

**SMART FARMER IOT ENABLED SMART  
FARMING APPLICATION**

**ASSIGNMENT-02**

SUBMITTED BY

**SHAMINI P (113219041105)**

**BACHELOR OF ENGINEERING IN  
ELECTRONICS AND  
COMMUNICATION ENGINEERING**

**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.**

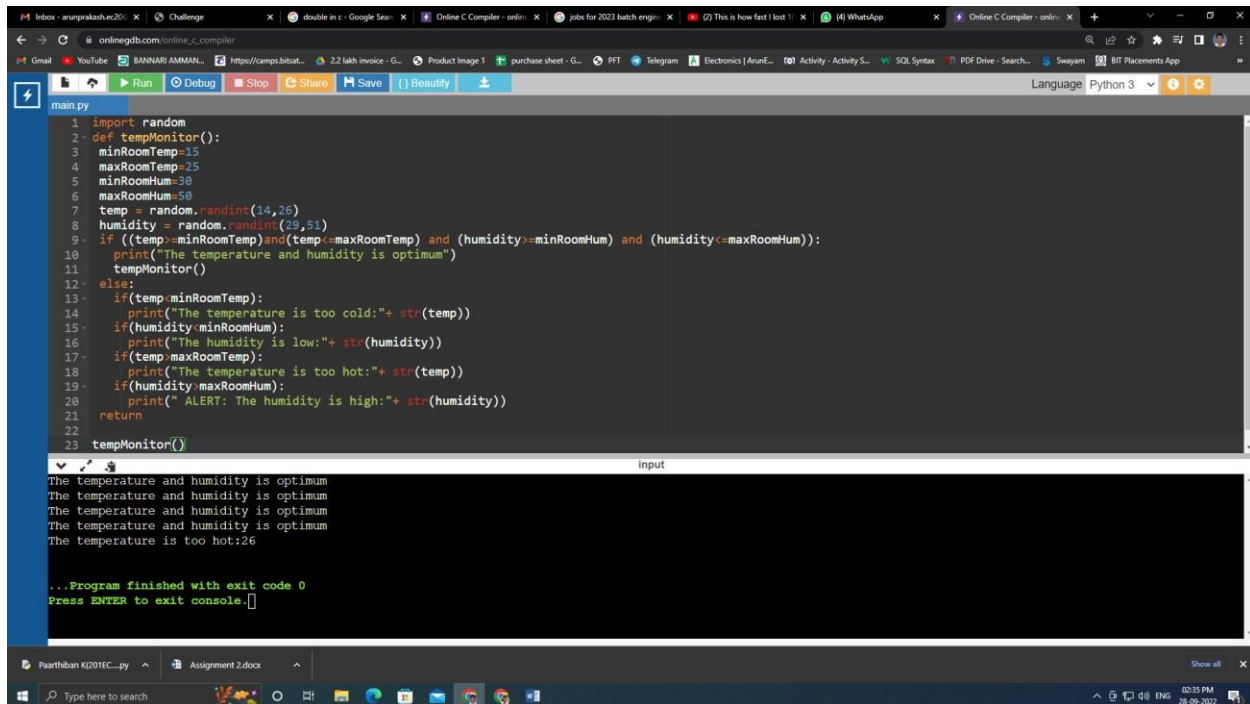
**Python code:**

```
import random  
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()
```

