
WebStore System Architecture and Design

Tsadkan Yitbarek, Aug 2021

5 Microservices

Customer Service

Handles customer CRUD
and send email to customer

Product Service

Handles product CRUD and
product stock recalculation

Order Service

Handles Creating and
Placing order

...continued

ShoppingCommandService

Handles storing shopping cart and cart checkout events

ShoppingQueryService

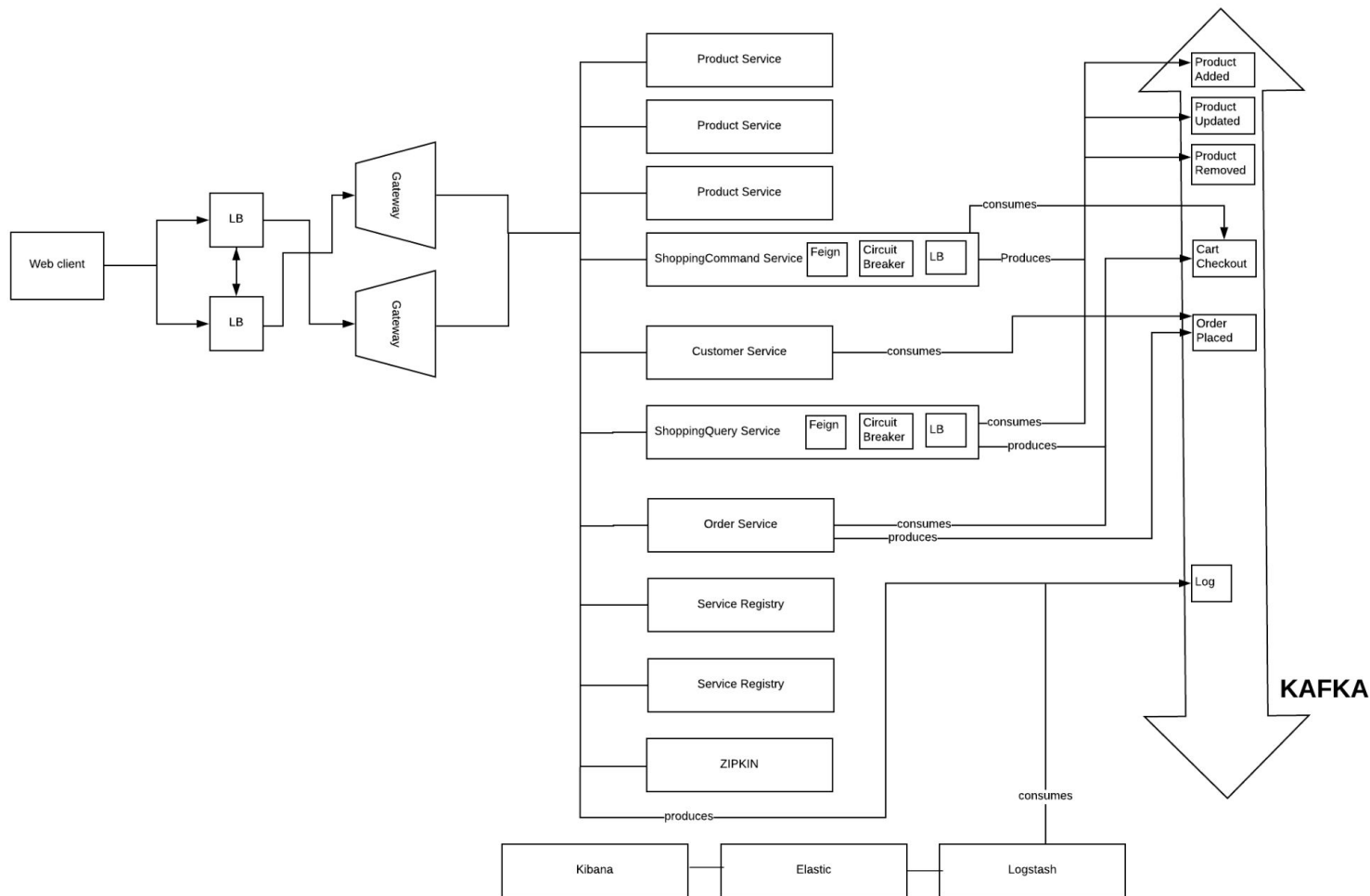
Acts as a query service to fetch shopping carts and handles cart checkout



