

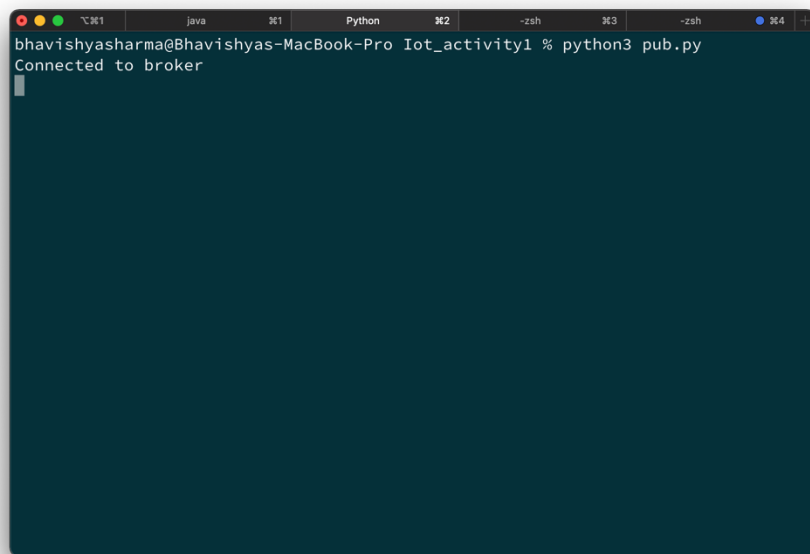
MQTT Broker Tutorial

Internet of Things

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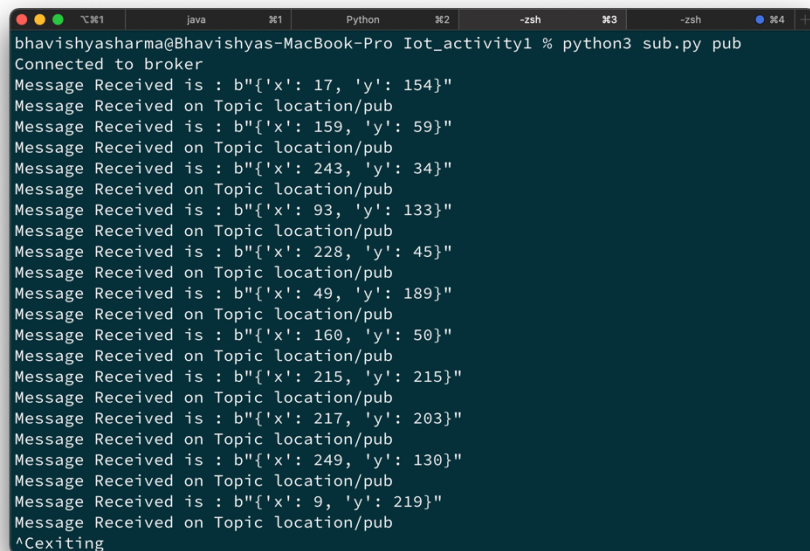
Activity 01 – PUB-SUB

Publisher

A terminal window with a dark blue background. The title bar shows tabs for 'java', 'Python', and two '-zsh' sessions. The terminal text shows the user 'bhavishyasharma@Bhavishyas-MacBook-Pro' in the directory 'Iot_activity1' running 'python3 pub.py'. The output is 'Connected to broker' followed by a cursor.

```
bhavishyasharma@Bhavishyas-MacBook-Pro Iot_activity1 % python3 pub.py
Connected to broker
```

Subscriber

A terminal window with a dark blue background. The title bar shows tabs for 'java', 'Python', and two '-zsh' sessions. The terminal text shows the user 'bhavishyasharma@Bhavishyas-MacBook-Pro' in the directory 'Iot_activity1' running 'python3 sub.py pub'. The output shows 'Connected to broker' followed by 15 lines of received messages, each containing a JSON object with 'x' and 'y' coordinates. The session ends with '^Cexiting'.

```
bhavishyasharma@Bhavishyas-MacBook-Pro Iot_activity1 % python3 sub.py pub
Connected to broker
Message Received is : b"{'x': 17, 'y': 154}"
Message Received on Topic location/pub
Message Received is : b"{'x': 159, 'y': 59}"
Message Received on Topic location/pub
Message Received is : b"{'x': 243, 'y': 34}"
Message Received on Topic location/pub
Message Received is : b"{'x': 93, 'y': 133}"
Message Received on Topic location/pub
Message Received is : b"{'x': 228, 'y': 45}"
Message Received on Topic location/pub
Message Received is : b"{'x': 49, 'y': 189}"
Message Received on Topic location/pub
Message Received is : b"{'x': 160, 'y': 50}"
Message Received on Topic location/pub
Message Received is : b"{'x': 215, 'y': 215}"
Message Received on Topic location/pub
Message Received is : b"{'x': 217, 'y': 203}"
Message Received on Topic location/pub
Message Received is : b"{'x': 249, 'y': 130}"
Message Received on Topic location/pub
Message Received is : b"{'x': 9, 'y': 219}"
Message Received on Topic location/pub
^Cexiting
```

