

Purpose

The results of the requirements elicitation and the analysis activities are documented in the Requirements Analysis Document (RAD). This document completely describes the system in terms of functional and nonfunctional requirements and serves as a contractual basis between the client and the developers.

Audience

The audience for the RAD includes the client, the end users, the project manager, and the developers.

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Document History

Rev.	Author	Date	Changes
1	Mehdi	22/07/2022	Everything

1. Introduction

The purpose of the Introduction is to provide a brief overview of the function of the system and the reasons for its development, its scope, and references to the development context. The introduction also includes the objectives and success criteria of the project.

1.1 Purpose of the system

The system's purpose is to be used a flight navigation system.

1.2 Scope of the system

The system is limited in scope and isn't designed for many users.

1.3 Objectives and success criteria of the project

Implementation of all Functional Requirements.

1.4 Definitions, acronyms, and abbreviations

None.

1.5 References

None.

1.6 Overview

Users can explore flights, select their favorite places, and request flight-related services.

2. Current system

Currently the server side supports all of the below mentioned functional requirements. The client side however is lacking behind and only supports requesting some services.

3. Proposed system

The third section documents the requirements elicitation and the analysis model of the new system.

3.1 Overview

Users can explore flights, select their favorite places, and request flight-related services.

3.2 Functional requirements

- FR1: Show flight information: The system shows flight information (flight number, start time, end time, gate, terminal, seat, airplane type, airline, etc.) of all the user's flights and notifies the user if a flight is canceled or delayed.

- FR2: Add new flight trip: The user can search through available flights and can select the one's he has booked. The user can build flight journeys (trips) with multiple connecting flights or one return flight and can see the trips on a map.
- FR3: Display destination information: The user can display important information such as POIs in the destination place (e.g., hotels, restaurants, attractions) and weather data. POIs should be shown in a map and the user should be able to filter them. When clicking on a POI, the user can see additional information and save the POI in the favorites.
- FR4: Give feedback: A passenger can give feedback after he took the flight about the flight itself, catering, entertainment, service or comfort. Passengers who take the survey will be rewarded, e.g., by miles, souvenirs, coupons, or price drawings.
- FR5: Request service: During a flight, a passenger can request the service. This notifies the service staff so that they can come to the passenger's seat.
- FR6: Watch flight safety instructions: The user can watch the flight safety instructions.

3.3 Nonfunctional requirements

Nonfunctional requirements describe user-level requirements that are not directly related to functionality. This includes usability, reliability, performance, supportability, implementation, interface, operational, packaging, and legal requirements. The section list all these non-functional requirements and additionally presents the dependencies between them.

3.3.1 Usability

The system should be intuitive to use, and the user interface should be easy to understand. All interactions should be completed in less than three clicks.

3.3.2 Reliability

The server has an uptime of 99%.

3.3.3 Performance

All server requests are fulfilled in less than 1 second.

3.3.4 Supportability

The system can run on Windows, Linux and Mac OS.

3.3.5 Implementation Requirements

A server subsystem with a couple of services must be used in the system. However, additional services like destination information for weather and POIs should be obtained from external services.

