

Software Engineering Workshops

Worksheet 6: Sequence Diagrams

Objective

The objective of today's session is to understand how to model the interactions between participants using Sequence Diagrams. Upon the completion of this session, you should be able to:

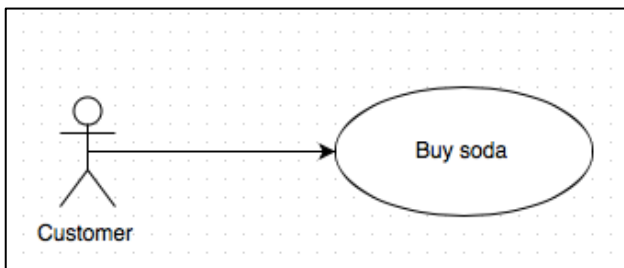
- Define a sequence diagram
- Model participants, time and messages
- Use sequence diagrams to model a single scenario in a use case.

Exercise 1

Below is a use case "buy soda" which is part of the soda machine system.



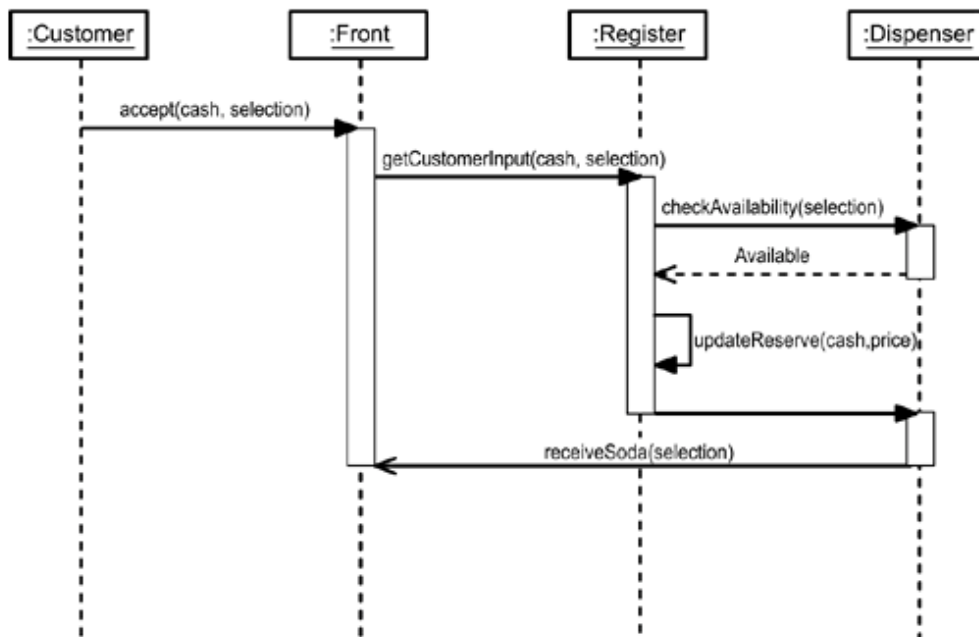
From *Sams Teach Yourself UML in 24 Hours*, Third Edition, by Schumler, J., 2004, Sams.



The best-case scenario (i.e., the main success scenario) of the "Buy soda" use case is as follows:

1. The customer inserts the money into the money slot in the front of the machine and makes a selection.
2. The money travels to the register, which updates itself.
3. Because this is the best-case scenario, an availability check reveals the soda is in stock, and the register has the dispenser release the soda to the front of the machine.¹

The sequence diagram that captures the previous scenario is given below:



From *Sams Teach Yourself UML in 24 Hours*, Third Edition, by Schumler, J., 2004, Sams.

In another scenario, the customer's selection might be sold out. Show a sequence diagram that models the sold-out scenario. (hint: if sold out, the register would ask the front object to return the cash and show "sold out" message).

¹ *Sams Teach Yourself UML in 24 Hours*, Third Edition, by Schumler, J., 2004, Sams