

**Assignment -2**  
Python Programming

Assignment Date	1 NOVEMBER 2022
Student Name	BARATH P
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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 explorer on the left shows a directory structure with various Python files, including 'Assignment\_2.py' which is currently selected. The main editor window shows the code for 'Assignment\_2.py', which imports 'random' and 'time' modules and uses a 'while' loop to generate random temperature and humidity values. It includes conditional statements to print messages based on these values, such as 'Temperature is normal', 'Temperature is too low', 'Temperature is too high', 'Humidity is normal', 'Very less humidity', and 'Very high humidity'. A comment indicates that the script observes temperature every 2 seconds. The bottom panel shows the output of the script, which matches the printed messages in the code.

```
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):
7         #room temperature in degrees Celsius between 15C - 30C
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    if(30<=hum<=50):
14        #humidity may percentage between 30% - 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)
```

Run: Assignment\_2

```
"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
```

Version Control Run Debug Python Packages TODO Python Console Problems Terminal Services

tabnine Starter 19/6 CRLF UTF-8 4 spaces Python 3.10 (2python)