

## Assignment -2

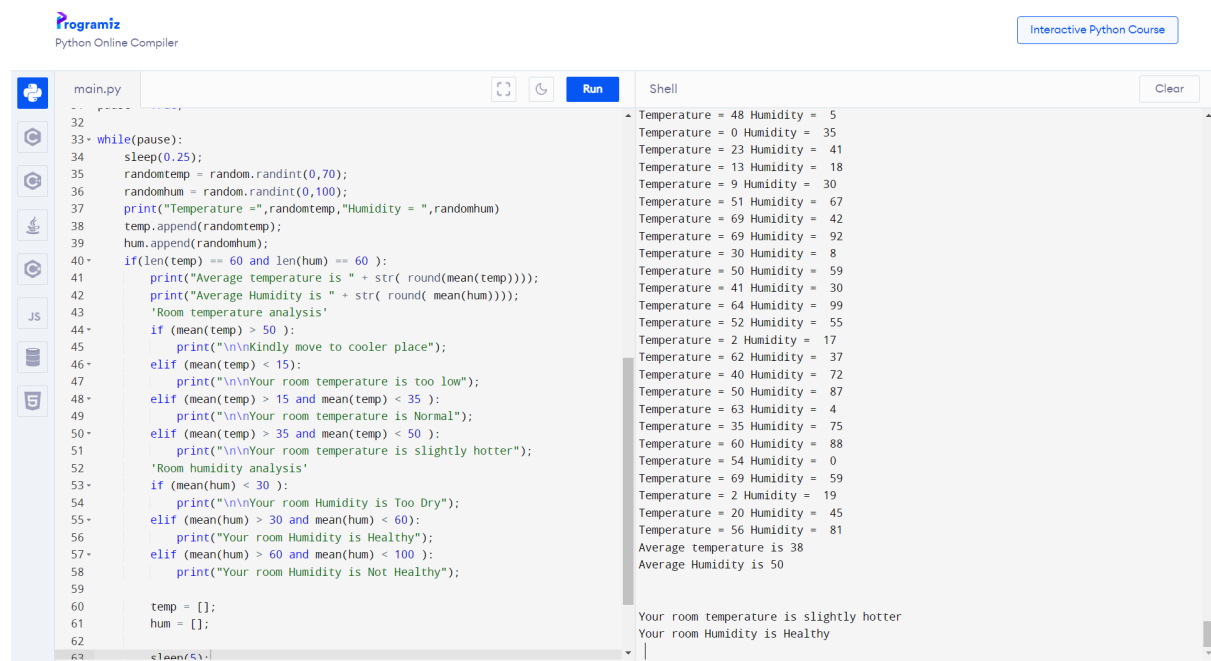
### Temperature and humidity

Date	29 September 2022
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Maximum Marks	2 Marks

#### Question-1:

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

#### Output :



The screenshot shows a Python Online Compiler interface. On the left, there's a sidebar with icons for file explorer, search, and other tools. The main area displays a Python script named 'main.py'. The script uses a while loop to generate random temperature and humidity values, append them to lists, and calculate averages. It includes conditional statements to print messages based on these values. On the right, the 'Shell' tab shows the output of the program, displaying a series of temperature and humidity readings, followed by average calculations and status messages.

```
main.py
32
33 while(pause):
34     sleep(0.25);
35     randomtemp = random.randint(0,70);
36     randomhum = random.randint(0,100);
37     print("Temperature =",randomtemp,"Humidity = ",randomhum)
38     temp.append(randomtemp);
39     hum.append(randomhum);
40
41 if(len(temp) == 60 and len(hum) == 60 ):
42     print("Average temperature is " + str( round(mean(temp))));
43     print("Average Humidity is " + str( round( mean(hum))));
44     'Room temperature analysis'
45     if (mean(temp) > 50 ):
46         print("\n\nKindly move to cooler place");
47     elif (mean(temp) < 15):
48         print("\n\nYour room temperature is too low");
49     elif (mean(temp) > 15 and mean(temp) < 35 ):
50         print("\n\nYour room temperature is Normal");
51     elif (mean(temp) > 35 and mean(temp) < 50 ):
52         print("\n\nYour room temperature is slightly hotter");
53     'Room humidity analysis'
54     if (mean(hum) < 30 ):
55         print("\n\nYour room Humidity is Too Dry");
56     elif (mean(hum) > 30 and mean(hum) < 60):
57         print("\n\nYour room Humidity is Healthy");
58     elif (mean(hum) > 60 and mean(hum) < 100 ):
59         print("\n\nYour room Humidity is Not Healthy");
60
61 temp = [];
62 hum = [];
63
64 <Sleep(51)>
```

