CS6310 Assignment 5
Grocery Express Design Document
Group 11

Introduction

The Grocery Store Application is a command-line based platform that allows customers to order groceries online and have them delivered by drones. Building upon the existing functionality developed in Assignment 3, we have incorporated the following new features:

- Angry Birds Function: This feature introduces a special delivery option where orders are delivered by drones that may come across Angry Birds during transit. Each Angry Bird found either at the store or customer's location has the potential to damage the drone, causing it to return to the store for repairs and delaying delivery. System users can adjust the number of Angry Birds and the probability of successful attacks for a customized delivery experience.

- Time-Sensitive Coupon Function: This feature rewards loyal customers with randomly distributed time-sensitive coupons applicable to the total order price or specific items. Customers must use the coupons before they expire, encouraging swift order placements. If the store fails to deliver orders on time, penalties apply. System users can adjust coupon frequency and distribution to cater to their customers' preferences.

- Robustness: To enhance the application's scalability and reliability, we have incorporated additional test cases, error messages, and a MongoDB database for storing the application's information.

Instructions to run application

1. Download the appplication.zip from canvas or from the following link: https://drive.google.com/file/d/1LOtspimUObYv5rwmTywioIbFhlZhWl4g/view?usp=sharing
2. Unzip the folder
3. Open the folder in IntelliJ IDEA
4. Go to Readme.md “Installation” section to find detailed instructions

Deliverables

a. **Source code:**
Please find the source_code.zip from the link:
https://drive.google.com/file/d/1Vth86vKs3G5GfvoQT61VqwrZ4DsRZLFM/view?usp=sharing

b. **Application:**
Please find the application.zip from the link:
https://drive.google.com/file/d/1LOtspimUObYv5rwmTywioIbFhlZhWl4g/view?usp=sharing

c. **Demonstration Video**
Please find the video form the link : https://youtu.be/ieTNweYIO1c

d. **UML Diagrams**

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UML Class Diagram
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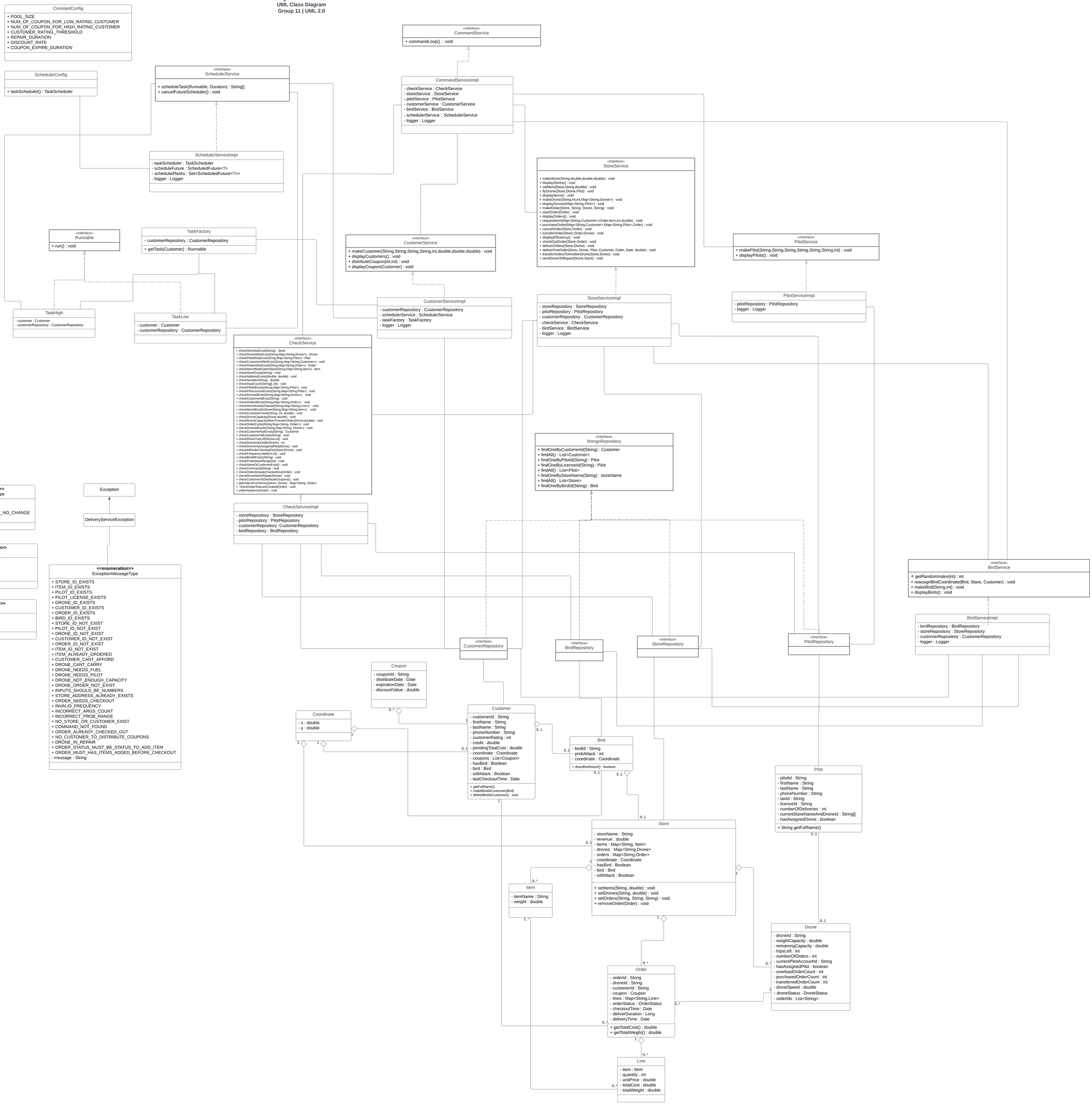

