SWEN30006
Software Modelling and Design

System Sequence Diagrams

Larman Chapter 10

In theory, there is no difference between theory and practice. But, in practice, there is.

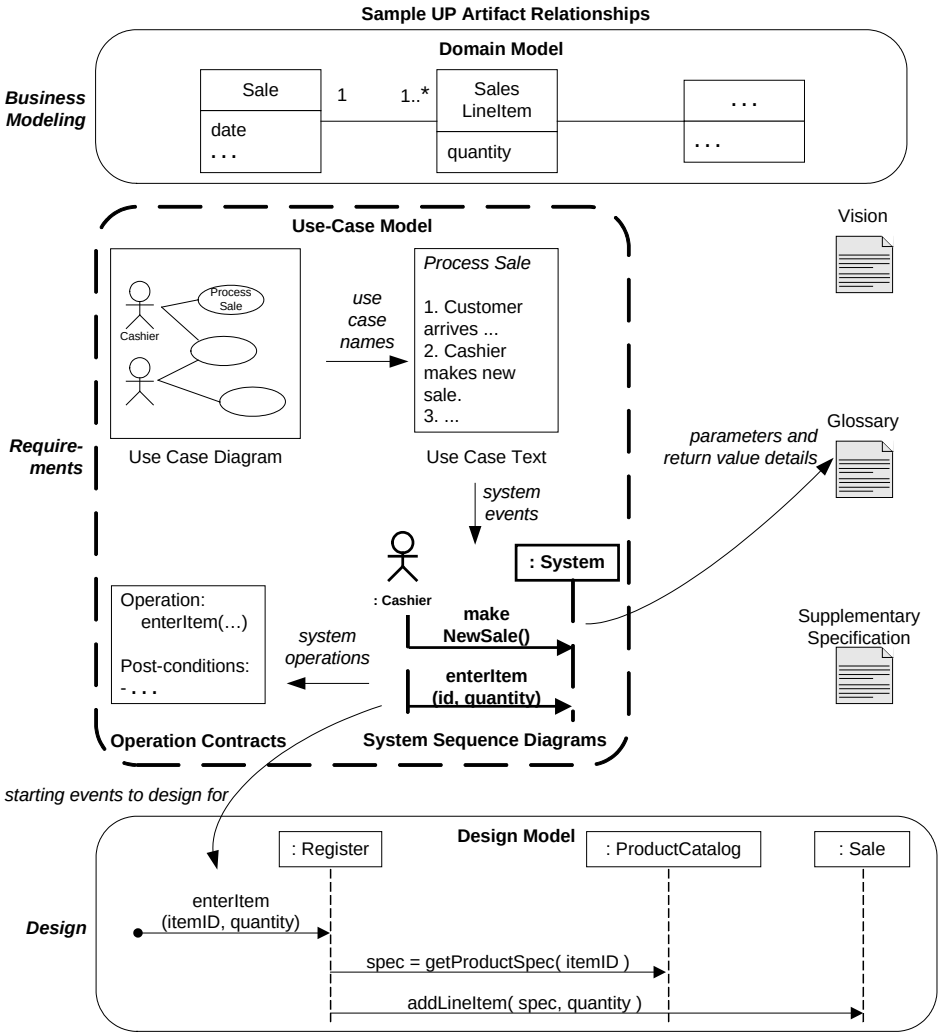
