

## Assignment -2

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Project Name	Smart Waste Management System for Metropolitan Cities

**Question:** Build a python code, Assume you 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.

### CODE:

```
import random

from time import sleep

while True:

    sleep(5)

    temperature = random.randrange(0, 200, 3)

    print("\nCurrent Temperature =", temperature, end="°C\n")

    humidity = random.randrange(0, 100, 6)

    print("Current Humidity    =", humidity, end="%\n\n")

    if temperature >= 38:

        print("Temperature >>High - Alarm ON")

    if humidity >= 75:

        print("Humidity    >>High - Alarm ON")
```

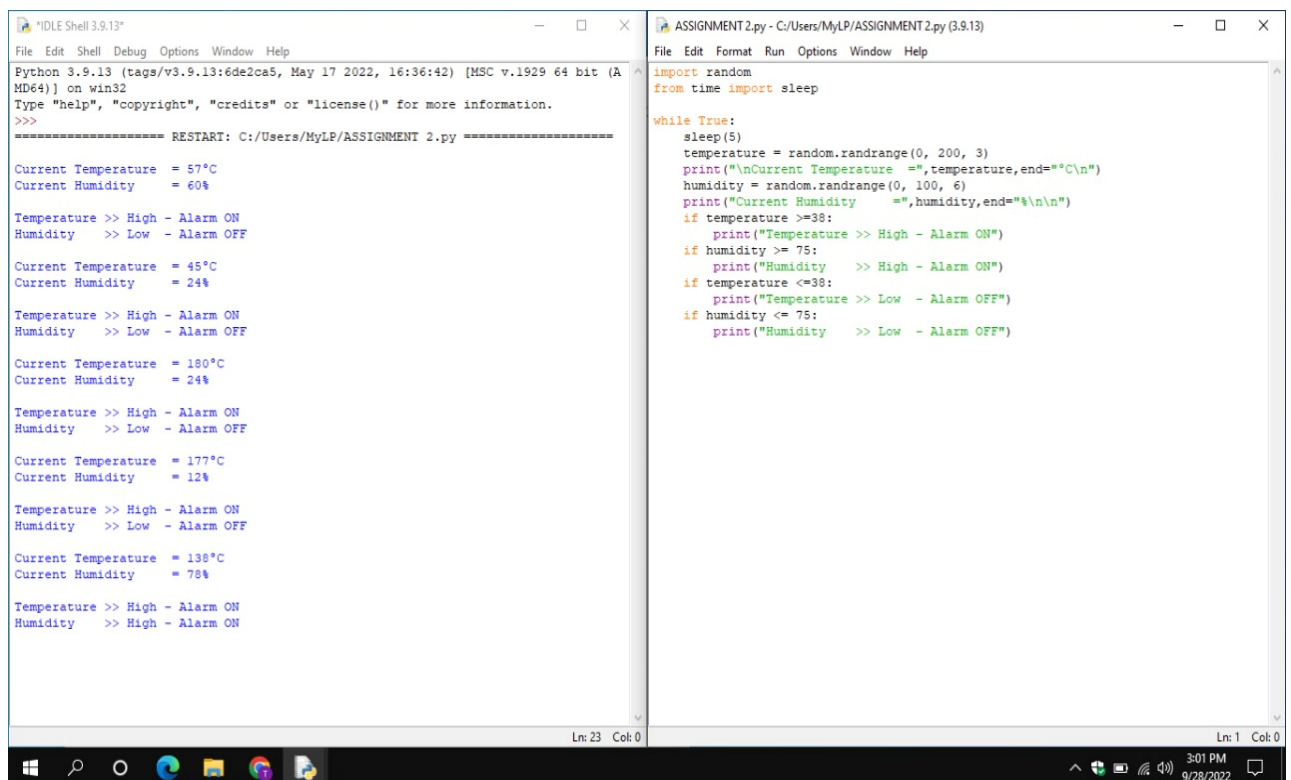
```
if temperature <=38:
```

```
    print("Temperature >> Low - Alarm OFF")
```

```
if humidity <= 75:
```

```
    print("Humidity >> Low - Alarm OFF")
```

## SCREENSHOT:



The screenshot displays a Python IDE with two windows. The left window, titled "IDLE Shell 3.9.13\*", shows the execution output of a script. It begins with a restart message and then displays a series of temperature and humidity readings along with alarm status messages. The right window, titled "ASSIGNMENT 2.py - C:/Users/MyLP/ASSIGNMENT 2.py (3.9.13)", shows the source code of the script. The code imports the random module and uses a while loop to generate random temperature and humidity values, printing them and checking if they trigger an alarm based on the conditions defined in the code.

```
Python 3.9.13 (tags/v3.9.13:6de2ca5, May 17 2022, 16:36:42) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/MyLP/ASSIGNMENT 2.py =====
Current Temperature = 57°C
Current Humidity = 60%
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Current Temperature = 45°C
Current Humidity = 24%
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Current Temperature = 180°C
Current Humidity = 24%
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Current Temperature = 177°C
Current Humidity = 12%
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Current Temperature = 138°C
Current Humidity = 78%
Temperature >> High - Alarm ON
Humidity >> High - Alarm ON
```

```
import random
from time import sleep

while True:
    sleep(5)
    temperature = random.randrange(0, 200, 3)
    print("\nCurrent Temperature =", temperature, end="\nC\n")
    humidity = random.randrange(0, 100, 6)
    print("Current Humidity =", humidity, end="\n\n")
    if temperature >=38:
        print("Temperature >> High - Alarm ON")
    if humidity >= 75:
        print("Humidity >> High - Alarm ON")
    if temperature <=38:
        print("Temperature >> Low - Alarm OFF")
    if humidity <= 75:
        print("Humidity >> Low - Alarm OFF")
```