Distributed Systems
Homework task #2

Spring Cloud Distributed System

Description

The aim of this homework project is to create a Spring Cloud distributed microservices application.

Steps

1. Follow instructions on how to create Spring Cloud application (attached to assignment) and create a **Discovery Service**, **Spring Cloud Config Server** and **Microservice.** For **Microservice** application use your application from Homework task #1.
2. Run all the applications according to instructions. For more information see references below. Make screenshots of running applications and add them to the homework report.
3. Explore the *Spring Cloud Netflix Eureka server Web console.* Make screenshots and attach them to the homework report.
4. Add Client-Side Load Balancer to your distributed application. Configure your distributed application to use multiple instances of the microservice. Make calls from your Client-Side Load Balancer to see load balanced calls. Make screenshots of running Load Balancer and add them to the homework report.
5. Optionally, create Server-Side load balancer as Spring Cloud Gateway.
6. **For more information read articles from references below.**
7. Create a report of the homework. Submit all the applications and the report to *Homework 2 submission*.

General Requirements

1. The entire code should be properly formatted.
2. The package/class/field/method names should conform to the naming conventions.
3. The Unit tests for all classes should present.
4. The entire code should be properly documented with JavaDoc comments.
5. The entire code should conform to S.O.L.I.D principles.

References

1. Building an Application with Spring Boot
2. Introduction to Spring Cloud Load Balancer
3. Client-Side Load-Balancing with Spring Cloud LoadBalancer
4. Building a Gateway
5. Naming Conventions
6. S.O.L.I.D: The First 5 Principles of Object Oriented Design