

Internet of Things Assignment

Assignment 2:

Build a python code, Assume u 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.

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Python Code:

```
import random
import time
```

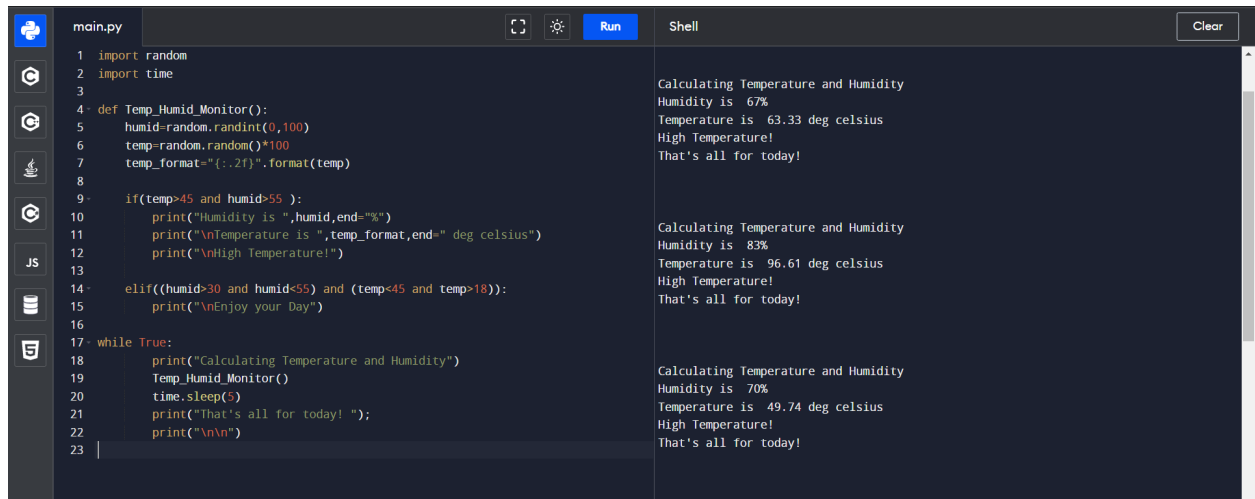
```
def Temp_Humid_Monitor():
    humid=random.randint(0,100)
    temp=random.random()*100
    temp_format="{:.2f}".format(temp)

    if(temp>45 and humid>55 ):
        print("Humidity is ",humid,end="%")
        print("\nTemperature is ",temp_format,end=" deg celsius")
        print("\nHigh Temperature!")

    elif((humid>30 and humid<55) and (temp<45 and temp>18)):
        print("\nEnjoy your Day")

while True:
    print("Calculating Temperature and Humidity")
    Temp_Humid_Monitor()
    time.sleep(5)
    print("That's all for today! ");
    print("\n\n")
```

Screenshot:



The screenshot shows a code editor with a dark theme. On the left is a sidebar with icons for file explorer, search, and other tools. The main area is split into two panes. The left pane, titled 'main.py', contains a Python script. The right pane, titled 'Shell', shows the output of the script. The script defines a function 'Temp_Humid_Monitor()' which generates random humidity and temperature values, checks for high temperature, and prints the results. A 'while True' loop calls this function and sleeps for 5 seconds between iterations. The output in the Shell pane shows three iterations of the function's output.

```
1 import random
2 import time
3
4 def Temp_Humid_Monitor():
5     humid=random.randint(0,100)
6     temp=random.random()*100
7     temp_format="{:.2f}".format(temp)
8
9     if(temp>45 and humid>55 ):
10         print("Humidity is ",humid,end=" ")
11         print("\nTemperature is ",temp_format,end=" deg celsius")
12         print("\nHigh Temperature!")
13
14     elif((humid>30 and humid<55) and (temp<45 and temp>18)):
15         print("\nEnjoy your Day")
16
17 while True:
18     print("Calculating Temperature and Humidity")
19     Temp_Humid_Monitor()
20     time.sleep(5)
21     print("That's all for today! ");
22     print("\n\n")
23
```

Calculating Temperature and Humidity
Humidity is 67%
Temperature is 63.33 deg celsius
High Temperature!
That's all for today!

Calculating Temperature and Humidity
Humidity is 83%
Temperature is 96.61 deg celsius
High Temperature!
That's all for today!

Calculating Temperature and Humidity
Humidity is 70%
Temperature is 49.74 deg celsius
High Temperature!
That's all for today!