MQTT

The objective was to implement a messaging system using MQTT-protocol pub-sub communication. The components involved in this project:

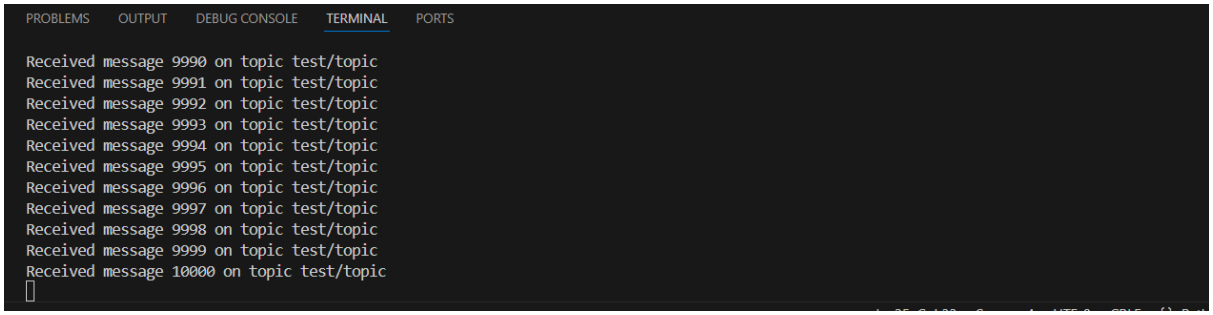
1. Publisher application: This application publishes 10000 messages to the test/topic MQTT topic.
2. Subscriber application: This application reads all messages from the test/topic MQTT topic.

The code for the same is available on GitHub.

Two scenarios were explored in the context of MQTT functionality:

1. Both publisher and subscriber are up, hence the subscriber will consume the messages instantly.
2. Only publisher is up, so all messages are lost.

In the first scenario, we brought up the subscriber application first and then the publisher application. It was found that as soon as the producer published messages to the topic, the consumer which was subscribed to the same topic, consumed it immediately. As seen in the image below, it was able to consume all 10000 messages.



However, when the second scenario was attempted, where the publisher application published all messages to the topic, but the consumer application was not running, it was found that no messages were consumed. This aligns with the MQTT principles as it does not care whether the consumers are up or not. As we can see in the image below, it did not consume a single message as it was not up when the producer was publishing messages.