

Model-Driven Software Development

Lecture 7

Sequence Diagrams

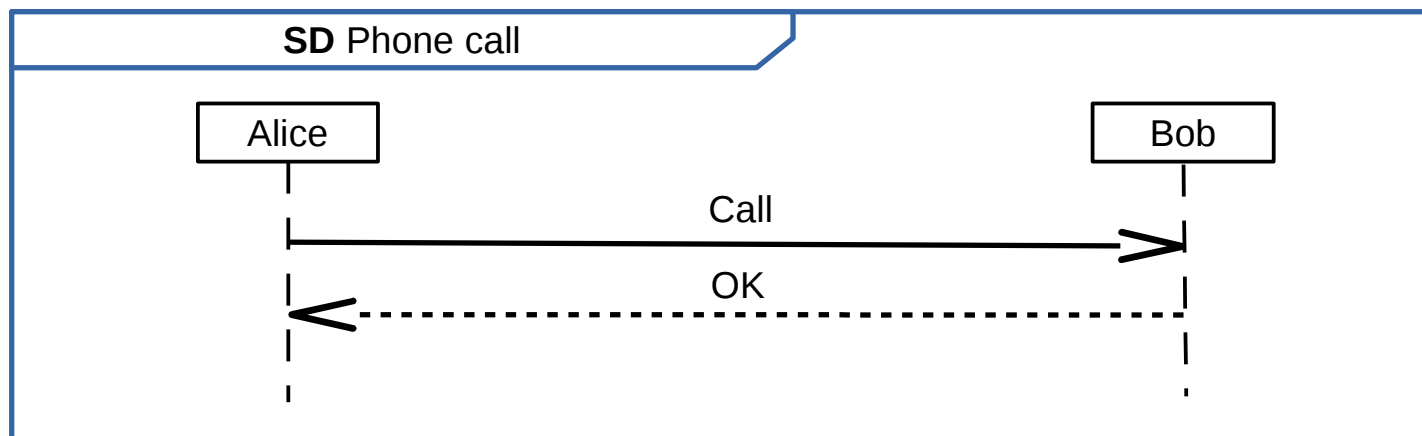
Magnus Ågren

Sequence diagram basics

- Shows control flow, the order of interaction
- Time runs vertically, from top to bottom
- Messages run horizontally

