



**A software tester walks
into a bar and then
runs into the bar...
strolls into the bar...
gallops into the bar...
saunters into the bar...**

Image: ministryoftesting.com

ECSE 429: Software Validation Project Tutorial

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web: mattsch.com

TouchRAM Demo Teaser

<https://youtu.be/Dxc5LvV3Nsw>

TouchCORE Demo Teaser

<https://youtu.be/Am9jp2y2Uds>

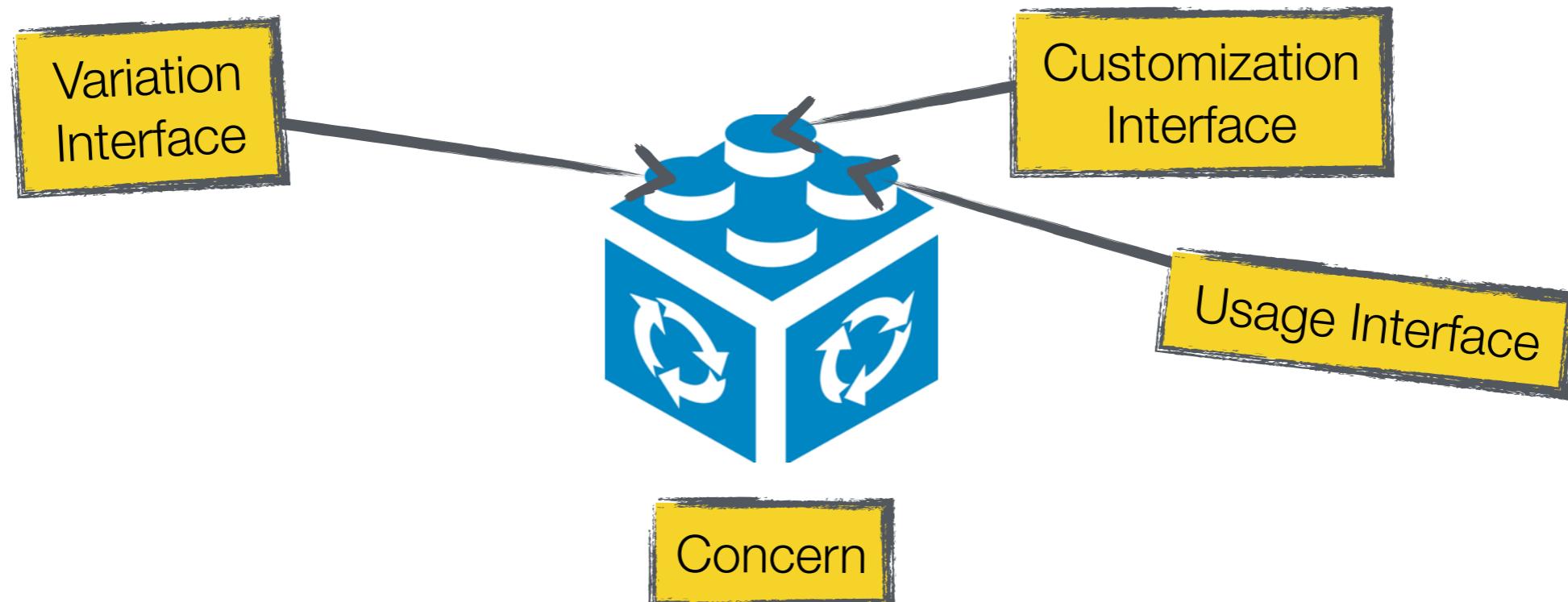


TouchCORE

“TouchCORE is a multi-touch enabled, concern-oriented software design modelling tool that supports feature and impact models, as well as class, sequence and state diagrams.”

Download: touchcore.cs.mcgill.ca

Concern-Orientation: Concern – Unit of Reuse





TouchCORE

Built using

Eclipse Modeling Framework (EMF)

Multitouch for Java (MT4j)

Reusable Aspect Models (RAM), short: Aspect

Structure: Class diagram (*structural view*)

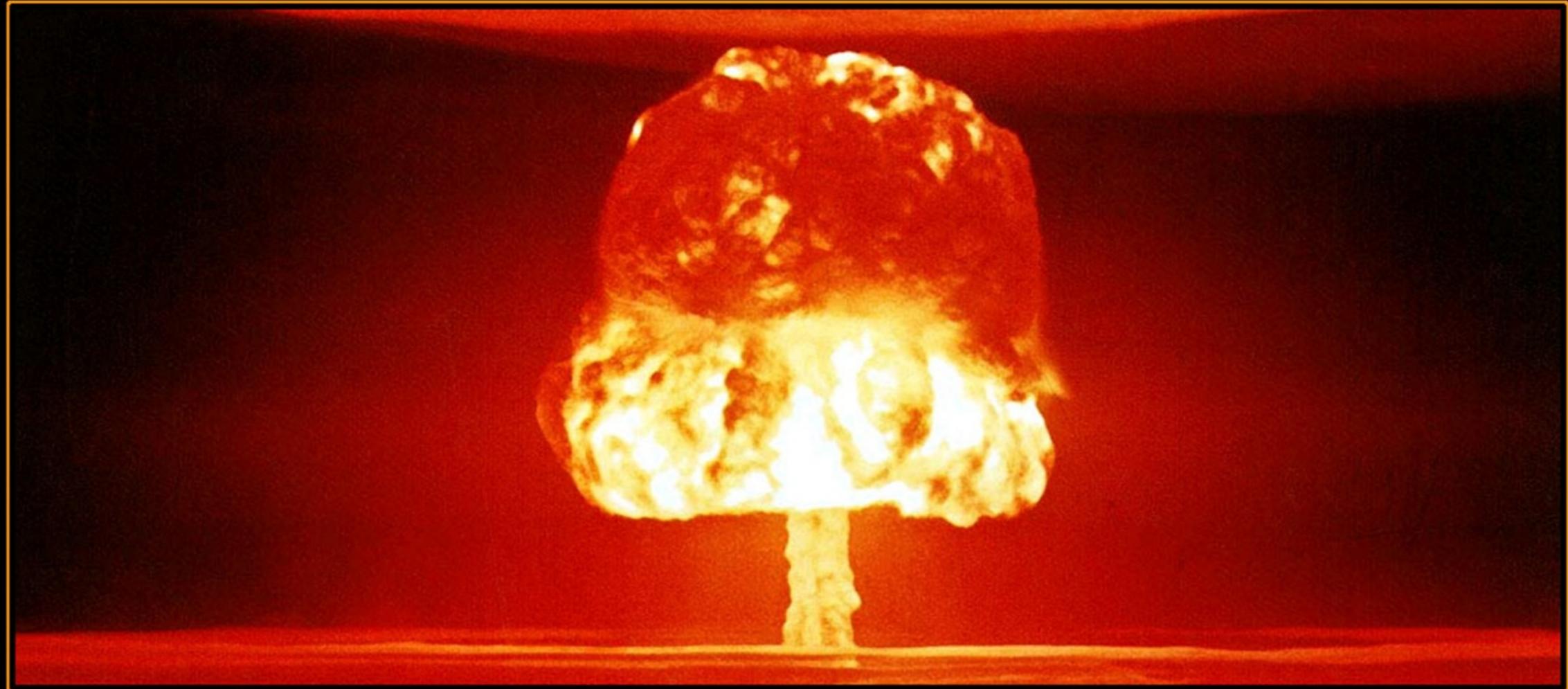
Behaviour: Sequence diagrams (*message views*)

Protocol: State diagrams (*state views*)

Research Project

Since 2012 (predecessor: TouchRAM)

LOC: ~79100 (~41% generated)



T D D

Test Driven Development.
So You Can Change One Line Of Code Without Fear Of Total Disaster.

