

## Assignment24(Khafka2)

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Task 1: Create a java program MyKafkaProducer.java that takes a file name and delimiter as input arguments. It should read the content of file line by line. Fields in the file are in following order 1. Kafka Topic Name 2. Key 3. value For every line, insert the key and value to the repsective Kafka broker in a fire and forget mode. After record is sent, it should print appropriate message on screen. Pass dataset\_producer.txt as the input file and -as delimiter. LINK:

[https://drive.google.com/file/d/0B\\_Qjau8wv1KoSnR5eHpKOF9rTFU/view?usp=sharing](https://drive.google.com/file/d/0B_Qjau8wv1KoSnR5eHpKOF9rTFU/view?usp=sharing)

### Steps:

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1. Start the Zookeeper using below command:  
**cd \$KAFKA\_HOME**  
**./bin/zookeeper-server-start ./etc/kafka/zookeeper.properties**  
**./bin/zookeeper-server-start.sh ./config/zookeeper.properties**
2. Starting the broker using below command:  
**cd \$KAFKA\_HOME**  
**./bin/kafka-server-start ./etc/kafka/server.properties**  
**./bin/kafka-server-start.sh ./config/server.properties**
3. Write a java API code for producer to read the file and segregate the topic key and value based on the delimiter. Source code is uploaded as separate file.
4. Execute the java program using run configuration by giving the file path as one parameter and delimiter as another parameter.
5. Run the console consumer using the below command:  
**cd \$KAFKA\_HOME**  
**./bin/kafka-console-consumer.sh --topic UserTopic --from-beginning \**  
**--zookeeper localhost:2181 --property print.key=true**
6. Consumer console will display the output as key value pair.

## Output screen shots:

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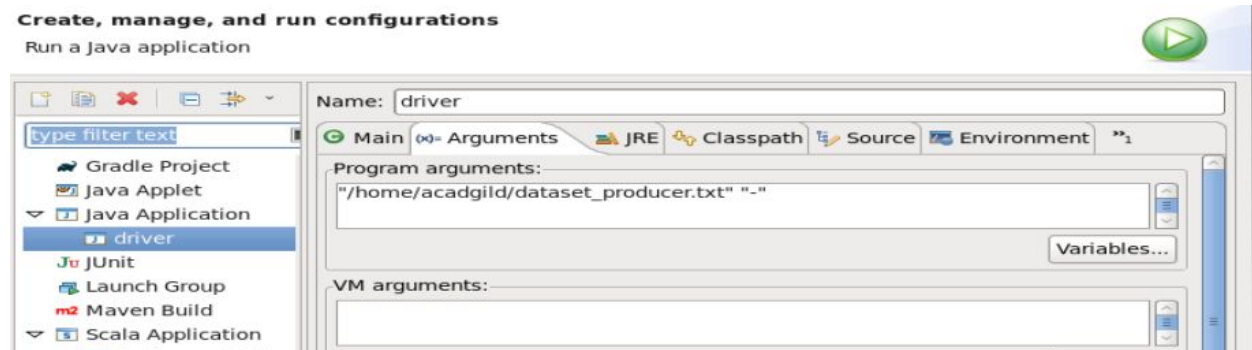
### Consumer console output for UserTopic:

```
[acadgild@localhost ~]$ cd $KAFKA_HOME
You have new mail in /var/spool/mail/acadgild
[acadgild@localhost kafka_2.12-0.10.1.1]$ ./bin/kafka-console-consumer.sh --topic UserTopic --from-beginning --zookeeper localhost:2181 --property print.key=true
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":"Mark"} {"exp":18}
{"name":"Cylin"} {"exp":15}
{"name":"Prod"} {"exp":14}
{"name":"Abhay"} {"exp":17}
{"name":"Misano"} {"exp":19}
{"name":"John"} {"exp":16}
{"name":"Mark"} {"exp":18}
{"name":"Cylin"} {"exp":15}
{"name":"Prod"} {"exp":14}
{"name":"Abhay"} {"exp":17}
{"name":"Misano"} {"exp":19}
```

### Consumer console output for ItemTopic:

```
[acadgild@localhost kafka_2.12-0.10.1.1]$ ./bin/kafka-console-consumer.sh --topic ItemTopic --from-beginning --zookeeper localhost:2181 --property print.key=true
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].
{"item_id":"101"} {"user_id":"U101"}
{"item_id":"101"} {"user_id":"U106"}
{"item_id":"102"} {"user_id":"U110"}
{"item_id":"102"} {"user_id":"U101"}
{"item_id":"104"} {"user_id":"U102"}
{"item_id":"107"} {"user_id":"U104"}
{"item_id":"101"} {"user_id":"U101"}
{"item_id":"101"} {"user_id":"U106"}
{"item_id":"102"} {"user_id":"U110"}
{"item_id":"102"} {"user_id":"U101"}
{"item_id":"104"} {"user_id":"U102"}
{"item_id":"107"} {"user_id":"U104"}
```