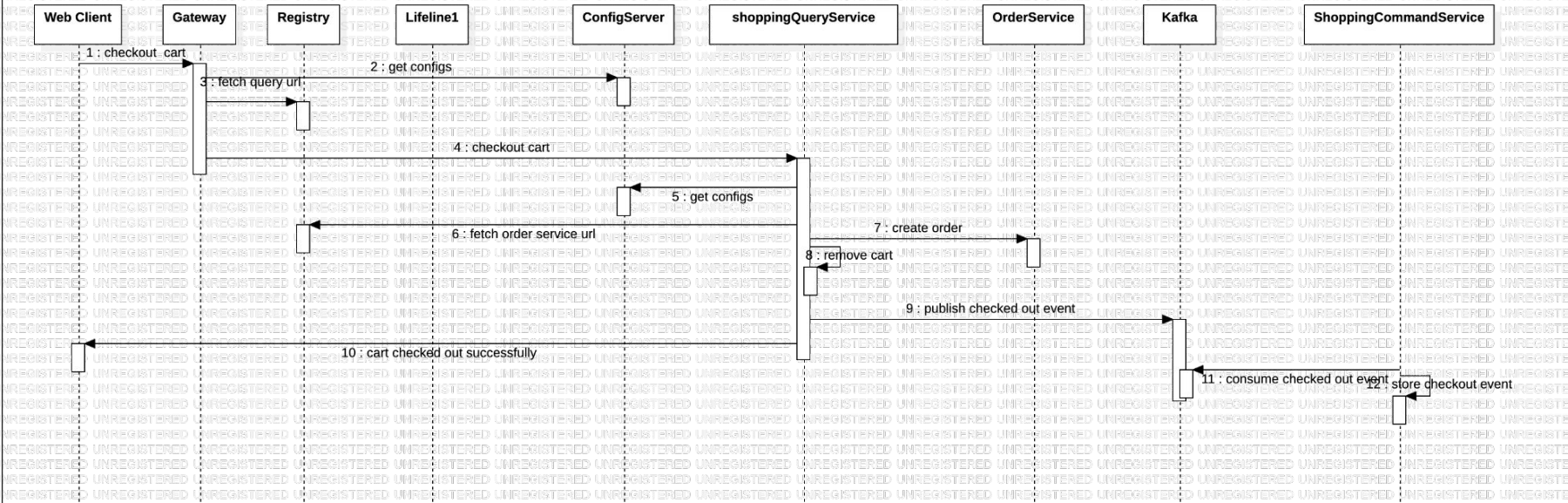
1. Main Points

Architecture wise, the following supporting services are used to have a scalable and reliable system

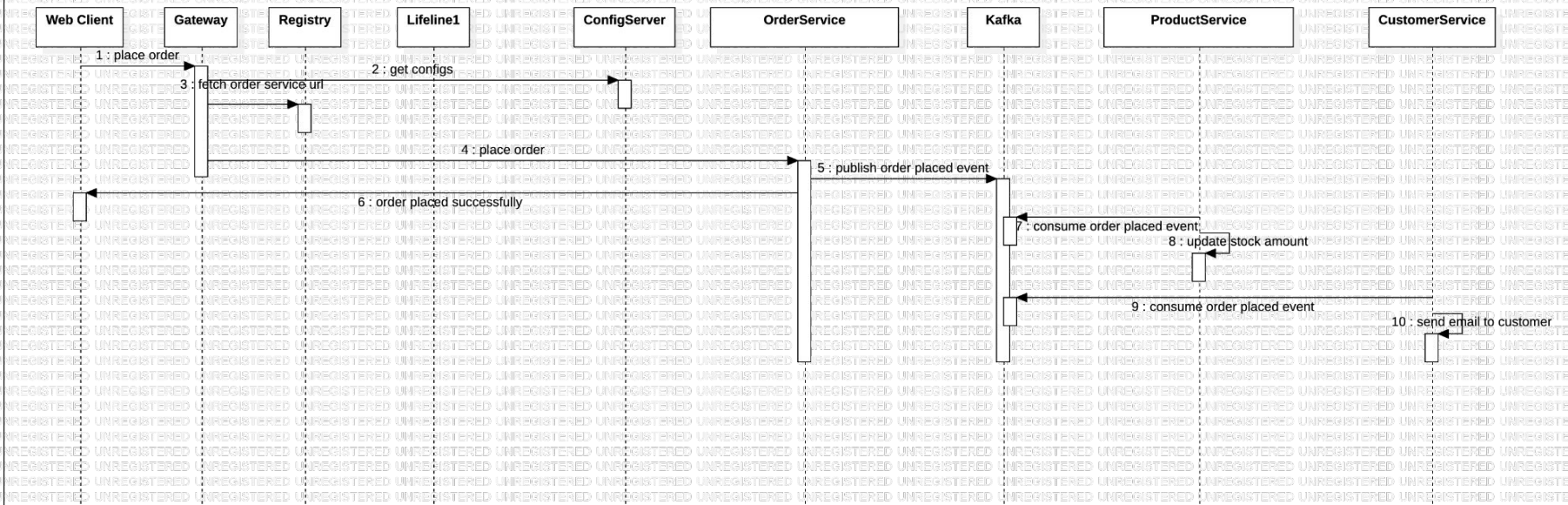
- Gateway with Load balancer
- Openfeign with Circuit breaker
- Event sourcing and CQRS
- Config Server
- Zipkin
- ELK with Kafka



