Sequence diagram

Overview

The Sequence diagram is a type of Interaction diagram (which falls under the behavioral diagramming family) that focuses on the Message interchange between various Lifelines.

A Sequence diagram shows the interaction information with an emphasis on the time sequence. The diagram has two dimensions: the vertical axis representing time and the horizontal axis representing the participating objects. The time axis could be an actual reference point by placing the time labels as text boxes. The horizontal ordering of the objects is not significant to the operation, and you can rearrange them as necessary.

There are two Sequence Diagram modeling approaches:

- Activation bars as the lifelines.
- Activation bars as the Execution Specifications (new modeling approach).

Purpose

The purpose of the Sequence diagram is to represent some aspect of the communication between objects to perform a task. The main benefit of the diagram is that it helps to identify the messages exchanged between objects.

Usage

A Sequence diagram can be used to:

- represent the details of a UML Use Case
- model the logic of a sophisticated procedure, function, or operation
- analyze the interaction of objects and components to complete a process
- plan and understand the detailed functionality of an existing or future scenario.

Summary

Sequence diagrams are valuable because they:

- allow seeing the specific questions, commands, and data being communicated during the execution of a specific task
- identify the communication required to fulfill an interaction
- identify the objects that participate in an interaction
- identify the data that is passed as part of the interactions.
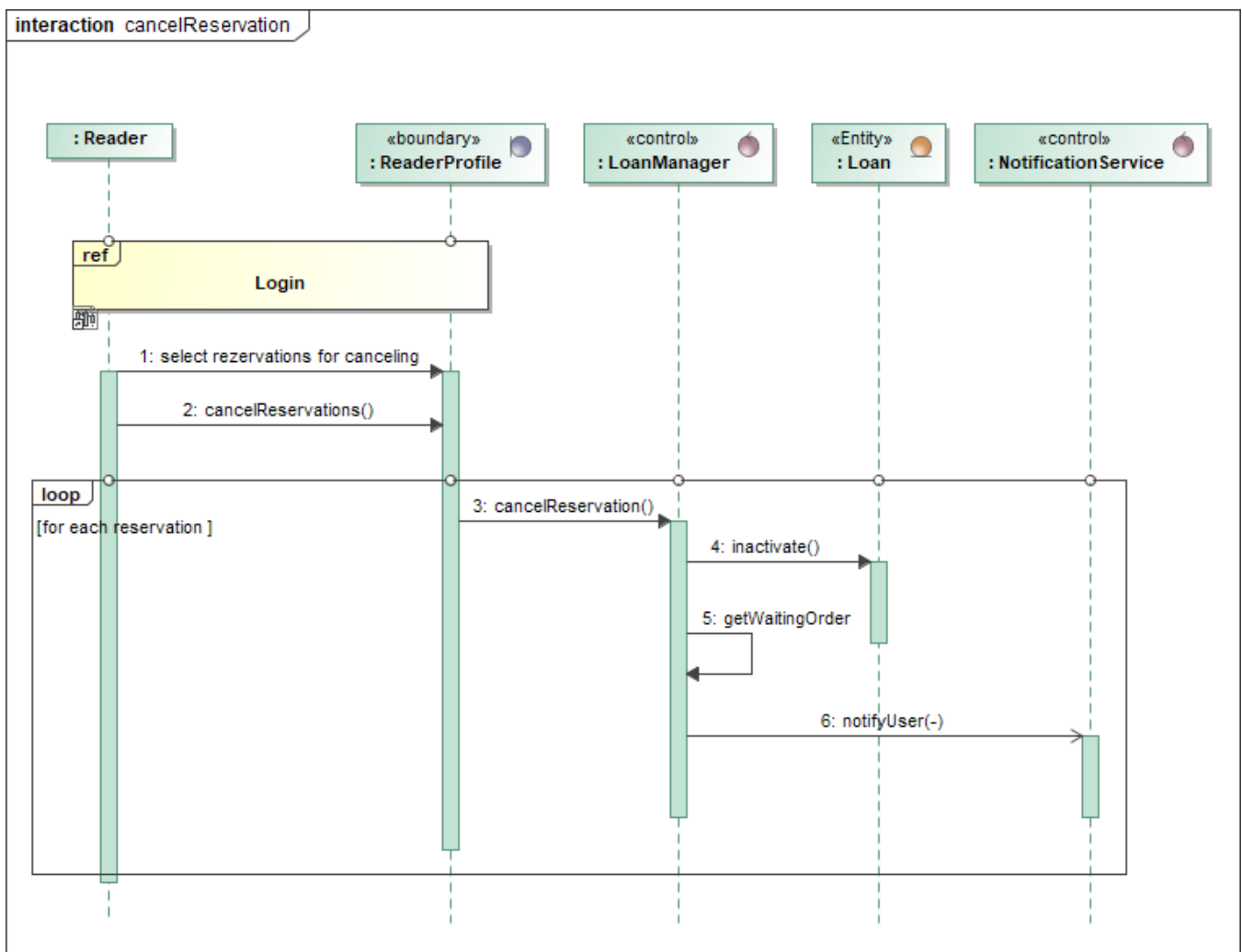
Example of a Sequence diagram

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