Assignment Day 22

Task 1:

Create a kafka topic named KeyLessTopic. Inside KeyLessTopic insert following data:

{"name":"John", "exp":16}

{"name":"Finn", "exp":20}

{"name":"Cylin", "exp":18}

{"name":"Mark", "exp":2}

{"name":"Akshay", "exp":14}

Note: Associated text file is properly documented & submitted along with this file. Kindly refer the text file for a detailed description of each instruction used within the complete process.

Ans:

##Zookeeper Start Command

$KAFKA_HOME/bin/zookeeper-**server-start.sh** \
$KAFKA_HOME/config/zookeeper.properties

ScreenShot:

```
[acadgild@10 ~]$ $KAFKA_HOME/bin/zookeeper-server-start.sh $KAFKA_HOME/config/zookeeper.properties
[2018-09-22 20:32:29,272] INFO Reading configuration from: /home/acadgild/install/kafka/kafka_2.12-0.10.1.1/config/zookeeper.properties
 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2018-09-22 20:32:29,300] INFO autopurge.snapRetainCount set to 3 (org.apache.zookeeper.server.DatadirCleanupManager)
[2018-09-22 20:32:29,300] INFO autopurge.purgeInterval set to 0 (org.apache.zookeeper.server.DatadirCleanupManager)
[2018-09-22 20:32:29,300] INFO Purge task is not scheduled. (org.apache.zookeeper.server.DatadirCleanupManager)
[2018-09-22 20:32:29,300] WARN Either no config or no quorum defined in config, running  in standalone mode (org.apache.zookeeper.serve
r.quorum.QuorumPeerMain)
[2018-09-22 20:32:29,474] INFO Reading configuration from: /home/acadgild/install/kafka/kafka_2.12-0.10.1.1/config/zookeeper.properties
 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2018-09-22 20:32:29,480] INFO Starting server (org.apache.zookeeper.server.ZooKeeperServerMain)
[2018-09-22 20:32:39,561] INFO Server environment:zookeeper.version=3.4.8--1, built on 02/06/2016 03:18 GMT (org.apache.zookeeper.serve
r.ZooKeeperServer)
[2018-09-22 20:32:39,561] INFO Server environment:host.name=10.0.3.15 (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:32:39,561] INFO Server environment:java.version=1.8.0_151 (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:32:39,562] INFO Server environment:java.vendor=Oracle Corporation (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:32:39,566] INFO Server environment:java.home=/usr/java/jdk1.8.0_151/jre (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:32:39,566] INFO Server environment:java.class.path=:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/aopalli
ance-repackaged-2.4.0-b34.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/argparse4j-0.5.0.jar:/home/acadgild/install/
kafka/kafka_2.12-0.10.1.1/bin/../libs/connect-api-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/connect-fil
e-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/connect-json-0.10.1.1.jar:/home/acadgild/install/kafka/kafk
a_2.12-0.10.1.1/bin/../libs/connect-runtime-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/guava-18.0.jar:/h
ome/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/hk2-api-2.4.0-b34.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/.
./libs/hk2-locator-2.4.0-b34.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/hk2-utils-2.4.0-b34.jar:/home/acadgild/in
stall/kafka/kafka_2.12-0.10.1.1/bin/../libs/jackson-annotations-2.6.0.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/
jackson-core-2.6.3.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/jackson-databind-2.6.3.jar:/home/acadgild/install/k
afka/kafka_2.12-0.10.1.1/bin/../libs/jackson-jaxrs-base-2.6.3.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/jackson-
jaxrs-json-provider-2.6.3.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/jackson-module-jaxb-annotations-2.6.3.jar:/h
ome/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/javassist-3.18.2-GA.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin
/../libs/javax.annotation-api-1.2.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/javax.inject-1.jar:/home/acadgild/in
stall/kafka/kafka_2.12-0.10.1.1/bin/../libs/javax.inject-2.4.0-b34.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/jav
ax.servlet-api-3.1.0.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/javax.ws.rs-api-2.0.1.jar:/home/acadgild/install/
kafka/kafka_2.12-0.10.1.1/bin/../libs/jersey-client-2.22.2.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/jersey-comm
on-2.22.2.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/jersey-container-servlet-2.22.2.jar:/home/acadgild/install/k
afka/kafka_2.12-0.10.1.1/bin/../libs/jersey-container-servlet-core-2.22.2.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../l
ibs/jersey-guava-2.22.2.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/jersey-media-jaxb-2.22.2.jar:/home/acadgild/in
stall/kafka/kafka_2.12-0.10.1.1/bin/../libs/jersey-server-2.22.2.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/../libs/jetty
```

