

ASSIGNMENT 2:

PYTHON CODE:

```
import random

# Define the threshold values for temperature and humidity
TEMP_THRESHOLD = 30.0 # in Celsius
HUMIDITY_THRESHOLD = 80.0 # in percentage

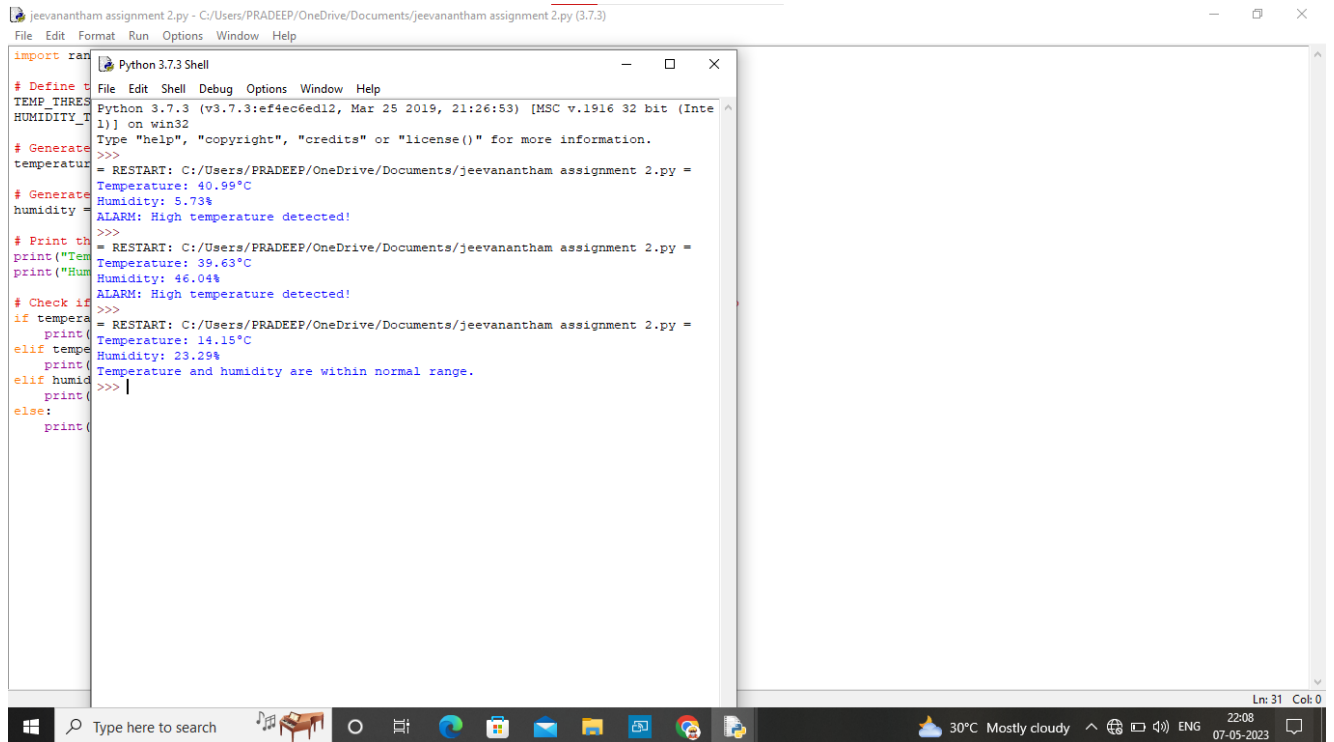
# Generate a random temperature value between 0 and 50 Celsius
temperature = random.uniform(0, 50)

# Generate a random humidity value between 0 and 100%
humidity = random.uniform(0, 100)

# Print the temperature and humidity values
print("Temperature: {:.2f}°C".format(temperature))
print("Humidity: {:.2f}%".format(humidity))

# Check if the temperature or humidity is above the threshold and print an alarm message if so
if temperature > TEMP_THRESHOLD and humidity > HUMIDITY_THRESHOLD:
    print("ALARM: High temperature and high humidity detected!")
elif temperature > TEMP_THRESHOLD:
    print("ALARM: High temperature detected!")
elif humidity > HUMIDITY_THRESHOLD:
    print("ALARM: High humidity detected!")
else:
    print("Temperature and humidity are within normal range.")
```

OUTPUT:



```
import random
# Define thresholds
TEMP_THRESHOLD = 40
HUMIDITY_THRESHOLD = 5

# Generate random temperature and humidity
temperature = random.uniform(10, 50)
humidity = random.uniform(0, 100)

# Print the generated values
print("Generated Temperature: {:.2f}°C".format(temperature))
print("Generated Humidity: {:.2f}%".format(humidity))

# Check if the values exceed the thresholds
if temperature > TEMP_THRESHOLD or humidity > HUMIDITY_THRESHOLD:
    print("ALARM: High temperature or humidity detected!")
else:
    print("Temperature and humidity are within normal range.")
```

The screenshot shows a Windows desktop environment. A Python 3.7.3 Shell window is open, displaying the execution of a script. The script defines two thresholds: TEMP_THRESHOLD = 40 and HUMIDITY_THRESHOLD = 5. It then generates random values for temperature and humidity using the random module. The generated values are printed, and a conditional check is performed to see if either value exceeds its respective threshold. If the condition is met, an alarm message is printed; otherwise, a message indicating that the values are within the normal range is printed. The Windows taskbar at the bottom shows the system clock as 22:08 on 07-05-2023, along with weather information (30°C, Mostly cloudy) and various system icons.