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UML Deployment Diagram
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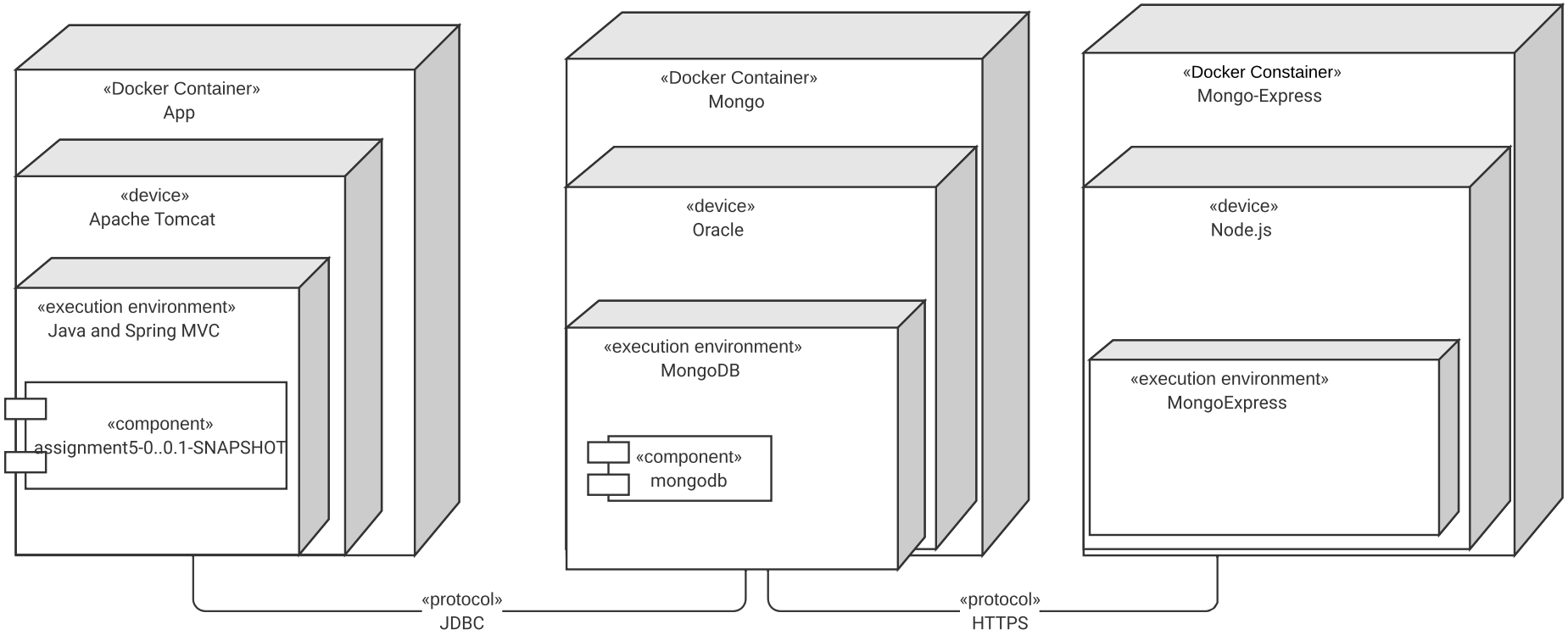

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State Machine Diagram
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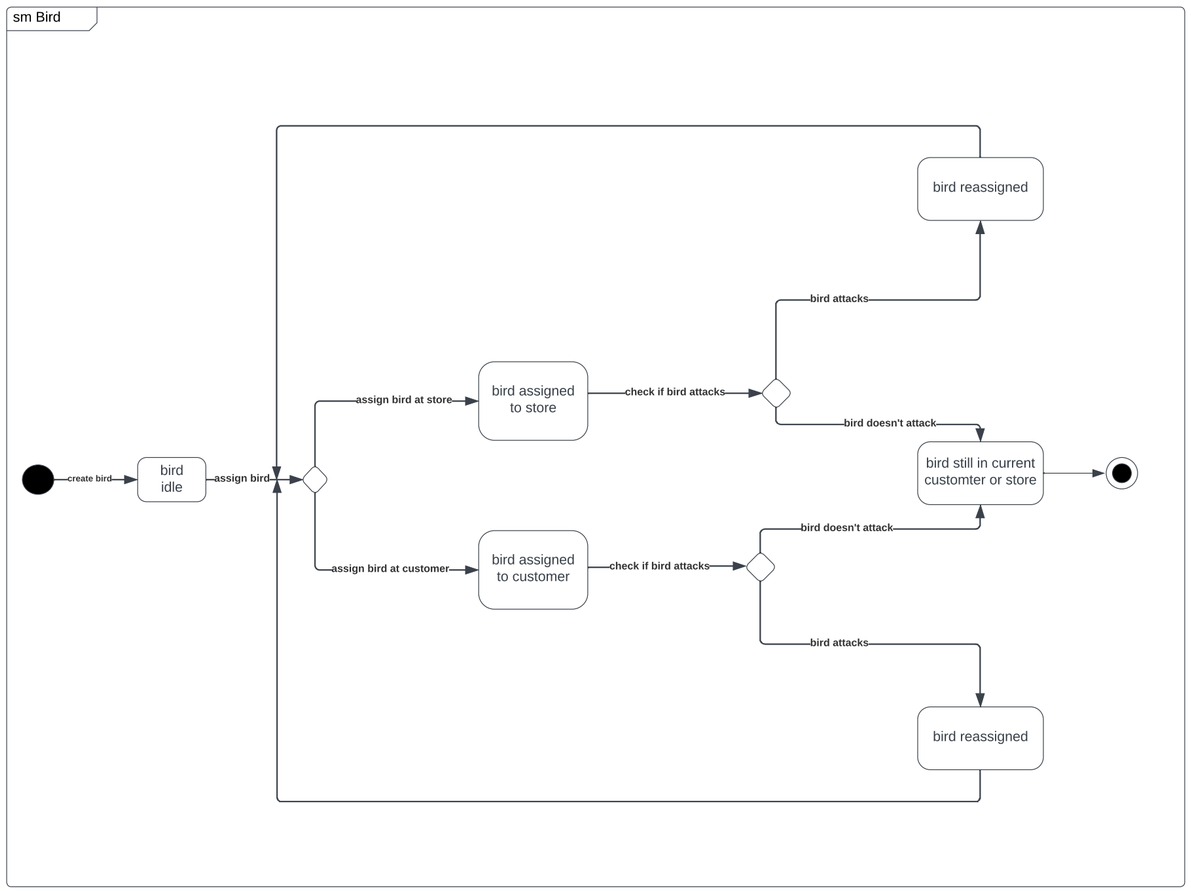