TouchCORE: ECSE 429 Project

Subset of TouchCORE

LOC: ~66800 (~50% generated); relevant: ~5700

Focus on *message views*

Creating messages

Deleting messages

TouchCORE: ECSE 429 Project

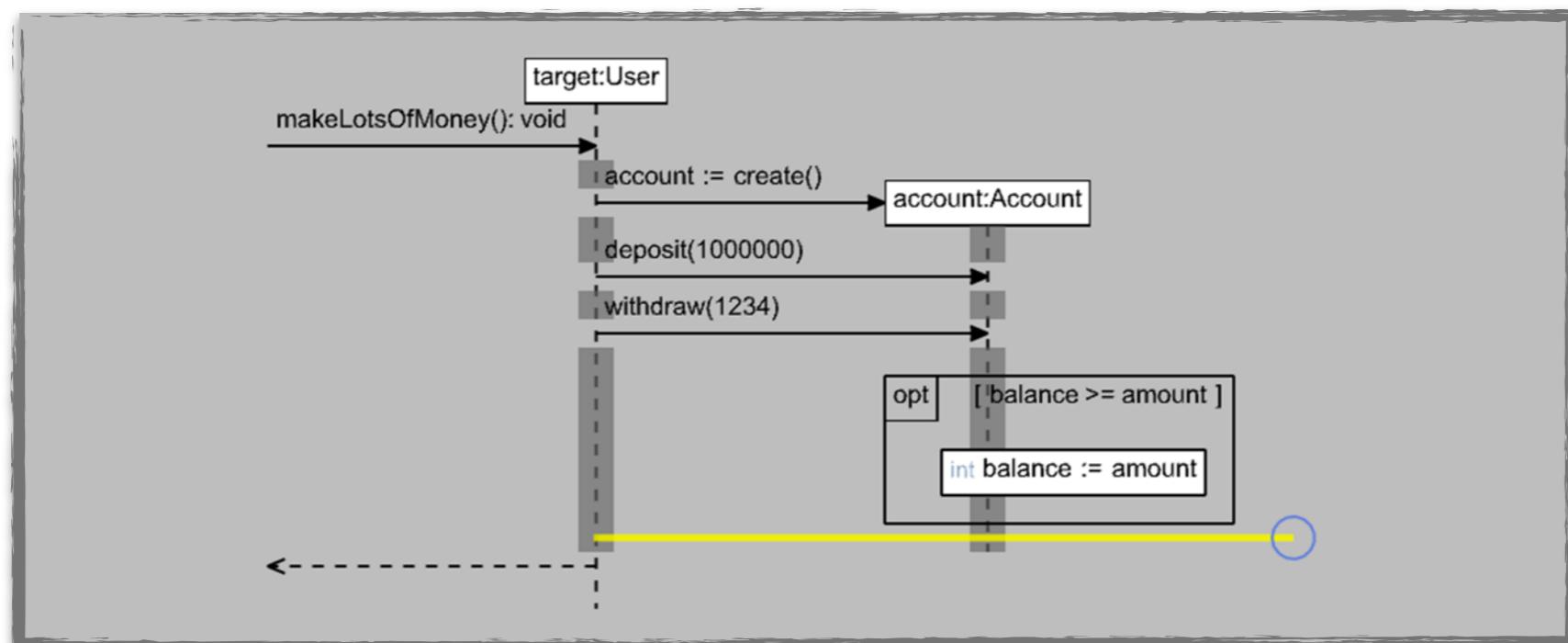
Subset of TouchCORE

LOC: ~66800 (~50% generated); relevant: ~5700

Focus on *message views*

Creating messages

Deleting messages



TouchCORE: ECSE 429 Project

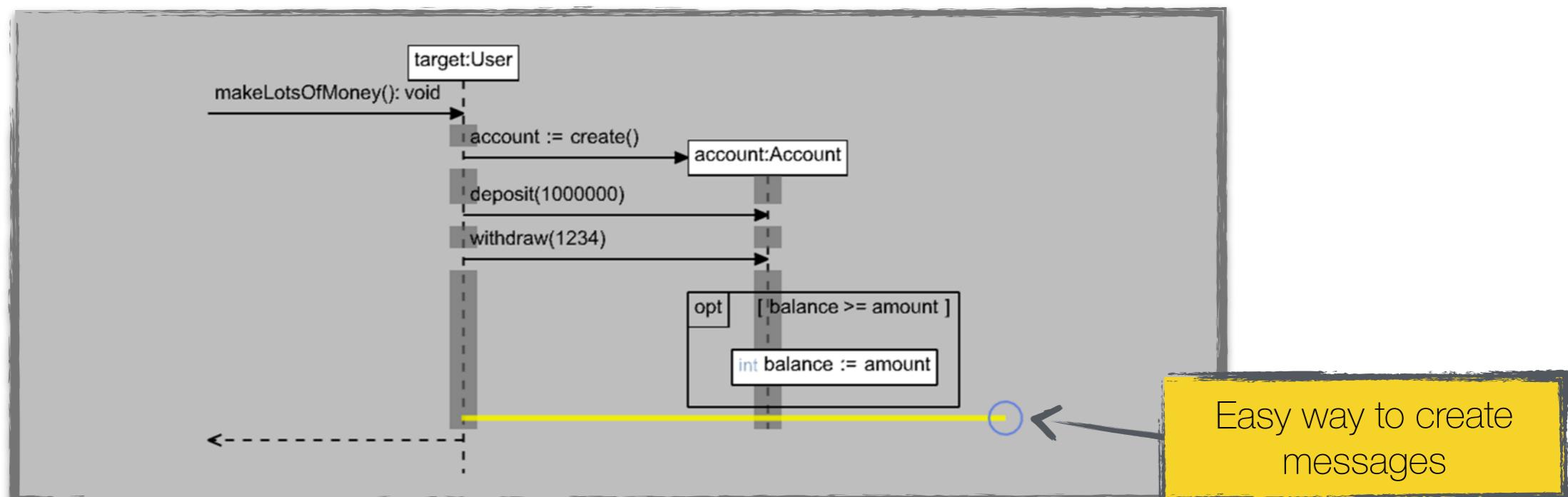
Subset of TouchCORE

