

Assignment II

Python Programming

Assignment Date	28 September,2022
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Maximum Marks	4 Marks

Question-1:

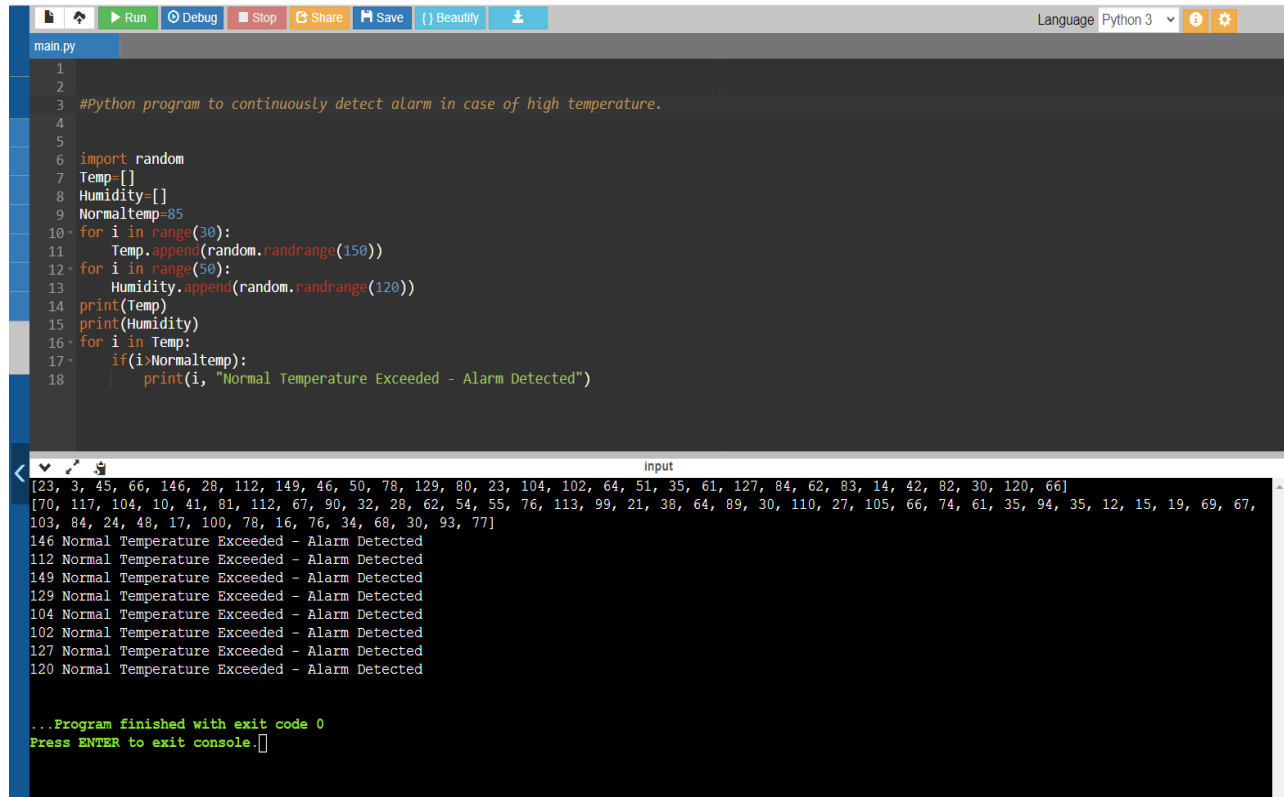
Build a python code, Assume you get temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect alarm in case of high temperature.

SOLUTION:

PYTHON CODE:

```
import random
Temp=[]
Humidity=[]
Normaltemp=85
for i in range(30):
    Temp.append(random.randrange(150))
for i in range(50):
    Humidity.append(random.randrange(120))
print(Temp)
print(Humidity)
for i in Temp:
    if(i>Normaltemp):
        print(i, "Normal Temperature Exceeded - Alarm Detected")
```

OUTPUT:



The screenshot shows a Python IDE with a file named `main.py`. The code is a Python program designed to continuously detect an alarm in case of high temperature. It imports the `random` module and initializes two empty lists, `Temp` and `Humidity`, and a variable `Normaltemp` set to 85. The program then enters a loop where it generates random temperature and humidity values. It prints these values and checks if the temperature exceeds the normal threshold. If it does, it prints an alarm message.

```
1
2
3 #Python program to continuously detect alarm in case of high temperature.
4
5
6 import random
7 Temp=[]
8 Humidity=[]
9 Normaltemp=85
10 for i in range(30):
11     Temp.append(random.randrange(150))
12 for i in range(50):
13     Humidity.append(random.randrange(120))
14 print(Temp)
15 print(Humidity)
16 for i in Temp:
17     if i>Normaltemp:
18         print(i, "Normal Temperature Exceeded - Alarm Detected")
```

The output window shows the execution results. It displays the generated temperature and humidity lists, followed by multiple instances of the alarm message: "Normal Temperature Exceeded - Alarm Detected". The program concludes with the message "...Program finished with exit code 0" and a prompt to press ENTER to exit the console.

```
[23, 3, 45, 66, 146, 28, 112, 149, 46, 50, 78, 129, 80, 23, 104, 102, 64, 51, 35, 61, 127, 84, 62, 83, 14, 42, 82, 30, 120, 66]
[70, 117, 104, 10, 41, 81, 112, 67, 90, 32, 28, 62, 54, 55, 76, 113, 99, 21, 38, 64, 89, 30, 110, 27, 105, 66, 74, 61, 35, 94, 35, 12, 15, 19, 69, 67,
103, 84, 24, 48, 17, 100, 78, 16, 76, 34, 68, 30, 93, 77]
146 Normal Temperature Exceeded - Alarm Detected
112 Normal Temperature Exceeded - Alarm Detected
149 Normal Temperature Exceeded - Alarm Detected
129 Normal Temperature Exceeded - Alarm Detected
104 Normal Temperature Exceeded - Alarm Detected
102 Normal Temperature Exceeded - Alarm Detected
127 Normal Temperature Exceeded - Alarm Detected
120 Normal Temperature Exceeded - Alarm Detected

...Program finished with exit code 0
Press ENTER to exit console.
```