

Project I : Building microservices application using Spring Boot

- Eureka as Service Registry
- Kafka Producer & Consumer as micro-services
- Spring Boot is another option

Suppose you have stream of food ratings from diner of a restaurant. Publishes Ratings and consume from another services.

Data format:

- Ratings: -
 - Food ID and Food Ratings.
 - Example (294 , 8.2)

Design Guidelines:

- 1) Maintain 1 topic:
 - a. RatingA
- 2) Produce at least 6 food items.
- 3) Produce some ratings for each food item, minimum 3 rating messages per food item.
- 4) Use Spring boot application API:
 - a. Publishes the ratings
 - b. Consume ratings and display it on the console.
- 5) Components:
 - a. Publishes a service on Eureka to push records to topic
 - b. Access publishes services by a client using Eureka

Optional : Create an interface for the application

<https://spring.io/guides/gs/service-registration-and-discovery/>

Project II : : Building Schema Server for Kafka Application

Each participant will be given a scenario having the following requirements:

- Define a schema using AVRO
- Deploy the schema in Schema Registry
- Produce message to the Topic using Avro
- Consume Message from the Topic
- Perform various transformation on the above messages.

Example use case:

Suppose you have stream of food ratings from diner of a restaurant. You already have a list of food items. Determine the average rating for each food item.

Data format:

- Ratings:-
 - Food ID and Food Ratings.
 - Example (294 , 8.2)
- Foods:-
 - Food ID , Food Category and Food Description.
 - Example: (294, Chaat , Papadi Chaat)

Find the average rating for each food Items.

Example: Papadi Chaat , 9.6

Design Guidelines:

- 6) Maintain 2 topics:
 - a. Rating and foods
- 7) Define schema for both the Topics using Avro.
- 8) Produce at least 6 food items.
- 9) Produce some ratings for each food item, minimum 3 rating messages per food item.
- 10) Use Schema registry to deploy avro schema.
- 11) Use Kafka Stream API – DSL
 - a. Fetch the ratings and display it on the console.
- 12) Use KSQL DB :
 - a. Calculate the average ratings for each food item and display the following
 - i. Food Description along with its average rating.

Deliverables:

Screen shot of:

- Input messages.
- Output Messages.

Code.

Optional: Create an interface for the application