LOC: ~66800 (~50% generated); relevant: ~5700

Focus on *message views*

Creating messages

Deleting messages

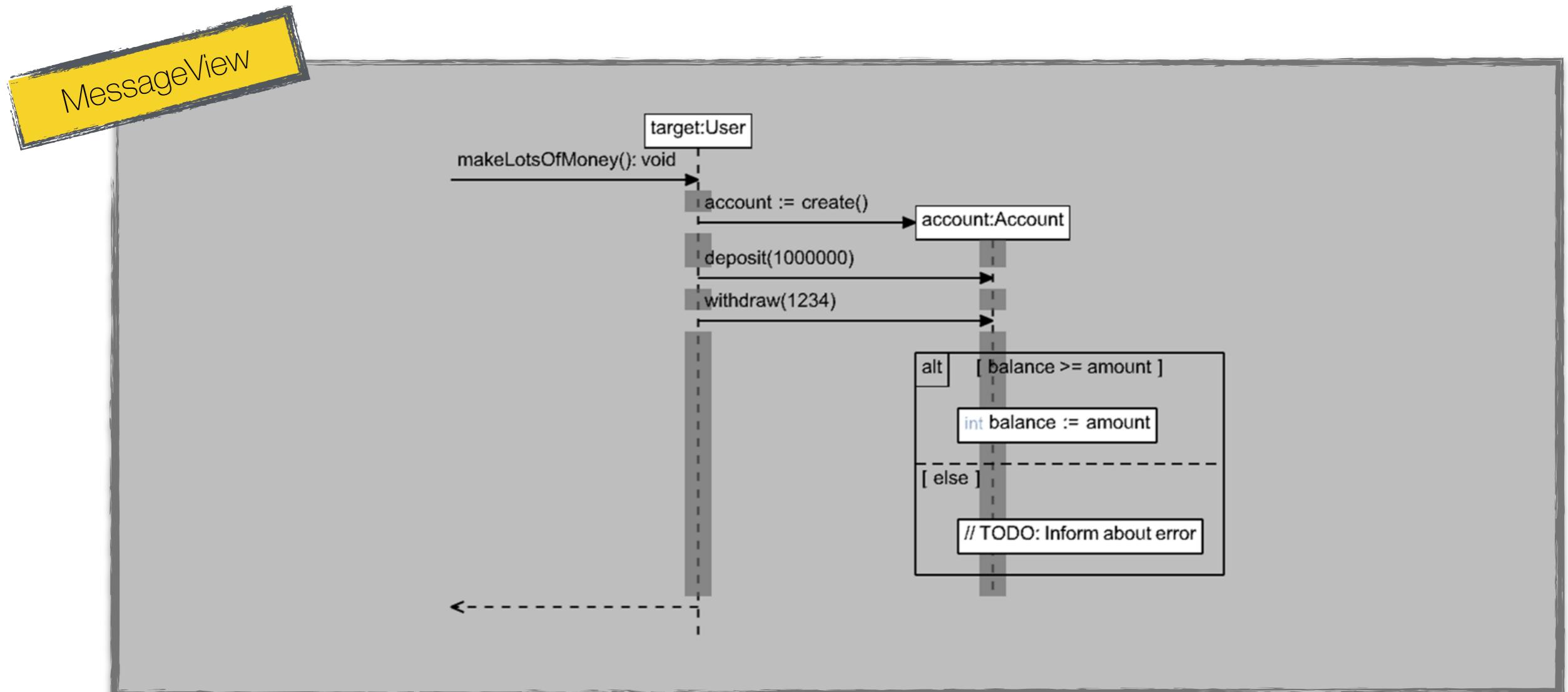




Message View Overview

Based on UML 2 Sequence Diagrams (see uml-diagrams.org)

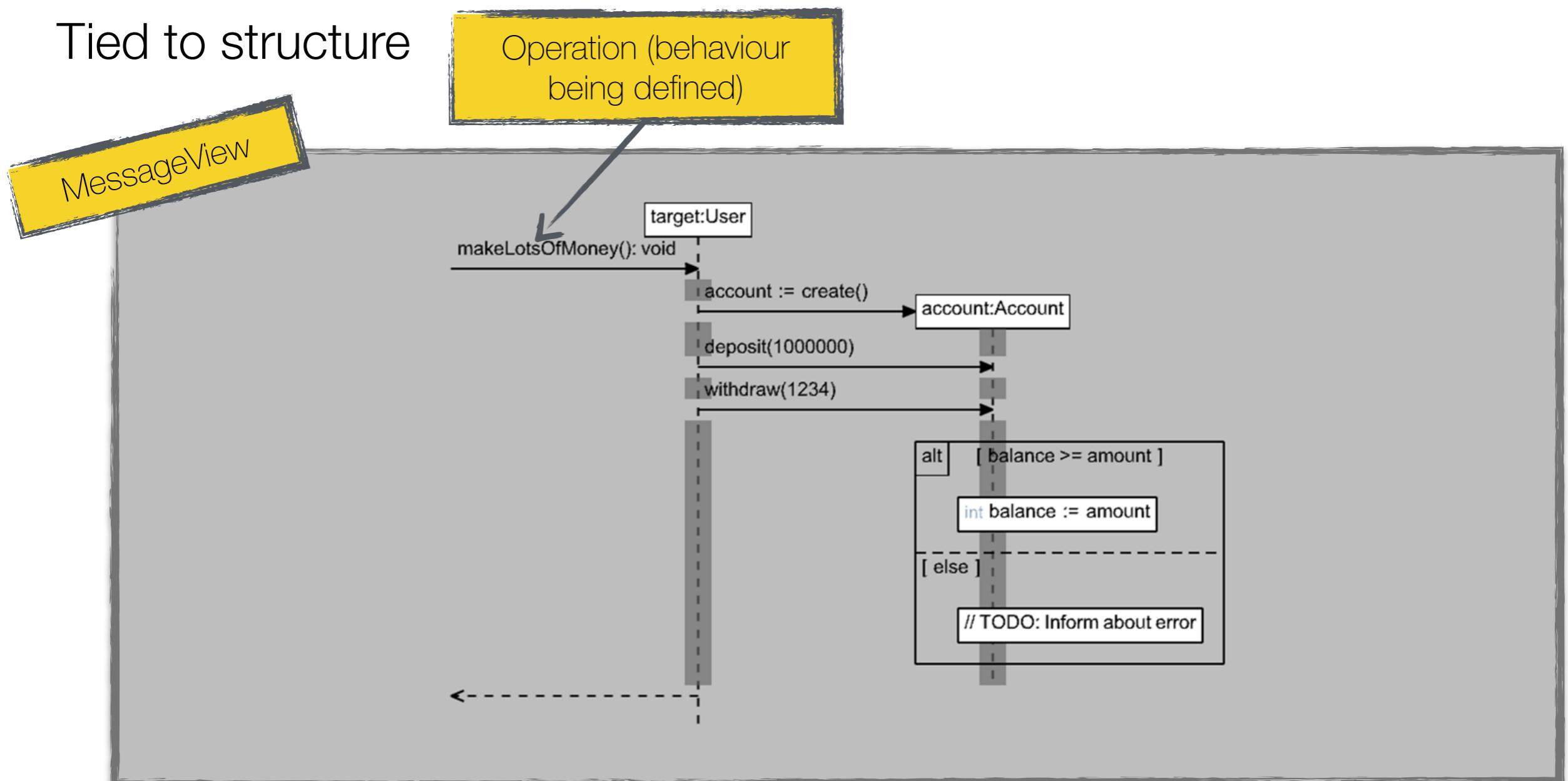
Tied to structure



Message View Overview

Based on UML 2 Sequence Diagrams (see uml-diagrams.org)

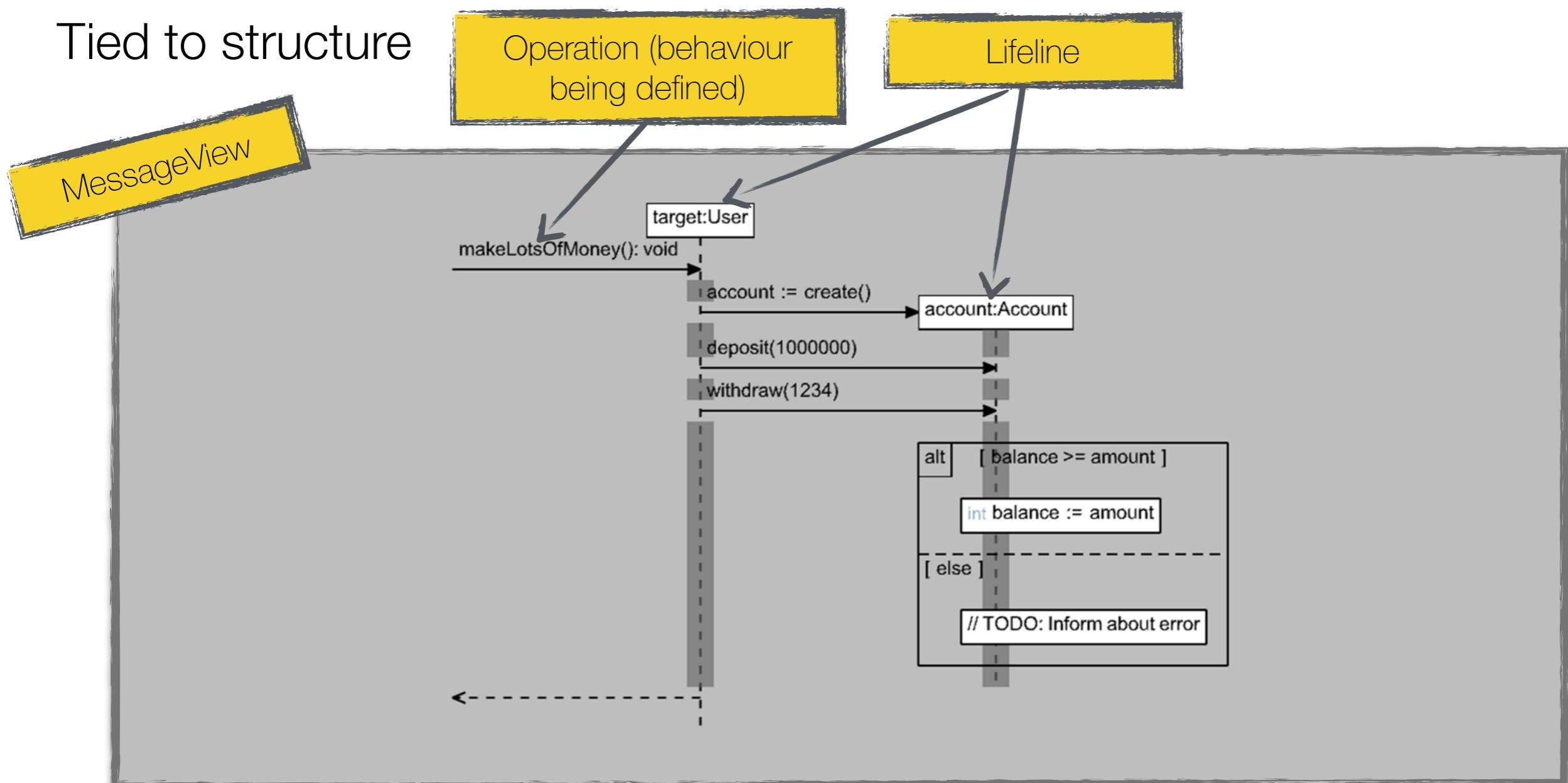
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Message View Overview