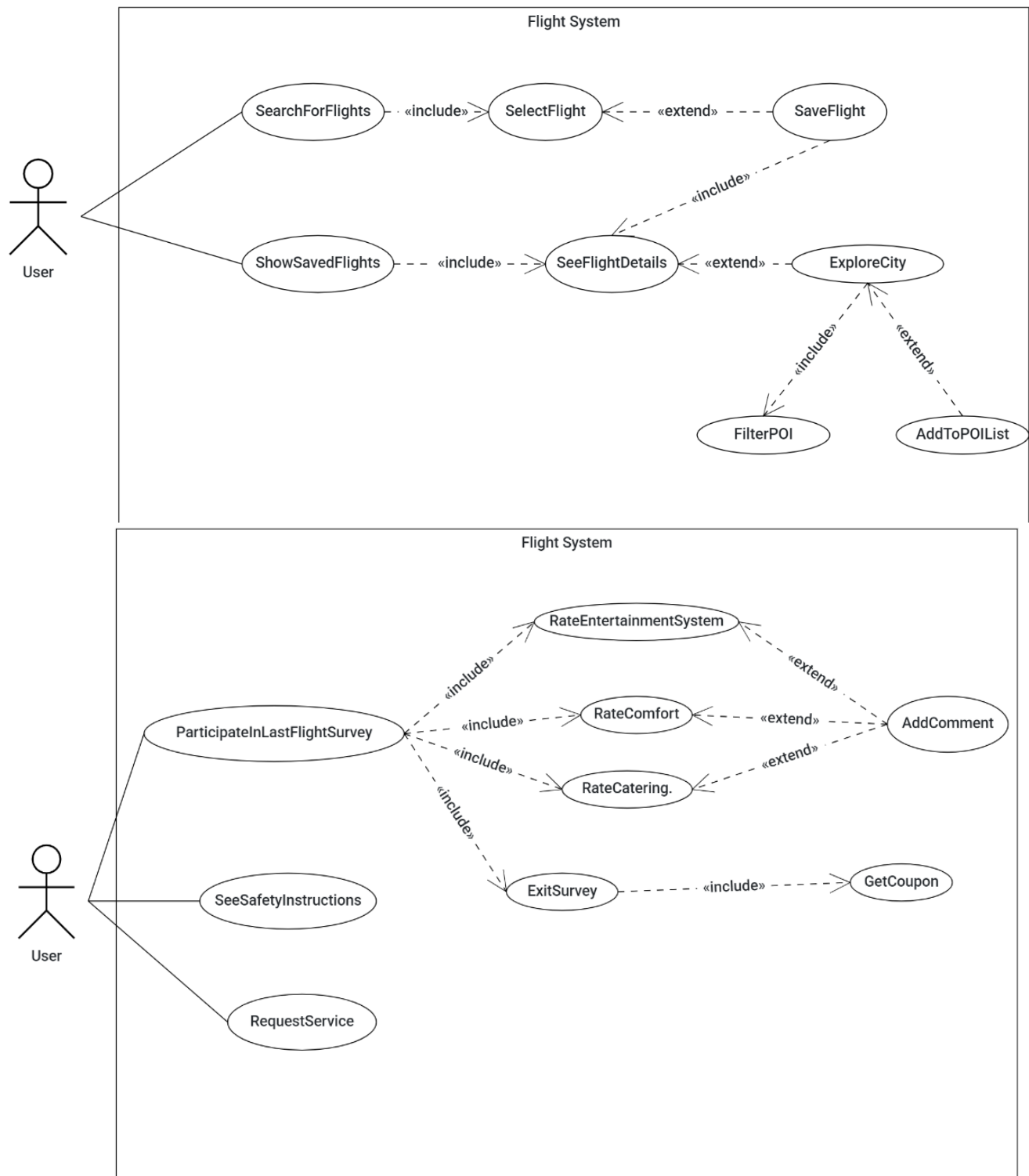
3.4 System models

The System models include scenarios, use cases, object model, and dynamic models for the system. This section should contain the complete functional specification, including mock-ups, paper-based prototypes or storyboards illustrating the user interface of the system and navigational paths representing the sequence of screens.

