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## ASSIGNMENT-2

IBM-PERSONAL ASSISTANCE FOR PEOPLE WHO ARE  
SELF-RELIANT

SONA COLLEGE OF TECHNOLOGY

### PROBLEM STATEMENT:

Build a python code, Assume u 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.

### CODE:

```
import random

import winsound

import sys

freq=440

duration=10000

while(True):

    temperature=random.randint(10,100)

    humidity=random.randint(10,100)

    print("Current Temperature=",temperature)

    print("Current Humidity=",humidity,'%')

    stable_temperature=37

    stable_humidity=45

    if temperature>stable_temperature and humidity>stable_humidity:

        print("High Temperature BEEP ALARM")

        winsound.Beep(freq,duration)

    else:

        print("Everything Fine NO ALARM")
```

```
sys.exit(100)
```

## CODE EXPLANATION;

RANDOM: module used to generate random values from (10-100) using randint for variables temperature and humidity

WINSOUND: module is used to create beep with duration and frequency variables(it does beep withing given duration and certain frequency)

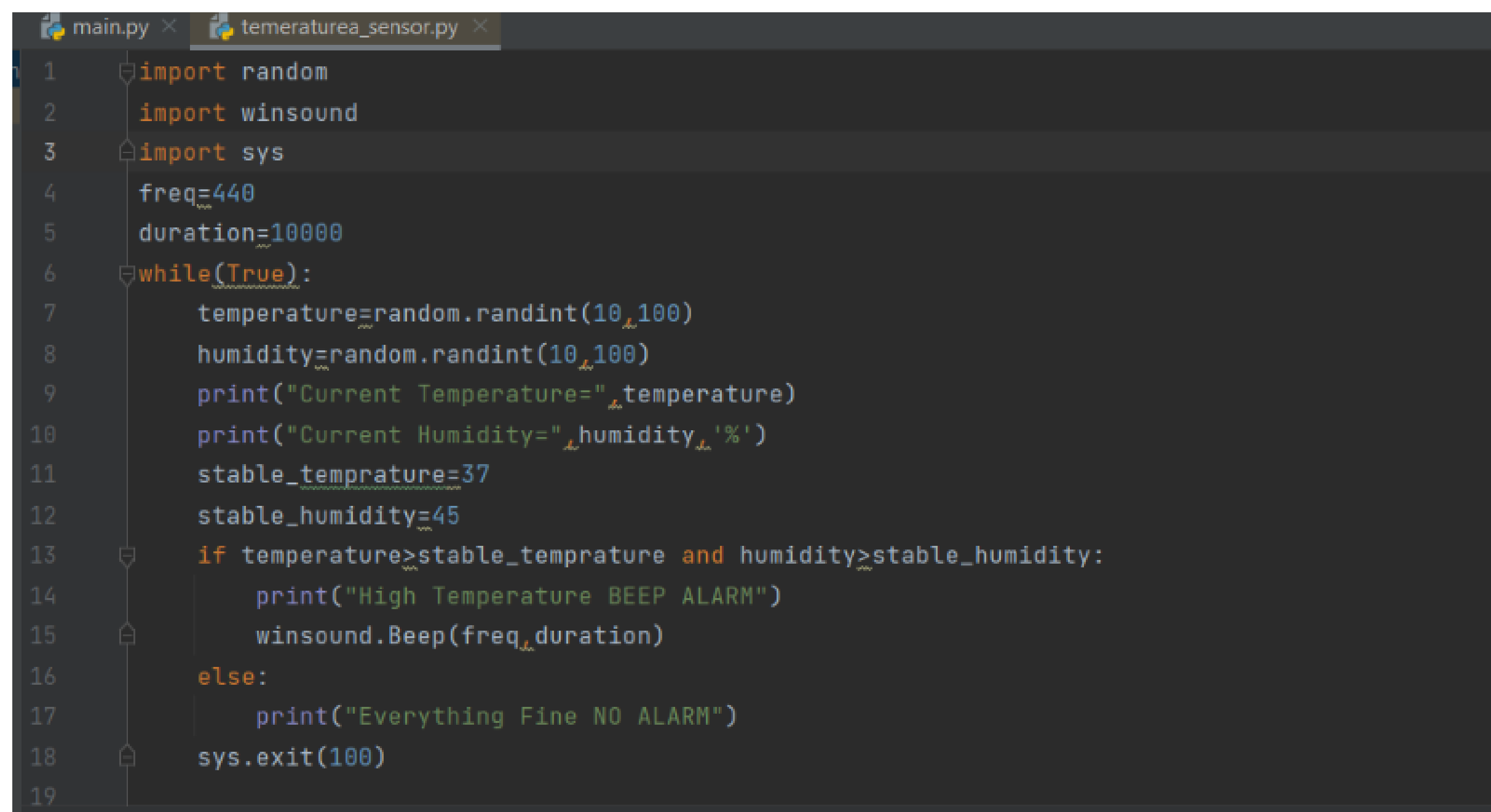
SYS: module used to clear memory and exit correctly once program completes execution