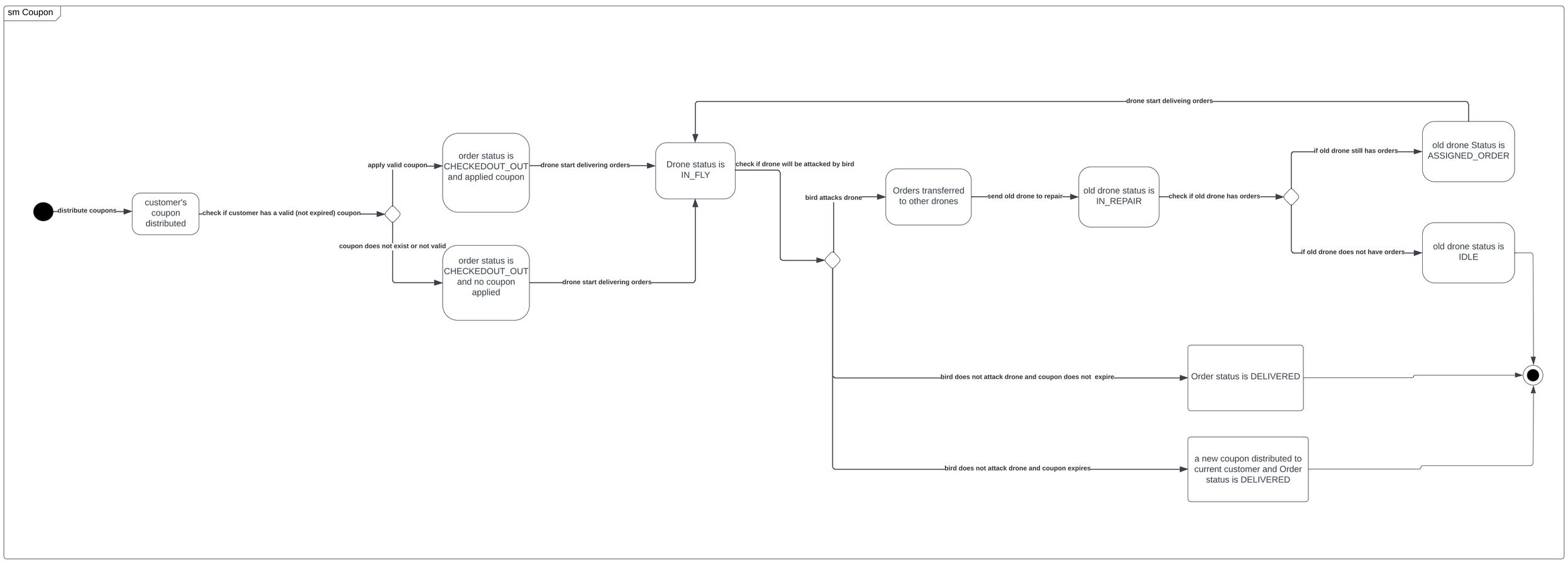

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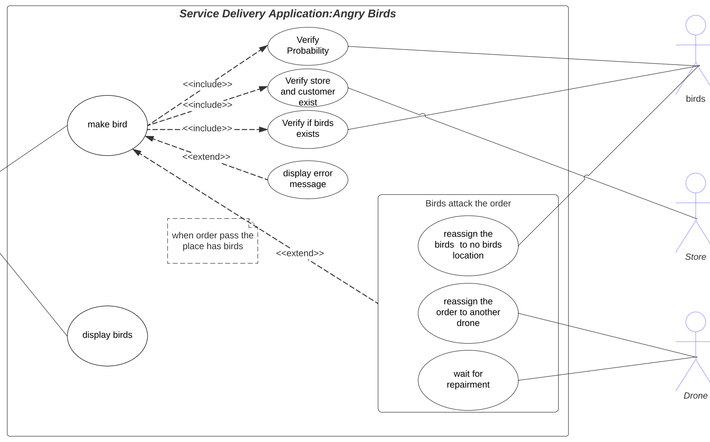
