

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:

```

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:



The screenshot shows the Python 3.8.10 IDLE Shell interface. The window title is "IDLE Shell 3.8.10". The menu bar includes File, Edit, Shell, Debug, Options, Window, and Help. The main window displays the following text output from a script named AS2.py:

```
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
>>> |
```

The status bar at the bottom right indicates "Ln: 39 Col: 4".