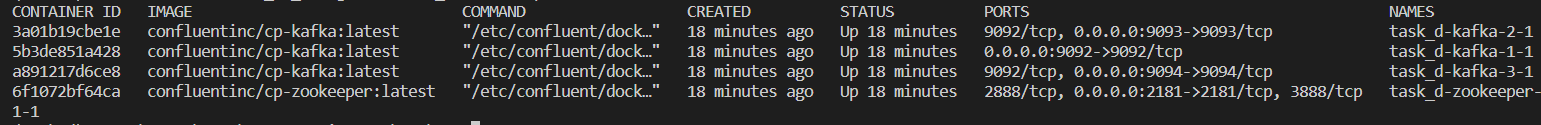
CS3219 Task D

1. In order to create a 3 node Apache Kafka cluster with a zookeeper node, the following docker-compose.yml should be created in the folder (see github link for content).

Reference used: <https://www.baeldung.com/ops/kafka-docker-setup>

1. In order to start up the nodes, run ` docker-compose -f "docker-compose.yml" up -d `



1. Create a topic called ‘test’ via Kafka Tools via the following instructions

Connect to the Apache Cluster with the following information,

Graphical user interface, text, application, email

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

The brokers will be shown in the list,

Graphical user interface, text, chat or text message

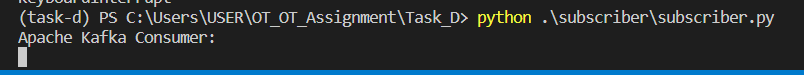
Description automatically generated

1. For the creation of a publisher and subscriber, I will be using the `confluent-kafka` python library.  
     
   Ensure confluent-kafka is installed in your python installation.  
     
   Reference used: https://docs.confluent.io/kafka-clients/python/current/overview.html#ak-producer
2. Start up the publisher via `python publisher/publisher.py`

Text

Description automatically generated

1. Start up the subscriber via `python subscriber/subscriber.py`

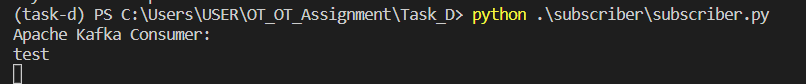


1. Typing a message in Producer,

Text

Description automatically generated

1. Will cause the same message to be printed in Consumer.



1. To test for failover, we will stop kafka-1 container

A computer screen capture

Description automatically generated with medium confidence

Testing for publisher and subscriber communication still working,

Text

Description automatically generated Text

Description automatically generated