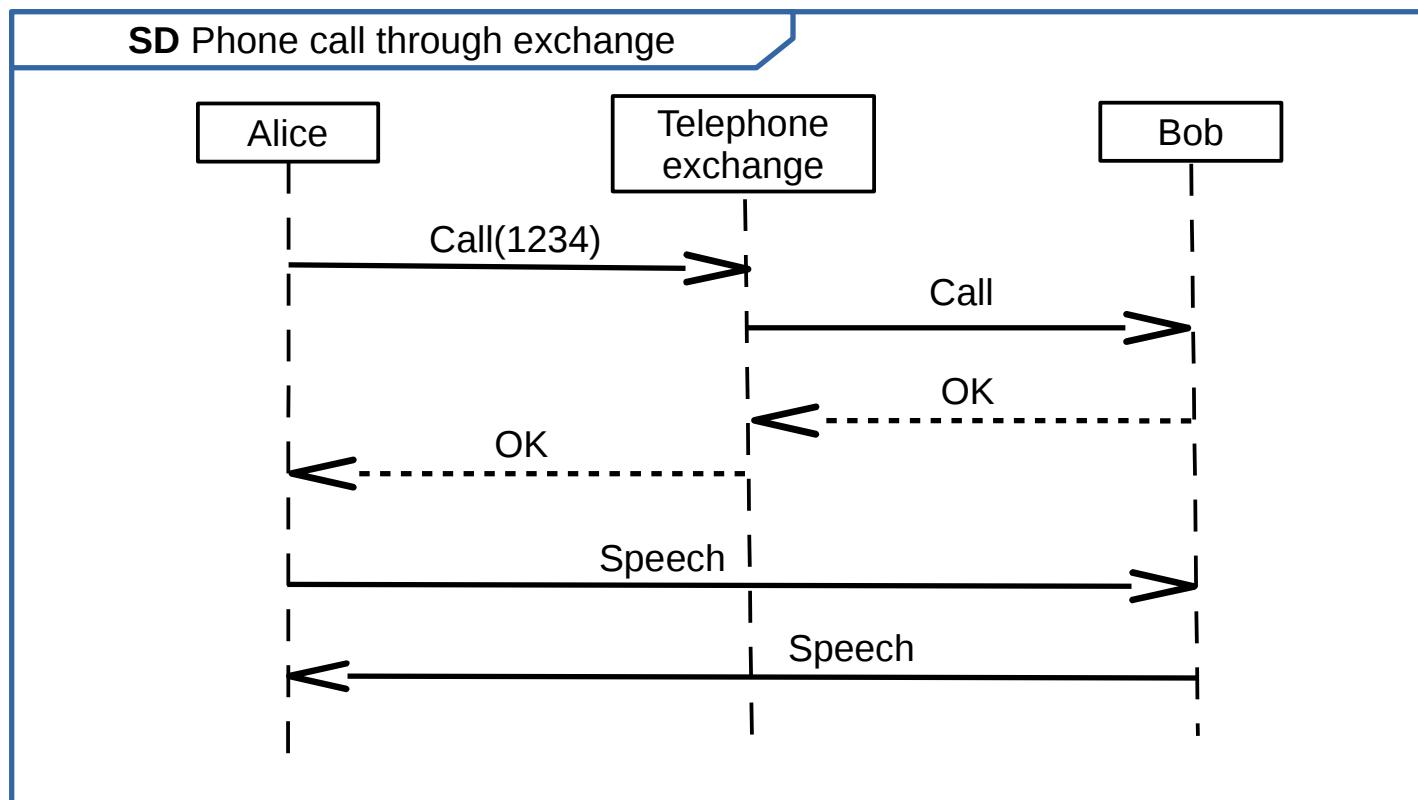
Basic example

- Phone call, Alice calls Bob



Intermediate example

- Alice calls Bob via a telephone exchange
 - Bob has number 1234
 - Speech goes directly between Alice and Bob



