

Kafka Assignment

Maithreyan K

School processing system

Student-data(ordering is not important) , teachers-data(ordering is not important),
rank-assignment(ordering is important)

Topic - Student

Student- data : process and save the data in DB

(Student name, id, class)

Topic - Teacher

Teacher-data : process and save the data in DB

(teachers name, id and what is expertise)

Topic - Rank

Rank-assignment : This want to give rank to the student according to the time of their assignment submission.

(student Id, name and the time of submission)

Starting Zookeeper-server

```
D:\kafka_2.12-2.6.1>zookeeper-server-start.bat config\zookeeper.properties
[2021-01-31 20:07:51,527] INFO Reading configuration from: config\zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,531] WARN config\zookeeper.properties is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,567] WARN \tmp\zookeeper is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,574] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,574] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,608] INFO autopurge.snapshotRetainCount set to 3 (org.apache.zookeeper.server.DataDirCleanupManager)
[2021-01-31 20:07:51,608] INFO autopurge.purgeInterval set to 0 (org.apache.zookeeper.server.DataDirCleanupManager)
[2021-01-31 20:07:51,609] INFO Purge task is not scheduled. (org.apache.zookeeper.server.DataDirCleanupManager)
[2021-01-31 20:07:51,611] WARN Either no config or no quorum defined in config, running in standalone mode (org.apache.zookeeper.server.quorum.QuorumPeerMain)
[2021-01-31 20:07:51,615] INFO Log4j 1.2 jmx support found and enabled. (org.apache.zookeeper.jmx.ManagedUtil)
[2021-01-31 20:07:51,625] INFO Reading configuration from: config\zookeeper.properties (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,626] WARN config\zookeeper.properties is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,626] WARN \tmp\zookeeper is relative. Prepend .\ to indicate that you're sure! (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,628] INFO clientPortAddress is 0.0.0.0:2181 (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,629] INFO secureClientPort is not set (org.apache.zookeeper.server.quorum.QuorumPeerConfig)
[2021-01-31 20:07:51,630] INFO Starting server (org.apache.zookeeper.server.ZooKeeperServerMain)
[2021-01-31 20:07:51,633] INFO zookeeper.snapshot.trust.empty : false (org.apache.zookeeper.server.persistence.FileTxnSnapLog)
[2021-01-31 20:07:51,672] INFO Server environment:zookeeper.version=3.5.8-f439ca583e70862c3068a1f2a7d4d068eec33315, built on 05/04/2020 15:53 GMT (org.apache.zookeeper.server.ZooKeeperServer)
[2021-01-31 20:07:51,672] INFO Server environment:host.name=DESKTOP-EDOST2V (org.apache.zookeeper.server.ZooKeeperServer)
[2021-01-31 20:07:51,673] INFO Server environment:java.version=11.0.9 (org.apache.zookeeper.server.ZooKeeperServer)
```

Starting Kafka-server

```
D:\kafka_2.12-2.6.1>kafka-server-start.bat config\server.properties
[2021-01-31 20:08:17,988] INFO Registered kafka:type=kafka.Log4jController MBean (kafka.utils.Log4jControllerRegistration$)
[2021-01-31 20:08:18,434] INFO Setting -D jdk.tls.rejectClientInitiatedRenegotiation=true to disable client-initiated TLS renegotiation (org.apache.zookeeper.common.XS09Util)
[2021-01-31 20:08:18,556] INFO starting (kafka.server.KafkaServer)
[2021-01-31 20:08:18,557] INFO Connecting to zookeeper on localhost:2181 (kafka.server.KafkaServer)
[2021-01-31 20:08:18,588] INFO [ZooKeeperClient Kafka server] Initializing a new session to localhost:2181. (kafka.zookeeper.ZooKeeperClient)
[2021-01-31 20:08:18,597] INFO Client environment:zookeeper.version=3.5.8-f439ca583e70862c3068a1f2a7d4d068eec33315, built on 05/04/2020 15:53 GMT (org.apache.zookeeper.ZooKeeper)
[2021-01-31 20:08:18,597] INFO Client environment:host.name=DESKTOP-EDOST2V (org.apache.zookeeper.ZooKeeper)
[2021-01-31 20:08:18,598] INFO Client environment:java.version=11.0.9 (org.apache.zookeeper.ZooKeeper)
[2021-01-31 20:08:18,598] INFO Client environment:java.vendor=Oracle Corporation (org.apache.zookeeper.ZooKeeper)
[2021-01-31 20:08:18,599] INFO Client environment:java.home=C:\Program Files\Java\jdk-11.0.9 (org.apache.zookeeper.ZooKeeper)
```