Shell

```
Temperature = 48 Humidity = 5
Temperature = 0 Humidity = 35
Temperature = 23 Humidity = 41
Temperature = 13 Humidity = 18
Temperature = 9 Humidity = 30
Temperature = 51 Humidity = 67
Temperature = 69 Humidity = 42
Temperature = 69 Humidity = 92
Temperature = 30 Humidity = 8
Temperature = 50 Humidity = 59
Temperature = 41 Humidity = 30
Temperature = 64 Humidity = 99
Temperature = 52 Humidity = 55
Temperature = 2 Humidity = 17
Temperature = 62 Humidity = 37
Temperature = 40 Humidity = 72
Temperature = 50 Humidity = 87
Temperature = 63 Humidity = 4
Temperature = 35 Humidity = 75
Temperature = 60 Humidity = 88
Temperature = 54 Humidity = 0
Temperature = 69 Humidity = 59
Temperature = 2 Humidity = 19
Temperature = 20 Humidity = 45
Temperature = 56 Humidity = 81
Average temperature is 38
Average Humidity is 50

Your room temperature is slightly hotter
Your room Humidity is Healthy
```

#### Code And ScreenShot

#### Python Code :

```
'''
```

#### Assignment 2:

Build a python code, Assume u get temperature and humidity values (generated with a random function to a variable) and write a condition to detect an

alarm in case of high temperature continuously.

DONE BY

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Computer Science Engineering

COLLEGE :

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'''

#import the necessary package!

import requests

import random

from time import \*

from statistics import mean

'Storing Temperature and Humidity in array'

temp = [];

hum = [];

pause = True;

while(pause):

    sleep(0.25);

    randomtemp = random.randint(0,70);

```
randomhum = random.randint(0,100);
print("Temperature =",randomtemp,"Humidity = ",randomhum)
temp.append(randomtemp);
hum.append(randomhum);
if(len(temp) == 60 and len(hum) == 60 ):
    print("Average temperature is " + str( round(mean(temp))));
    print("Average Humidity is " + str( round( mean(hum))));
    'Room temperature analysis'
    if (mean(temp) > 50 ):
        print("\n\nKindly move to cooler place");
    elif (mean(temp) < 15):
        print("\n\nYour room temperature is too low");
    elif (mean(temp) > 15 and mean(temp) < 35 ):
        print("\n\nYour room temperature is Normal");
    elif (mean(temp) > 35 and mean(temp) < 50 ):
        print("\n\nYour room temperature is slightly hotter");
    'Room humidity analysis'
    if (mean(hum) < 30 ):
        print("\n\nYour room Humidity is Too Dry");
    elif (mean(hum) > 30 and mean(hum) < 60):
        print("Your room Humidity is Healthy");
    elif (mean(hum) > 60 and mean(hum) < 100 ):
        print("Your room Humidity is Not Healthy");

temp = [];
hum = [];

sleep(5);
```

### **Output for Code :**

Temperature = 37 Humidity = 84

Temperature = 62 Humidity = 41

Temperature = 37 Humidity = 97

Temperature = 7 Humidity = 46

Temperature = 52 Humidity = 84

Temperature = 2 Humidity = 58

Temperature = 61 Humidity = 75

Temperature = 29 Humidity = 25

Temperature = 15 Humidity = 82

Temperature = 40 Humidity = 94

Temperature = 63 Humidity = 28

Temperature = 18 Humidity = 76

Temperature = 65 Humidity = 49

Temperature = 61 Humidity = 7

Temperature = 57 Humidity = 70

Temperature = 28 Humidity = 1

Temperature = 20 Humidity = 56

Temperature = 28 Humidity = 59

Temperature = 70 Humidity = 79

Temperature = 68 Humidity = 67

Temperature = 44 Humidity = 67

Temperature = 10 Humidity = 17

Temperature = 14 Humidity = 92

Temperature = 44 Humidity = 67

Temperature = 11 Humidity = 23

Temperature = 39 Humidity = 37

Temperature = 22 Humidity = 44

Temperature = 21 Humidity = 70  
Temperature = 46 Humidity = 50  
Temperature = 62 Humidity = 72  
Temperature = 41 Humidity = 97  
Temperature = 52 Humidity = 89  
Temperature = 53 Humidity = 6  
Temperature = 37 Humidity = 82  
Temperature = 24 Humidity = 55  
Temperature = 49 Humidity = 54  
Temperature = 10 Humidity = 83  
Temperature = 10 Humidity = 46  
Temperature = 25 Humidity = 36  
Temperature = 56 Humidity = 100  
Temperature = 39 Humidity = 78  
Temperature = 59 Humidity = 79  
Temperature = 43 Humidity = 69  
Temperature = 24 Humidity = 64  
Temperature = 21 Humidity = 86  
Temperature = 25 Humidity = 36  
Temperature = 15 Humidity = 31  
Temperature = 59 Humidity = 45  
Temperature = 19 Humidity = 13  
Temperature = 17 Humidity = 22  
Temperature = 37 Humidity = 39  
Temperature = 8 Humidity = 37  
Temperature = 40 Humidity = 66  
Temperature = 23 Humidity = 40  
Temperature = 14 Humidity = 3  
Temperature = 39 Humidity = 51  
Temperature = 35 Humidity = 77

Temperature = 53 Humidity = 63

Temperature = 70 Humidity = 80

Temperature = 43 Humidity = 38

Temperature = 38 Humidity = 31

Average temperature is 36

Average Humidity is 55

Your room temperature is slightly hotter

Your room Humidity is Healthy