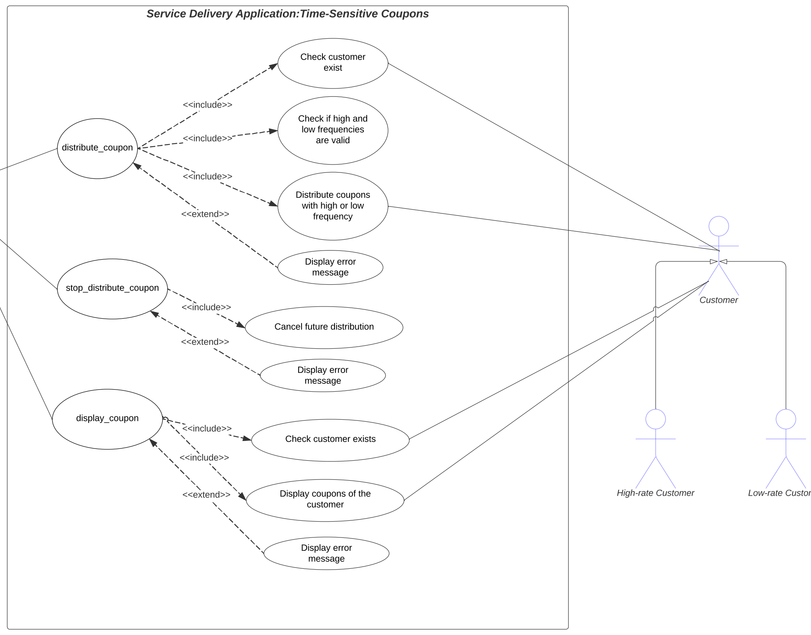
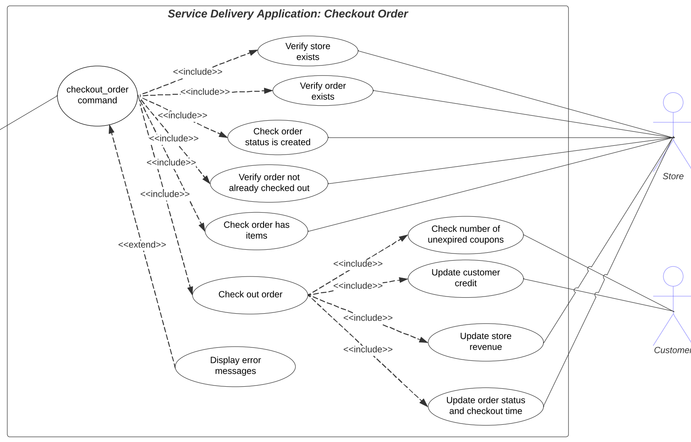
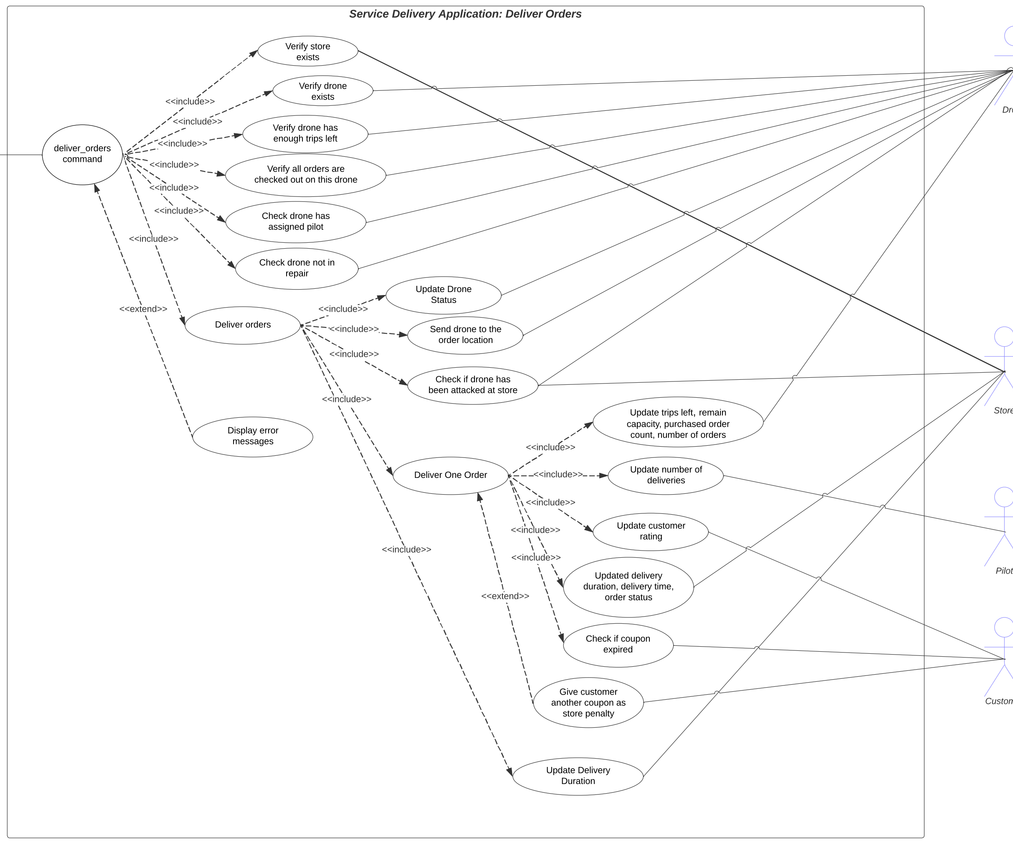
Use Case Diagram
Group 11 | UML 2.0









