

**Assignment -2 Python
Programming**

Team ID:PNT2022TMID53952

Assignment Date	24 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 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 screenshot displays a Python IDE with a project named '2python'. The file 'Assignment_2.py' is open, showing a script that uses the 'random' and 'time' modules to generate random temperature and humidity values and prints them out. The script includes conditional checks for normal, too low, and too high values for both temperature and humidity, and a 2-second sleep interval between observations.

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

The Run console shows the output of the script, which prints the temperature and humidity values every 2 seconds. 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 = 0
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
```