

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.server.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.server.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/aopalliance-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-file-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/kafka_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:/home/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/install/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/kafka/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:/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/install/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/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-container-servlet-2.22.2.jar:/home/acadgild/install/kafka/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/./libs/jersey-media-jaxb-2.22.2.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/jetty
```

```

a_2.12-0.10.1.1/bin/./libs/jetty-servlets-9.2.15.v20160210.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/jetty-util-9.2.15.v20160210.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/jopt-simple-4.9.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/kafka_2.12-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/kafka_2.12-0.10.1.1-sources.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/kafka_2.12-0.10.1.1-test-sources.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/kafka-clients-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/kafka-log4j-appender-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/kafka-streams-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/kafka-streams-examples-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/kafka-tools-0.10.1.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/log4j-1.2.17.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/lz4-1.3.0.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/metrics-core-2.2.0.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/osgi-resource-locator-1.0.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/rocksdbrjni-4.9.0.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/scala-library-2.12.1.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/scala-parler-combinators-2.12.1.0.4.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/slf4j-api-1.7.21.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/slf4j-log4j12-1.7.21.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/snappy-java-1.1.2.6.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/validation-api-1.1.0.Final.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/zkclient-0.9.jar:/home/acadgild/install/kafka/kafka_2.12-0.10.1.1/bin/./libs/zookeeper-3.4.8.jar (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,690] INFO Server environment:java.library.path=/usr/java/packages/lib/amd64:/usr/lib64:/lib:/usr/lib (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,691] INFO Server environment:java.io.tmpdir=/tmp (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,693] INFO Server environment:java.compiler=<NA> (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,695] INFO Server environment:os.name=linux (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,704] INFO Server environment:os.arch=amd64 (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,708] INFO Server environment:os.version=2.6.32-754.el6.x86_64 (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,708] INFO Server environment:user.name=acadgild (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,709] INFO Server environment:user.home=/home/acadgild (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,709] INFO Server environment:user.dir=/home/acadgild (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,889] INFO tickTime set to 3000 (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,890] INFO minSessionTimeout set to -1 (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:45,890] INFO maxSessionTimeout set to -1 (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:46,072] INFO binding to port 0.0.0.0/0.0.0.0:2181 (org.apache.zookeeper.server.NIOServerCnxnFactory)
[2018-09-22 20:35:54,001] INFO Expiring session 0x16600c621110023, timeout of 6000ms exceeded (org.apache.zookeeper.server.ZooKeeperServer)
[2018-09-22 20:35:54,013] INFO Processed session termination for sessionid: 0x16600c621110023 (org.apache.zookeeper.server.PreRequestProcessor)
[2018-09-22 20:35:54,014] INFO Creating new log file: log.20a (org.apache.zookeeper.server.persistence.FileTxnLog)

```

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,PLAINTEXT)
(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".

```

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 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}
```

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:

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.

Create a topic named KeyedTopic

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

ScreenShot:

```
[acadgild@i0 ~]$ $KAFKA_HOME/bin/kafka-topics.sh --create --topic KeyedTopic --zookeeper localhost:2181 --partitions 1 --replication-factor 1
Created topic "KeyedTopic".
[acadgild@i0 ~]$
```

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@i0 ~]$ $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

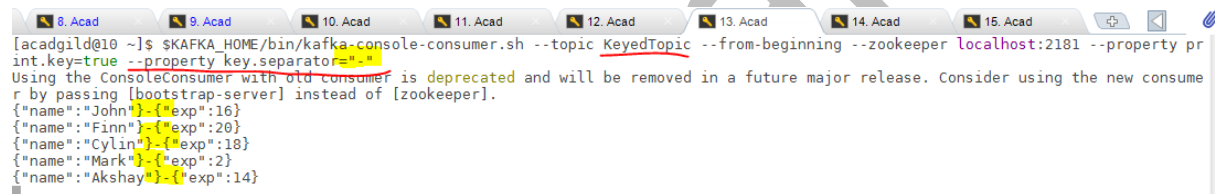
The key and value should be separated by '-'

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 pr  
int.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 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 }
```

End