Assignment 5 CS 6310 Sequence Diagram
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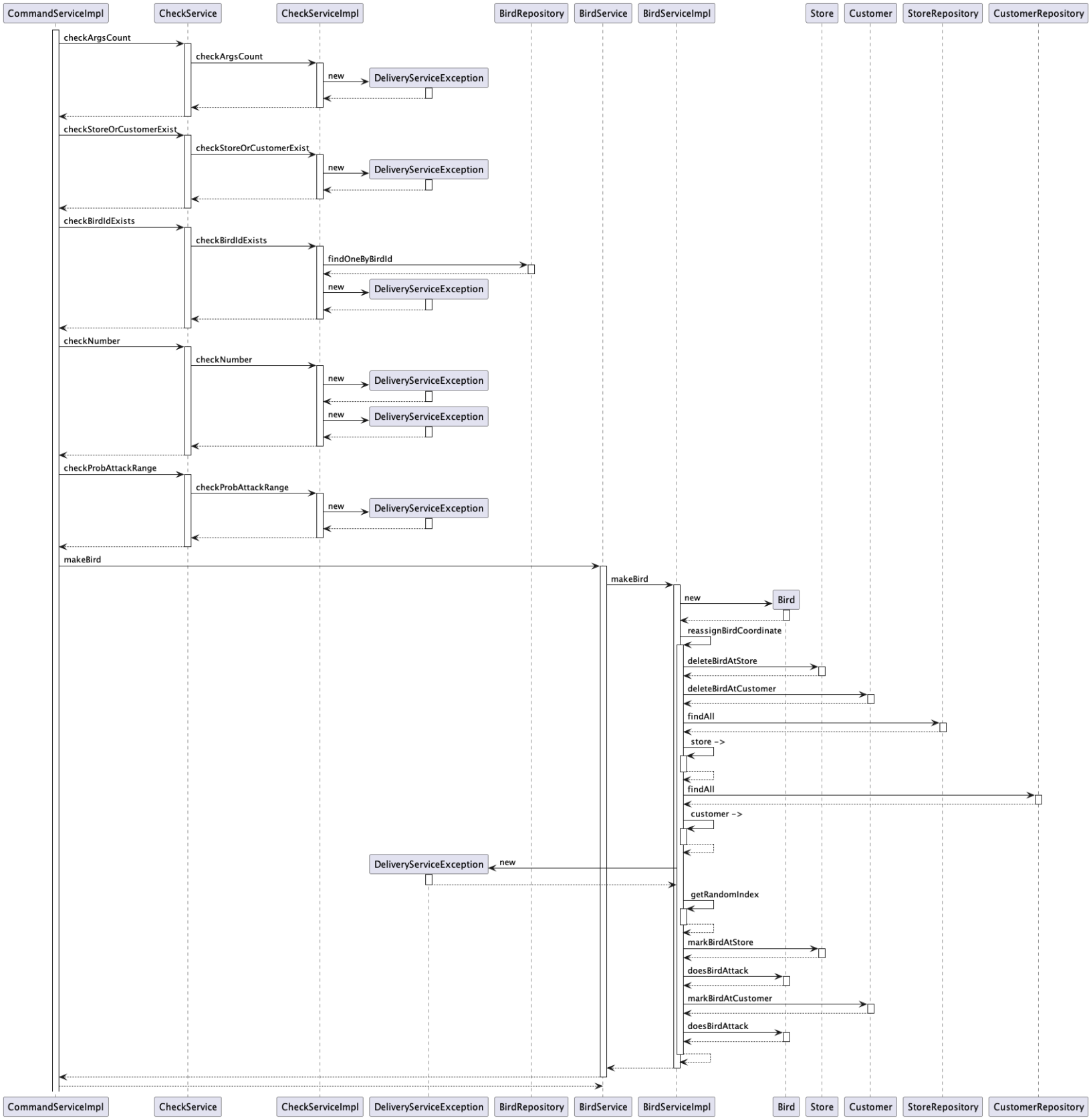
