IBM

ASSIGNMENT-02

TEAM ID: PNT2022TMID23451

TEAM MEMBERS:

- ❖ Leela Vinothini S (113219041056)
- ❖ Ponsanthini A (113219041083)
- ❖ Shalini R (113219041104)
- ❖ Shamini P (113219041105)

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.
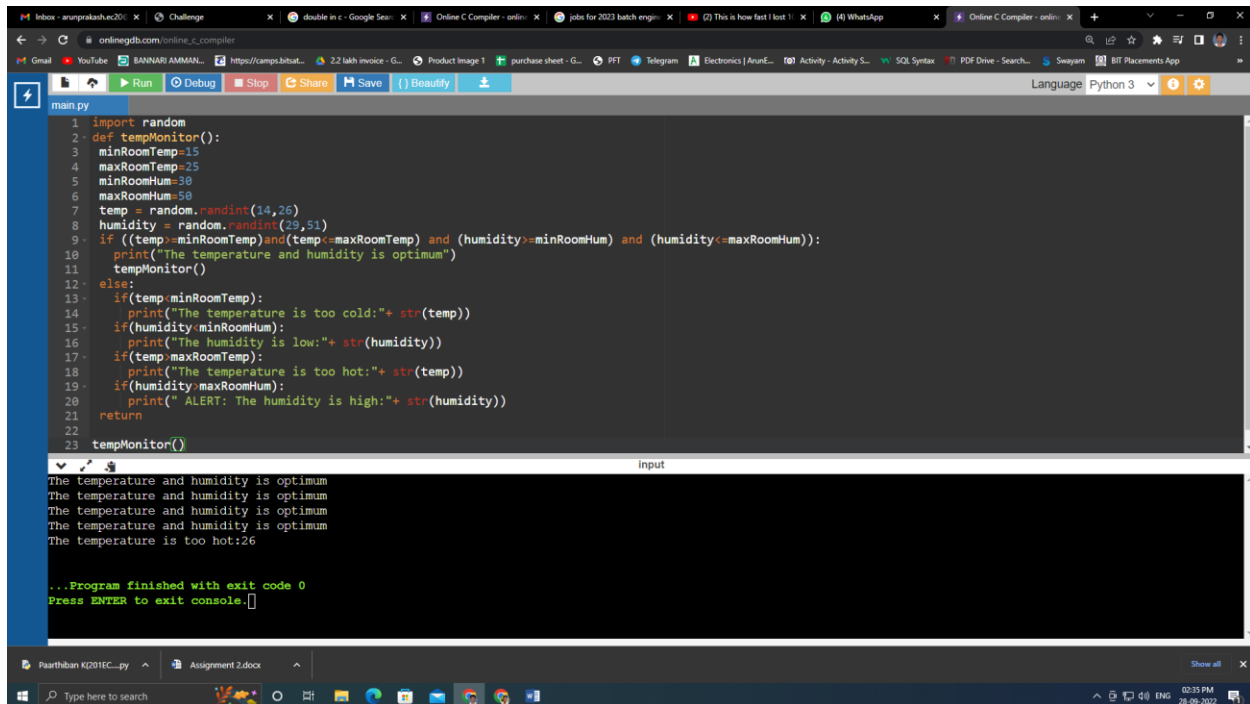
Python code:

```python
import random
def tempMonitor():
 minRoomTemp=15
 maxRoomTemp=25
 minRoomHum=30
 maxRoomHum=50
```

```python
    temp = random.randint(14,26)

    humidity = random.randint(29,51)

    if ((temp>=minRoomTemp)and(temp<=maxRoomTemp) and
(humidity>=minRoomHum) and (humidity<=maxRoomHum)):

        print("The temperature and humidity is optimum")

        tempMonitor()

    else:

        if(temp<minRoomTemp):

            print("The temperature is too cold:"+ str(temp))

        if(humidity<minRoomHum):

            print("The humidity is low:"+ str(humidity))

        if(temp>maxRoomTemp):

            print("The temperature is too hot:"+ str(temp))

        if(humidity>maxRoomHum):

            print(" ALERT: The humidity is high:"+ str(humidity))

    return


tempMonitor()
```
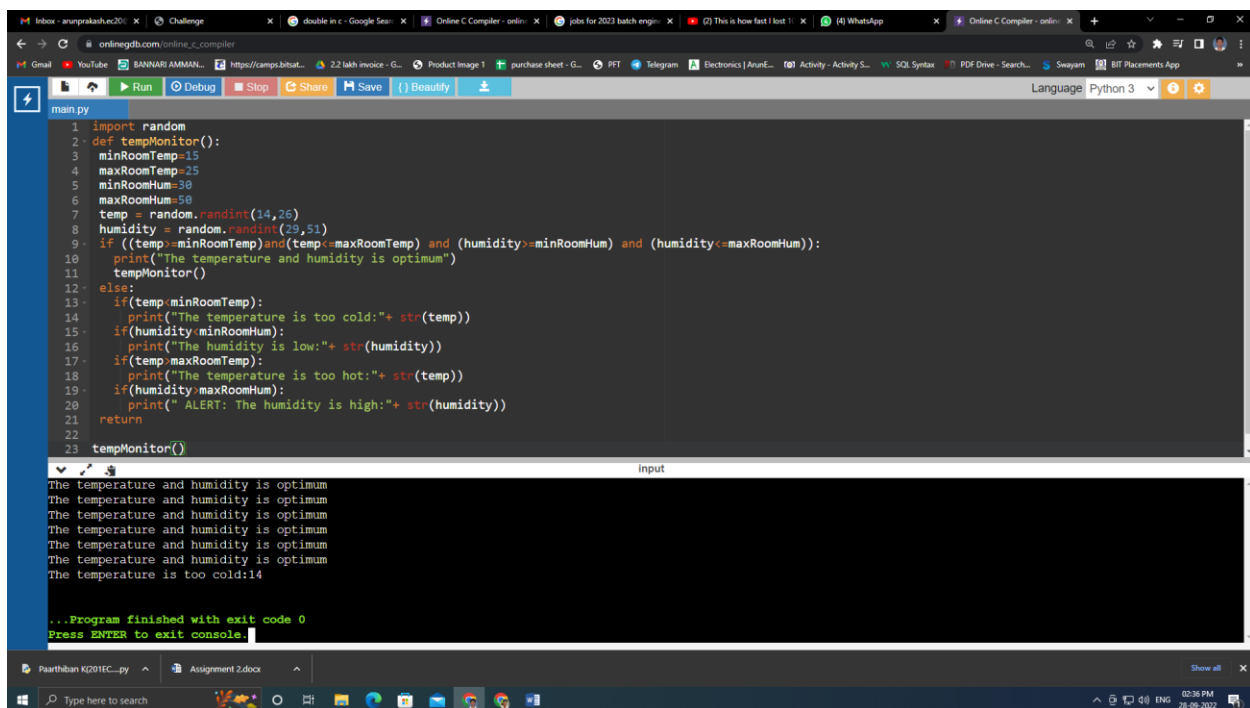
IDLE OUTPUT:


```python
import random
def tempMonitor():
    minRoomTemp=15
    maxRoomTemp=25
    minRoomHum=30
    maxRoomHum=50
    temp = random.randint(14,26)
    humidity = random.randint(29,51)
    if ((temp>=minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and (humidity<=maxRoomHum)):
        print("The temperature and humidity is optimum")
        tempMonitor()
    else:
        if(temp<minRoomTemp):
            print("The temperature is too cold:"+ str(temp))
        if(humidity<minRoomHum):
            print("The humidity is low:"+ str(humidity))
        if(temp>maxRoomTemp):
            print("The temperature is too hot:"+ str(temp))
        if(humidity>maxRoomHum):
            print(" ALERT: The humidity is high:"+ str(humidity))
    return

tempMonitor()
```

```
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature is too hot:26


...Program finished with exit code 0
Press ENTER to exit console.
```



