Jakarta Messaging Guide

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What's Open Liberty and JMS guide

Open liberty: Open source project that provides a flexible server framework for running and building java application built by IBM.

Jakarta Messaging Guide: Step-by-Step guide on Jakarta Messaging APIs to build the application and implement a messaging solution that enables communication between different parts of Java microservices.

Milestones

Initial Set up
- Set up development environment
- Fork the initial repository and contributed through PRs
- Configure the necessary tools such as maven, IBM MQ

Implementation
- Developed the **system** and **inventory** microservices
- Created the message producers and consumers (sendMessage(), onMessage())
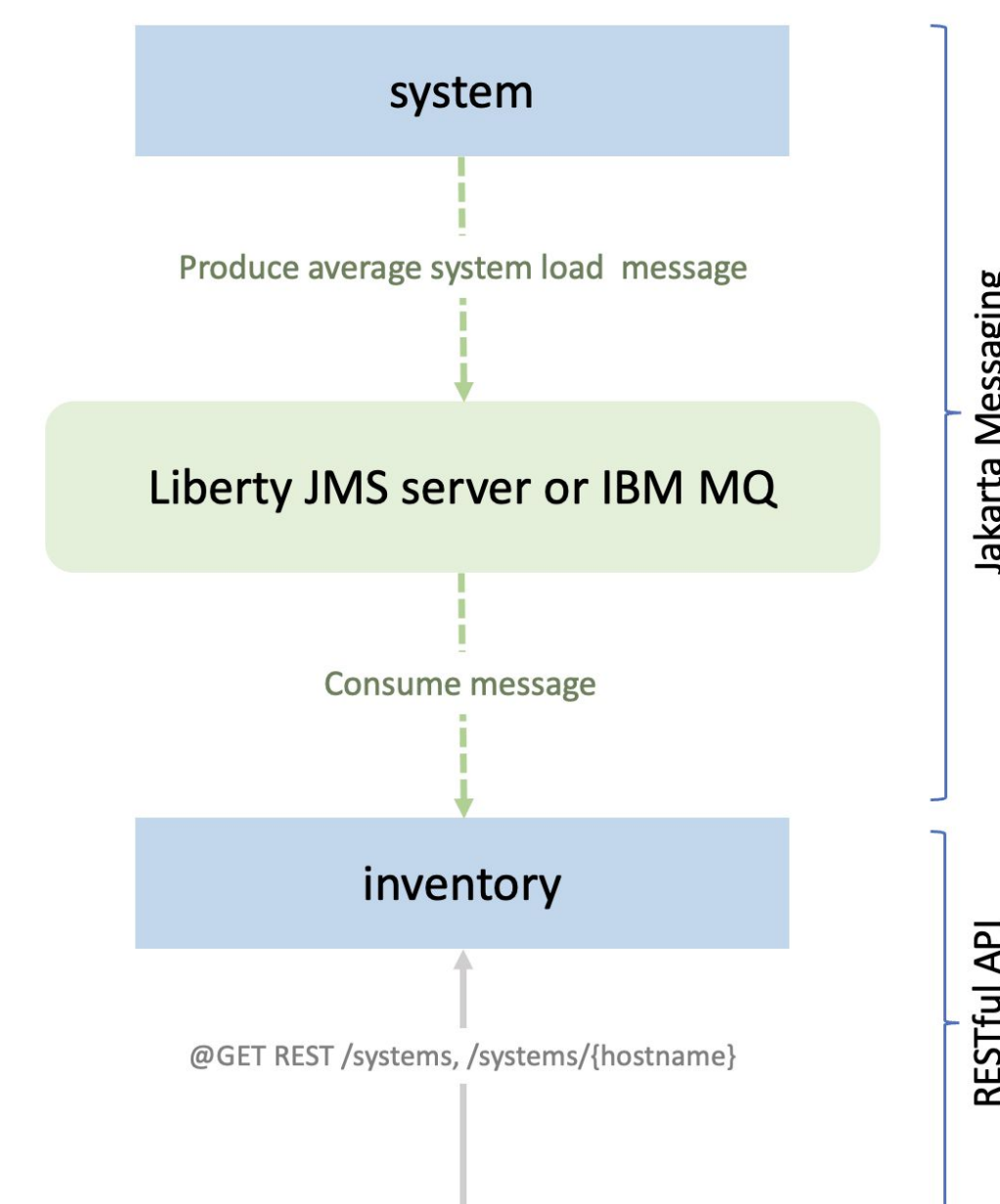
Documentation
- Wrote comprehensive step-by-step guides (README.adoc)
- Provided an overview of setting up **Jakarta Messaging** and the roles of **message producers** and **consumers** in the application

Testing
- Implemented **Integration Test** Class to ensure the reliability and performance of the application.
- Implemented **test.sh** for automated testing