## WHAT PROGRAM DOES:

The program gets random values from random module for temperature and humidity and checks condition with fixed value of humidity(good range(30-45)) and temperature(ideal range(25-37)) and beeps if temperature is above the fixed level using winsound.

## RESULT:

## CODE:



```
1 import random
2 import winsound
3 import sys
4 freq=440
5 duration=10000
6 while(True):
7     temperature=random.randint(10,100)
8     humidity=random.randint(10,100)
9     print("Current Temperature=",temperature)
10    print("Current Humidity=",humidity,'%')
11    stable_temprature=37
12    stable_humidity=45
13    if temperature>stable_temprature and humidity>stable_humidity:
14        print("High Temperature BEEP ALARM")
15        winsound.Beep(freq,duration)
16    else:
17        print("Everything Fine NO ALARM")
18    sys.exit(100)
19
```

## CASE1:(NO ALARM SAFE TEMPERATURE)

Project

pythonProject C:\Users\Kishore\PycharmProjects\pythonProject

venv library root

main.py

External Libraries

Scratches and Consoles

1

import random

2

import winsound

3

import sys

4

freq=440

5

duration=10000

6

while(True):

7

temperature=random.randint(10,100)

8

humidity=random.randint(10,100)

9

print("Current Temperature=",temperature)

10

print("Current Humidity=",humidity,'%')

11

stable\_temprature=37

12

stable\_humidity=45

13

if temperature>stable\_temprature and humidity>stable\_humidity:

14

print("High Temperature BEEP ALARM")

15

winsound.Beep(freq,duration)

16

else:

17

print("Everything Fine NO ALARM")

18

sys.exit(100)

19

Run: main

C:\Users\Kishore\PycharmProjects\pythonProject\venv\Scripts\python.exe C:\Users\Kishore\PycharmProjects\pythonProject\main.py

Current Temperature= 16

Current Humidity= 91 %

Everything Fine NO ALARM

Process finished with exit code 100

## CASE 2:HIGH TEMERATURE-ALARM BEEP

pycharm projects / temeraturea\_sensor.py

Project

pythonProject C:\Users\Kishore\PycharmProjects\pythonProject

venv library root

main.py

External Libraries

Scratches and Consoles

1

import random

2

import winsound

3

import sys

4

freq=440

5

duration=10000

6

while(True):

7

temperature=random.randint(10,100)

8

humidity=random.randint(10,100)

9

print("Current Temperature=",temperature)

10

print("Current Humidity=",humidity,'%')

11

stable\_temprature=37

12

stable\_humidity=45

13

if temperature>stable\_temprature and humidity>stable\_humidity:

14

print("High Temperature BEEP ALARM")

15

winsound.Beep(freq,duration)

16

else:

17

print("Everything Fine NO ALARM")

18

sys.exit(100)

19

Run: main

C:\Users\Kishore\PycharmProjects\pythonProject\venv\Scripts\python.exe C:\Users\Kishore\PycharmProjects\pythonProject\main.py

Current Temperature= 70

Current Humidity= 71 %

High Temperature BEEP ALARM

Process finished with exit code 100

