

Session 24: More KAFKA

Assignment 1

Task 1:

Create a java program MyKafkaProducer.java that takes a file name and delimiter as input arguments.

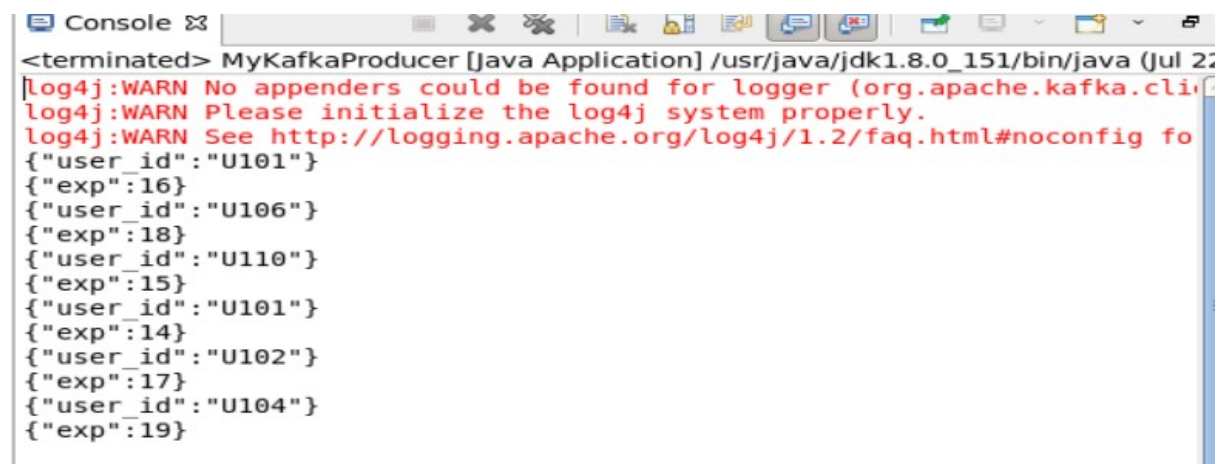
It should read the content of file line by line.

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 respective Kafka broker in a fire and forget mode.

```
public class MyKafkaProducer {  
    public void produce()  
    {  
        Properties configProperties = new Properties();  
        configProperties.put(ProducerConfig.BOOTSTRAP_SERVERS_CONFIG, "localhost:9092");  
        configProperties.put(ProducerConfig.KEY_SERIALIZER_CLASS_CONFIG,  
            "org.apache.kafka.common.serialization.StringSerializer");  
        configProperties.put(ProducerConfig.VALUE_SERIALIZER_CLASS_CONFIG,  
            "org.apache.kafka.common.serialization.StringSerializer");  
        Producer producer = new KafkaProducer<String, String>(configProperties);  
        try {  
            File textFile = new File("/home/acadgild/dataset/producer.txt");  
            BufferedReader reader = new BufferedReader(new FileReader(textFile));  
            String line = null;  
            int messageNum = 1;  
            while ((line = reader.readLine()) != null) {  
                String topic = line.split("-")[0];  
                String key = line.split("-")[1];  
                String data = line.split("-")[2];  
                producer.send(new ProducerRecord<String, String>(topic, key, data));  
                System.out.println(data);  
                messageNum++;  
            }  
            reader.close();  
        } catch (Exception e) {  
            e.printStackTrace();  
        }  
    }  
}
```



The screenshot shows a Java application window titled "Console" with the following output:

```
<terminated> MyKafkaProducer [Java Application] /usr/java/jdk1.8.0_151/bin/java (Jul 22  
log4j:WARN No appenders could be found for logger (org.apache.kafka.cli  
log4j:WARN Please initialize the log4j system properly.  
log4j:WARN See http://logging.apache.org/log4j/1.2/faq.html#noconfig fo  
{ "user_id": "U101" }  
{ "exp": 16 }  
{ "user_id": "U106" }  
{ "exp": 18 }  
{ "user_id": "U110" }  
{ "exp": 15 }  
{ "user_id": "U101" }  
{ "exp": 14 }  
{ "user_id": "U102" }  
{ "exp": 17 }  
{ "user_id": "U104" }  
{ "exp": 19 }
```

```
acadgild@localhost:~/install/kafka/kafka_2.12-0.10.1.1
File Edit View Search Terminal Help
[acadgild@localhost kafka_2.12-0.10.1.1]$ ./bin/kafka-console-consumer.sh --topi
c ItemTopic --zookeeper localhost:2181 --from-beginning
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-s
erver] instead of [zookeeper].
{"user_id":"U101"}
{"user_id":"U106"}
{"user_id":"U110"}
{"user_id":"U101"}
{"user_id":"U102"}
{"user_id":"U104"}
█
```

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.

```
public class MyKafkaProducer {
    public void produce()
    {
        Properties configProperties = new Properties();
        configProperties.put(ProducerConfig.BOOTSTRAP_SERVERS_CONFIG, "localhost:9092");
        configProperties.put(ProducerConfig.KEY_SERIALIZER_CLASS_CONFIG,
            "org.apache.kafka.common.serialization.StringSerializer");
        configProperties.put(ProducerConfig.VALUE_SERIALIZER_CLASS_CONFIG,
            "org.apache.kafka.common.serialization.StringSerializer");
        configProperties.put(ProducerConfig.ACKS_CONFIG, "1");
        configProperties.put(ProducerConfig.RETRIES_CONFIG, "3");
        Producer producer = new KafkaProducer<String, String>(configProperties);
        try {
            File textFile = new File("/home/acadgild/dataset_producer.txt");
            BufferedReader reader = new BufferedReader(new FileReader(textFile));
            String line = null;
            int messageNum = 1;
            while ((line = reader.readLine()) != null) {
                String topic = line.split("-")[0];
                String key = line.split("-")[1];
                String data = line.split("-")[2];
                producer.send(new ProducerRecord<String, String>(topic, key, data));
                System.out.println(data);
                messageNum++;
            }
            reader.close();
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

Console  MyKafkaProducer [Java Application] /usr/java/jdk1.8.0_151/bin/java (Jul 2
[log4j:WARN No appenders could be found for logger (org.apache.kafka.cli
log4j:WARN Please initialize the log4j system properly.
log4j:WARN See http://logging.apache.org/log4j/1.2/faq.html#noconfig fo
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{"exp": 15}
{"user_id": "U101"}
{"exp": 14}
{"user_id": "U102"}
{"exp": 17}
{"user_id": "U104"}
{"exp": 19}

acadgild@localhost:~/install/kafka/kafka_2.12-0.10.1.1

File Edit View Search Terminal Help

[acadgild@localhost kafka_2.12-0.10.1.1]\$./bin/kafka-console-consumer.sh --topi
c ItemTopic --zookeeper localhost:2181 --from-beginning
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{"user_id": "U104"}
{"user_id": "U101"}
{"user_id": "U106"}
{"user_id": "U110"}
{"user_id": "U101"}
{"user_id": "U102"}
{"user_id": "U104"}
█