Activity 02 – Multiple Clients

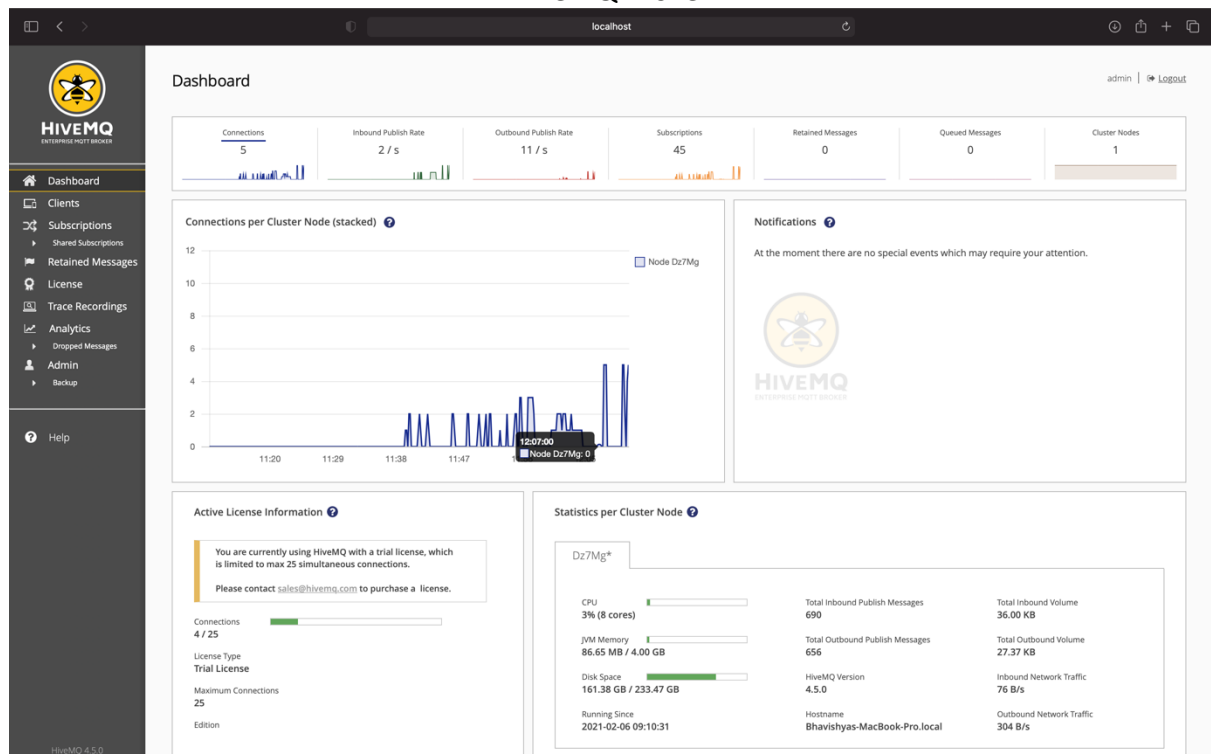
Client

```
bhavishyasharma@Bhavishyas-MacBook-Pro Iot_activity2 % python3 client.py client5

Connected to Broker
exiting
['client2']
bhavishyasharma@Bhavishyas-MacBook-Pro Iot_activity2 % python3 client.py client5

Connected to Broker
exiting
['client1']
bhavishyasharma@Bhavishyas-MacBook-Pro Iot_activity2 %
```

HiveMQ Broker



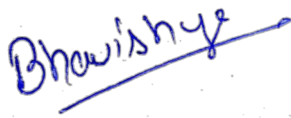
5 Clients are connected at the same time to the broker.

PLAGIARISM STATEMENT

I certify that this assignment/report is my own work, based on my personal study and/or research and that I have acknowledged all material and sources used in its preparation, whether they be books, articles, reports, lecture notes, and any other kind of document, electronic or personal communication. I also certify that this assignment/report has not previously been submitted for assessment in any other course, except where specific permission has been granted from all course instructors involved, or at any other time in this course, and that I have not copied in part or whole or otherwise plagiarised the work of other students and/or persons. I pledge to uphold the principles of honesty and responsibility at CSE@IITH. In addition, I understand my responsibility to report honour violations by other students if I become aware of it.

Name: Bhavishya Sharma
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Signature

A handwritten signature in blue ink, reading "Bhavishya", with a long horizontal stroke extending to the right.