

Assignment -2

Assignment Date	20/09/2022
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Maximum Marks	2 Marks

Question:

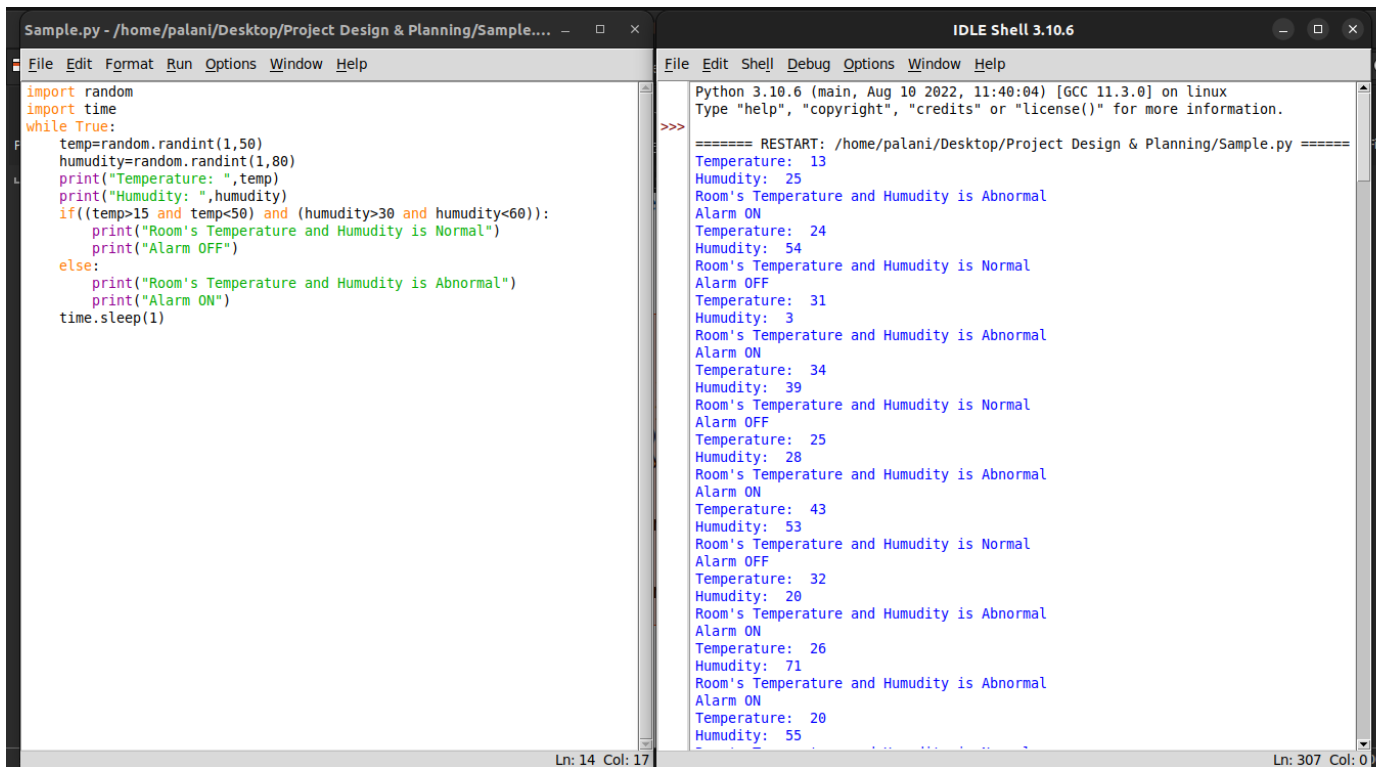
Build a python code, Assume u get temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect alarm in case of high temperature.

Solution:

Python Code:

```
import random
import time
while True:
    temp=random.randint(1,50)
    humudity=random.randint(1,80)
    print("Temperature: ",temp)
    print("Humudity: ",humudity)
    if((temp>15 and temp<50) and (humudity>30 and
humudity<60)):
        print("Room's Temperature and Humudity is Normal")
        print("Alarm OFF")
    else:
        print("Room's Temperature and Humudity is Abnormal")
        print("Alarm ON")
    time.sleep(1)
```

Output:



The image shows a screenshot of an IDE with two windows. The left window, titled 'Sample.py - /home/palani/Desktop/Project Design & Planning/Sample...', contains a Python script. The script imports 'random' and 'time', and enters a 'while True' loop. Inside the loop, it generates random temperature and humidity values, prints them, and checks if they are within a normal range (15-50 for temperature, 30-60 for humidity). If normal, it prints 'Room's Temperature and Humudity is Normal' and 'Alarm OFF'. Otherwise, it prints 'Room's Temperature and Humudity is Abnormal' and 'Alarm ON'. It then sleeps for 1 second. The right window, titled 'IDLE Shell 3.10.6', shows the output of the script. It starts with a Python version notice, followed by a restart command. The output then shows a series of temperature and humidity readings, each followed by a status message ('Normal' or 'Abnormal') and an alarm status ('OFF' or 'ON').

```
Sample.py - /home/palani/Desktop/Project Design & Planning/Sample...  
File Edit Format Run Options Window Help  
import random  
import time  
while True:  
    temp=random.randint(1,50)  
    humudity=random.randint(1,80)  
    print("Temperature: ",temp)  
    print("Humudity: ",humudity)  
    if((temp>15 and temp<50) and (humudity>30 and humudity<60)):  
        print("Room's Temperature and Humudity is Normal")  
        print("Alarm OFF")  
    else:  
        print("Room's Temperature and Humudity is Abnormal")  
        print("Alarm ON")  
    time.sleep(1)  
Ln: 14 Col: 17
```

```
IDLE Shell 3.10.6  
File Edit Shell Debug Options Window Help  
Python 3.10.6 (main, Aug 10 2022, 11:40:04) [GCC 11.3.0] on linux  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
===== RESTART: /home/palani/Desktop/Project Design & Planning/Sample.py =====  
Temperature: 13  
Humudity: 25  
Room's Temperature and Humudity is Abnormal  
Alarm ON  
Temperature: 24  
Humudity: 54  
Room's Temperature and Humudity is Normal  
Alarm OFF  
Temperature: 31  
Humudity: 3  
Room's Temperature and Humudity is Abnormal  
Alarm ON  
Temperature: 34  
Humudity: 39  
Room's Temperature and Humudity is Normal  
Alarm OFF  
Temperature: 25  
Humudity: 28  
Room's Temperature and Humudity is Abnormal  
Alarm ON  
Temperature: 43  
Humudity: 53  
Room's Temperature and Humudity is Normal  
Alarm OFF  
Temperature: 32  
Humudity: 20  
Room's Temperature and Humudity is Abnormal  
Alarm ON  
Temperature: 26  
Humudity: 71  
Room's Temperature and Humudity is Abnormal  
Alarm ON  
Temperature: 20  
Humudity: 55  
Ln: 307 Col: 0
```