

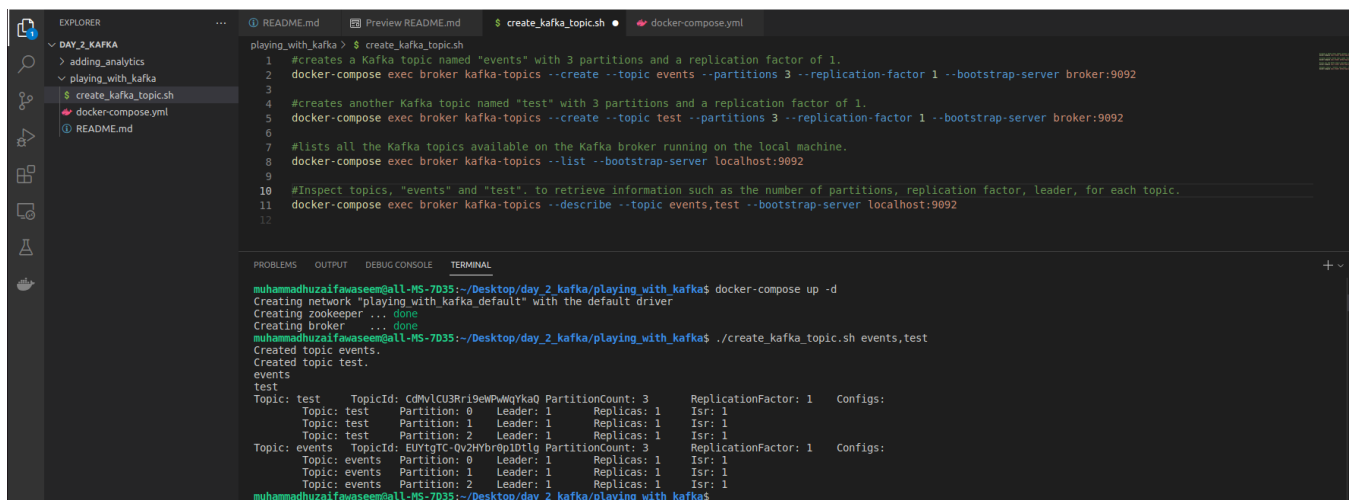
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Pair Partner 2: - Syed Muhammad Hammad Irshad(2303.KHI.DEG.032)

## UNIT 4.2:

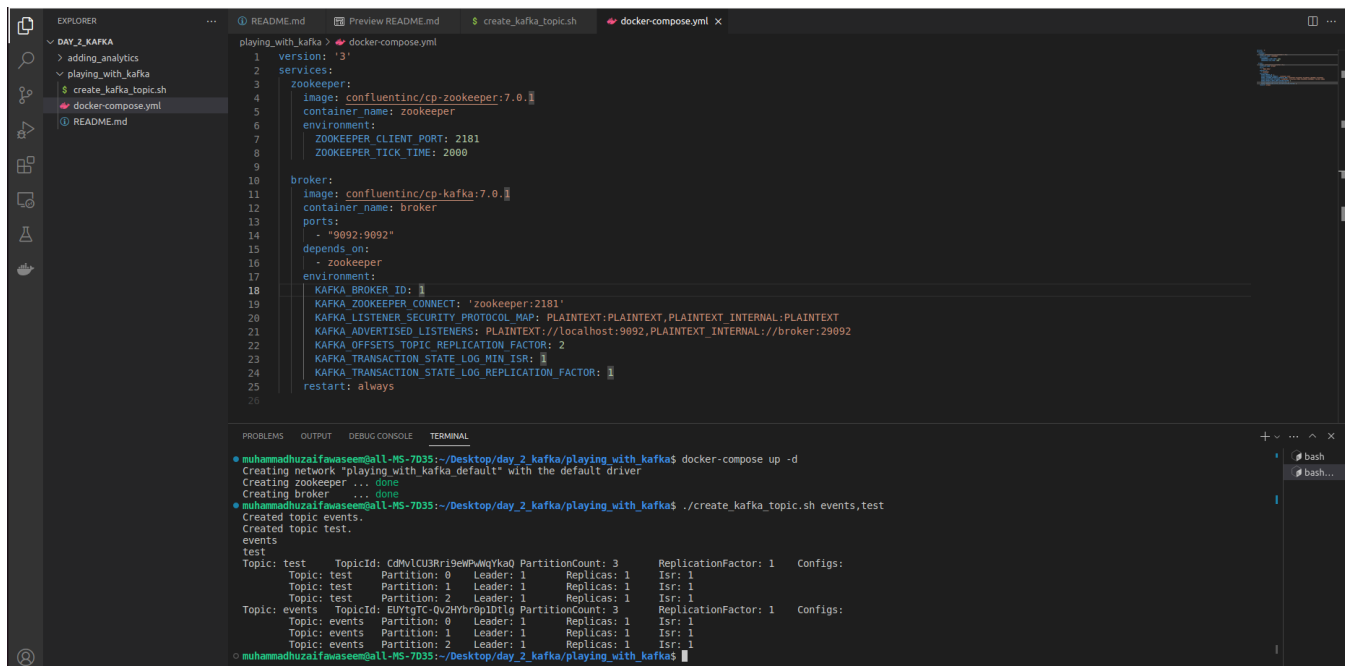
# Assignment



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EXPLORER
...
DAY_2_KAFKA
  > adding_analytics
  > playing_with_kafka
    $ create_kafka_topic.sh
    docker-compose.yml
    README.md