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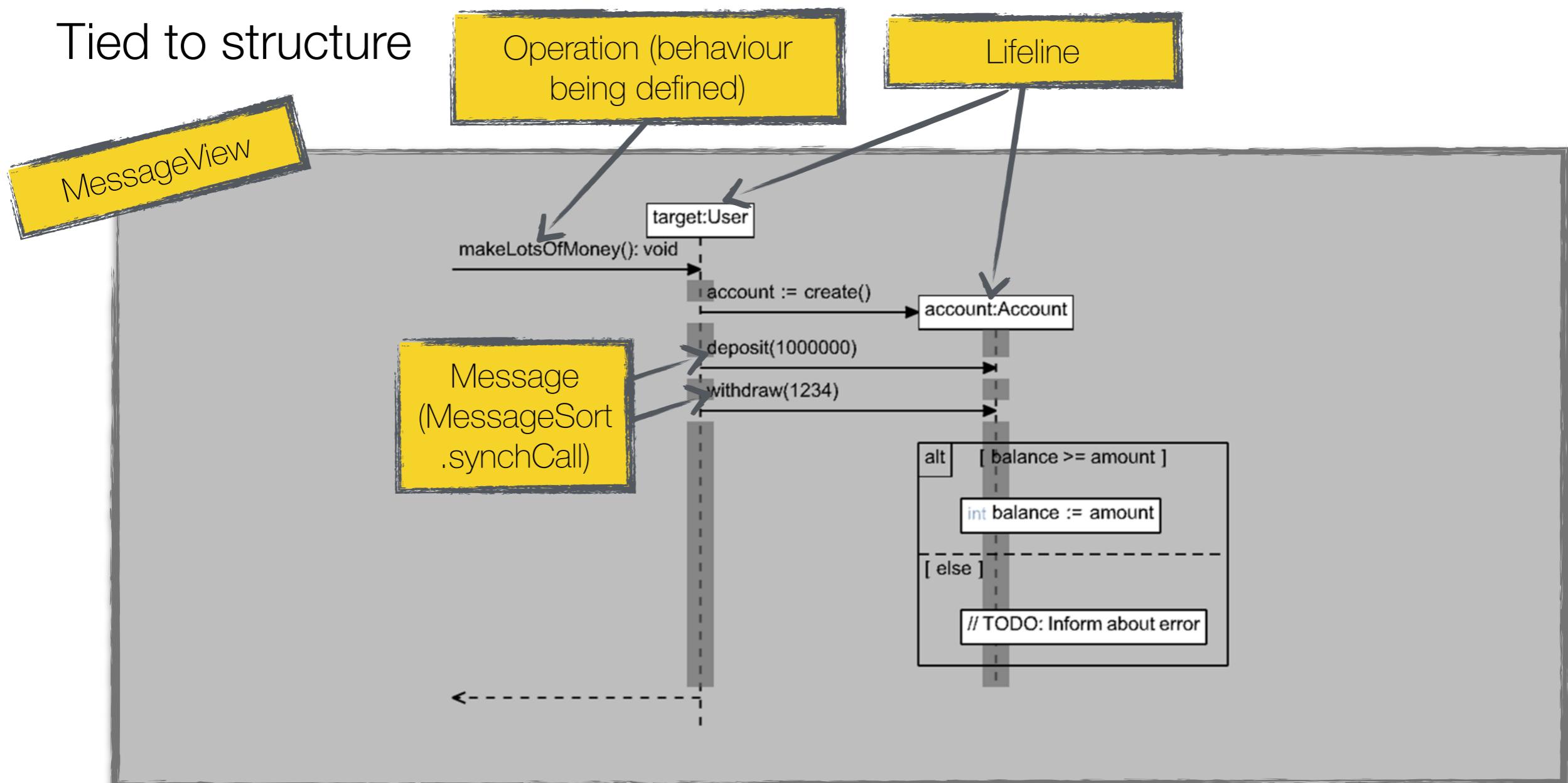
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Message View Overview