—Jan L. A. van de Snepscheut

Objectives

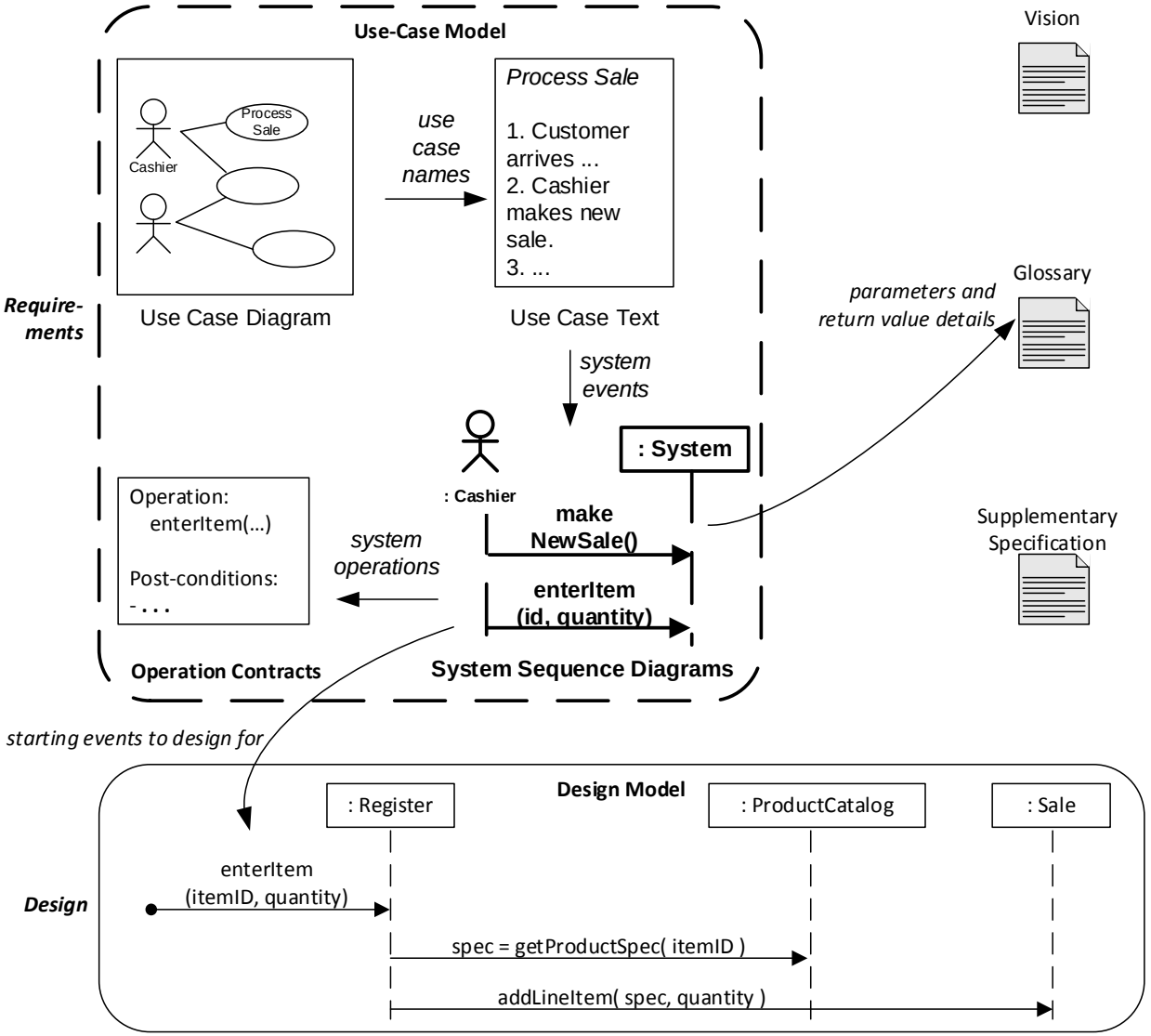
On completion of this topic you should be able to:

- Identify system events
- Create system sequence diagrams for use case scenarios