Real world example

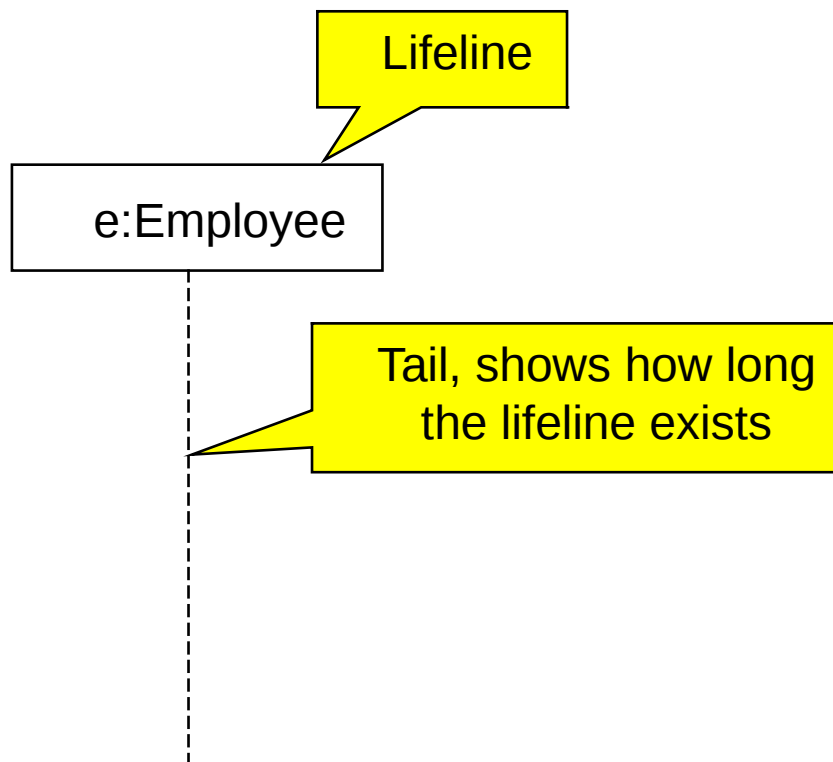
SIP – Session Initiation Protocol

- Basic session establishment

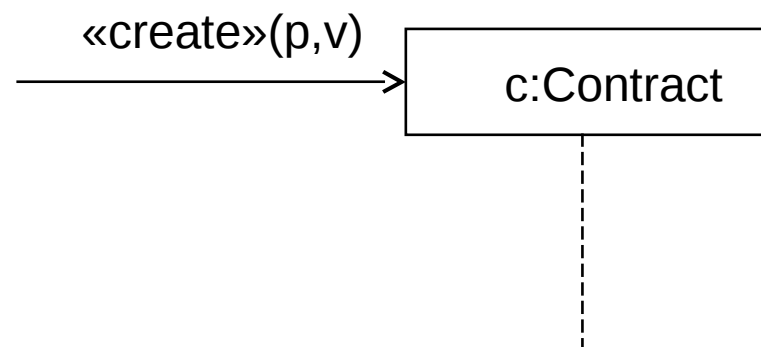
<https://tools.ietf.org/html/rfc3665#section-3>

Note: informal notation used, **not UML!**

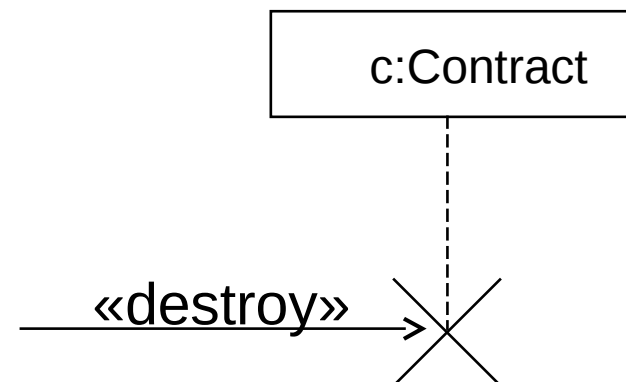
Syntax: Objects



Objects can be created:

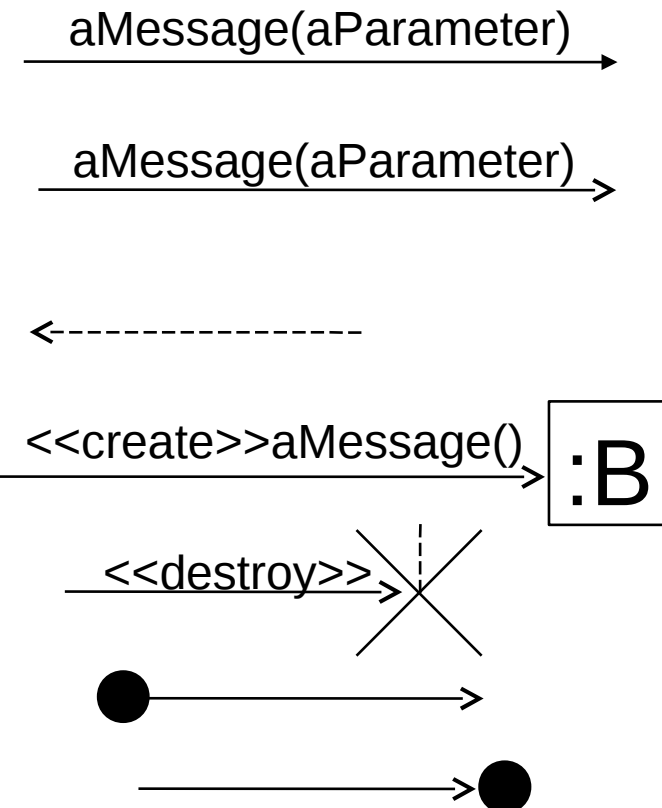


... and destroyed:



