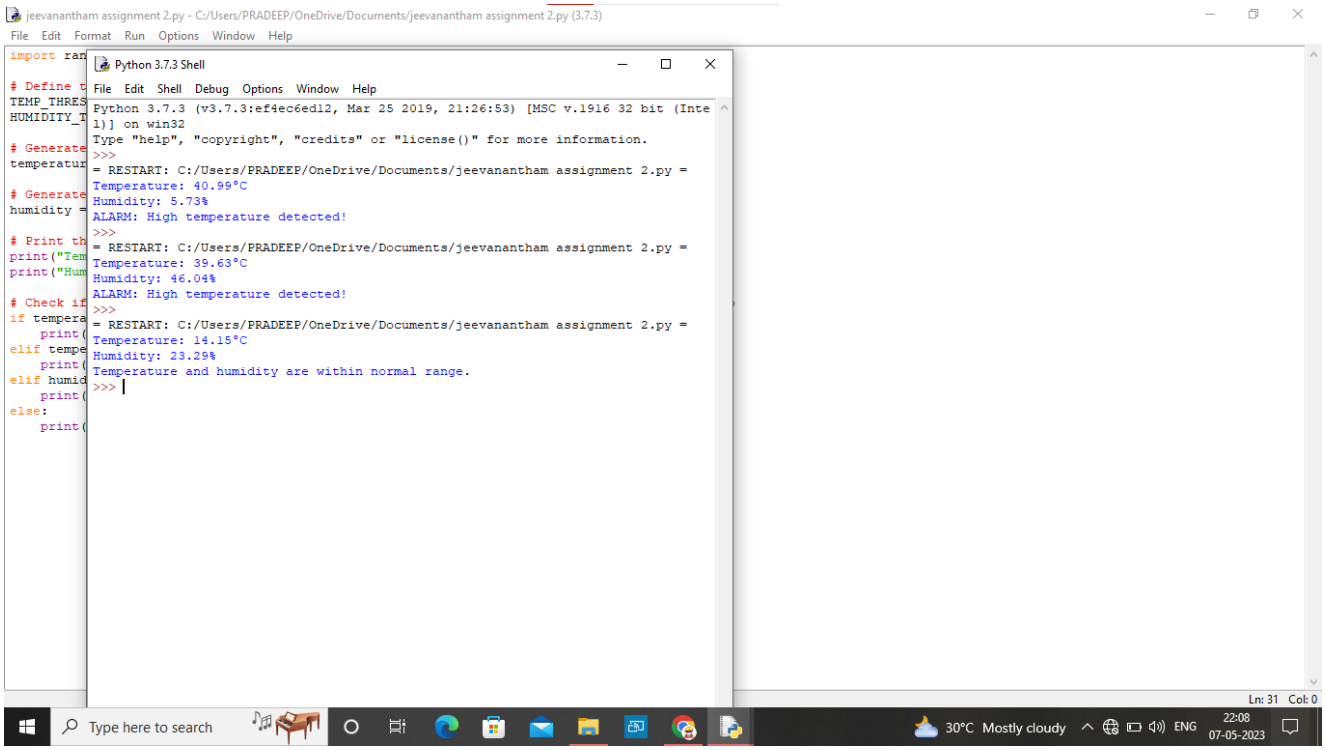
ASSIGNMENT 2:

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:


jeevanantham assignment 2.py - C:/Users/PRADEEP/OneDrive/Documents/jeevanantham assignment 2.py (3.7.3)
File Edit Format Run Options Window Help
Python 3.7.3 Shell
File Edit Shell Debug Options Window Help
Python 3.7.3 (v3.7.3:ef4ec6ed12, Mar 25 2019, 21:26:53) [MSC v.1916 32 bit (Intel)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/PRADEEP/OneDrive/Documents/jeevanantham assignment 2.py =
Temperature: 40.99°C
Humidity: 5.73%
ALARM: High temperature detected!
>>>
= RESTART: C:/Users/PRADEEP/OneDrive/Documents/jeevanantham assignment 2.py =
Temperature: 39.63°C
Humidity: 46.04%
ALARM: High temperature detected!
>>>
= RESTART: C:/Users/PRADEEP/OneDrive/Documents/jeevanantham assignment 2.py =
Temperature: 14.15°C
Humidity: 23.29%
Temperature and humidity are within normal range.
>>>
Ln: 31 Col: 0
Type here to search
30°C Mostly cloudy
ENG
22:08
07-05-2023