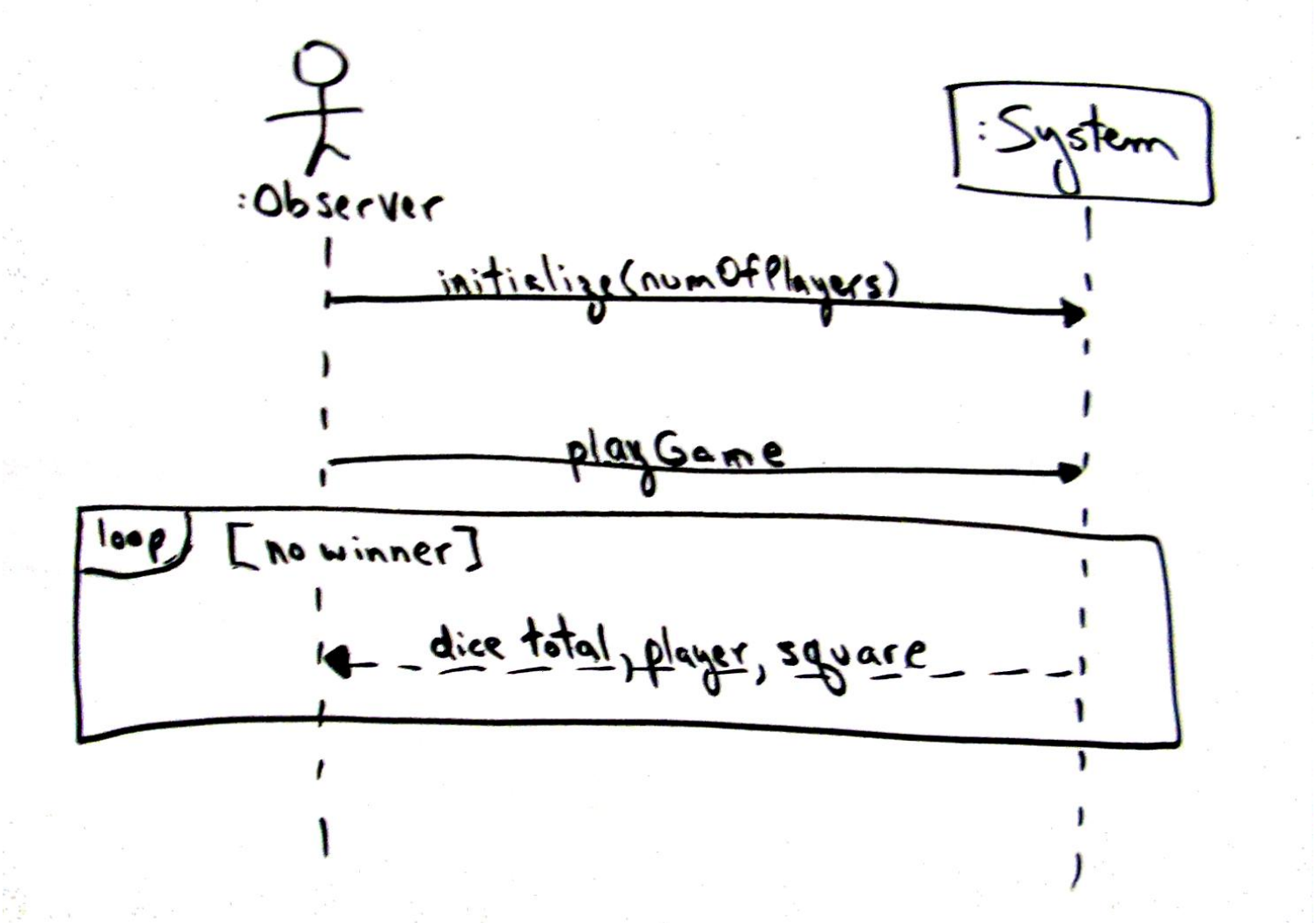
Sample UP Artifact Influence



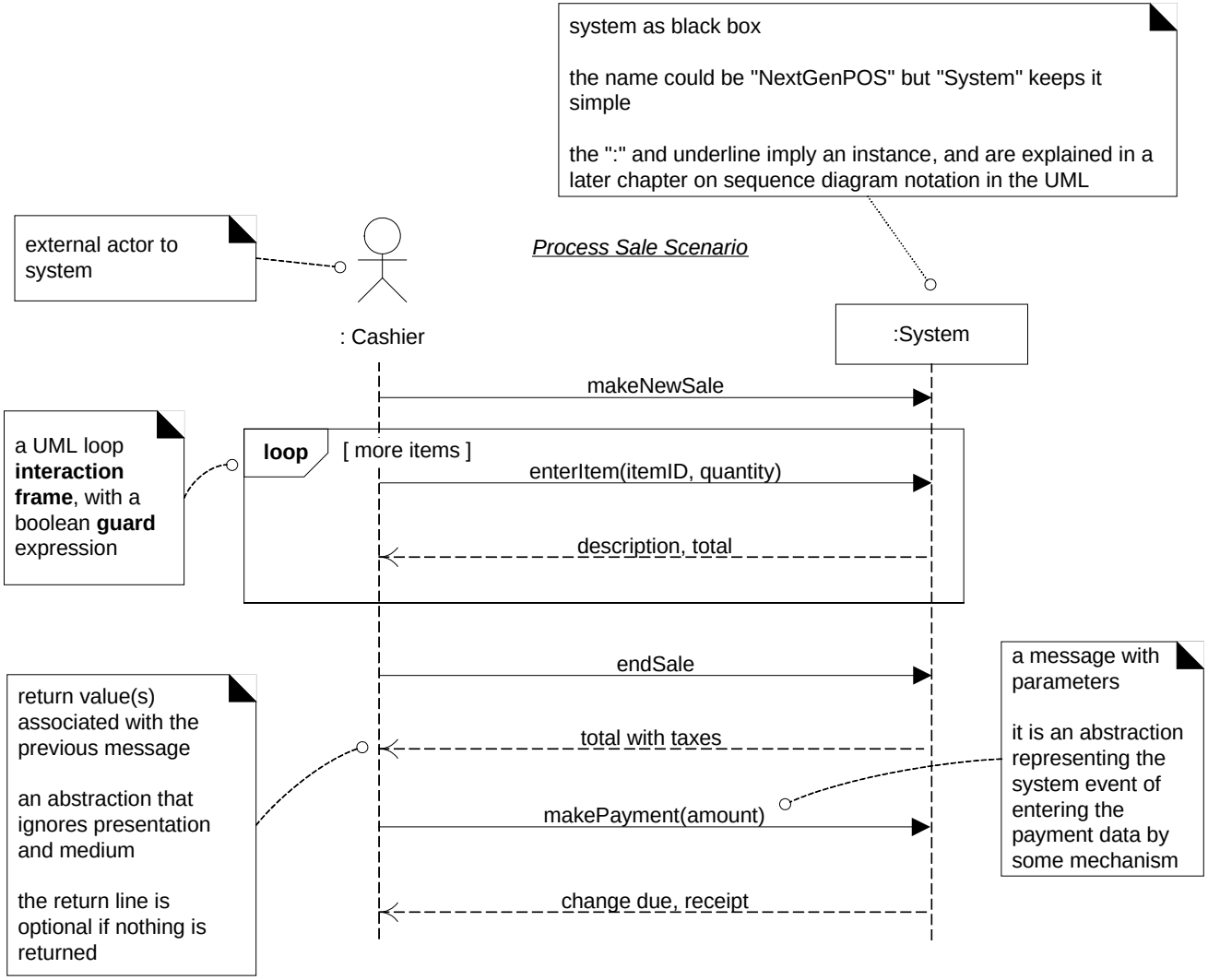
Sample UP Artifact Influence



SSD for a *Play Monopoly Game* Scenario



SSD for a *Process Sale* Scenario



Deriving an SSD from a Use Case

Simple cash-only *Process Sale* scenario:

1. Customer arrives at a POS checkout with goods and/or services to purchase.
2. Cashier starts a new sale.
3. Cashier enters item identifier.
4. System records sale line item and presents item description, price, and running total. Cashier repeats steps 3-4 until indicates done.
5. System presents total with taxes calculated.
6. Cashier tells Customer the total, and asks for payment.
7. Customer pays and System handles payment.

