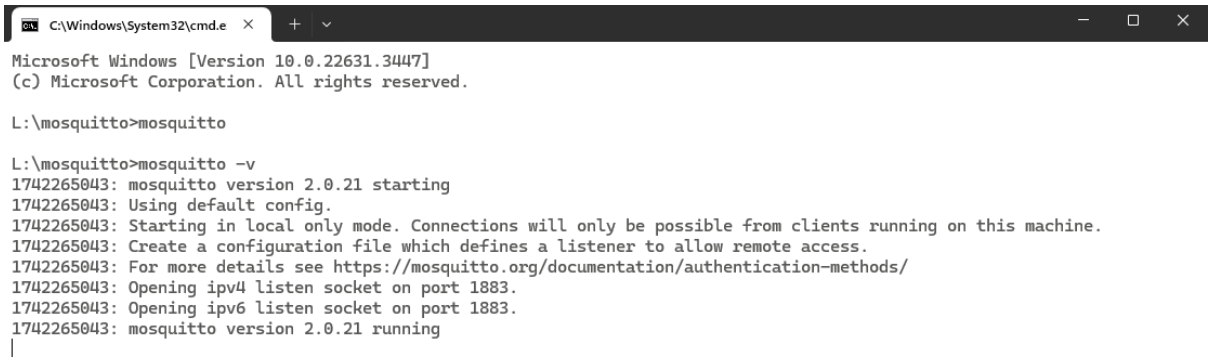
Starting Mosquitto Broker



Publisher.py

Subscriber.py

publisher.py 1 | subscriber.py 1

C: > Users > anves > OneDrive > Desktop > subscriber.py > ...

```python
import paho.mqtt.client as mqtt

# Callback function when a message is received
def on_message(client, userdata, message):
    print(f"Received message: {message.payload.decode()} from {message.topic}")

# Define MQTT broker and topic
broker = "localhost"
port = 1883
topic = "crowd/sector1/#"  # Subscribe to all devices in Sector 1

# Create MQTT client and connect
client = mqtt.Client()
client.on_message = on_message
client.connect(broker, port, 60)
client.subscribe(topic, qos=1)

# Listen for incoming messages
client.loop_forever()
```

published

```
PS C:\Users\anves> & C:/Users/anves/AppData/Local/Microsoft/WindowsApps/python3.12.exe c:/Users/anves/OneDrive/Desktop/publisher.py
c:\Users\anves\OneDrive\Desktop\publisher.py:11: DeprecationWarning: Callback API version 1 is deprecated, update to latest version
  client = mqtt.Client()
Published: {'sector': 'sector1', 'device_id': 'sensor123', 'timestamp': '2025-03-18 08:31:43', 'crowd_density': 85}
Published: {'sector': 'sector1', 'device_id': 'sensor123', 'timestamp': '2025-03-18 08:31:48', 'crowd_density': 85}
Published: {'sector': 'sector1', 'device_id': 'sensor123', 'timestamp': '2025-03-18 08:31:53', 'crowd_density': 85}
```

Subscribed

```python
port = 1883
topic = "crowd/sector1/#"  # Subscribe to all devices in Sector 1

# Create MQTT client and connect
client = mqtt.Client()
client.on_message = on_message
client.connect(broker, port, 60)
client.subscribe(topic, qos=1)

# Listen for incoming messages
client.loop_forever()
```

26.8s

```
C:\Users\anves\AppData\Local\Temp\ipykernel_12896\4028585870.py:13: DeprecationWarning: Callback API version 1 is deprecated, update to latest version
  client = mqtt.Client()
Received message: {"sector": "sector1", "device_id": "sensor123", "timestamp": "2025-03-18 08:31:53", "crowd_density": 85} from crowd/sector1/sensor123
Received message: {"sector": "sector1", "device_id": "sensor123", "timestamp": "2025-03-18 08:31:58", "crowd_density": 85} from crowd/sector1/sensor123
Received message: {"sector": "sector1", "device_id": "sensor123", "timestamp": "2025-03-18 08:32:03", "crowd_density": 85} from crowd/sector1/sensor123
Received message: {"sector": "sector1", "device_id": "sensor123", "timestamp": "2025-03-18 08:32:08", "crowd_density": 85} from crowd/sector1/sensor123
Received message: {"sector": "sector1", "device_id": "sensor123", "timestamp": "2025-03-18 08:32:13", "crowd_density": 85} from crowd/sector1/sensor123
```

Mosquito broker