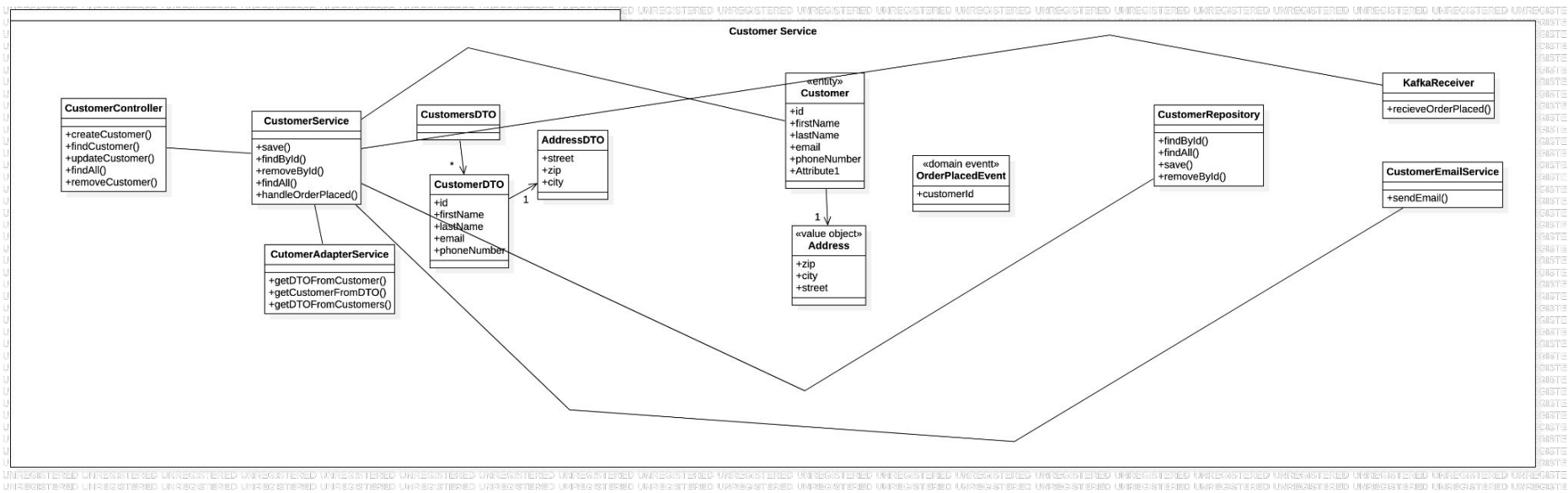
sd Checkout Shopping cart Sequence Diagram