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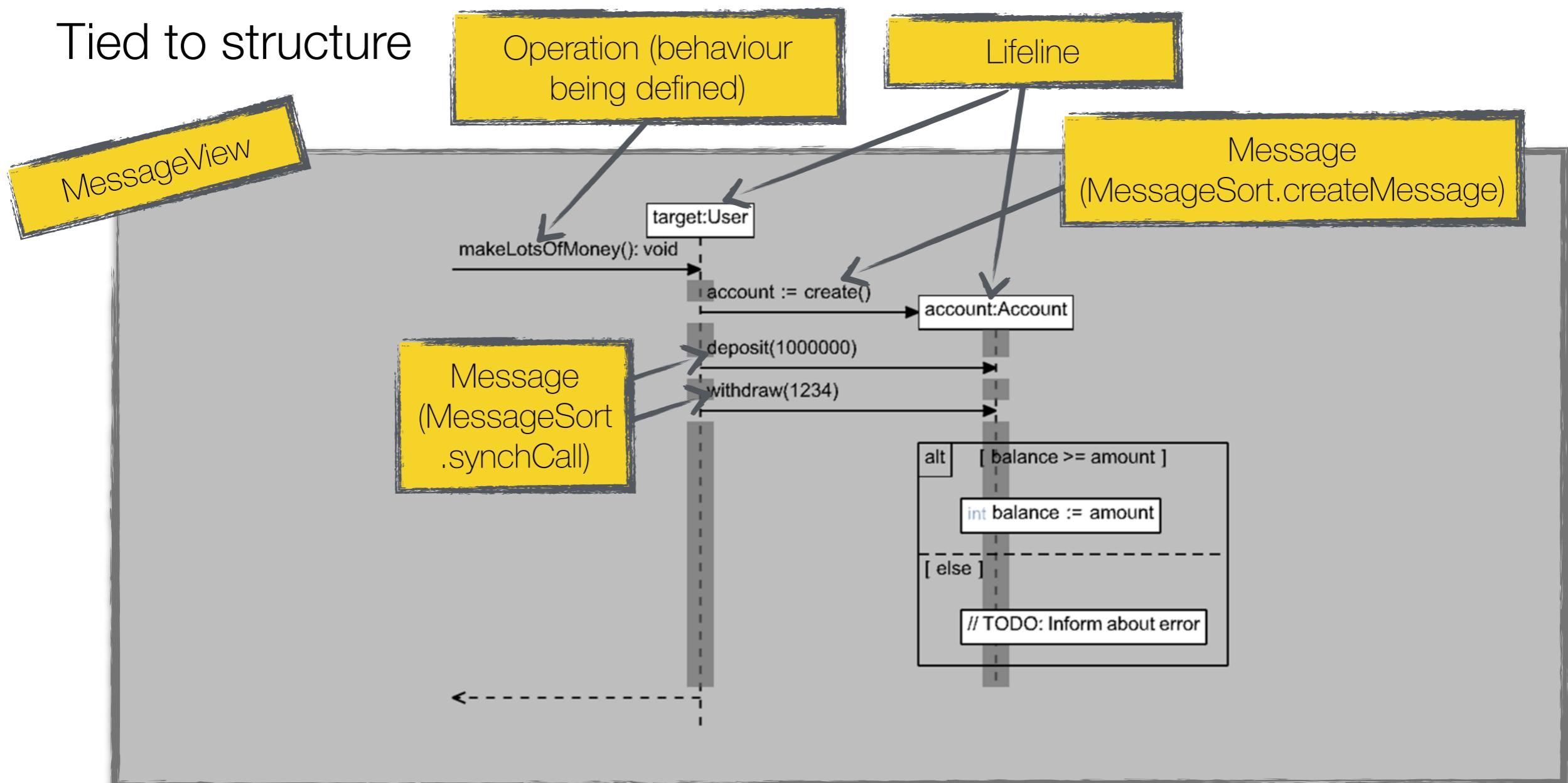
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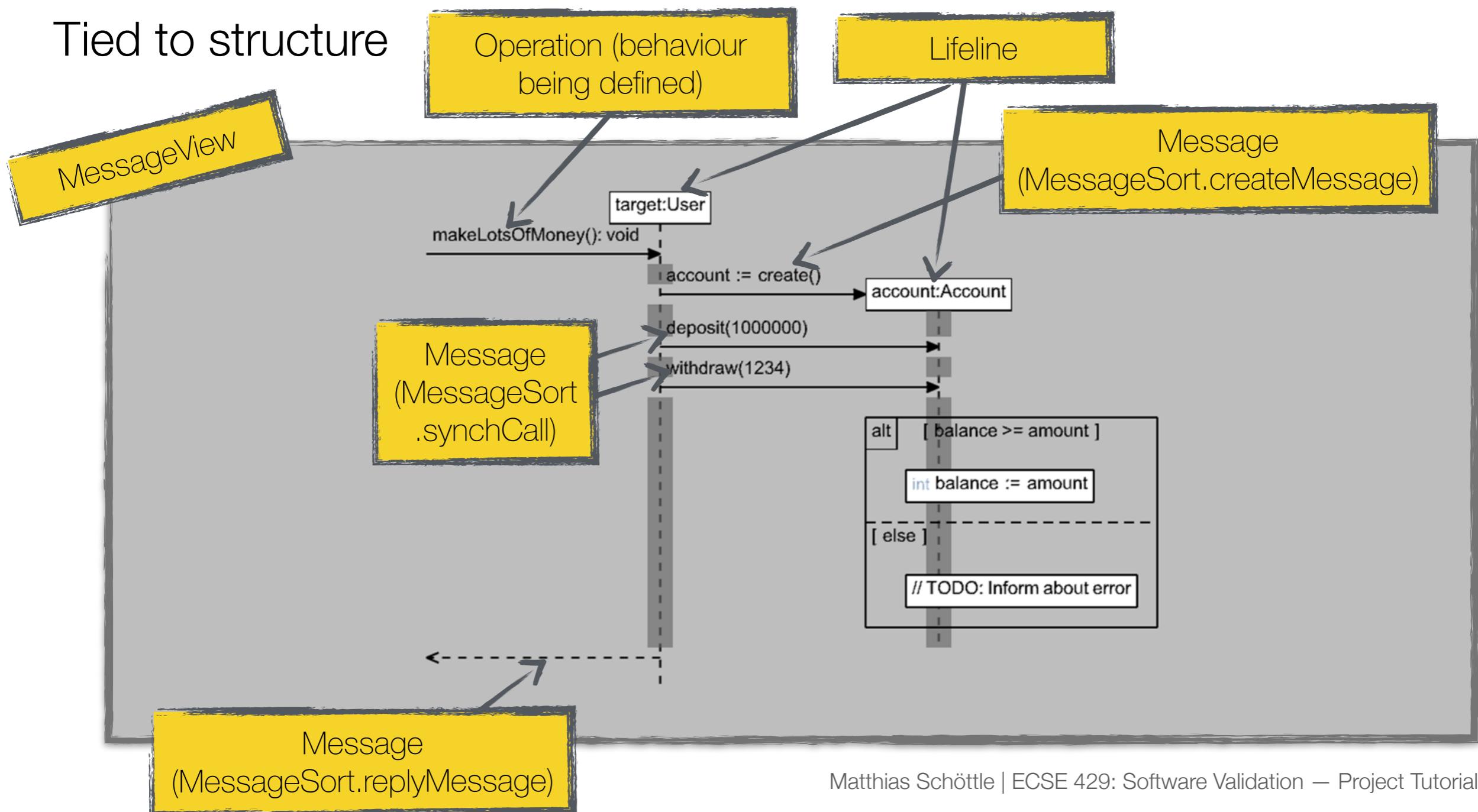
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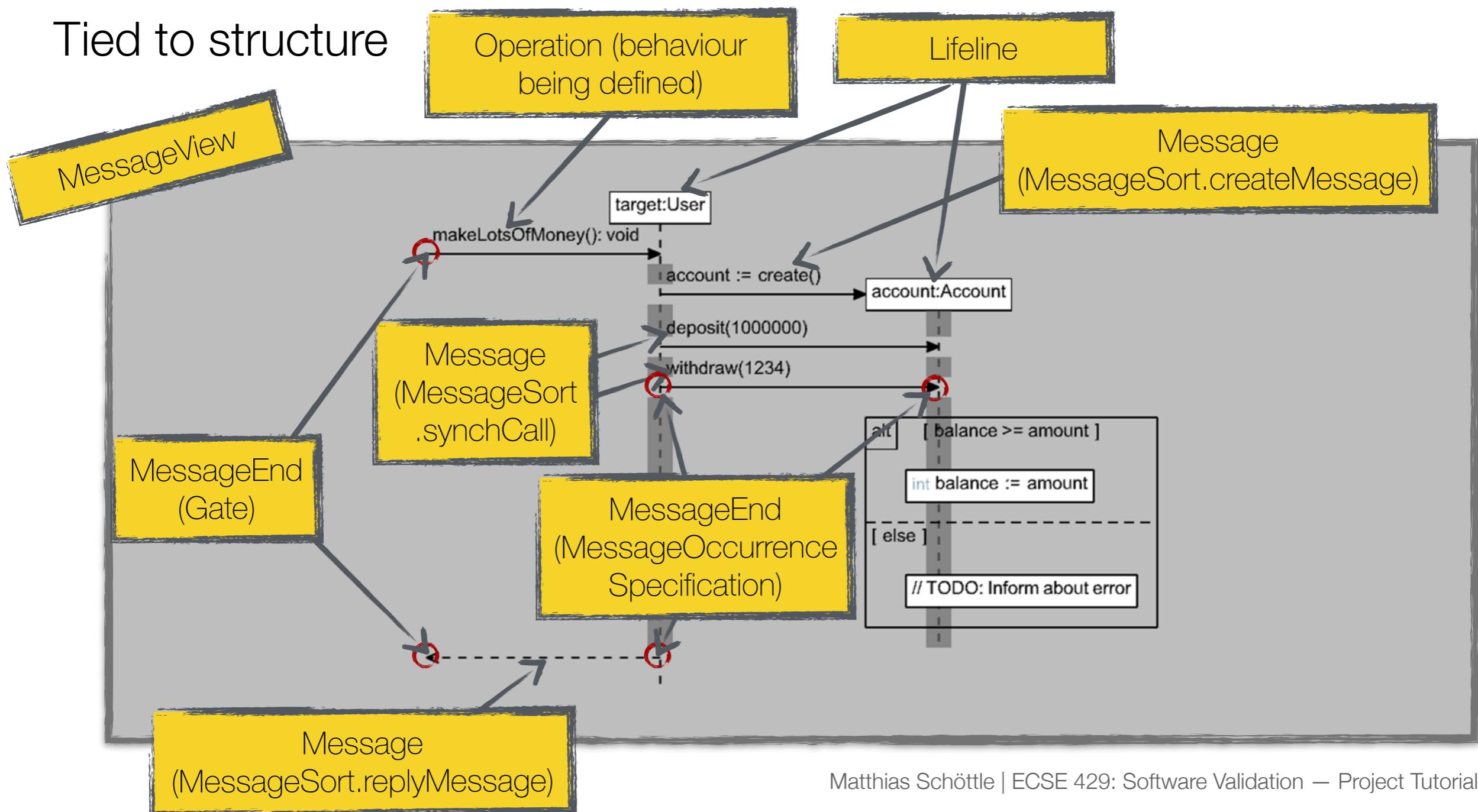
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Message View Overview

