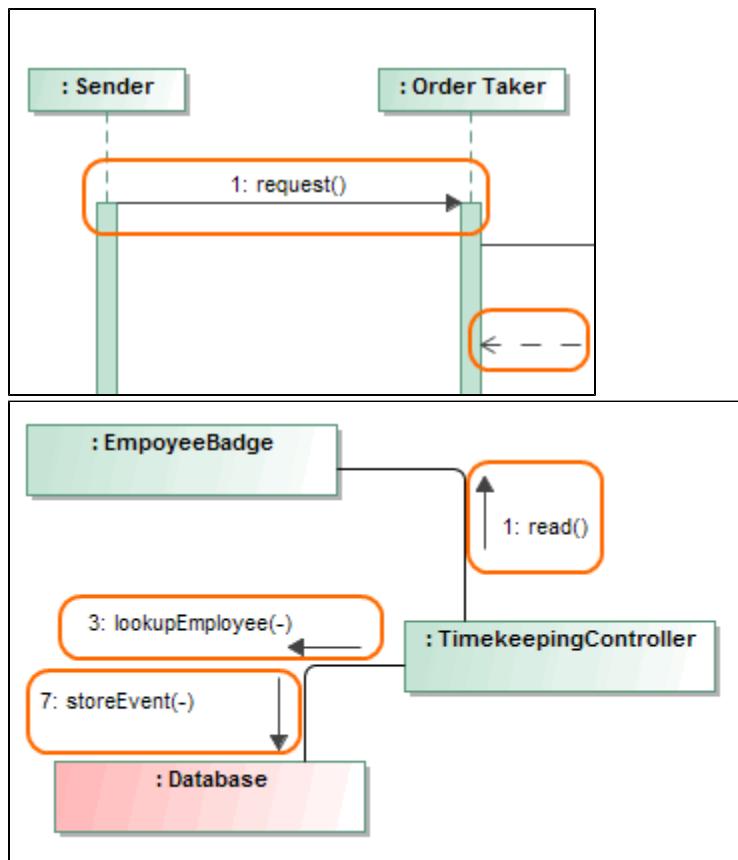


# Exchanging Messages

A Message defines a particular communication between Lifelines of an Interaction, such as raising a Signal, invoking an Operation, or creating or destroying an Instance. Messages specify the kind of communication, the sender, and the receiver.

A Message is represented by arrows between the lifelines. The style of the Message line and arrowhead reflect the types of the Message.



You can see the description of a selected property in the description area of the [Specification window](#). To see descriptions, be sure the **Show Description** option is selected.

## Message sorts

Message Sort	Description	Example
synchCall	The Message was generated by a synchronous call to an Operation. Synchronous Messages can overtake each other. When a Message represents an Operation, the arguments of the Message must correspond to the parameters of the Operation.	<pre>sequenceDiagram     participant Customer as : Customer     participant Library as : Library      Note over Customer, Library:         1: login(username, password)     end     Note over Customer, Library:          synchCall message     end</pre>
asynchCall	Asynchronous means that the caller continues immediately after the call. asynchCall Messages do not have reply Messages.	<pre>sequenceDiagram     participant LoanManager as &lt;&lt;control&gt;&gt; : LoanManager     participant NotificationService as &lt;&lt;control&gt;&gt; : NotificationService      Note over LoanManager, NotificationService:         1: notifyUser()     end     Note over LoanManager, NotificationService:          asynchCall message     end</pre>
asynchSignal	The Message was generated by an asynchronous send Action. The argument of the Message must correspond to the attributes of the Signal.	

reply	A reply Message to an Operation call.	A sequence diagram illustrating a reply message. A lifeline for 'Customer' sends a synchronous message '1: login(username, password)' to a lifeline for 'Library'. The 'Library' lifeline returns a reply message '2: matchingItemList' to the 'Customer' lifeline. An orange arrow points from the return message to the 'Customer' lifeline, labeled 'reply message'.
createMessage	The Message designates the creation of another Lifeline object. No other Messages on a given Lifeline in an Interaction operand may appear above a Lifeline.	An interaction diagram showing an 'alt' block. If 'user found', it sends a synchronous message '1: open()' to a 'ReaderProfile' object. This message is labeled 'createMessage' in orange. The 'ReaderProfile' object has a dashed line extending from its bottom, indicating its creation.
deleteMessage	The Message designates the termination of another Lifeline.	An interaction diagram showing a 'Library' object sending a synchronous message '1:' to a 'UserSession' object. This message is labeled 'deleteMessage' in orange. The 'UserSession' object has a dashed line extending from its top, indicating its termination.

## Message syntax

The Message name is displayed on the message path on the diagram pane. The syntax of the message name is as follows:

```
<messageident> ::= [<attribute> '='] <signal or operation name> [ '(' [<argument> ','<argument>]* ')'] [ '.' <return value> ]
<argument> ::= ([<parameter name> '='] <argument-value>) / '-'
```

### Example

v=fo(P1="a", P2=True):12

## Common actions with Messages

To set an action type for a Message

Do one of the following:

- In the Message Specification window, click the **Message Sort** property value cell and select the action type from the drop-down list.
- On the diagram pane, right-click the Message and select a desired action type from the shortcut menu.

To show / hide Message numbers

1. Right-click the diagram pane to open its shortcut menu.
2. Then do one of the following:
  - In a **Sequence** or **Time** diagram, select / clear **Show Message Numbers**.
  - In a **Communication diagram**, select / clear **Numbering > Show Message Numbers**.

