDrive/Documents/py shell/AS2.py =====
random temperature and humidity reading
temperature is very low: 13 %
humidity is very low: 48 %
Alarm Off
>>>
===== RESTART: C:/Users/yusuf/OneDrive/Documents/py shell/AS2.py =====
random temperature and humidity reading
temperature is high: 99 %
humidity is high: 28 %
Alarm On
>>>
===== RESTART: C:/Users/yusuf/OneDrive/Documents/py shell/AS2.py =====
random temperature and humidity reading
temperature is normal: 19 %
humidity is normal: 16 %
Alarm Off
>>>
===== RESTART: C:/Users/yusuf/OneDrive/Documents/py shell/AS2.py =====
random temperature and humidity reading
temperature is very low: 30 %
humidity is very low: 48 %
Alarm Off
>>>
===== RESTART: C:/Users/yusuf/OneDrive/Documents/py shell/AS2.py =====
random temperature and humidity reading
temperature is high: 61 %
humidity is low: 42 %
Alarm On
>>>
===== RESTART: C:/Users/yusuf/OneDrive/Documents/py shell/AS2.py =====
random temperature and humidity reading
temperature is normal: 4 %
humidity is normal: 8 %
Alarm Off
>>> |
```

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