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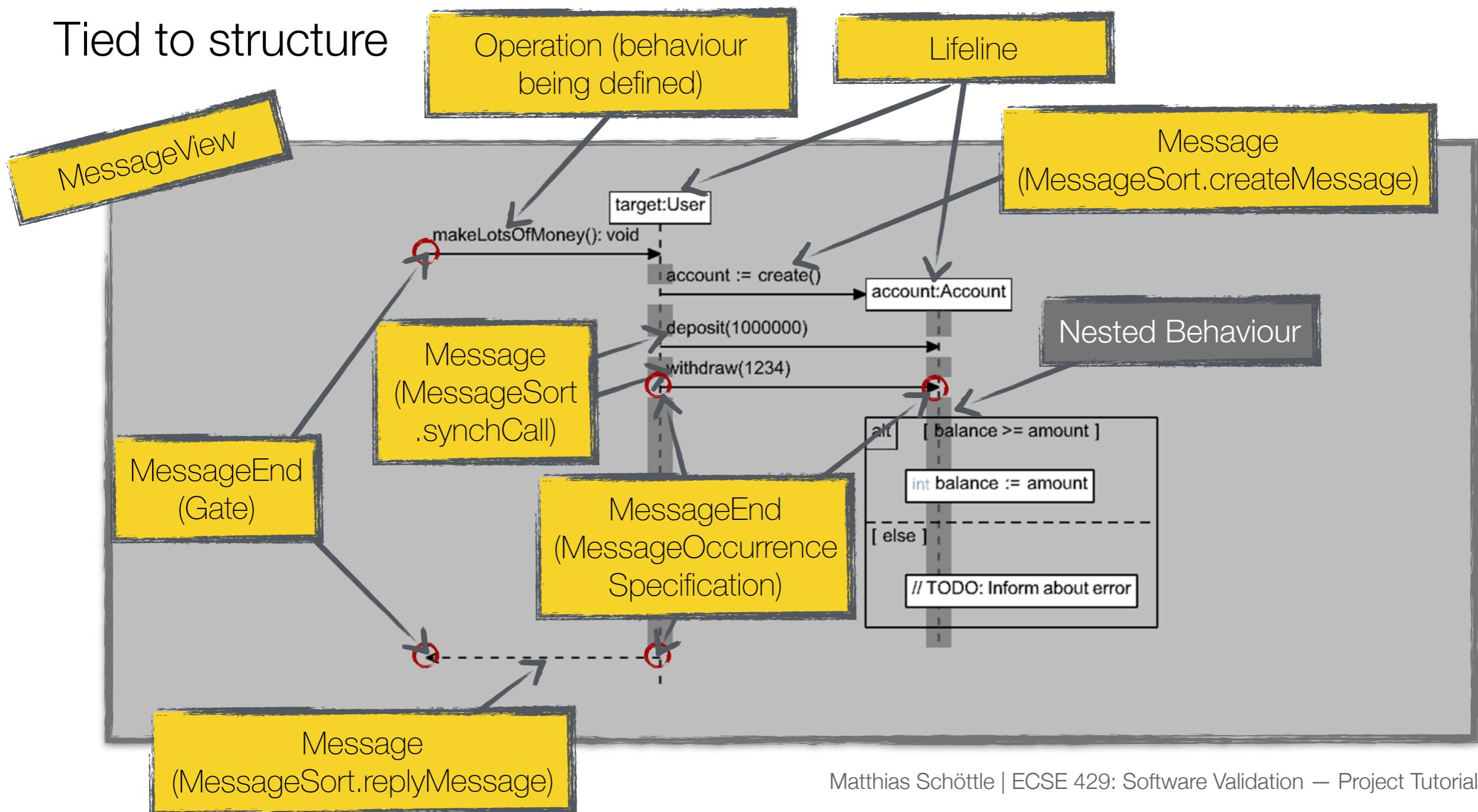
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Message View Overview

Based on UML 2 Sequence Diagrams (see uml-diagrams.org)

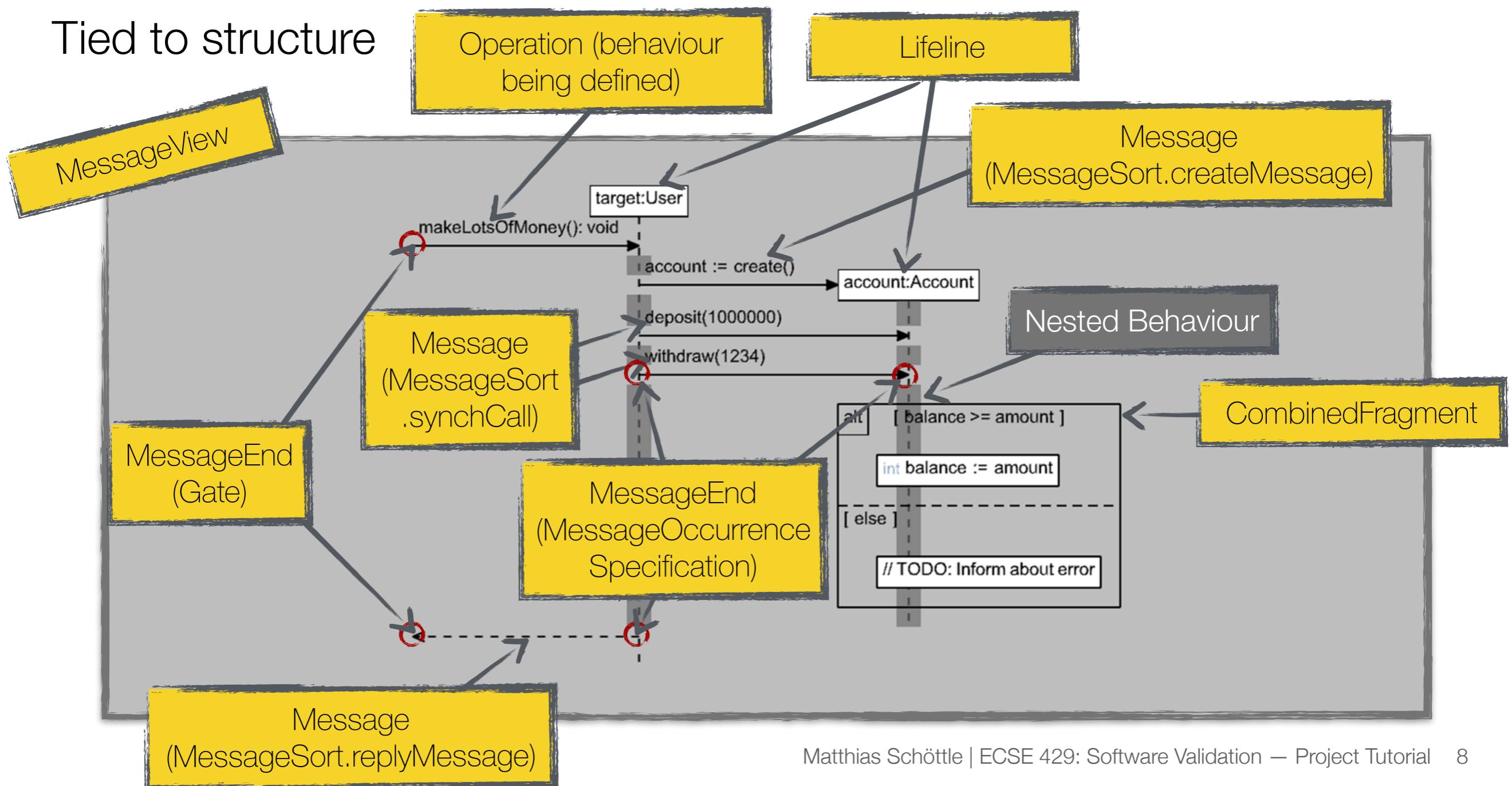
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Message View Overview