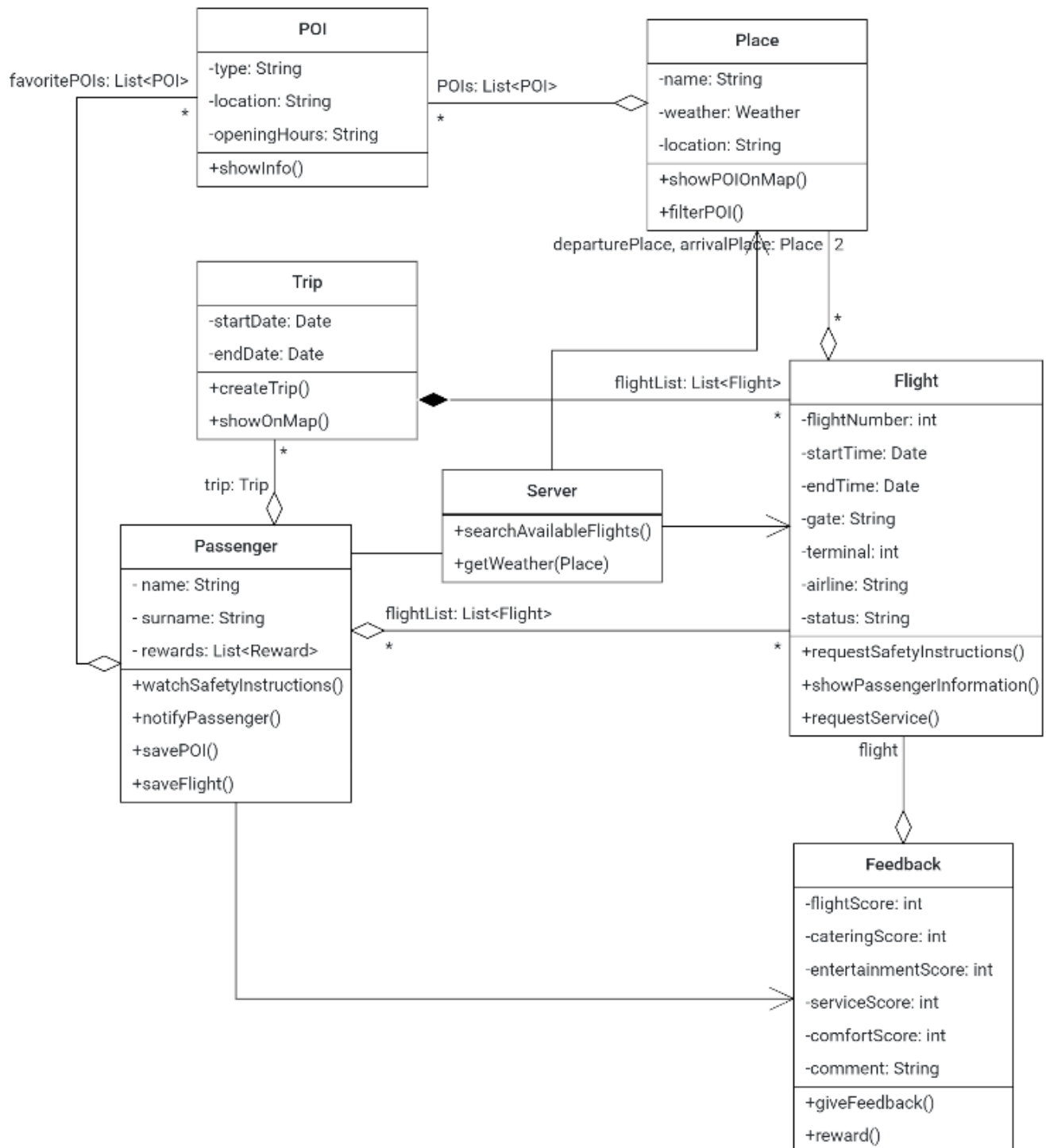
3.4.1 Scenarios

- **Trip Dashboard:** Julia bought a Lufthansa flight from Munich to Lisbon on June 5 via the Lufthansa website. She opens the system and searches all the available flights between Munich and Lisbon on June 5. She selects the flight and saves it to her flight list. When looking into the details, she recognizes that the sun is shining in Lisbon. When she clicks on Lisbon, she sees the city map with points of interest (POI) and uses a filter to see the 10 best attractions. Julia decides to visit the Belém Tower and saves it in her favorites POI list.
- **Passenger Survey:** Simon is currently flying from Rome to London. During the flight, he has a nice dinner with spaghetti and a beer. Then he participates in a survey: Simon is asked to rate the entertainment system and the catering. He gives both a five-star rating. Then he is asked about the comfort. Simon chooses a four-star rating, because the toilet is not clean. He describes the problem in the comment section. After he quits the survey, the system shows him a coupon for a free drink at the Burger restaurant at Heathrow airport.
- **In-Flight Service:** Maria is flying from Barcelona to Paris with Lufthansa. Because the steward had a strong German accent, she did not understand the safety instructions before the plane takes off. She opens the system and sees instructions on how to fasten the seatbelt, how to use the oxygen mask and how to locate the nearest emergency exit. After the plane reaches cruising altitude, she decides to watch a movie using the airplane entertainment system. While she is watching the movie, she requests a drink available on the menu.

