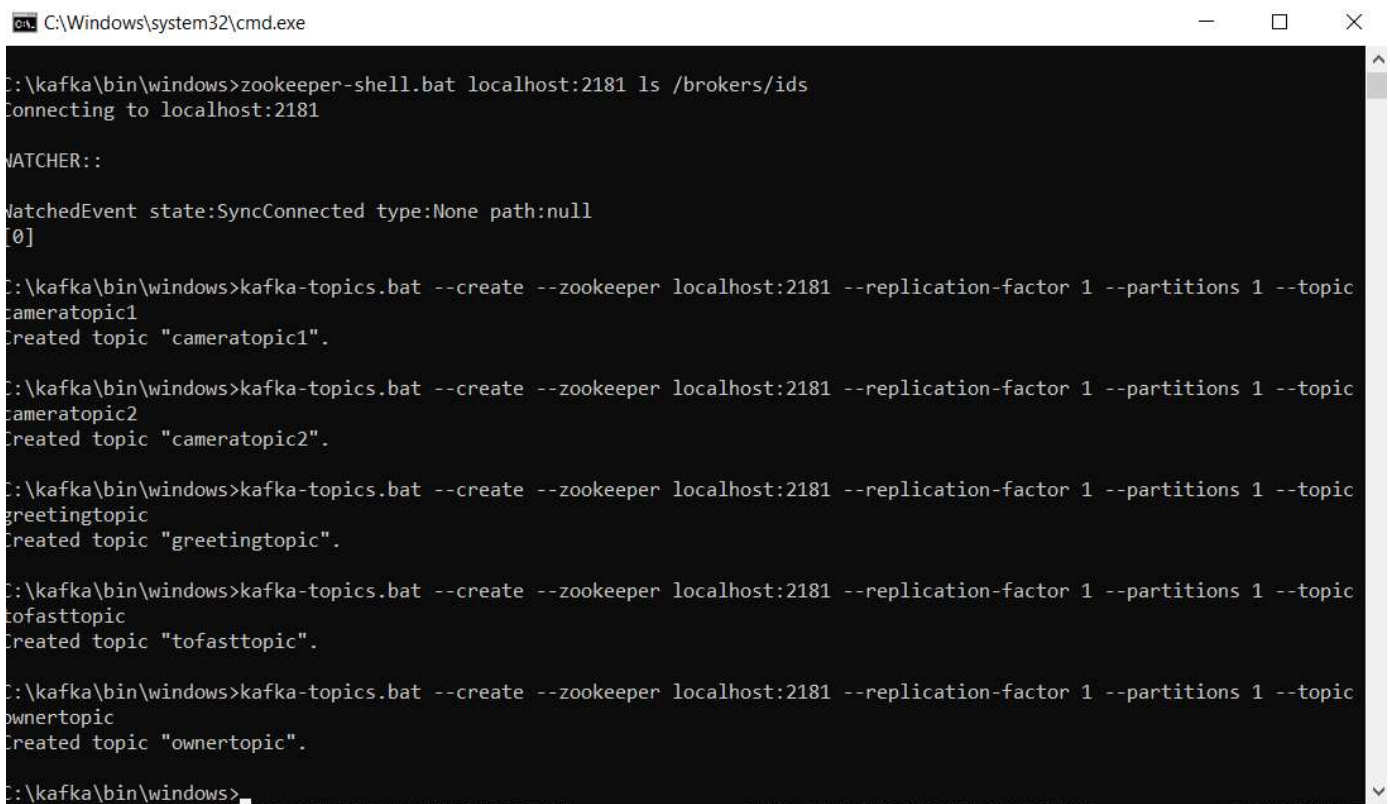


Subject	SWA – CS590
Assignment	Lab 13
Date	9/25/2021
Students	Vo Ngoc Huy Nguyen - 611066
Professor	Rene de Jong

Lab Assignment 13: EDA

Exercise: Kafka with CameraTopic

Start kafka and added topics:



```

C:\Windows\system32\cmd.exe

C:\kafka\bin\windows>zookeeper-shell.bat localhost:2181 ls /brokers/ids
Connecting to localhost:2181

WATCHER::

WatchedEvent state:SyncConnected type:None path:null
[0]

C:\kafka\bin\windows>kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic
cameratopic1
Created topic "cameratopic1".

C:\kafka\bin\windows>kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic
cameratopic2
Created topic "cameratopic2".

C:\kafka\bin\windows>kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic
greetingtopic
Created topic "greetingtopic".

C:\kafka\bin\windows>kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic
tofasttopic
Created topic "tofasttopic".

C:\kafka\bin\windows>kafka-topics.bat --create --zookeeper localhost:2181 --replication-factor 1 --partitions 1 --topic
ownertopic
Created topic "ownertopic".

C:\kafka\bin\windows>