Based on UML 2 Sequence Diagrams (see uml-diagrams.org)

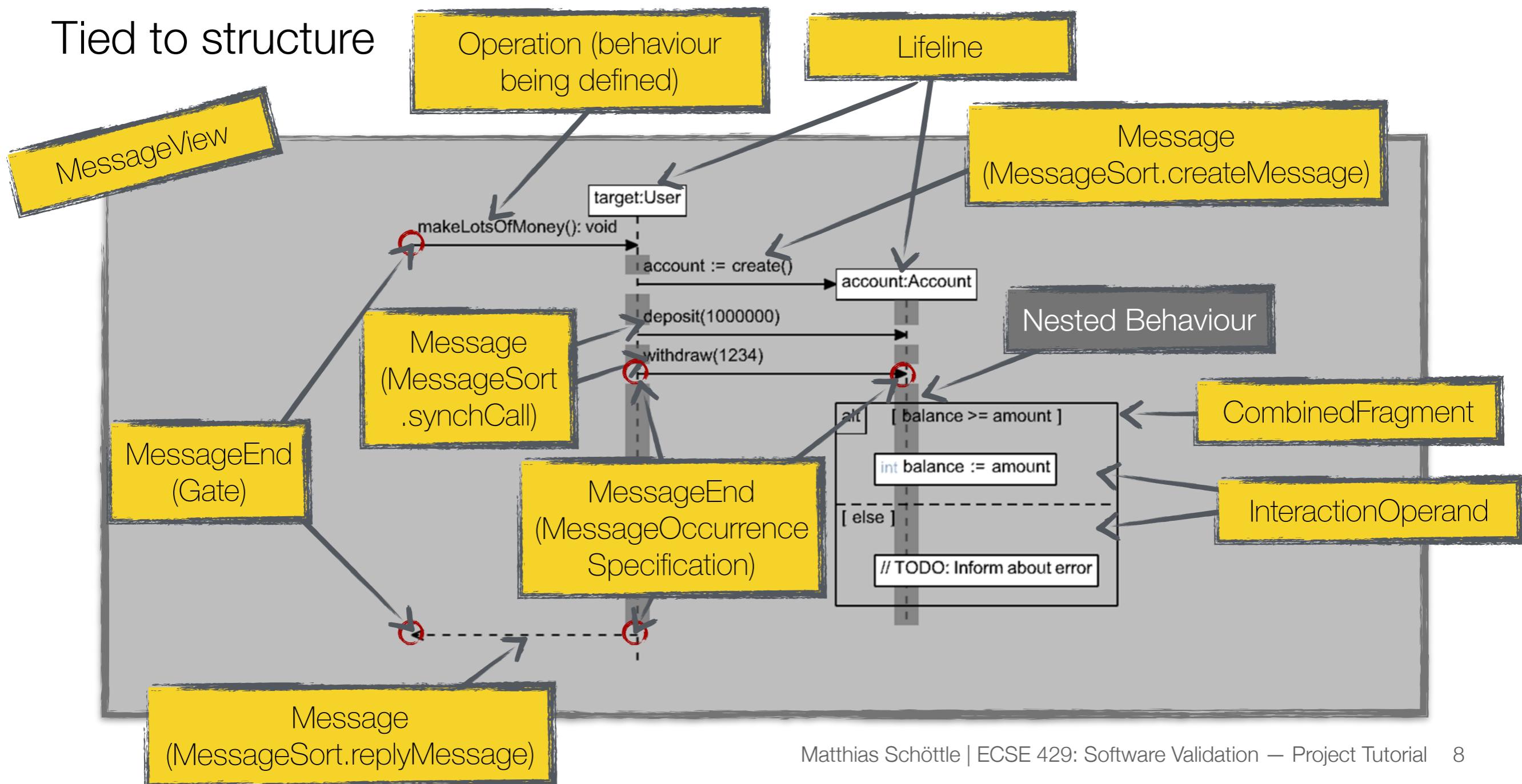
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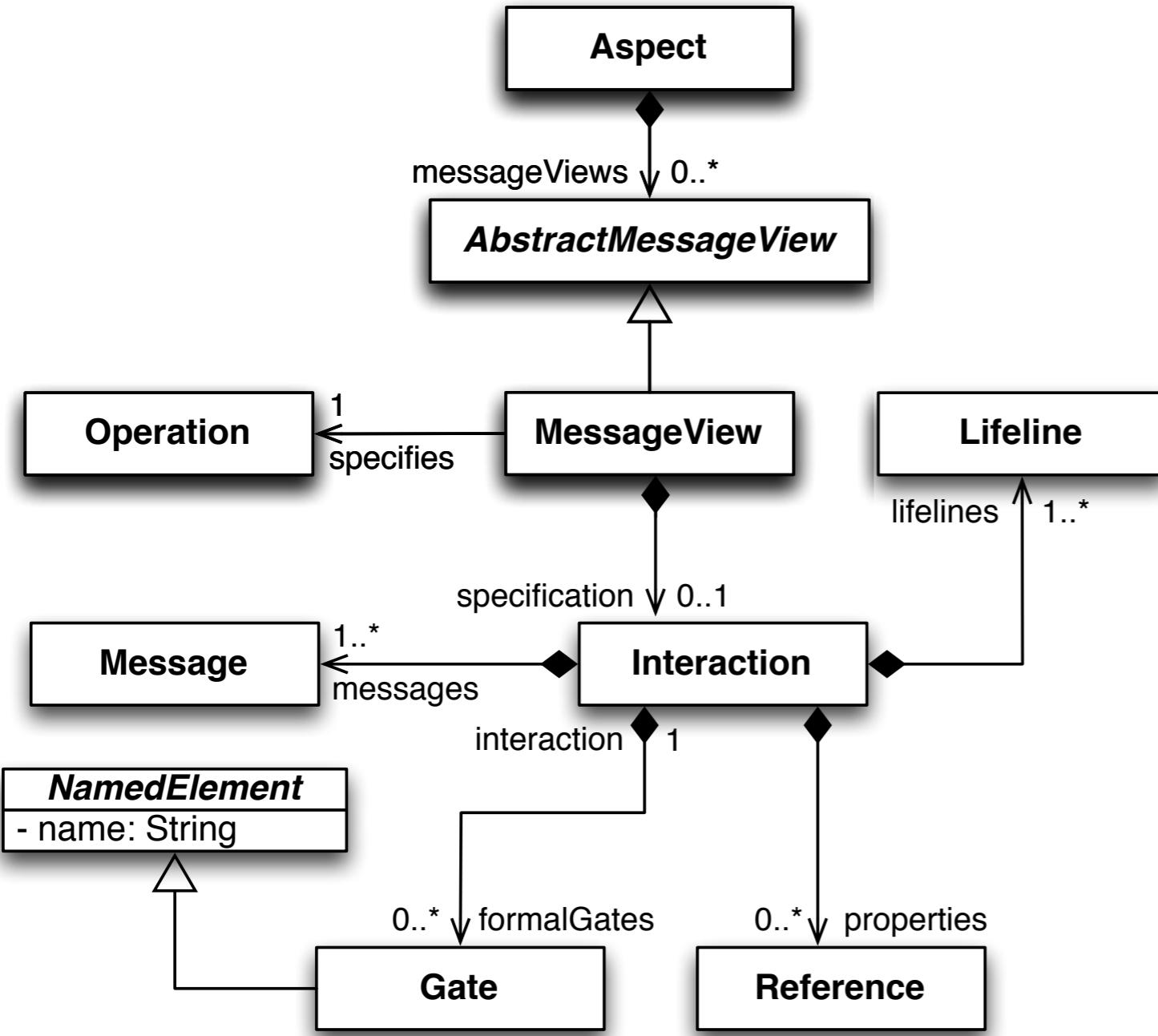