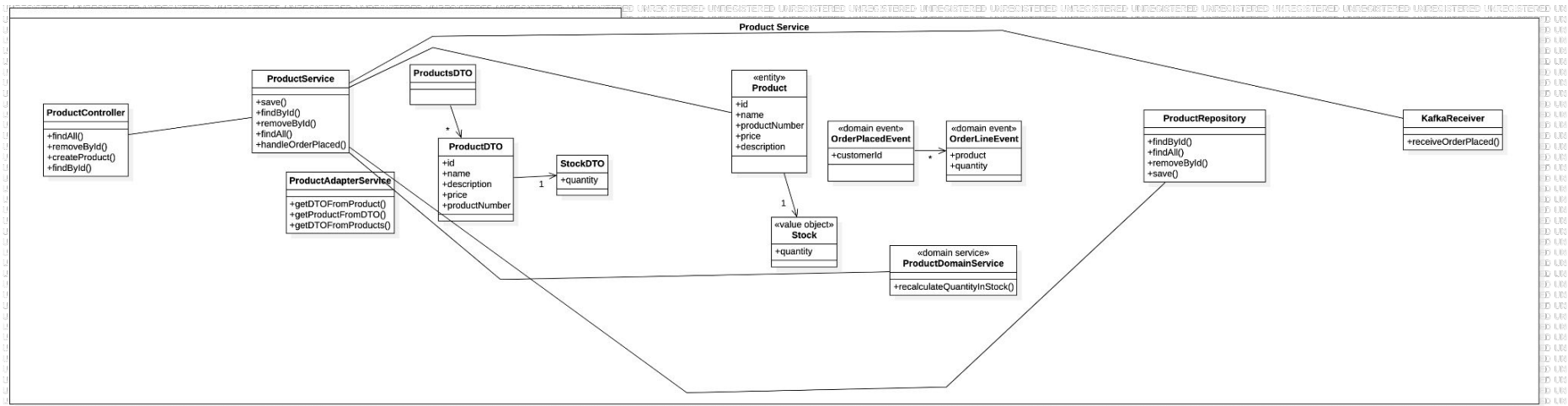
sd Order Place Sequence Diagram



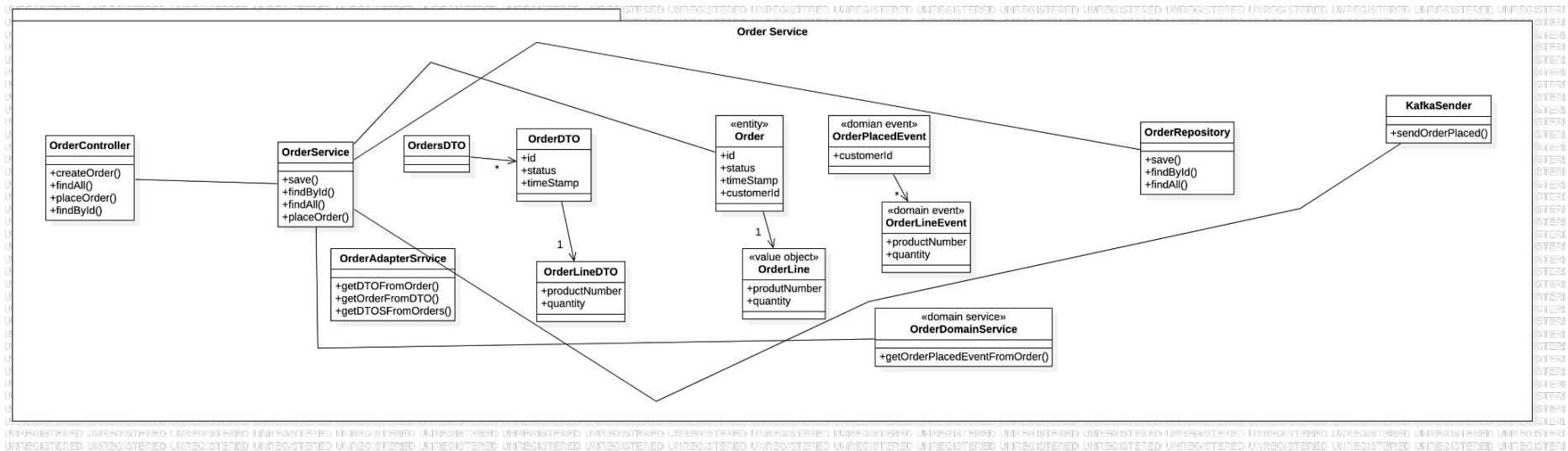
Customer Service



Product Service

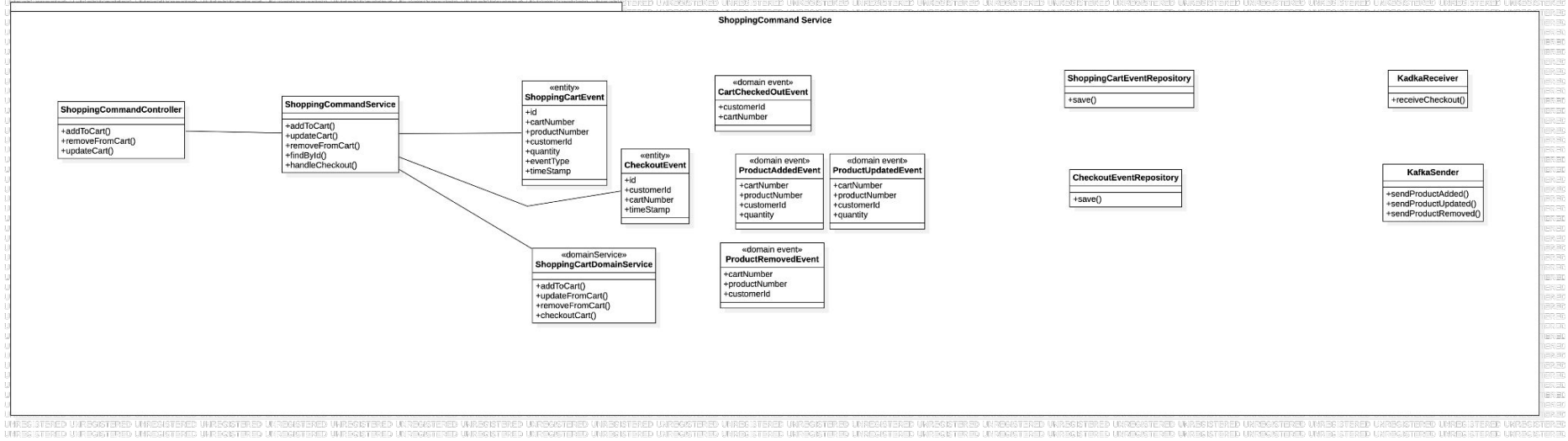
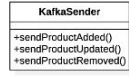
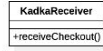
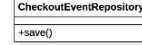
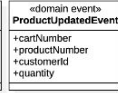