Starting broker

$KAFKA_HOME/bin/kafka-**server-start.sh** \
$KAFKA_HOME/config/server.properties

```
[acadgild@10 ~]$ $KAFKA_HOME/bin/kafka-server-start.sh $KAFKA_HOME/config/server.properties
[2018-09-22 20:38:44,150] INFO KafkaConfig values:
        advertised.host.name = null
        advertised.listeners = null
        advertised.port = null
        authorizer.class.name =
        auto.create.topics.enable = true
        auto.leader.rebalance.enable = true
        background.threads = 10
        broker.id = 0
        broker.id.generation.enable = true
        broker.rack = null
        compression.type = producer
        connections.max.idle.ms = 600000
        controlled.shutdown.enable = true
        controlled.shutdown.max.retries = 3
        controlled.shutdown.retry.backoff.ms = 5000
        controller.socket.timeout.ms = 30000
        default.replication.factor = 1
        delete.topic.enable = false
        fetch.purgatory.purge.interval.requests = 1000
        group.max.session.timeout.ms = 300000
        group.min.session.timeout.ms = 6000
        host.name =
        inter.broker.protocol.version = 0.10.1-IV2
        leader.imbalance.check.interval.seconds = 300
        leader.imbalance.per.broker.percentage = 10
        listeners = null
        log.cleaner.backoff.ms = 15000
        log.cleaner.dedupe.buffer.size = 134217728
        log.cleaner.delete.retention.ms = 86400000
        log.cleaner.enable = true
        log.cleaner.io.buffer.load.factor = 0.9
        log.cleaner.io.buffer.size = 524288
        log.cleaner.io.max.bytes.per.second = 1.7976931348623157E308
        log.cleaner.min.cleanable.ratio = 0.5
        log.cleaner.min.compaction.lag.ms = 0
```

```
afka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,787] INFO [Group Metadata Manager on Broker 0]: Finished loading offsets from [__consumer_offsets,27] in 8 millise
conds. (kafka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,787] INFO [Group Metadata Manager on Broker 0]: Loading offsets and group metadata from [__consumer_offsets,30] (k
afka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,798] INFO [Group Metadata Manager on Broker 0]: Finished loading offsets from [__consumer_offsets,30] in 10 millis
econds. (kafka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,798] INFO [Group Metadata Manager on Broker 0]: Loading offsets and group metadata from [__consumer_offsets,33] (k
afka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,807] INFO [Group Metadata Manager on Broker 0]: Finished loading offsets from [__consumer_offsets,33] in 9 millise
conds. (kafka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,808] INFO [Group Metadata Manager on Broker 0]: Loading offsets and group metadata from [__consumer_offsets,36] (k
afka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,811] INFO [Group Metadata Manager on Broker 0]: Finished loading offsets from [__consumer_offsets,36] in 3 millise
conds. (kafka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,812] INFO [Group Metadata Manager on Broker 0]: Loading offsets and group metadata from [__consumer_offsets,39] (k
afka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,822] INFO [Group Metadata Manager on Broker 0]: Finished loading offsets from [__consumer_offsets,39] in 10 millis
econds. (kafka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,824] INFO [Group Metadata Manager on Broker 0]: Loading offsets and group metadata from [__consumer_offsets,42] (k
afka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,827] INFO [Group Metadata Manager on Broker 0]: Finished loading offsets from [__consumer_offsets,42] in 3 millise
conds. (kafka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,827] INFO [Group Metadata Manager on Broker 0]: Loading offsets and group metadata from [__consumer_offsets,45] (k
afka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,836] INFO [Group Metadata Manager on Broker 0]: Finished loading offsets from [__consumer_offsets,45] in 9 millise
conds. (kafka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,836] INFO [Group Metadata Manager on Broker 0]: Loading offsets and group metadata from [__consumer_offsets,48] (k
afka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:32,847] INFO [Group Metadata Manager on Broker 0]: Finished loading offsets from [__consumer_offsets,48] in 11 millis
econds. (kafka.coordinator.GroupMetadataManager)
[2018-09-22 20:39:33,657] INFO Registered broker 0 at path /brokers/ids/0 with addresses: PLAINTEXT -> EndPoint(10.0.3.15,9092,PLAINTEX
T) (kafka.utils.ZkUtils)
[2018-09-22 20:39:33,821] INFO Kafka version : 0.10.1.1 (org.apache.kafka.common.utils.AppInfoParser)
[2018-09-22 20:39:33,821] INFO Kafka commitId : f10ef2720b03b247 (org.apache.kafka.common.utils.AppInfoParser)
[2018-09-22 20:39:33,839] INFO [Kafka Server 0], started (kafka.server.KafkaServer)
```

##Create a topic named KeyLessTopic

$KAFKA_HOME/bin/kafka-topics.sh --create --topic **KeyLessTopic** --zookeeper localhost:2181 --partitions 1 --replication-factor 1

```
[acadgild@10 ~]$ $KAFKA_HOME/bin/kafka-topics.sh --create --topic KeyLessTopic --zookeeper localhost:2181 --partitions 1 --replication-
factor 1
Created topic "KeyLessTopic".
[acadgild@10 ~]$
```

Running a console producer

$KAFKA_HOME/bin/**kafka-console-producer.sh** --broker-list localhost:9092 --topic **KeyLessTopic**

{"name":"John", "exp":16}

{"name":"Finn", "exp":20}

{"name":"Cylin", "exp":18}

{"name":"Mark", "exp":2}

{"name":"Akshay", "exp":14}

```
[acadgild@10 ~]$ $KAFKA_HOME/bin/kafka-console-producer.sh --broker-list localhost:9092 --topic KeyLessTopic
{"name":"John", "exp":16}
{"name":"Finn", "exp":20}
{"name":"Cylin", "exp":18}
{"name":"Mark", "exp":2}
{"name":"Akshay", "exp":14}
```

Task 2:

Create a console consumer that reads **KeyLessTopic** from beginning

Ans:

Note: Associated text file is properly documented & submitted along with this file. Kindly refer the text file for a detailed description of each instruction used within the complete process.

