

# **NAAN MUDHALVAN – PROFESSIONAL READINESS FOR INNOVATION, EMPLOYMENT AND ENTREPRENEURSHIP**

## **ASSIGNMENT – 2**

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### **QUESTION:**

Build Python code, Generate Temperature and Humidity values (Use Random function to generate values) and write a condition to detect an alarm in case of high temperature and high Humidity.

- o Example: Temp is greater than 30 c, play alarm sound. Same for humidity.
- o Submit the Assignment in PDF format in the Git repo.
- o Everyone in the team should submit the assignment as it is an individual task.

## Code:

main.py

```
import random
```

```
# Set the threshold values for temperature and humidity
```

```
TEMP_THRESHOLD = 85 # degrees Celsius HUMIDITY_THRESHOLD = 45 #  
percent
```

```
# Generate a random temperature value between 0 and 100 degrees
```

```
Celsius temperature = random.uniform(0, 100)
```

```
print("Temperature:", temperature)
```

```
# Generate a random humidity value between 0 and 100
```

```
percent
```

```
humidity = random.uniform(0, 100)
```

```
print("Humidity:", humidity)
```

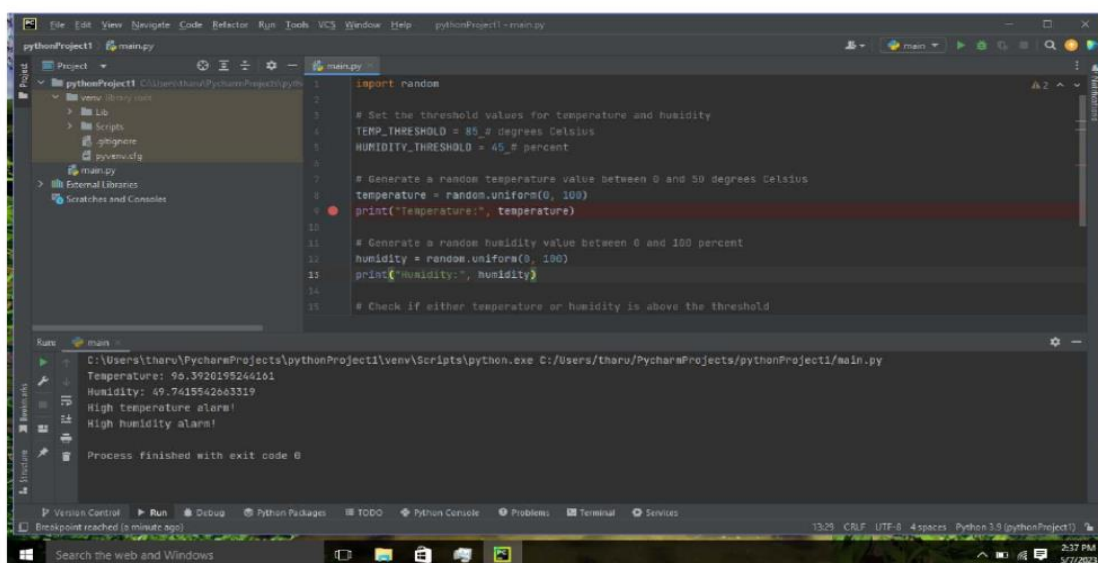
```
# Check if either temperature or humidity is above  
the threshold
```

```
if temperature > TEMP_THRESHOLD:
```

```
print("High temperature alarm!") if humidity>
HUMIDITY_THRESHOLD:
```

```
print("High humidity alarm!")
```

## OUTPUT:



The screenshot shows the PyCharm IDE with a Python script named `main.py` and its output in the Run console.

**Script Code:**

```
1 import random
2
3 # Set the threshold values for temperature and humidity
4 TEMP_THRESHOLD = 85_# degrees Celsius
5 HUMIDITY_THRESHOLD = 45_# percent
6
7 # Generate a random temperature value between 0 and 30 degrees Celsius
8 temperature = random.uniform(0, 100)
9 print("Temperature:", temperature)
10
11 # Generate a random humidity value between 0 and 100 percent
12 humidity = random.uniform(0, 100)
13 print("Humidity:", humidity)
14
15 # Check if either temperature or humidity is above the threshold
```

**Run Console Output:**

```
C:\Users\tharu\PycharmProjects\pythonProject1\venv\Scripts\python.exe C:/Users/tharu/PycharmProjects/pythonProject1/main.py
Temperature: 96.3920195244161
Humidity: 49.7415542663319
High temperature alarm!
High humidity alarm!
Process finished with exit code 0
```