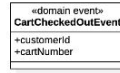
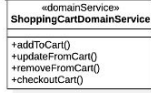
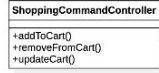


Order Service

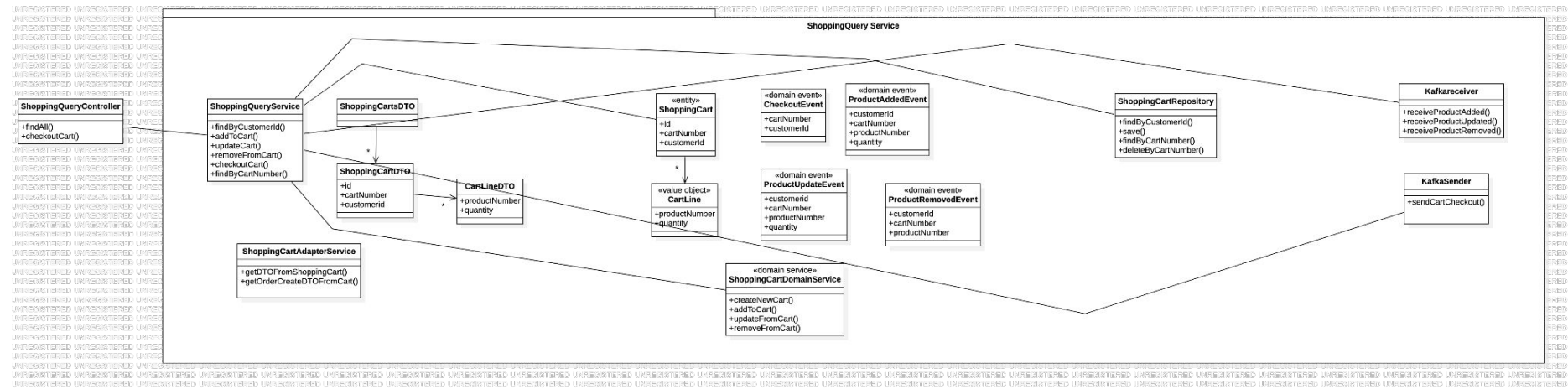


ShoppingCommand Service

ShoppingCommand Service



ShoppingQuery Service





Thank you

Implementation of the design can be found in github.

<https://github.com/orgs/XADMIU2021/repositories>