

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 two windows from a computer screen. The left window, titled "IDLE Shell 3.10.7", shows the output of a Python program. It prints out current temperature and humidity values, along with alarm status messages. For example, it shows "Current Temperature = 135°C", "Current Humidity = 42%", "Temperature >> High - Alarm ON", and "Humidity >> Low - Alarm OFF". The right window, titled "test.py - C:\Users\Dark-Devil\Desktop\test.py (3.10.7)", shows the Python code that generates this output. The code imports the random module and uses a while loop to repeatedly generate random temperature and humidity values. It then uses if statements to print the current values and the alarm status based on the conditions defined in the text above the screenshot.

```
File Edit Shell Debug Options Window Help
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Current Temperature = 135°C
Current Humidity = 42%
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Current Temperature = 39°C
Current Humidity = 24%
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Current Temperature = 3°C
Current Humidity = 36%
Temperature >> Low - Alarm OFF
Humidity >> Low - Alarm OFF
Current Temperature = 15°C
Current Humidity = 78%
Humidity >> High - Alarm ON
Temperature >> Low - Alarm OFF
Current Temperature = 72°C
Current Humidity = 54%
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Current Temperature = 105°C
Current Humidity = 6%
Temperature >> High - Alarm ON
Humidity >> Low - Alarm OFF
Ln: 489 Col: 0
```

```
File Edit Format Run Options Window Help
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")
Ln: 17 Col: 29
```