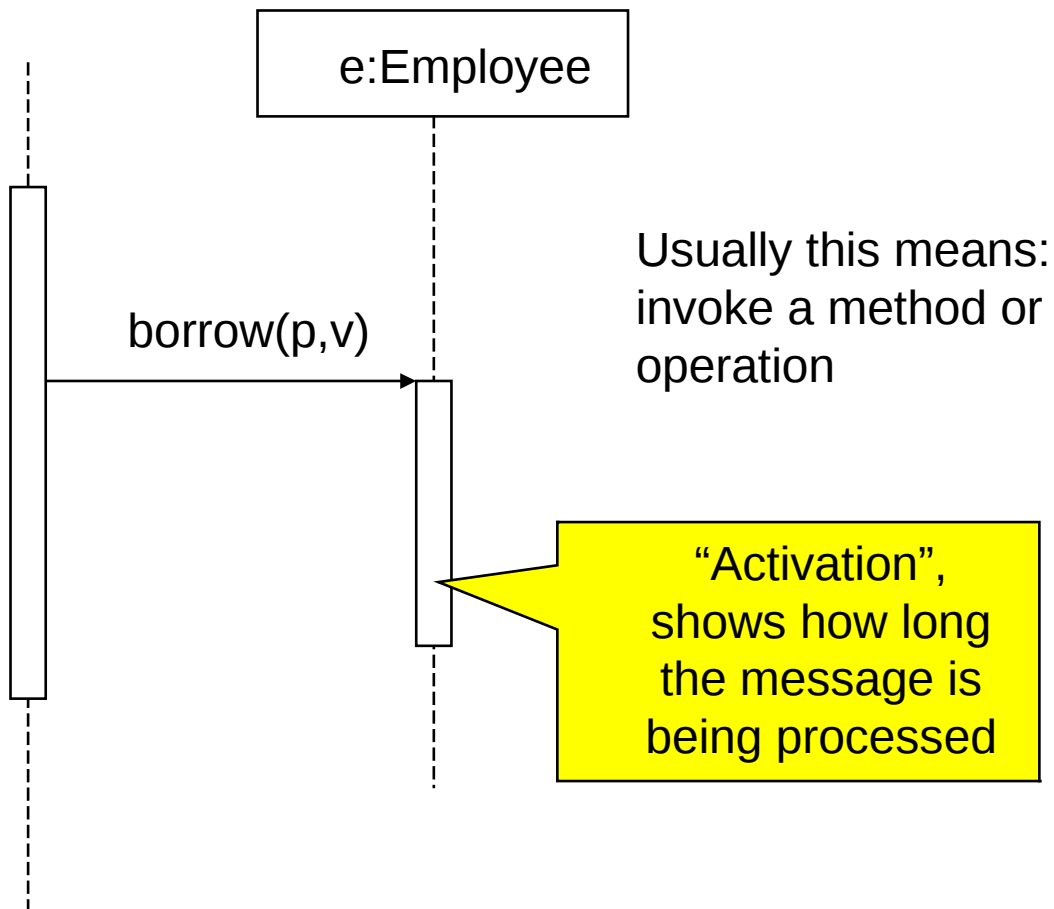
Syntax: Messages

- Synchronous message
- Asynchronous message
- Message return
- Object creation
- Object destruction
- Found message
- Lost message

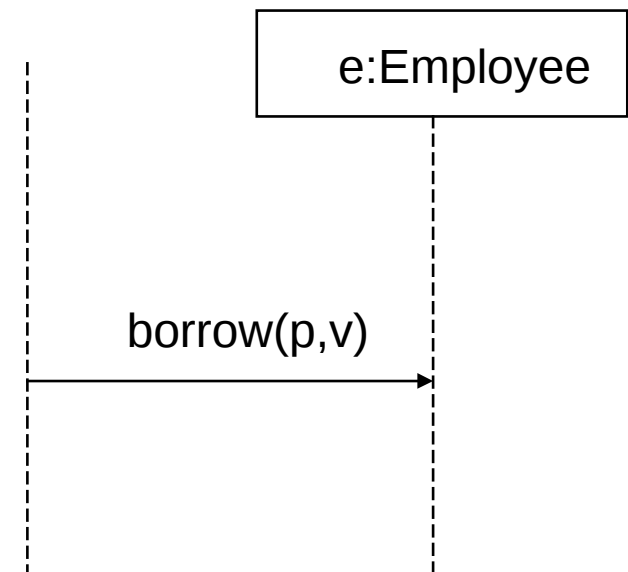


More message syntax

Send message “borrow” with parameters “p”, “v” to “e”:

