

**Assignment -2**  
Python Programming

Assignment Date	1 NOVEMBER 2022
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Maximum Marks	2 Marks

**Question-1:**

**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:**

```
import random
import time
while(1):
    temp=random.randint(0,80)
    hum=random.randint(0,80)
    if(15<=temp<=30):                #room temperature in degrees Celsius between
15C - 30C
        print("Temperature is normal. Temperature = ",temp)
    elif(temp<15):
        print("Temperature is too low. Temperature = ",temp)
    elif(temp>30):
        print("Temperature is too high. Temperature = ",temp)
    if(30<=hum<=50):                #humidity may percentage between 30% - 50%
        print("Humidity is normal. Humidity = ",hum)
    elif(hum<30):
        print("Very less humidity. Humidity = ",hum)
    elif(hum>50):
        print("Very high humidity. Humidity = ",hum)
    print()
    time.sleep(2)                    #It observe temperature every 2 seconds
```

## SAMPLE INPUT AND OUTPUT :

The image shows a Python IDE window titled "2python - Assignment\_2.py". The editor displays a script that generates random temperature and humidity values and prints status messages based on these values. The script includes comments for temperature and humidity ranges.

```
1 import random
2 import time
3 while(1):
4     temp=random.randint(0,80)
5     hum=random.randint(0,80)
6     #room temperature in degrees Celsius between 15C - 30C
7     if(15<=temp<=30):
8         print("Temperature is normal. Temperature = ",temp)
9     elif(temp<15):
10        print("Temperature is too low. Temperature = ",temp)
11    elif(temp>30):
12        print("Temperature is too high. Temperature = ",temp)
13    #humidity may percentage between 30% - 50%
14    if(30<=hum<=50):
15        print("Humidity is normal. Humidity = ",hum)
16    elif(hum<30):
17        print("Very less humidity. Humidity = ",hum)
18    elif(hum>50):
19        print("Very high humidity. Humidity = ",hum)
20    print()
21    time.sleep(2) #if observe temperature every 2 seconds
22 while(1):
```

The Run console shows the output of the script, which prints temperature and humidity values along with status messages. The output is as follows:

```
"D:\coding in (c,java,python)\projects in python\2python\venv\Scripts\python.exe" "D:/coding in (c,java,python)/projects in python/2python/Assignment_2.py"
Temperature is normal. Temperature = 21
Humidity is normal. Humidity = 37

Temperature is too high. Temperature = 60
Very less humidity. Humidity = 20

Temperature is too low. Temperature = 6
Very less humidity. Humidity = 21

Temperature is too high. Temperature = 53
Very high humidity. Humidity = 62

Temperature is too low. Temperature = 12
Humidity is normal. Humidity = 50

Temperature is too high. Temperature = 60
Very high humidity. Humidity = 78
```