

## **IBM ASSIGNMENT – 2**

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### **ASSIGNMENT QUESTION:**

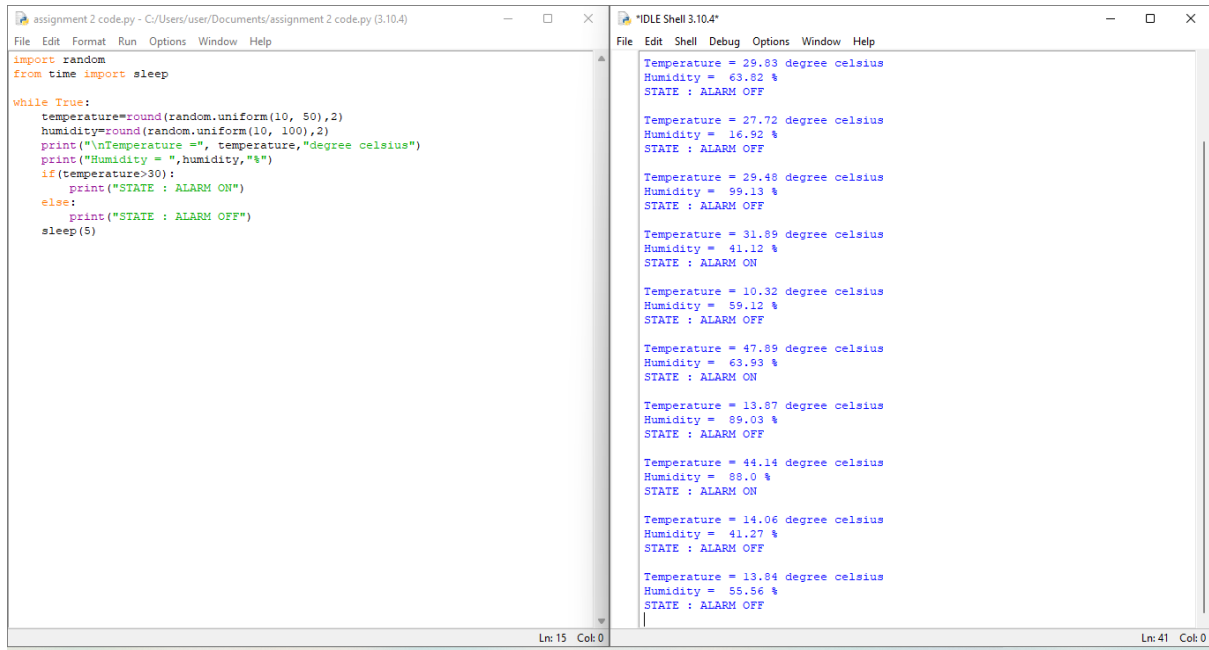
Build a python code, assume you get temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect alarm in case of high temperature.

### **PYTHON CODE:**

```
import random
from time import sleep

while True:
    temperature=round(random.uniform(10, 50),2)
    humidity=round(random.uniform(10, 100),2)
    print("\nTemperature =", temperature,"degree celsius")
    print("Humidity = ",humidity,"%")
    if(temperature>32):
        print("STATE : ALARM ON")
    else:
        print("STATE : ALARM OFF")
    sleep(5)
```

## OUTPUT:



The image shows a screenshot of an IDE with two windows. The left window, titled 'assignment 2 code.py - C:/Users/user/Documents/assignment 2 code.py (3.10.4)', contains a Python script. The script imports 'random' and 'time', and uses a 'while True' loop to generate random temperature and humidity values. It prints these values along with a 'STATE' that is 'ALARM ON' if the temperature is greater than 30, and 'ALARM OFF' otherwise. The script includes a 5-second sleep in the loop. The right window, titled 'IDLE Shell 3.10.4', displays the output of the script, showing multiple iterations of the loop with random values and the corresponding alarm state.

```
assignment 2 code.py - C:/Users/user/Documents/assignment 2 code.py (3.10.4)
File Edit Format Run Options Window Help

import random
from time import sleep

while True:
    temperature=round(random.uniform(10, 50),2)
    humidity=round(random.uniform(10, 100),2)
    print("\nTemperature =", temperature,"degree celsius")
    print("Humidity = ",humidity,"%")
    if(temperature>30):
        print("STATE : ALARM ON")
    else:
        print("STATE : ALARM OFF")
    sleep(5)

Ln: 15 Col: 0
```

```
IDLE Shell 3.10.4
File Edit Shell Debug Options Window Help

Temperature = 29.83 degree celsius
Humidity = 63.82 %
STATE : ALARM OFF

Temperature = 27.72 degree celsius
Humidity = 16.92 %
STATE : ALARM OFF

Temperature = 29.48 degree celsius
Humidity = 59.13 %
STATE : ALARM OFF

Temperature = 31.89 degree celsius
Humidity = 41.12 %
STATE : ALARM ON

Temperature = 10.32 degree celsius
Humidity = 59.12 %
STATE : ALARM OFF

Temperature = 47.89 degree celsius
Humidity = 63.93 %
STATE : ALARM ON

Temperature = 13.87 degree celsius
Humidity = 89.03 %
STATE : ALARM OFF

Temperature = 44.14 degree celsius
Humidity = 88.0 %
STATE : ALARM ON

Temperature = 14.06 degree celsius
Humidity = 41.27 %
STATE : ALARM OFF

Temperature = 13.84 degree celsius
Humidity = 55.56 %
STATE : ALARM OFF

Ln: 41 Col: 0
```