

ASSIGNMENT-2

CODING:

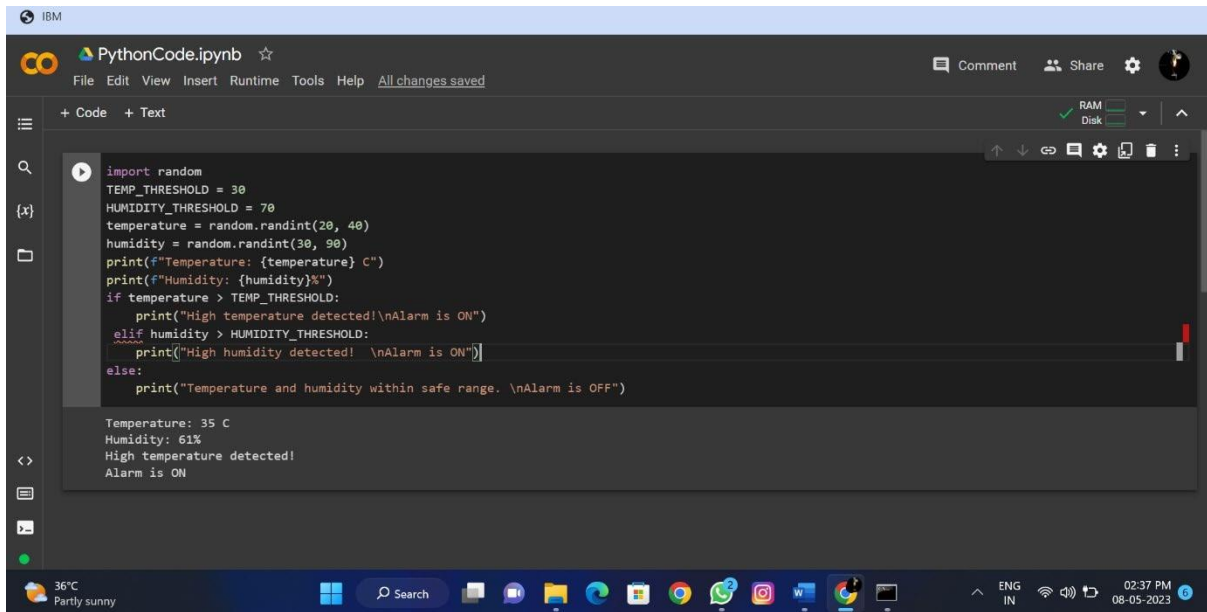
```
import random
TEMP_THRESHOLD = 30

HUMIDITY_THRESHOLD = 70
temperature = random.randint(20, 40)
humidity = random.randint(30, 90)

print(f"Temperature: {temperature} C")
print(f"Humidity: {humidity}%")

if temperature > TEMP_THRESHOLD:
    print("High temperature detected!\nAlarm is ON")
elif humidity > HUMIDITY_THRESHOLD:
    print("High humidity detected! \nAlarm is ON")
else:
    print("Temperature and humidity within safe range. \nAlarm is OFF")
```

CIRCUIT DIAGRAM:

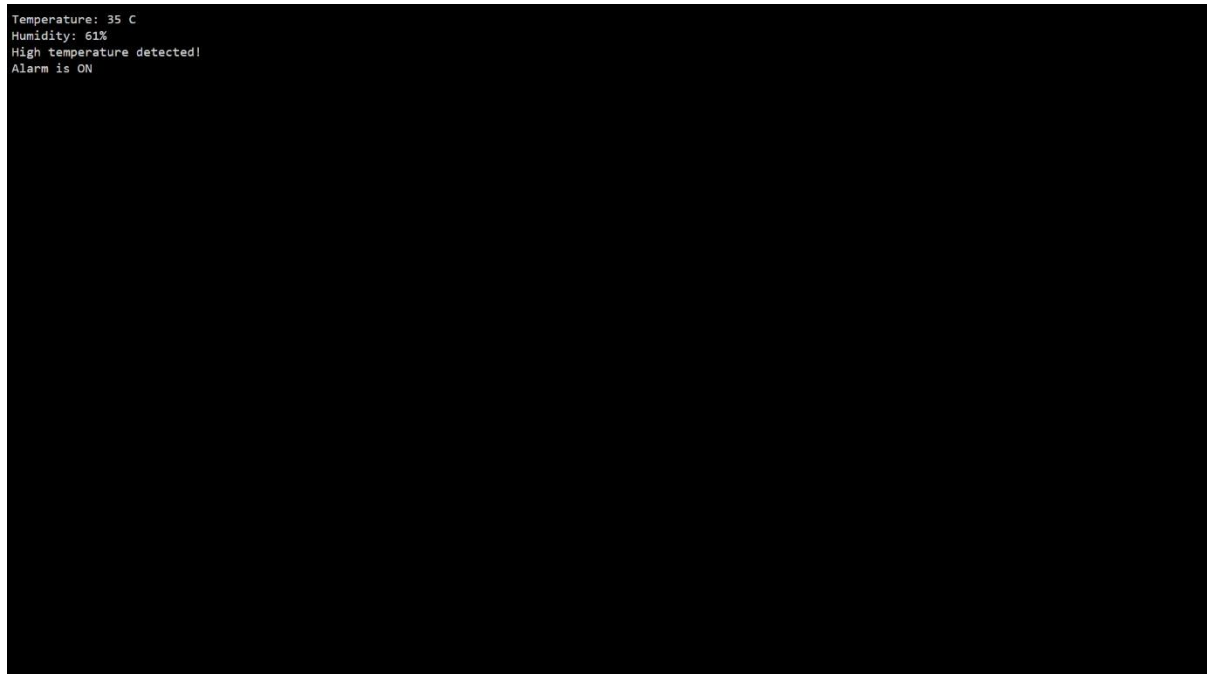


The screenshot shows a Jupyter Notebook titled "PythonCode.ipynb" in a web browser. The code defines two thresholds, generates random temperature and humidity values, and prints them. It then uses conditional logic to check if the temperature is above the threshold or if the humidity is above the threshold, printing an alarm message accordingly. The output shows the generated values and the resulting alarm status.

```
import random
TEMP_THRESHOLD = 30
HUMIDITY_THRESHOLD = 70
temperature = random.randint(20, 40)
humidity = random.randint(30, 90)
print(f"Temperature: {temperature} C")
print(f"Humidity: {humidity}%")
if temperature > TEMP_THRESHOLD:
    print("High temperature detected!\nAlarm is ON")
elif humidity > HUMIDITY_THRESHOLD:
    print("High humidity detected! \nAlarm is ON")
else:
    print("Temperature and humidity within safe range. \nAlarm is OFF")
```

Temperature: 35 C
Humidity: 61%
High temperature detected!
Alarm is ON

OUTPUT:



The output of the code is displayed in a dark-themed terminal window. It shows the generated temperature and humidity values, followed by the conditional logic results and the final alarm status.

```
Temperature: 35 C
Humidity: 61%
High temperature detected!
Alarm is ON
```