## Running the java code by giving input parameter:



## Java code console output:

```
-----  
Entere while loop  
Record sent to topic: ItemTopic. Key:{"item_id":"101"}, Vale:{"user_id":"U101"}  
Entere while loop  
Record sent to topic: UserTopic. Key:{"name":"John"}, Vale:{"exp":16}  
Entere while loop  
Record sent to topic: ItemTopic. Key:{"item_id":"101"}, Vale:{"user_id":"U106"}  
Entere while loop  
Record sent to topic: UserTopic. Key:{"name":"Mark"}, Vale:{"exp":18}  
Entere while loop  
Record sent to topic: ItemTopic. Key:{"item_id":"102"}, Vale:{"user_id":"U110"}  
Entere while loop  
Record sent to topic: UserTopic. Key:{"name":"Cylin"}, Vale:{"exp":15}  
Entere while loop  
Record sent to topic: ItemTopic. Key:{"item_id":"102"}, Vale:{"user_id":"U101"}  
Entere while loop  
Record sent to topic: UserTopic. Key:{"name":"Prod"}, Vale:{"exp":14}  
Entere while loop
```

**Task 2: Modify the previous program MyKafkaProducer.java and create a new Java program KafkaProducerWithAck.java This should perform the same task as of KafkaProducer.java with some modification. When passing any data to a topic, it should wait for acknowledgement. After acknowledgement is received from the broker, it should print the key and value which has been written to a specified topic. The application should attempt for 3 retries before giving any exception. Pass dataset\_producer.txt as the input file and -as delimiter.**

## Steps:

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```
1. Start the Zookeeper using below command:  
**cd \$KAFKA\_HOME**  
**./bin/zookeeper-server-start ./etc/kafka/zookeeper.properties**  
**./bin/zookeeper-server-start.sh ./config/zookeeper.properties**
  2. Starting the broker using below command:  
**cd \$KAFKA\_HOME**  
**./bin/kafka-server-start ./etc/kafka/server.properties**  
**./bin/kafka-server-start.sh ./config/server.properties**

3. Write a java API code for producer to read the file and segregate the topic key and value based on the delimiter and to get acknowledgement for every message sent. Source code is uploaded as separate file.
4. Execute the java program using run configuration by giving the file path as one parameter and delimiter as another parameter.
5. Run the console consumer using the below command:  

```
cd $KAFKA_HOME  
./bin/kafka-console-consumer.sh --topic UserTopic --from-beginning \  
--zookeeper localhost:2181 --property print.key=true
```
6. Consumer console will display the output as key value pair.

### Output screenshots:

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### UserTopic console output

```
"item_id":"101"}      Message Sent{"user_id":"U101"}  
"item_id":"101"}      Message Sent{"user_id":"U106"}  
"item_id":"102"}      Message Sent{"user_id":"U110"}  
"item_id":"102"}      Message Sent{"user_id":"U101"}  
"item_id":"104"}      Message Sent{"user_id":"U102"}  
"item_id":"107"}      Message Sent{"user_id":"U104"}  
"item_id":"101"}      Message Sent{"user_id":"U101"}  
"item_id":"101"}      Message Sent{"user_id":"U106"}  
"item_id":"102"}      Message Sent{"user_id":"U110"}  
"item_id":"102"}      Message Sent{"user_id":"U101"}  
"item_id":"104"}      Message Sent{"user_id":"U102"}
```

## ItemTopic console output:

```
-----  
{"name":"John"} {"exp":16}Message Sent  
{"name":"Mark"} {"exp":18}Message Sent  
{"name":"Cylin"} {"exp":15}Message Sent  
{"name":"Prod"} {"exp":14}Message Sent  
{"name":"Abhay"} {"exp":17}Message Sent  
{"name":"Misano"} {"exp":19}Message Sent  
{"name":"John"} {"exp":16}Message Sent  
{"name":"Mark"} {"exp":18}Message Sent  
{"name":"Cylin"} {"exp":15}Message Sent  
{"name":"Prod"} {"exp":14}Message Sent  
{"name":"Abhay"} {"exp":17}Message Sent  
{"name":"Misano"} {"exp":19}Message Sent  
{"name":"John"} Message Sent{"exp":16}  
{"name":"Mark"} Message Sent{"exp":18}  
{"name":"Cylin"} Message Sent{"exp":15}  
{"name":"Prod"} Message Sent{"exp":14}  
{"name":"Abhay"} Message Sent{"exp":17}  
{"name":"Misano"} Message Sent{"exp":19}  
{"name":"John"} Message Sent{"exp":16}  
{"name":"Mark"} Message Sent{"exp":18}  
{"name":"Cylin"} Message Sent{"exp":15}  
{"name":"Prod"} Message Sent{"exp":14}  
{"name":"Abhay"} Message Sent{"exp":17}  
{"name":"Misano"} Message Sent{"exp":19}
```