

**Assignment -2**  
Python Programming

Assignment Date	24 September 2022
Student Name	Dharshini.S
Student Roll Number	813819106024
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, printing status messages based on these values. The 'Run' console at the bottom shows the execution output, displaying several iterations of temperature and humidity readings and their corresponding status messages.

```
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         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):
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)
20 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
```