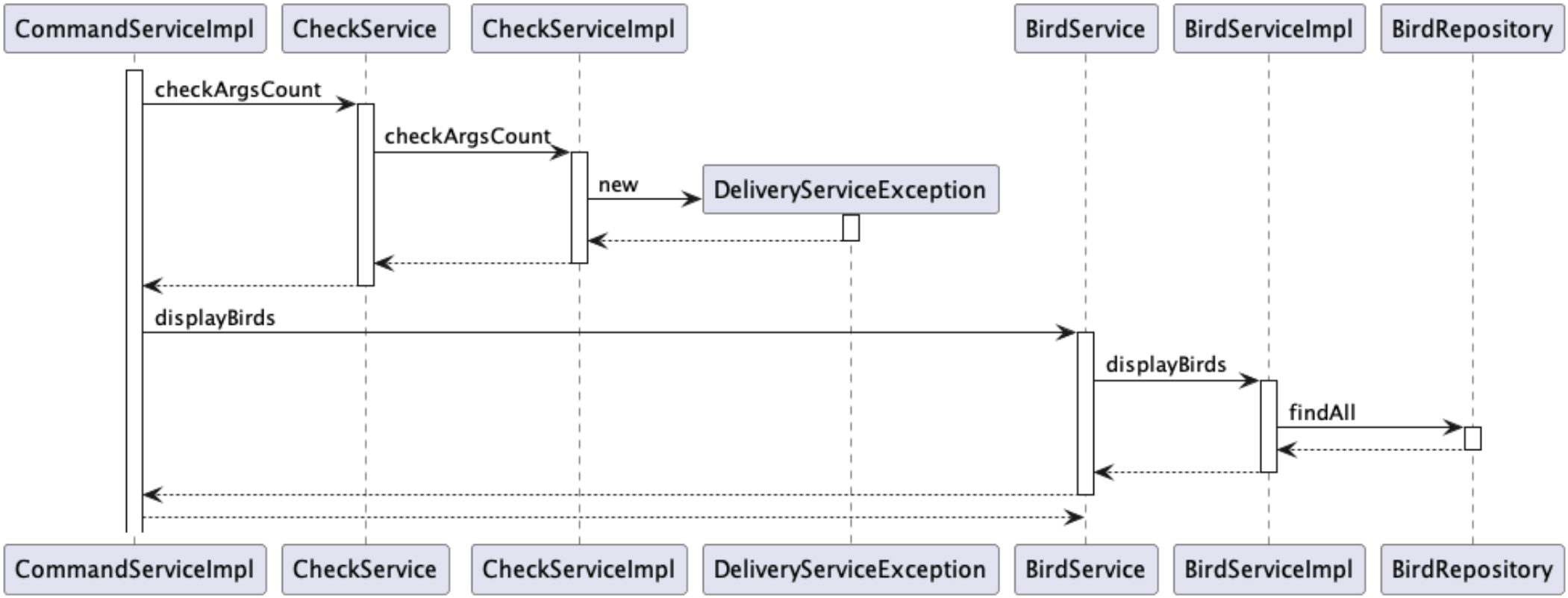
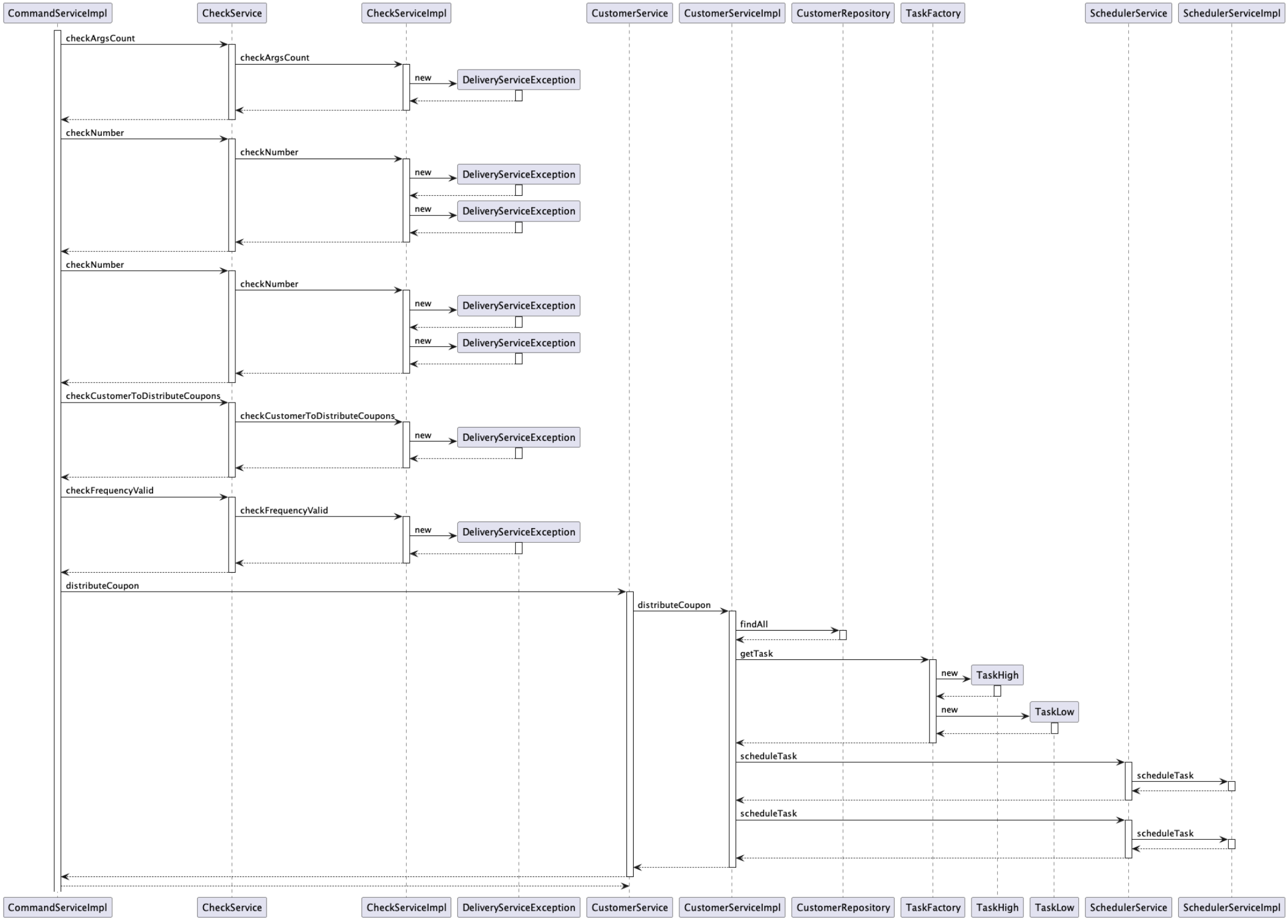
create_bird