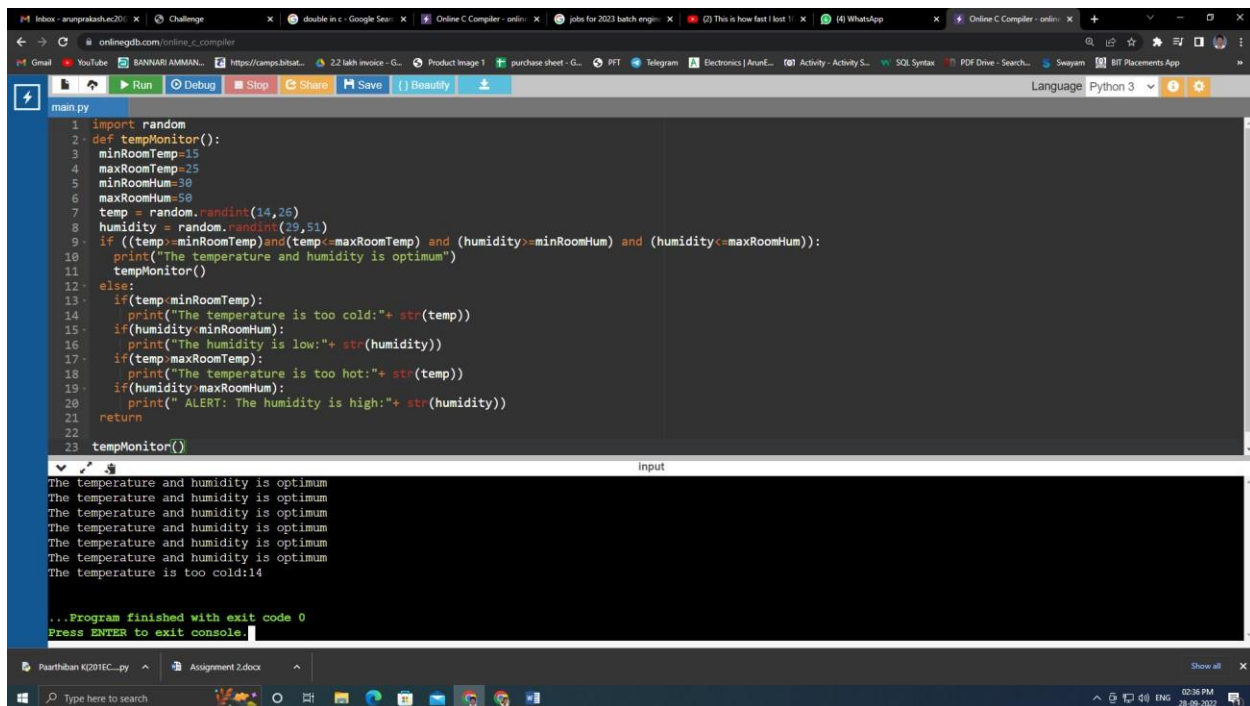
## IDLE OUTPUT:



```
1 import random
2 def tempMonitor():
3     minRoomTemp=15
4     maxRoomTemp=25
5     minRoomHum=30
6     maxRoomHum=50
7     temp = random.randint(14,26)
8     humidity = random.randint(29,51)
9     if ((temp>minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and (humidity<=maxRoomHum)):
10        print("The temperature and humidity is optimum")
11        tempMonitor()
12    else:
13        if(temp<minRoomTemp):
14            print("The temperature is too cold:"+ str(temp))
15        if(humidity<minRoomHum):
16            print("The humidity is low:"+ str(humidity))
17        if(temp>maxRoomTemp):
18            print("The temperature is too hot:"+ str(temp))
19        if(humidity>maxRoomHum):
20            print(" ALERT: The humidity is high:"+ str(humidity))
21    return
22
23 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.



```
1 import random
2 def tempMonitor():
3     minRoomTemp=15
4     maxRoomTemp=25
5     minRoomHum=30
6     maxRoomHum=50
7     temp = random.randint(14,26)
8     humidity = random.randint(29,51)
9     if ((temp>minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and (humidity<=maxRoomHum)):
10        print("The temperature and humidity is optimum")
11        tempMonitor()
12    else:
13        if(temp<minRoomTemp):
14            print("The temperature is too cold:"+ str(temp))
15        if(humidity<minRoomHum):
16            print("The humidity is low:"+ str(humidity))
17        if(temp>maxRoomTemp):
18            print("The temperature is too hot:"+ str(temp))
19        if(humidity>maxRoomHum):
20            print(" ALERT: The humidity is high:"+ str(humidity))
21    return
22
23 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 is too cold:14

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

```
main.py
1 import random
2 def tempMonitor():
3     minRoomTemp=15
4     maxRoomTemp=25
5     minRoomHum=30
6     maxRoomHum=50
7     temp = random.randint(14,26)
8     humidity = random.randint(29,51)
9     if ((temp>=minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and (humidity<=maxRoomHum)):
10         print("The temperature and humidity is optimum")
11         tempMonitor()
12     else:
13         if(temp<minRoomTemp):
14             print("The temperature is too cold:"+ str(temp))
15         if(humidity<minRoomHum):
16             print("The humidity is low:"+ str(humidity))
17         if(temp>maxRoomTemp):
18             print("The temperature is too hot:"+ str(temp))
19         if(humidity>maxRoomHum):
20             print(" ALERT: The humidity is high:"+ str(humidity))
21     return
22
23 tempMonitor()
```

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

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

```
main.py
1 import random
2 def tempMonitor():
3     minRoomTemp=15
4     maxRoomTemp=25
5     minRoomHum=30
6     maxRoomHum=50
7     temp = random.randint(14,26)
8     humidity = random.randint(29,51)
9     if ((temp>=minRoomTemp)and(temp<=maxRoomTemp) and (humidity>=minRoomHum) and (humidity<=maxRoomHum)):
10         print("The temperature and humidity is optimum")
11         tempMonitor()
12     else:
13         if(temp<minRoomTemp):
14             print("The temperature is too cold:"+ str(temp))
15         if(humidity<minRoomHum):
16             print("The humidity is low:"+ str(humidity))
17         if(temp>maxRoomTemp):
18             print("The temperature is too hot:"+ str(temp))
19         if(humidity>maxRoomHum):
20             print(" ALERT: The humidity is high:"+ str(humidity))
21     return
22
23 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  
ALERT: The humidity is high:51

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