Highlights and Accomplishments

Application Architecture

- How to communicate between system and inventory services using **JMS server or IBM MQ**
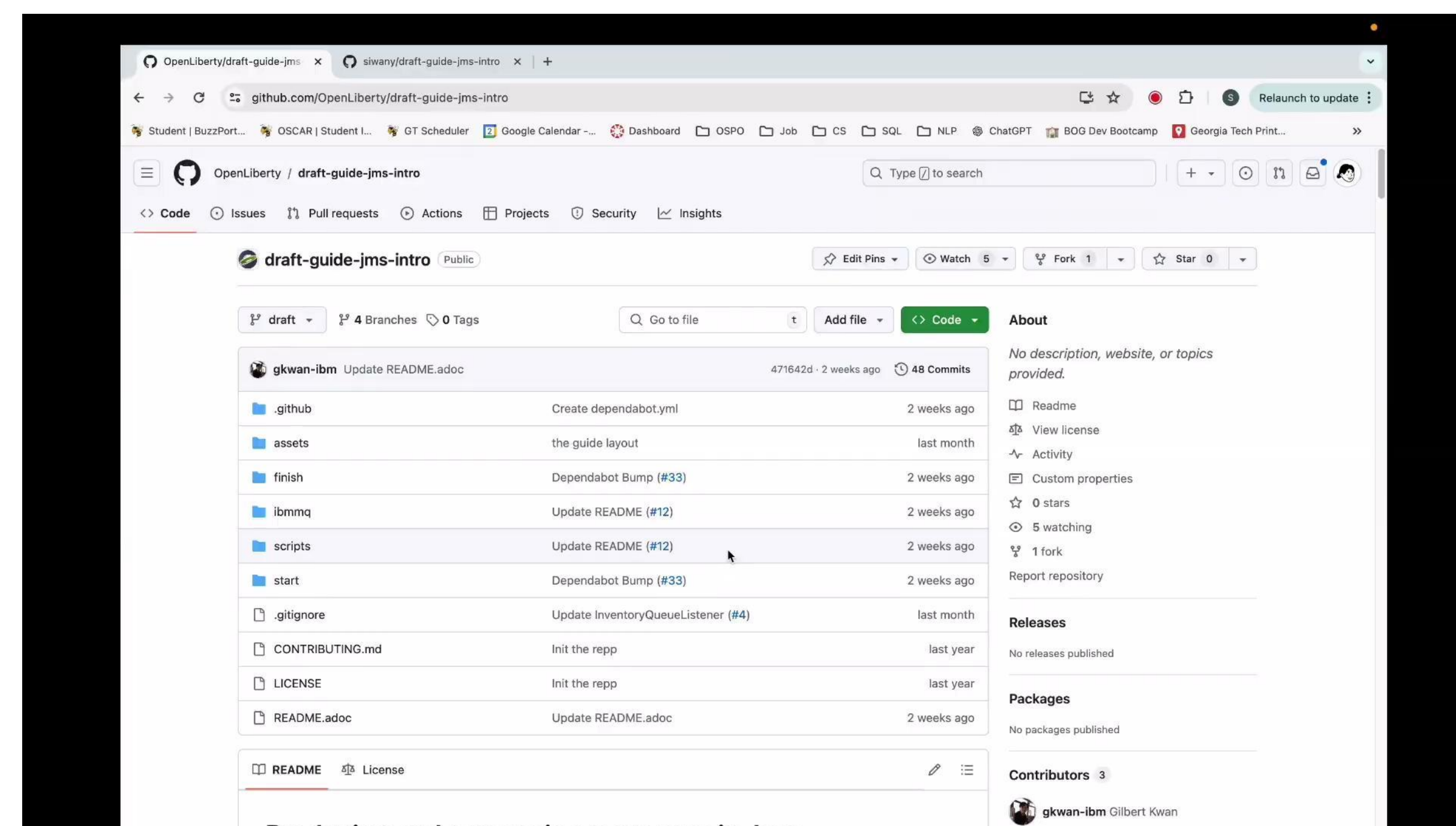
```
[INFO] [INFO    ] {"hostname":"Siwans-MacBook-Pro.local","loadAverage":5.06640625}
[INFO] [INFO    ] {"hostname":"Siwans-MacBook-Pro.local","loadAverage":5.068359375}
```

- When both **system** and **inventory** services are running, the application shows hostname and CPU System Load every 15 seconds

Github Link for the JMS guide
https://github.com/OpenLiberty/draft-guide-jms-intro

IBM MQ integration

- Designed the application container also to use **IBM MQ** as the messaging server., increasing both flexibility and compatibility.

Application Demo Video

Engaging with Open Liberty

If you got interested in the Open Liberty project, here are some resources and contacts you can reach out to:

Open Liberty Guides
https://openliberty.io/guides/

If you want to be a contributor:
https://openliberty.io/contribute/

What Skills Did I Learn?

Web application development
- Designed and Implemented the web application by using JMS service, RESTful APIs, Maven

IBM MQ
- Integrated IBM MQ as a messaging server for message handling.

Technical Writing
- Wrote comprehensive step-by-step guides by providing detailed explanations

Automated Testing
- Developed junit integration tests to verify application functionality

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