```

- InterstateSpeedService: to detect which car has over limit speed

```
Problems Javadoc Declaration Search Console Debug
InterstateTrafficSensor - TrafficSensorsApplication [Spring Boot App] D:\sources\Eclipse\sts-4.11.0.RELEASE\plugins\org.eclipse.justi.openjdk.hotspot.jre.full.win32.x86_64_16.0.1.v20210528-1205\jre\bin\javaw.exe (Sep 26, 2021, 10:32:15 AM)

=====
:: Spring Boot ::
(v2.5.4)

sending to topic:cameratopic1 1 FB1000
sending to topic:cameratopic1 1 FG1000
sending to topic:cameratopic1 1 BB1000
sending to topic:cameratopic1 1 CC1000
sending to topic:cameratopic1 1 GA1000
sending to topic:cameratopic1 1 FA1000
sending to topic:cameratopic1 1 EE1000
sending to topic:cameratopic1 1 AA1000
sending to topic:cameratopic1 1 FF1000
sending to topic:cameratopic1 1 FBS1000
sending to topic:cameratopic1 1 FGS1000
sending to topic:cameratopic1 1 BS1000
sending to topic:cameratopic1 1 CS1000
sending to topic:cameratopic1 1 GS1000
sending to topic:cameratopic1 1 FAS1000
sending to topic:cameratopic1 1 ES1000
sending to topic:cameratopic1 1 AS1000
sending to topic:cameratopic1 1 FS1000
--> received message=SpeedRecord [licencePlate=EE1000, speed=81]
--> received message=SpeedRecord [licencePlate=BB1000, speed=78]
--> received message=SpeedRecord [licencePlate=ES1000, speed=78]
--> received message=SpeedRecord [licencePlate=FAS1000, speed=78]
--> received message=SpeedRecord [licencePlate=BS1000, speed=75]
--> received message=SpeedRecord [licencePlate=FBS1000, speed=75]
sending to topic:cameratopic2 2 EE1000
speeding *****EE1000 = 81
--> received message=SpeedRecord [licencePlate=EE1000, speed=81]
sending to topic:cameratopic2 2 BB1000
sending to topic:cameratopic2 2 ES1000
speeding *****BB1000 = 78
speeding *****ES1000 = 78
--> received message=SpeedRecord [licencePlate=BB1000, speed=78]
--> received message=SpeedRecord [licencePlate=ES1000, speed=78]
sending to topic:cameratopic2 2 FAS1000
```

```
workspace-spring-tool-suite-4-4.11.0.RELEASE_2 - InterstateTrafficSensor/src/main/java/kafka/InterstateSpeedService.java - Spring Tool Suite 4
File Edit Source Refactor Navigate Search Project Run Window Help

Package Explorer
  Other Projects
  lab10
  lab11
  lab12
  lab13
  InterstateTrafficSensor [boot]
    src/main/java
      kafka
        InterstateSpeedService.java
        OwnService.java
        Receiver.java
        Sender.java
        Sensor.java
        Sensor2.java
        SensorRecord.java
        SpeedCalculator.java
        SpeedRecord.java
        TrafficSensorsApplication.java
    src/main/resources
    application.properties
    src/test/java
    JRE System Library [JavaSE-1.8]
    Maven Dependencies
    src
    target
    mvnw

Boot Dashboard
Type tags, projects, or working set names to match (incl. * and ? wildc

  local
    AuthenticationService
    InterstateTrafficSensor [unknown port]
    KafkaEventsOrderService
    KafkaEventsPaymentService
    KafkaEventsStockService
    KafkaProject
    Service_A
8 elements hidden by filter

Sender.java
1 package kafka;
2
3
4 import org.springframework.beans.factory.annotation.Autowired;[]
11
12 @Service
13 public class InterstateSpeedService {
14
15     @Autowired
16     SpeedCalculator speedCalculator;
17
18     @KafkaListener(topics = {"${app.topic.cameratopic1}", "${app.topic.cameratopic2}"})
19     public void receive(@Payload SensorRecord sensorRecord,
20                       @Headers MessageHeaders headers) {
21         //System.out.println("--> received message="+ sensorRecord.toString());
22         speedCalculator.handleRecord(sensorRecord);
23     }
24
25
26
27     @KafkaListener(topics = {"${app.topic.toFasttopic}"})
28     public void receive(@Payload SpeedRecord speedRecord,
29                       @Headers MessageHeaders headers) {
30         System.out.println("--> received message="+ speedRecord.toString());
31     }
32
33 }
```

- Display name which violent speed limit:
And fee information

