Lab 04: Messaging Queue

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Code (branch): *micro_mq*

Starting the Hazelcast clusters

```
INFO: [172.18.2.40]:5701 [dev] [4.2.5]

Members {size:1, ver:1} [
        Member [172.18.2.40]:5701 - 02959bd5-cb9f-45be-955d-43eb3cca95e7 this
]
```

```
INFO: [172.18.2.40]:5702 [dev] [4.2.5]

Members {size:1, ver:1} [
        Member [172.18.2.40]:5702 - 11202fe6-bfa9-4d0d-8fc8-034065f8d604 this
]
```

```
INFO: [172.18.2.40]:5703 [dev] [4.2.5]

Members {size:1, ver:1} [
        Member [172.18.2.40]:5703 - 4f216e4c-7f89-41a4-aaa1-5ec183a11e22 this
]
```

Task 1: POST

First, we send out the 10 POST requests (with 10 messages)

- Facade service:

```
127.0.0.1 - - [13/Jun/2022 01:23:27] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:28] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:30] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:31] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:33] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:34] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:36] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:37] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:39] "POST /facade HTTP/1.1" 200 -
127.0.0.1 - - [13/Jun/2022 01:23:41] "POST /facade HTTP/1.1" 200 -
```

- Logging services:

```
(Labs) slavkoprytula@Slavkos-MacBook-Pro Labs % cd Lab_04 && python logging-service/main.py --port=8083
Connected to hz clusters
 * Serving Flask app "main" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://localhost:8083/ (Press CTRL+C to quit)
127.0.0.1 - - [13/Jun/2022 01:51:11] "GET /logging HTTP/1.1" 200 -
------ msg5
Logging Service: [uuid: 99a85f1c-64c6-4bb7-9c28-81130bd4902b, msg: msg5]
127.0.0.1 - - [13/Jun/2022 01:51:45] "POST /logging HTTP/1.1" 200 -
------ msg6
Logging Service: [uuid: 0c27efaa-834f-4652-88d8-f0c2f121ae13, msg: msg6]
127.0.0.1 - - [13/Jun/2022 01:51:47] "POST /logging HTTP/1.1" 200 -
```

```
(Labs) slavkoprytula@Slavkos-MacBook-Pro Labs % cd Lab_04 && python logging-service/main.py --port=8084
Connected to hz clusters
 * Serving Flask app "main" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://localhost:8084/ (Press CTRL+C to quit)
------ msg3
Logging Service: [uuid: 39d3f79a-c493-461e-a863-563f9e494d23, msg: msg3]
127.0.0.1 - - [13/Jun/2022 01:51:42] "POST /logging HTTP/1.1" 200 -
------ msg7
Logging Service: [uuid: 53bbd0f5-3c68-4a73-825a-bab602356cb2, msg: msg7]
127.0.0.1 - - [13/Jun/2022 01:51:48] "POST /logging HTTP/1.1" 200 -
------ msg8
Logging Service: [uuid: 36aaf4b9-e074-4ab2-8bd2-ae3710714b23, msg: msg8]
127.0.0.1 - - [13/Jun/2022 01:51:50] "POST /logging HTTP/1.1" 200 -
```

```
(Labs) slavkoprytula@Slavkos-MacBook-Pro Labs % cd Lab_04 && python logging-service/main.py --port=8085
Connected to hz clusters
 * Serving Flask app "main" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://localhost:8085/ (Press CTRL+C to quit)
------ msg1
Logging Service: [uuid: a8951668-e6a8-48ce-8d34-013f67fd6481, msg: msg1]
127.0.0.1 - - [13/Jun/2022 01:51:07] "POST /logging HTTP/1.1" 200 -
------ msg2
Logging Service: [uuid: 8da407d4-db19-4d5d-ae76-e63fd7c21b04, msg: msg2]
127.0.0.1 - - [13/Jun/2022 01:51:09] "POST /logging HTTP/1.1" 200 -
------ msg4
Logging Service: [uuid: 0a6d769f-b087-4c0d-9e26-3d8555fd6eee, msg: msg4]
127.0.0.1 - - [13/Jun/2022 01:51:43] "POST /logging HTTP/1.1" 200 -
------ msg9
Logging Service: [uuid: 657b622b-fb9c-4c6b-86ad-cf1dbe3dacb4, msg: msg9]
127.0.0.1 - - [13/Jun/2022 01:51:52] "POST /logging HTTP/1.1" 200 -
------ msg10
Logging Service: [uuid: 155c32d0-aa96-437f-b3d0-f77fb64cfb35, msg: msg10]
127.0.0.1 - - [13/Jun/2022 01:51:53] "POST /logging HTTP/1.1" 200 -
```

Task 2: GET

Message service: **(HZ Message Queue)**

```
(Labs) slavkoprytula@Slavkos-MacBook-Pro Labs % cd Lab_04 && python messages-service/main.py --port=8081

Connected to hz clusters
 * Serving Flask app "main" (lazy loading)
 * Environment: production
   WARNING: This is a development server. Do not use it in a production deployment.
   Use a production WSGI server instead.
 * Debug mode: off
 * Running on http://localhost:8081/ (Press CTRL+C to quit)
msg1
Messages Service:  msg2
Messages Service:  msg3
Messages Service:  msg4
Messages Service:  msg5
Messages Service:  msg6
Messages Service:  msg7
Messages Service:  msg8
Messages Service:  msg9
Messages Service:  msg10
Messages Service:  msg1
```

We can see that all the messages have been distributed randomly between the logging and messaging services