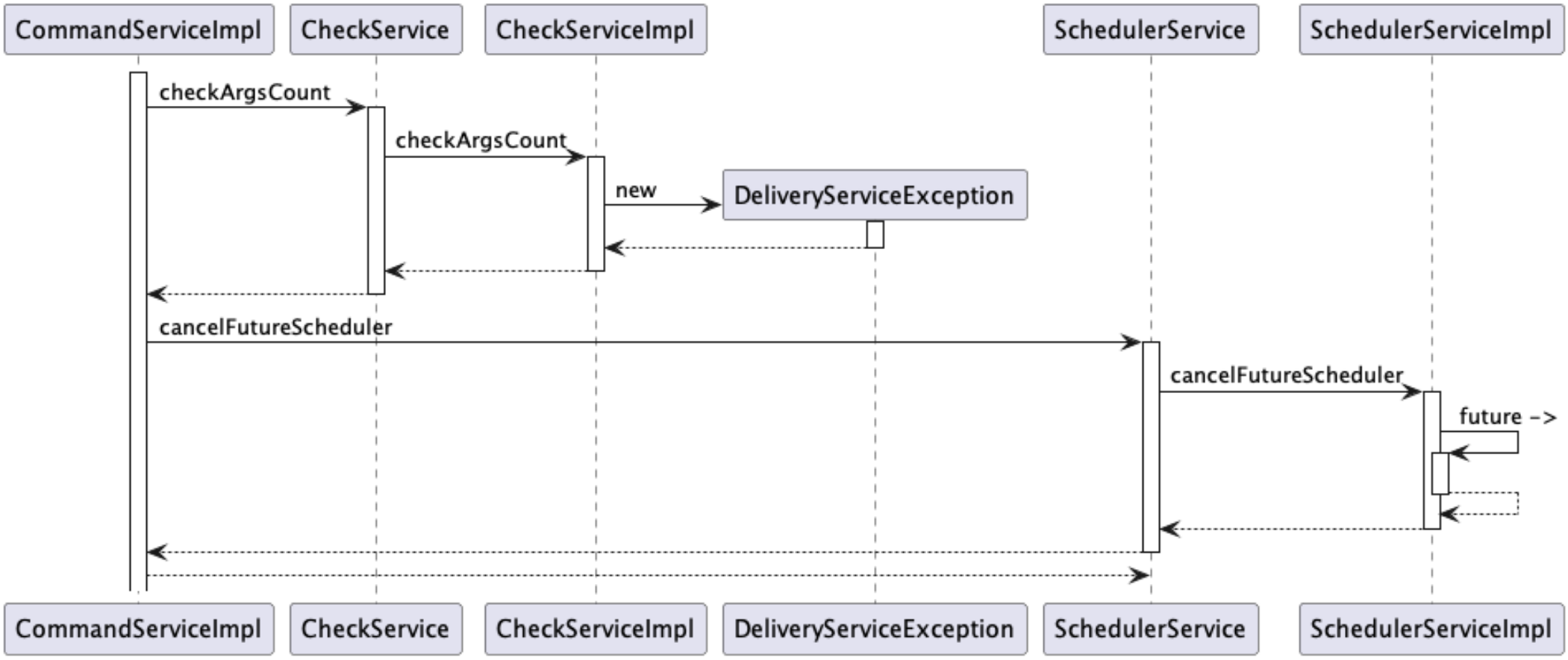
display_birds



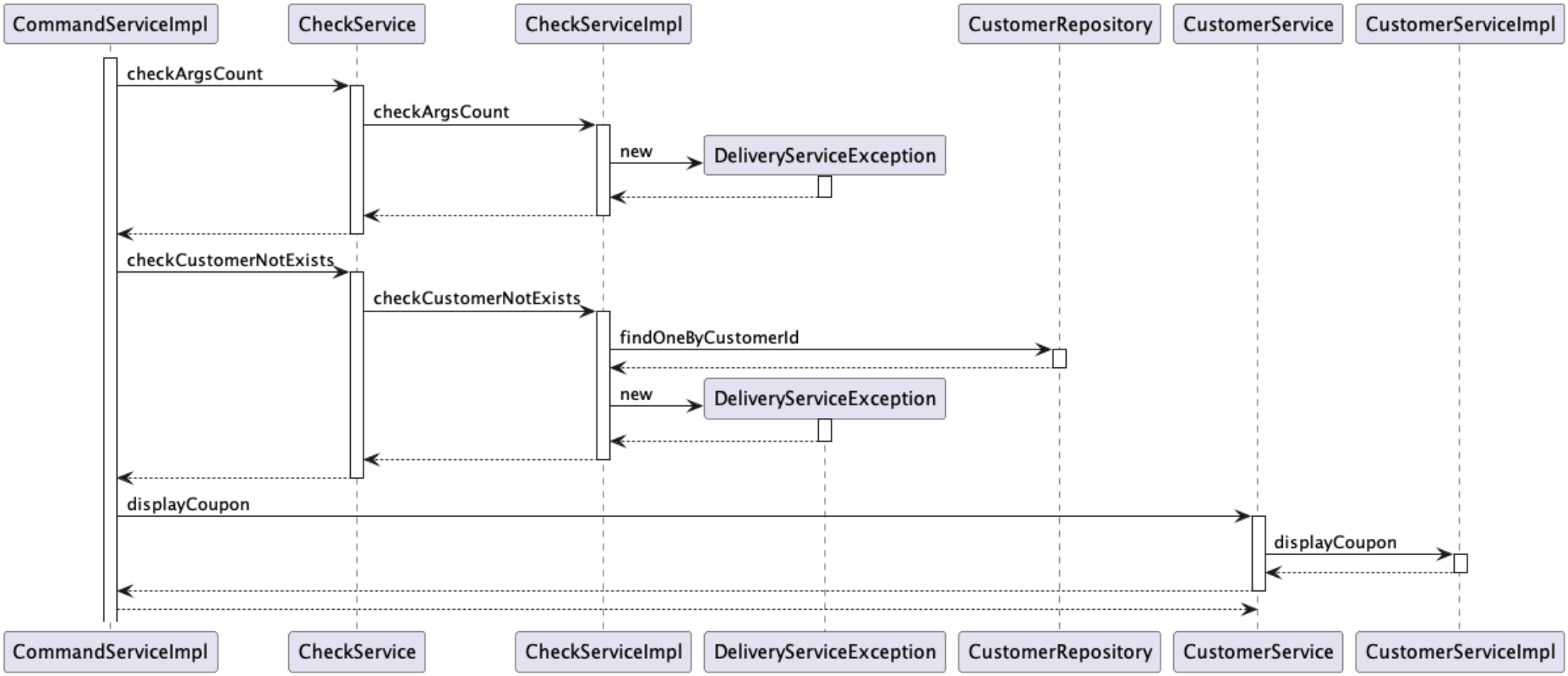
distribute_coupon



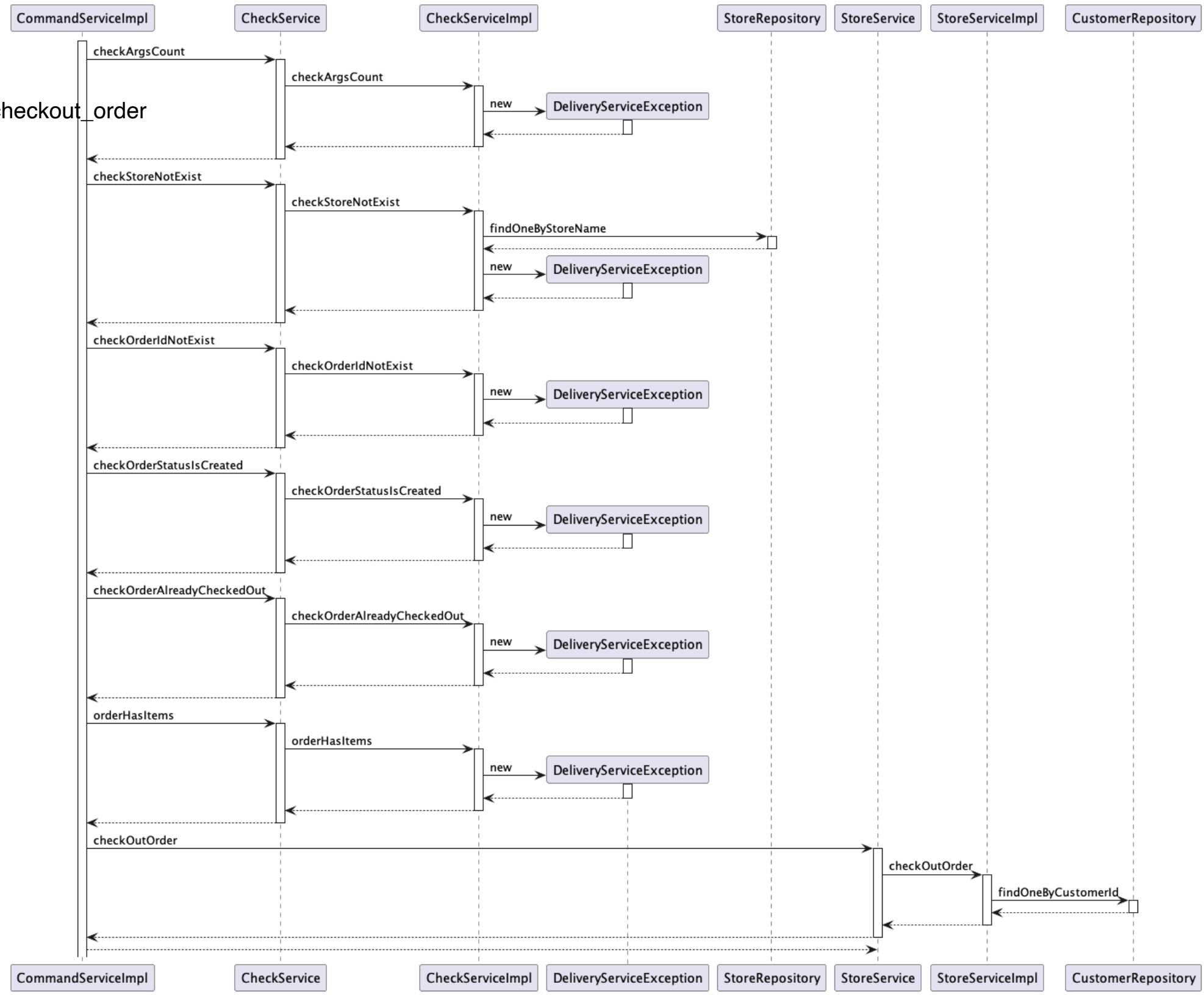
stop_distribute_coupon

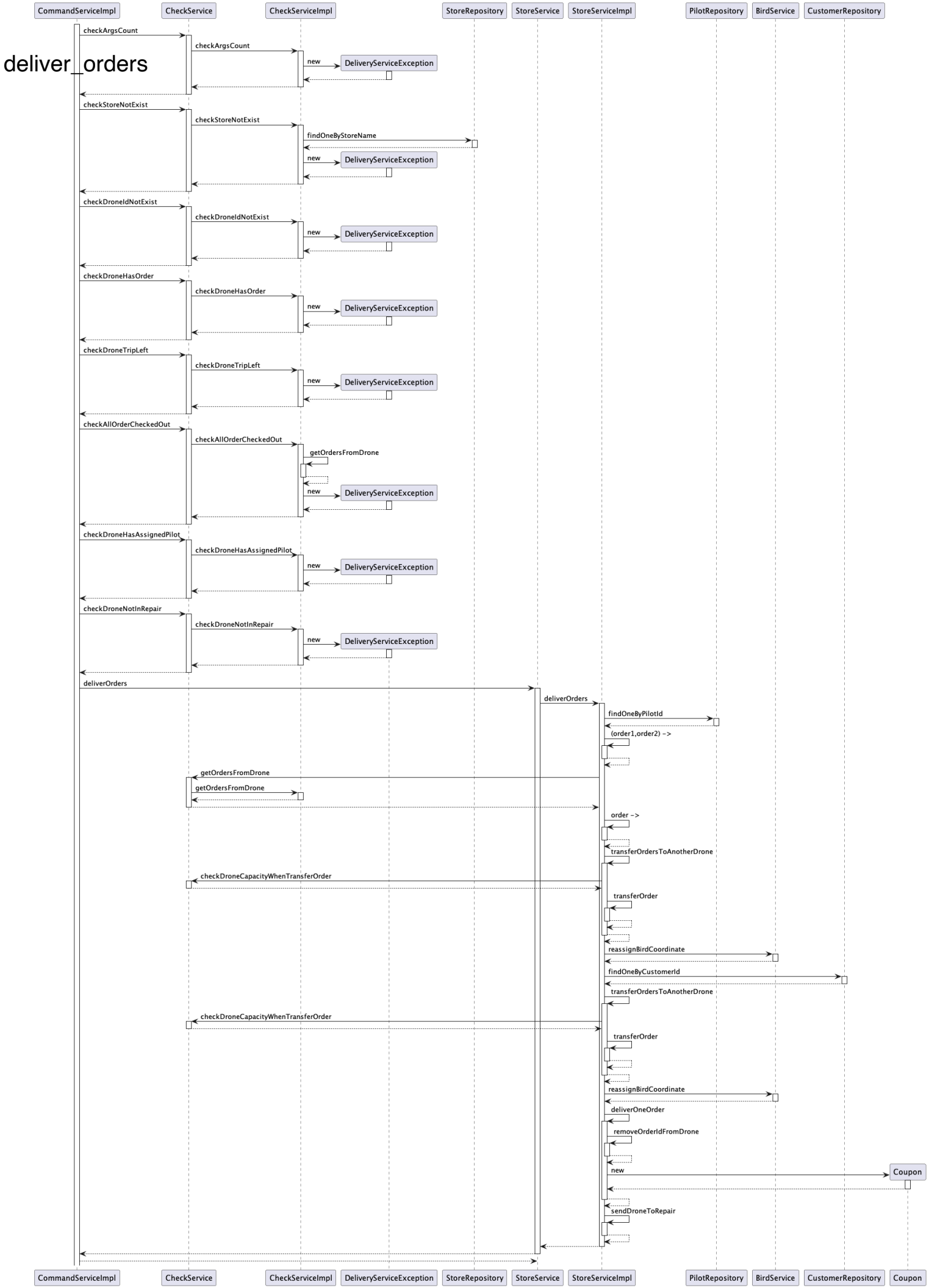


display_coupon



checkout_order




deliver_orders
CommandServiceImpl
CheckService
CheckServiceImpl
DeliveryServiceException
StoreRepository
StoreService
StoreServiceImpl
PilotRepository
BirdService
CustomerRepository
Coupon
checkArgsCount
checkStoreNotExist
findOneByStoreName
checkDroneIdNotExist
checkDroneHasOrder
checkDroneTripLeft
checkAllOrderCheckedOut
getOrdersFromDrone
checkDroneHasAssignedPilot
checkDroneNotInRepair
new
deliverOrders
findOneByPilotId
(order1,order2) ->
order ->
transferOrdersToAnotherDrone
checkDroneCapacityWhenTransferOrder
transferOrder
reassignBirdCoordinate
findOneByCustomerId
deliverOneOrder
removeOrderIdFromDrone
sendDroneToRepair