```python
import random
def tempMonitor():
    minRoomTemp=15
    maxRoomTemp=25
    minRoomHum=30
    maxRoomHum=50
    temp = random.randint(14,26)
    humidity = random.randint(29,51)
    if ((temp>=minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and (humidity<=maxRoomHum)):
        print("The temperature and humidity is optimum")
        tempMonitor()
    else:
        if(temp<minRoomTemp):
            print("The temperature is too cold:"+ str(temp))
        if(humidity<minRoomHum):
            print("The humidity is low:"+ str(humidity))
        if(temp>maxRoomTemp):
            print("The temperature is too hot:"+ str(temp))
        if(humidity>maxRoomHum):
            print(" ALERT: The humidity is high:"+ str(humidity))
    return

tempMonitor()
```

```
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature is too cold:14


...Program finished with exit code 0
Press ENTER to exit console.
```

main.py   Language Python 3

```python
import random
def tempMonitor():
    minRoomTemp=15
    maxRoomTemp=25
    minRoomHum=30
    maxRoomHum=50
    temp = random.randint(14,26)
    humidity = random.randint(29,51)
    if ((temp>=minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and (humidity<=maxRoomHum)):
        print("The temperature and humidity is optimum")
        tempMonitor()
    else:
        if(temp<minRoomTemp):
            print("The temperature is too cold:"+ str(temp))
        if(humidity<minRoomHum):
            print("The humidity is low:"+ str(humidity))
        if(temp>maxRoomTemp):
            print("The temperature is too hot:"+ str(temp))
        if(humidity>maxRoomHum):
            print(" ALERT: The humidity is high:"+ str(humidity))
    return

tempMonitor()
```

input

```
The temperature and humidity is optimum
The humidity is low:29


...Program finished with exit code 0
Press ENTER to exit console.
```

input

```
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
The temperature and humidity is optimum
 ALERT: The humidity is high:51


...Program finished with exit code 0
Press ENTER to exit console.
```