Controller

```
@RestController
@RequestMapping(value = "/api")
public class KafkaProducerController {
    private final KafkaProducerService producerService;
    private static int rank = 0;

    @Autowired
    public KafkaProducerController(KafkaProducerService producerService) { this.producerService = producerService; }

    @PostMapping(value = "/student")
    public void createStudent(@RequestBody Student student) { this.producerService.saveStudent(student); }
    @PostMapping(value = "/teacher")
    public void createStudent(@RequestBody Teacher teacher) { this.producerService.saveTeacher(teacher); }
    @PostMapping(value = "/assignment")
    public void createStudent(@RequestBody Assignment assignment) {
        assignment.setSubmissionDate(new Date());
        assignment.setRank(++this.rank);
        this.producerService.saveAssignment(assignment);
    }
}
```

Student1

POST http://localhost:9000/api/student

Params Authorization Headers (10) **Body** Pre-request Script Tests Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON** ▼

```
1 { "studentId": 1,
2   "studentName": "Maithreyan K",
3   "studentClass": "MSc" }
```

Student 2

POST http://localhost:9000/api/student

Params Authorization Headers (10) **Body** Pre-request Script Tests Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON**

```
1 {"studentId":2,  
2  "studentName":"Ashwin T",  
3  "studentClass":"MSc"}
```

Teacher

POST http://localhost:9000/api/teacher

Params Authorization Headers (10) **Body** Pre-request Script Tests Settings

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **JSON**

```
1 {"teacherId":1, "teacherName":"Vinod", "teacherDesig":"Computer Science"}
```

Assignment 1

POST http://localhost:9000/api/assignment

Params Authorization Headers (10) **Body** Pre-request Script Tests Set

☐ none ☐ form-data ☐ x-www-form-urlencoded ☒ raw ☐ binary ☐ GraphQL **J**

```
1 {"studentId":2,  
2  "studentName":"Ashwin T"  
3  }
```

Assignment 2

POST

http://localhost:9000/api/assignment

Send

ParamsAuthorizationHeaders (10)BodyPre-request ScriptTestsSettings

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

JSON

1

{

2

"studentId":1,

3

"studentName":"Maithreyan K"

}

Rank

```
erIALIZER.JsonSerializer
fka.common.utils.AppInfoParser      : Kafka version: 2.5.0
fka.common.utils.AppInfoParser      : Kafka commitId: 66563e712b0b9f84
fka.common.utils.AppInfoParser      : Kafka startTimeMs: 1612104919258
ache.kafka.clients.Metadata         : [Producer clientId=producer-1] Cluster ID: zLeNTAXASW6xgC6NU9KLLw
demo.service.KafkaConsumerService    : Student created -> Student{studentId=1, studentName='Maithreyan K', studentClass='MSc'}
demo.service.KafkaProducerService    : Student created -> Student{studentId=2, studentName='Ashwin T', studentClass='MSc'}
demo.service.KafkaConsumerService    : Student created -> Student{studentId=2, studentName='Ashwin T', studentClass='MSc'}
demo.service.KafkaProducerService    : Teacher created -> Teacher{teacherId=1, teacherName='Vinod', teacherDesig='Computer Science'}
demo.service.KafkaConsumerService    : Teacher created -> Teacher{teacherId=1, teacherName='Vinod', teacherDesig='Computer Science'}
demo.service.KafkaProducerService    : Assignment created -> Assignment{studentId=2, studentName='Ashwin T', submissionDate=Sun Jan 31 20:31:17 IST 2021, rank=1}
demo.service.KafkaConsumerService    : Assignment created -> Assignment{studentId=2, studentName='Ashwin T', submissionDate=Sun Jan 31 20:31:17 IST 2021, rank=1}
demo.service.KafkaProducerService    : Assignment created -> Assignment{studentId=1, studentName='Maithreyan K', submissionDate=Sun Jan 31 20:31:59 IST 2021, rank=2}
demo.service.KafkaConsumerService    : Assignment created -> Assignment{studentId=1, studentName='Maithreyan K', submissionDate=Sun Jan 31 20:31:59 IST 2021, rank=2}
```

Kafka Server Stopped

```
D:\>kafka-server-stop.bat
Deleting instance \\DESKTOP-EDOST2V\ROOT\CIMV2:Win32_Process.Handle="2492"
Instance deletion successful.
```

Zookeeper Server Stopped

```
D:\>zookeeper-server-stop.bat
Deleting instance \\DESKTOP-EDOST2V\ROOT\CIMV2:Win32_Process.Handle="7036"
Instance deletion successful.
```