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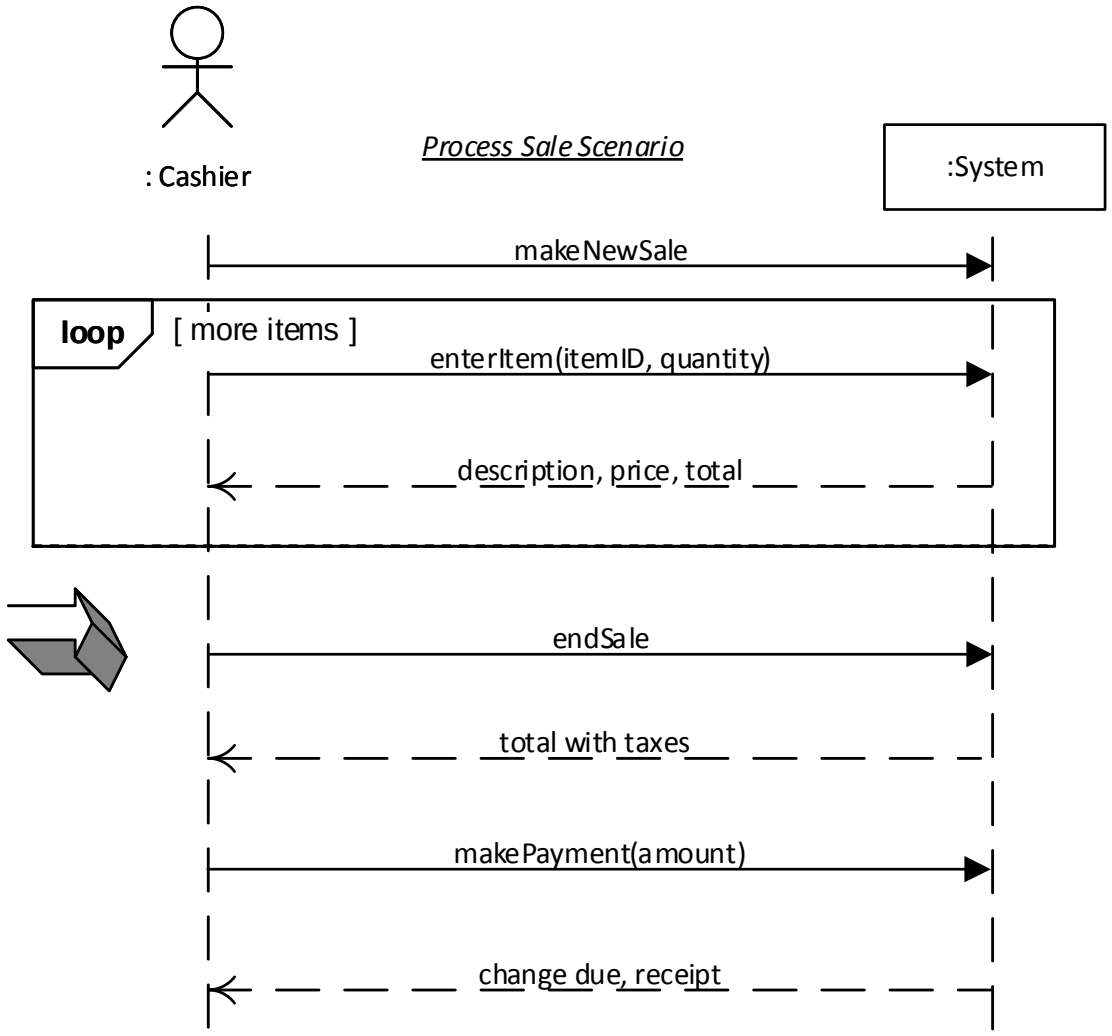
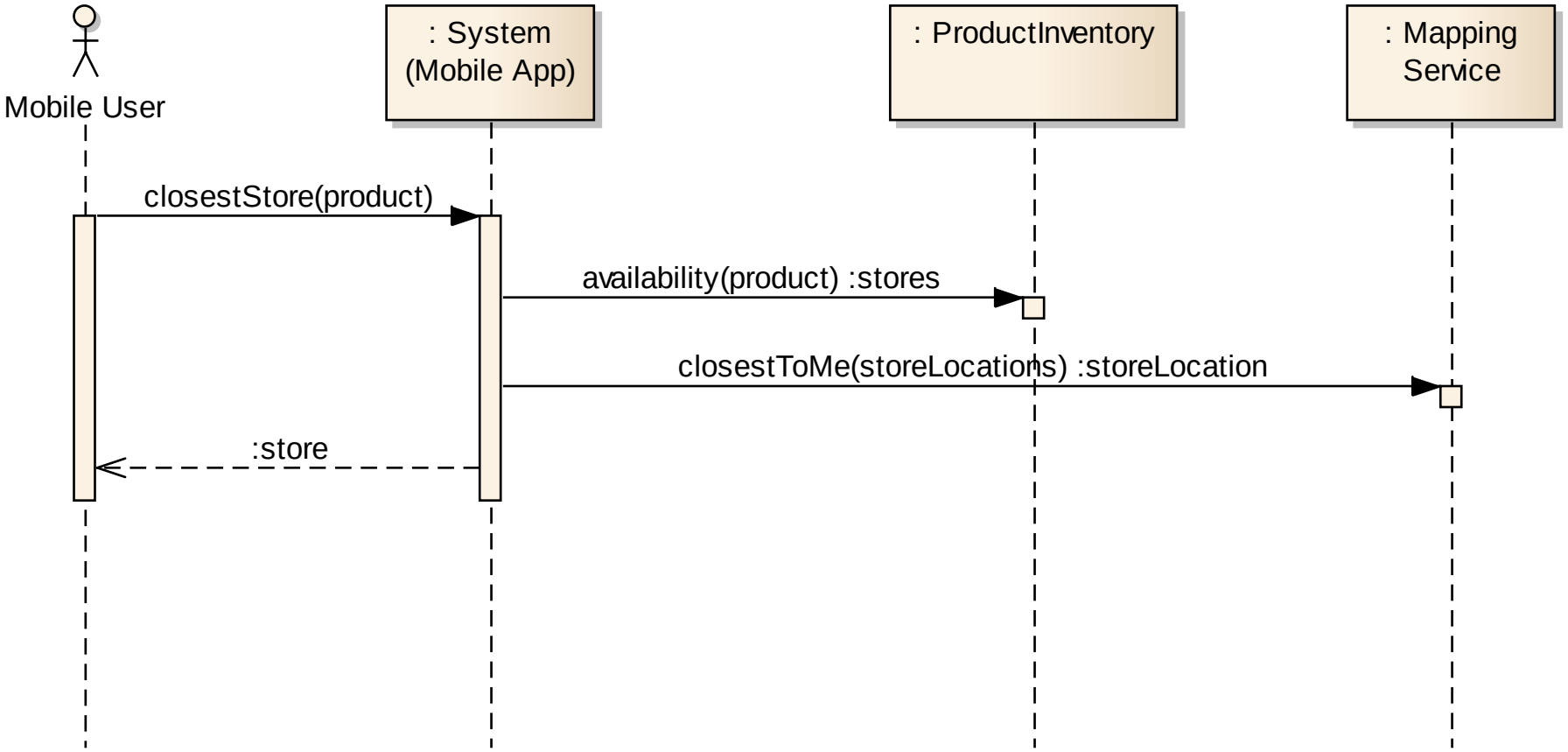
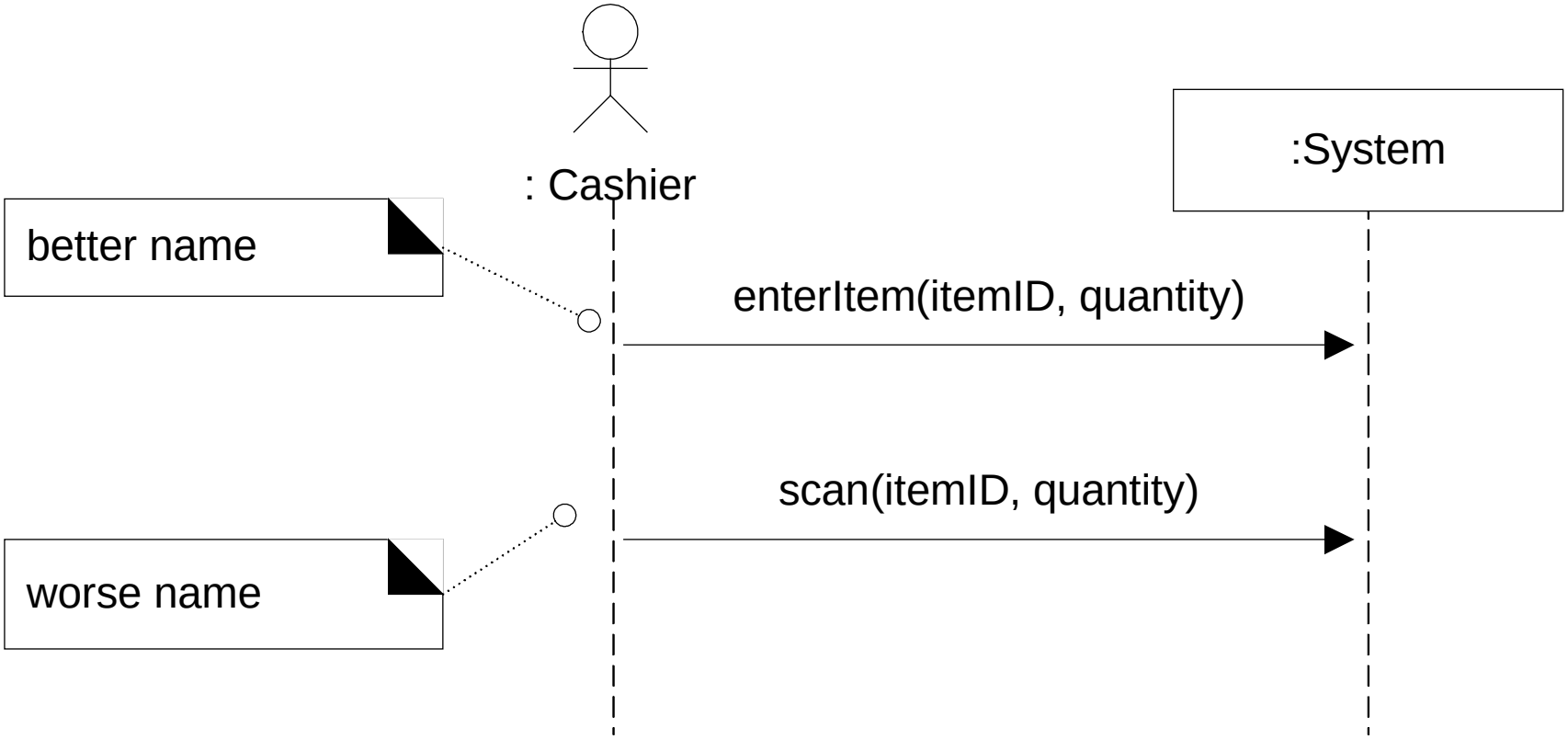


Multiple Actors



Choosing Abstract Naming



SSD Summary

- Captures dynamic context for system
- Treats system as a black box
- Derived from uses cases; show one scenario
- All external actors (human, non-human) for scenario are included
- Events should remain abstract: intent, not means
- Indicate events which design needs to handle