ScreenShot:

Running a console consumer to read the type KeyLessTopic sent by the producer.

$KAFKA_HOME/bin/kafka-console-consumer.sh --topic KeyLessTopic --**from-beginning** --zookeeper localhost:2181 --property **print.key=false**

```
[acadgild@10 ~]$ $KAFKA_HOME/bin/kafka-console-consumer.sh --topic KeyLessTopic --from-beginning --zookeeper localhost:2181 --property
print.key=false
Using the ConsoleConsumer with old consumer is deprecated and will be removed in a future major release. Consider using the new consume
r by passing [bootstrap-server] instead of [zookeeper].
{"name":"John", "exp":16}
{"name":"Finn", "exp":20}
{"name":"Cylin", "exp":18}
{"name":"Mark", "exp":2}
{"name":"Akshay", "exp":14}
```

Task 3:

Create a kafka topic named KeyedTopic. Inside KeyedTopic insert following data:

The part before comma(,) should be treated as key and after comma(,) should be treated as value

{"name":"John"},{"exp":16}

{"name":"Finn"},{"exp":20}

{"name":"Cylin"},{"exp":18}

{"name":"Mark"},{"exp":2}

{"name":"Akshay"},{"exp":14}

Ans:

##Create a topic named **KeyedTopic**

$KAFKA_HOME/bin/**kafka-topics.sh** --create --topic **KeyedTopic** --zookeeper localhost:2181 --partitions 1 --replication-factor 1

ScreenShot:

```
[acadgild@10 ~]$ $KAFKA_HOME/bin/kafka-topics.sh --create --topic KeyedTopic --zookeeper localhost:2181 --partitions 1 --replication-fa
ctor 1
Created topic "KeyedTopic".
[acadgild@10 ~]$
```

Running a console producer

$KAFKA_HOME/bin/kafka-console-producer.sh --broker-list localhost:9092 --topic KeyedTopic --property **parse.key=true** --property **key.separator=","**

{"name":"John"},{"exp":16}

{"name":"Finn"},{"exp":20}

{"name":"Cylin"},{"exp":18}

{"name":"Mark"},{"exp":2}

{"name":"Akshay"},{"exp":14}

```
[acadgild@10 ~]$ $KAFKA_HOME/bin/kafka-console-producer.sh --broker-list localhost:9092 --topic KeyedTopic --property parse.key=true --
property key.separator=","
{"name":"John"},{"exp":16}
{"name":"Finn"},{"exp":20}
{"name":"Cylin"},{"exp":18}
{"name":"Mark"},{"exp":2}
{"name":"Akshay"},{"exp":14}
```

Task 4:

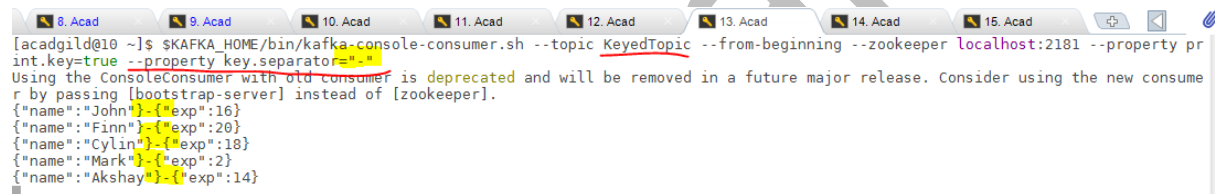Create a console consumer that reads KeyedTopic from beginning

The key and value should be separated by '-'

Ans:

Running a console consumer to read the type KeyedTopic sent by the producer.

$KAFKA_HOME/bin/kafka-console-consumer.sh --topic **KeyedTopic** --from-beginning --zookeeper localhost:2181 --property **print.key=true** --**property key.separator="-"**

ScreenShot:

```
[acadgild@10 ~]$ $KAFKA_HOME/bin/kafka-console-consumer.sh --topic KeyedTopic --from-beginning --zookeeper localhost:2181 --property print.key=true --property key.separator="-"
Using the ConsoleConsumer with old consumer is deprecated and will be removed in a future major release. Consider using the new consumer by passing [bootstrap-server] instead of [zookeeper].
{"name":"John"}-{"exp":16}
{"name":"Finn"}-{"exp":20}
{"name":"Cylin"}-{"exp":18}
{"name":"Mark"}-{"exp":2}
{"name":"Akshay"}-{"exp":14}
```

***************************** **End** *****************************