**ASSIGNMENT – EVENT-DRIVEN-FUEL-COST-CALCULATOR**

**Technologies Used:**

1. Programming Language: Java8
2. Backend Framework: SpringBoot2
3. Database: NA
4. Caching: Spring Cache, Ehcache
5. Messaging: Kafka
6. Miscellaneous: Spring Schedulers

**Application Flow:**

Diagram

Description automatically generated

**Module Description:**

1. **Event-Producer-API:**

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| API Name | Event-Producer-API |
| Description | Event-Producer-Service produces and commits scheduled events at every 2 mins to Kafka broker. As of now for demo purpose, it is configured to Mumbai as cityName. |
| URL | <http://localhost:8082/producer/eventTrigger/action/trigger-event> |
| Request Body | {  "eventFlag”: true,  "cityName": "Bangalore" } |
| Http Method | POST |

1. **Event-Receiving-API:**

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| API Name | Event-Receiving-API |
| Description | Event-Receiving-API acts as the main service which polls/listens to the events that are published by producer API to Kafka broker, based on the flag i.e., true, or false it calculates the price of the fuel for any given city. It internally calls fuel-price-api to get the price of fuel for any given cityName and based on the time for which the lid was open, it estimates the final price of the fuel. |
| URL | <http://localhost:8081/consumer/eventTrigger/action/trigger-event> |
| Request Body | {  "eventFlag": false,  "timeStamp": "2021-02-15T12:44:00.014",  "cityName": "Mumbai" } |
| Http Method | POST |

**Assumptions:**

1. It is assumed that the request body will be having all the parameters and so validations are not considered.
2. **Fuel-Price-API:**

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| --- | --- |
| API Name: | Fuel-Price-API |
| Description: | This is a mocked service which will return the fuel price for any given cityName. |
| URL: | [http://localhost:8083/fuelPrice/v1/{cityName}](http://localhost:8083/fuelPrice/v1/%7bcityName%7d) |
| Request Body: | NA |
| Http Method: | Get |