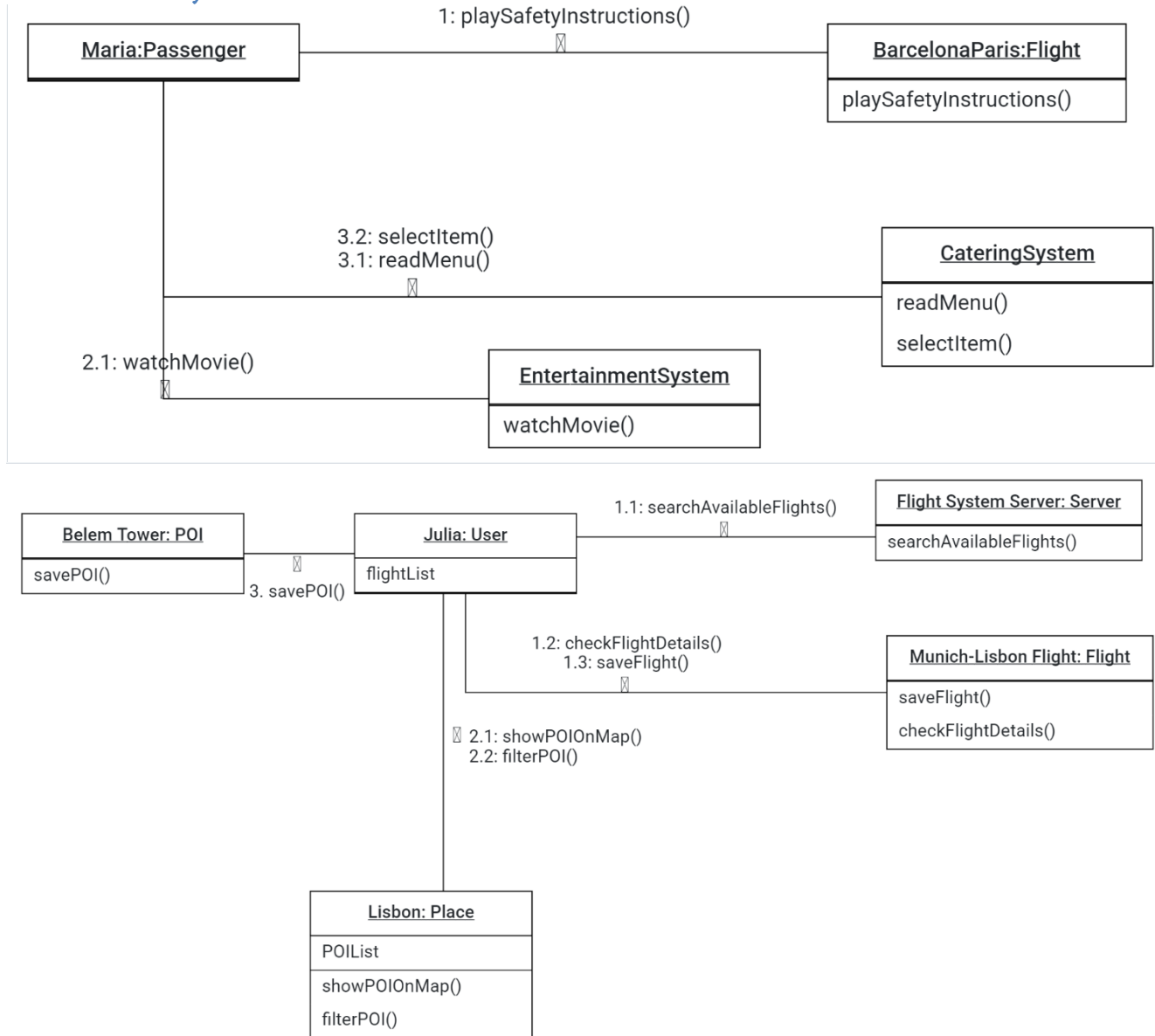
3.4.2 Use case model

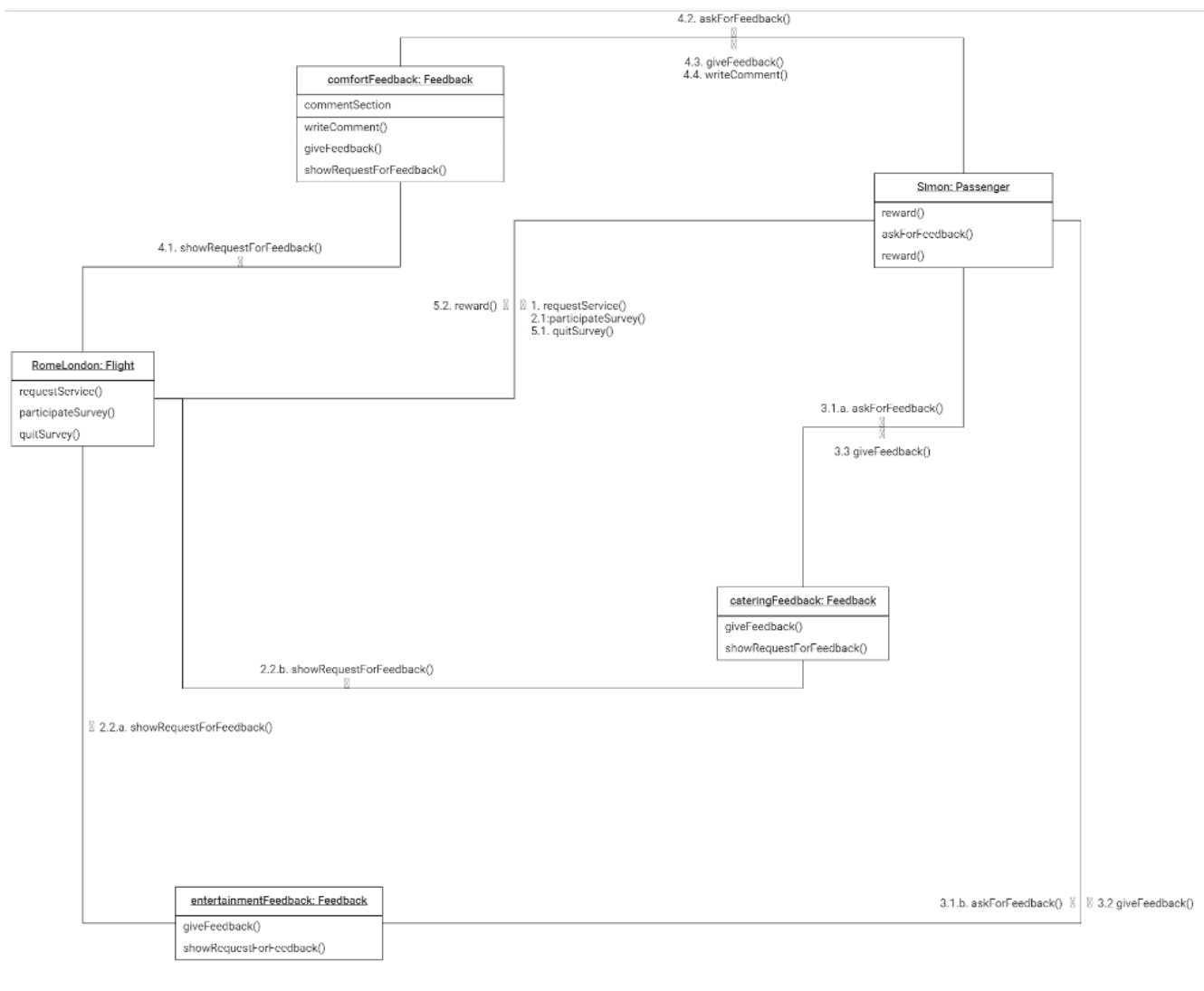


3.4.3 Object model



3.4.4 Dynamic model





4. Glossary

There is no problem-specific terminology.