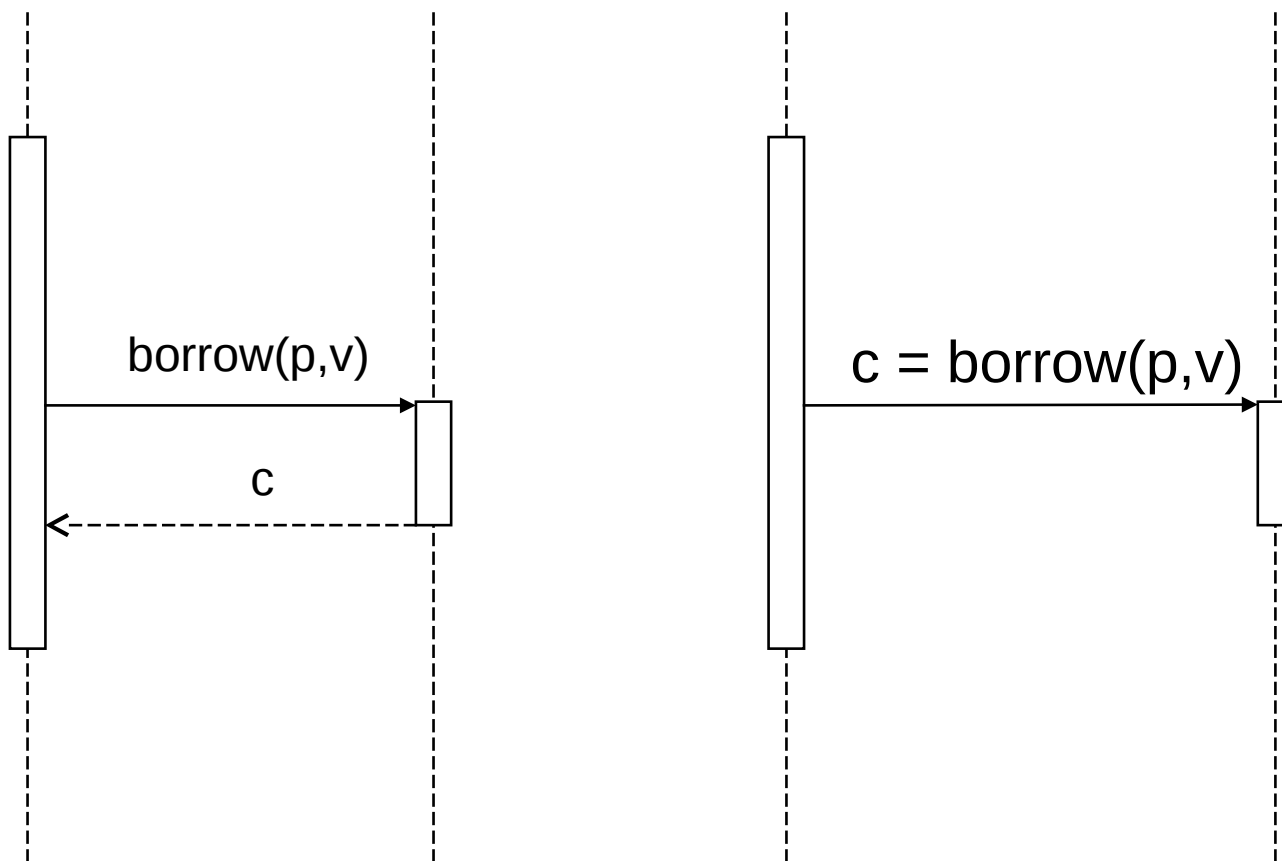


Activations are often left out
in diagrams:



Message result syntax

Two different notations to return result “c”:



Syntax: Alternatives

Choose between two (or more) possible scenarios:

