Task 1:

Start Zookeeper using the below command :

cd $KAFKA_HOME

#./bin/zookeeper-server-start ./etc/kafka/zookeeper.properties

./bin/zookeeper-server-start.sh ./config/zookeeper.properties
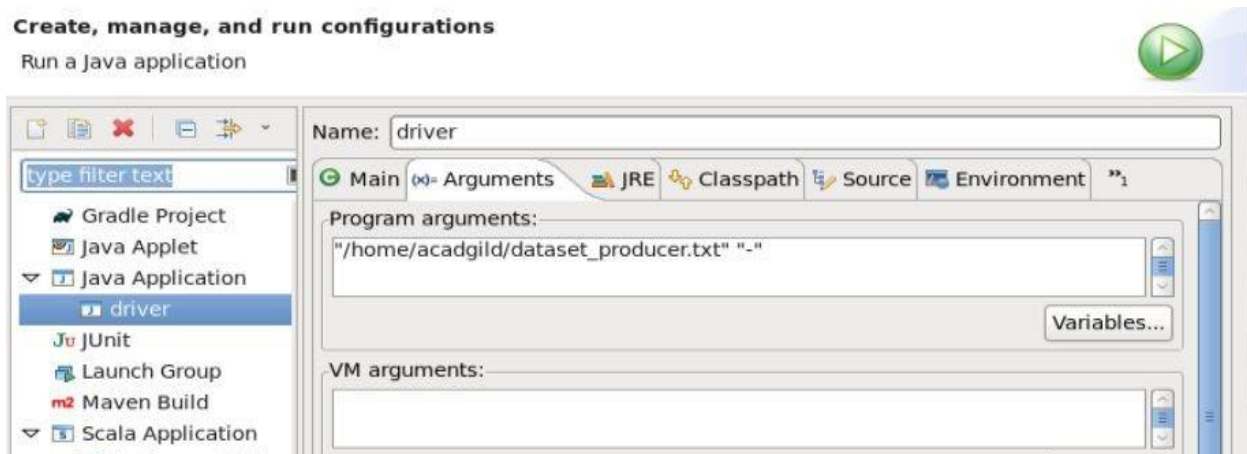
Start the broker using below command :

cd $KAFKA_HOME

#./bin/kafka-server-start ./etc/kafka/server.properties

./bin/kafka-server-start.sh ./config/server.properties

Java API code for producer which will take file path and delimiter as parameters

Source code uploaded as separate file

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
```

Source code :

```
package kafka;
import java.io.BufferedReader;
import java.io.File;
import java.io.FileReader;
import java.io.IOException;
import java.util.Properties;

import org.apache.kafka.clients.producer.KafkaProducer;
import org.apache.kafka.clients.producer.ProducerRecord;


public class driver{

public static void main(String[] args) throws IOException{
if(args.length!=2)
{
        System.out.println("Driver: <File path> <seperator>");

}

System.out.println("Input1" + args[0] + "input2" + args[1] );
Properties prop = new Properties();
prop.put("bootstrap.servers","localhost:9092");
prop.put("key.serializer","org.apache.kafka.common.serialization.StringSerializer");
prop.put("value.serializer","org.apache.kafka.common.serialization.StringSerializer");
KafkaProducer<String, String> producer = new KafkaProducer<>(prop);
ProducerRecord<String, String> producerRecord= null;
```

```java
File file = new File(args[0]);
FileReader fileReader = new FileReader(file);
BufferedReader bufferedReader = new BufferedReader(fileReader);

String line;
String separator = args[1];

String topic = "";
String key = "";
String value = "";

while ((line = bufferedReader.readLine()) != null) {

        System.out.println("Entere while loop");
        String[] items = line.split(separator);
        topic = items[0];
        key = items[1];

        value = items[2];
        producerRecord =new ProducerRecord<String,String>(topic,key,value);

producer.send(producerRecord);
System.out.printf("Record sent to topic: %s. Key:%s, Vale:%s\n", topic, key, value);

}

        producer.close();
        System.out.println("Contents of file:");

}
}
```

Task 2 :

Output:

```java
package kafkaAck;

import java.io.BufferedReader;

import java.io.File;

import java.io.FileReader;

import java.io.IOException;

import java.util.Properties;


import org.apache.kafka.clients.producer.KafkaProducer;
import org.apache.kafka.clients.producer.ProducerConfig;
import org.apache.kafka.clients.producer.ProducerRecord;
import org.apache.kafka.clients.producer.RecordMetadata;

public class KafkaAck{

public static void main(String[] args) throws IOException{
if(args.length!=2)
{
        System.out.println("Driver: <File path> <seperator>");
}

System.out.println("Input1" + args[0] + "input2" + args[1] );
Properties prop = new Properties();
prop.put("bootstrap.servers","localhost:9092");
prop.put("key.serializer","org.apache.kafka.common.serialization.StringSerializer");
prop.put("value.serializer","org.apache.kafka.common.serialization.StringSerializer");
prop.put(ProducerConfig.ACKS_CONFIG, "all");
prop.put(ProducerConfig.RETRIES_CONFIG, 3);
prop.put(ProducerConfig.RETRY_BACKOFF_MS_CONFIG,1_000);

KafkaProducer<String, String> producer = new KafkaProducer<>(prop);
ProducerRecord<String, String> producerRecord= null;
File file = new File(args[0]);
FileReader fileReader = new FileReader(file);
BufferedReader bufferedReader = new BufferedReader(fileReader);

String line;
String separator = args[1];
String topic = "";
```

```
String key = "";
String value = "";

while ((line = bufferedReader.readLine()) != null) {

        System.out.println("Entere while loop");
        String[] items = line.split(separator);
        topic = items[0];
        key = items[1];
        value = items[2];
        String msg = "Message Sent";

        try {

        producerRecord = new ProducerRecord<String,String>(topic,key,msg + value );
        RecordMetadata ack = producer.send(producerRecord).get();
        System.out.printf("Record sent to topic: %s. Key:%s, Vale:%s\n", topic, key, value);

        }catch(Exception e)

        {
        e.printStackTrace();

        }

        }

        producer.close();

        System.out.println("Contents of file:");

}

}
```

Output screenshots:

UserTopic console output

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}
```