playing_with_kafka > $ create_kafka_topic.sh
1 #creates a Kafka topic named "events" with 3 partitions and a replication factor of 1.
2 docker-compose exec broker kafka-topics --create --topic events --partitions 3 --replication-factor 1 --bootstrap-server broker:9092
3
4 #creates another Kafka topic named "test" with 3 partitions and a replication factor of 1.
5 docker-compose exec broker kafka-topics --create --topic test --partitions 3 --replication-factor 1 --bootstrap-server broker:9092
6
7 #lists all the Kafka topics available on the Kafka broker running on the local machine.
8 docker-compose exec broker kafka-topics --list --bootstrap-server localhost:9092
9
10 #Inspect topics, "events" and "test", to retrieve information such as the number of partitions, replication factor, leader, for each topic.
11 docker-compose exec broker kafka-topics --describe --topic events,test --bootstrap-server localhost:9092
12

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
muhammadhuzaifawaseem@all-MS-7035:~/Desktop/day_2_kafka/playing_with_kafka$ docker-compose up -d
Creating network "playing_with_kafka_default" with the default driver
Creating zookeeper ... done
Creating broker ... done
muhammadhuzaifawaseem@all-MS-7035:~/Desktop/day_2_kafka/playing_with_kafka$ ./create_kafka_topic.sh events,test
Created topic events.
Created topic test.
events
test
Topic: test TopicId: CdMvLCU3RrI9eWpWqYka0 PartitionCount: 3 ReplicationFactor: 1 Configs:
Topic: test Partition: 0 Leader: 1 Replicas: 1 Isr: 1
Topic: test Partition: 1 Leader: 1 Replicas: 1 Isr: 1
Topic: test Partition: 2 Leader: 1 Replicas: 1 Isr: 1
Topic: events TopicId: EUYtgTC-Qv2HYbrp1DtIg PartitionCount: 3 ReplicationFactor: 1 Configs:
Topic: events Partition: 0 Leader: 1 Replicas: 1 Isr: 1
Topic: events Partition: 1 Leader: 1 Replicas: 1 Isr: 1
Topic: events Partition: 2 Leader: 1 Replicas: 1 Isr: 1
muhammadhuzaifawaseem@all-MS-7035:~/Desktop/day_2_kafka/playing_with_kafka$
```



```
EXPLORER
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playing_with_kafka > $ docker-compose.yml
1 version: '3'
2 services:
3   zookeeper:
4     image: confluentinc/cp-zookeeper:7.0.5
5     container_name: zookeeper
6     environment:
7       ZOOKEEPER_CLIENT_PORT: 2181
8       ZOOKEEPER_TICK_TIME: 2000
9
10  broker:
11    image: confluentinc/cp-kafka:7.0.5
12    container_name: broker
13    ports:
14      - "9092:9092"
15    depends_on:
16      - zookeeper
17    environment:
18      KAFKA_BROKER_ID: 1
19      KAFKA_ZOOKEEPER_CONNECT: 'zookeeper:2181'
20      KAFKA_LISTENER_SECURITY_PROTOCOL_MAP: PLAINTEXT:PLAINTEXT,PLAINTEXT_INTERNAL:PLAINTEXT
21      KAFKA_ADVERTISED_LISTENERS: PLAINTEXT://localhost:9092,PLAINTEXT_INTERNAL://broker:29092
22      KAFKA_OFFSETS_TOPIC_REPLICATION_FACTOR: 2
23      KAFKA_TRANSACTION_STATE_LOG_MIN_ISR: 1
24      KAFKA_TRANSACTION_STATE_LOG_REPLICATION_FACTOR: 1
25    restart: always
26

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
muhammadhuzaifawaseem@all-MS-7035:~/Desktop/day_2_kafka/playing_with_kafka$ docker-compose up -d
Creating network "playing_with_kafka_default" with the default driver
Creating zookeeper ... done
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muhammadhuzaifawaseem@all-MS-7035:~/Desktop/day_2_kafka/playing_with_kafka$ ./create_kafka_topic.sh events,test
Created topic events.
Created topic test.
events
test
Topic: test TopicId: CdMvLCU3RrI9eWpWqYka0 PartitionCount: 3 ReplicationFactor: 1 Configs:
Topic: test Partition: 0 Leader: 1 Replicas: 1 Isr: 1
Topic: test Partition: 1 Leader: 1 Replicas: 1 Isr: 1
Topic: test Partition: 2 Leader: 1 Replicas: 1 Isr: 1
Topic: events TopicId: EUYtgTC-Qv2HYbrp1DtIg PartitionCount: 3 ReplicationFactor: 1 Configs:
Topic: events Partition: 0 Leader: 1 Replicas: 1 Isr: 1
Topic: events Partition: 1 Leader: 1 Replicas: 1 Isr: 1
Topic: events Partition: 2 Leader: 1 Replicas: 1 Isr: 1
muhammadhuzaifawaseem@all-MS-7035:~/Desktop/day_2_kafka/playing_with_kafka$
```

**Explain:** The commands shown in the screenshot are used to create a Kafka topic in a Docker container using the kafka-topics.sh script. The commands are saved in a shell script file called create\_kafka\_topic.sh, which can be executed by running the command ./create\_kafka\_topic.sh events in a terminal. However, before running the script, the Docker containers required for Kafka should be running. This is done by running docker-compose up -d in a terminal, which starts the Kafka containers defined in a docker-compose.yml file in detached mode. This ensures that the Kafka containers are running and ready to accept requests before the create\_kafka\_topic.sh script is executed.