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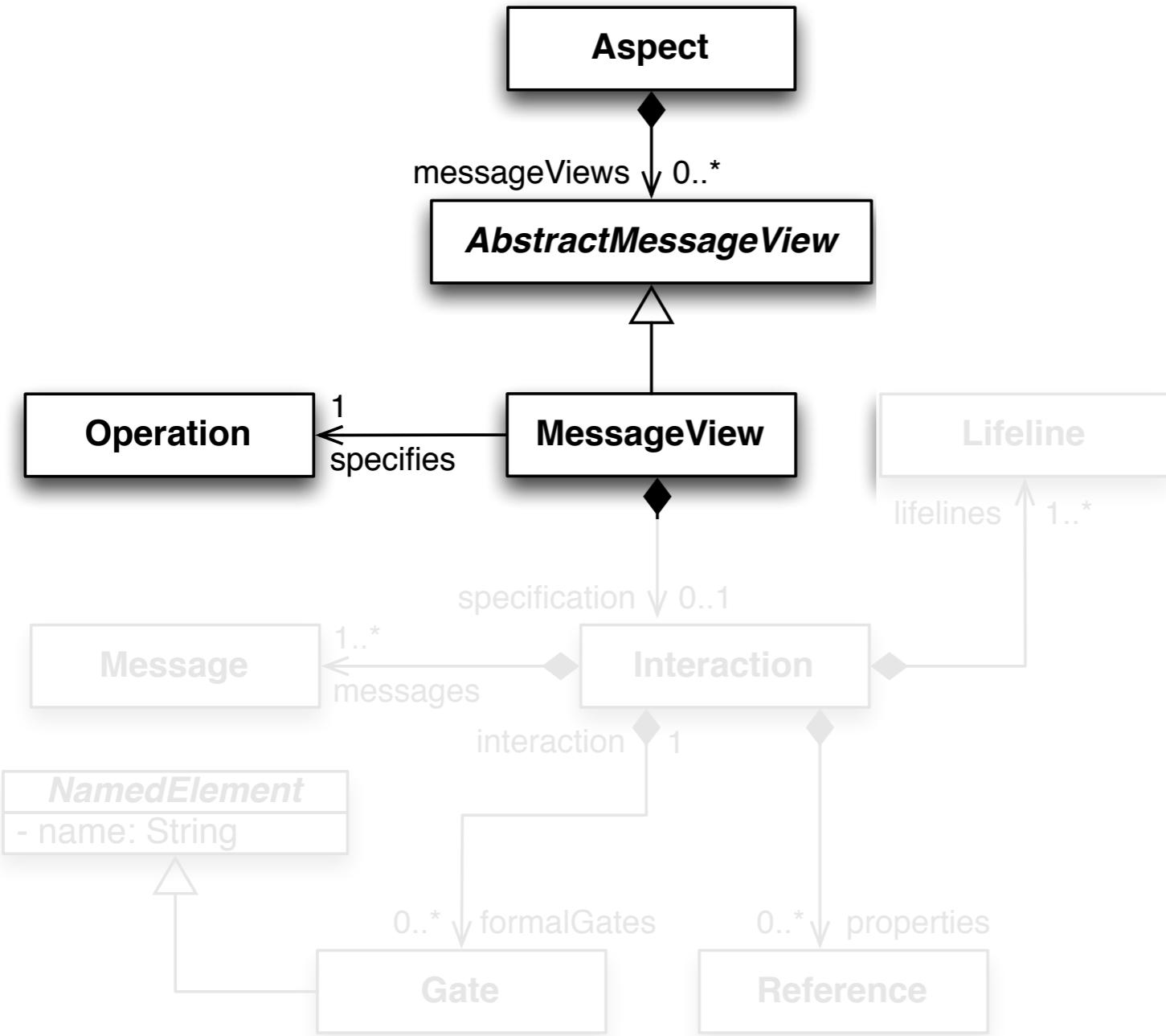
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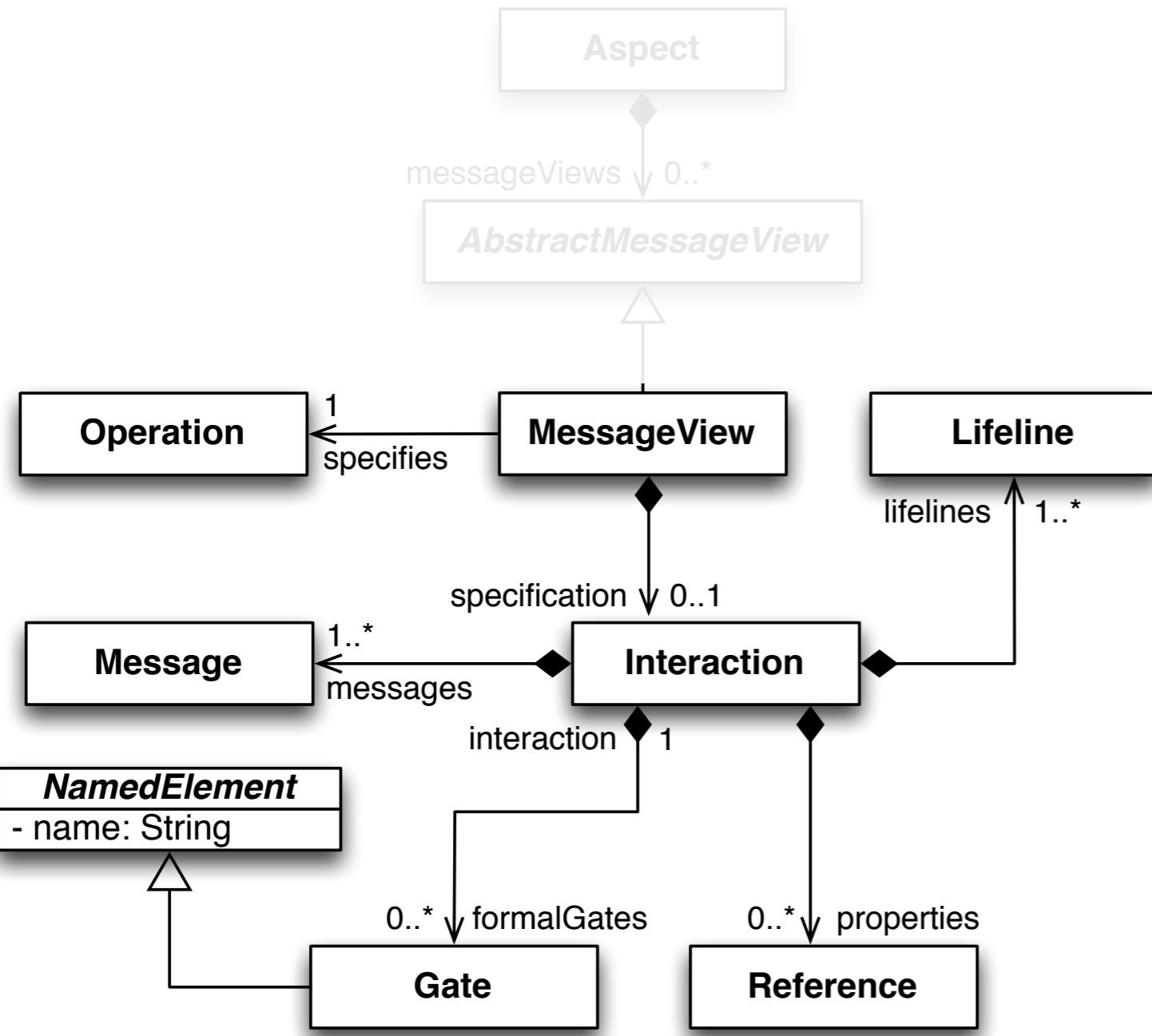
Message View Metamodel



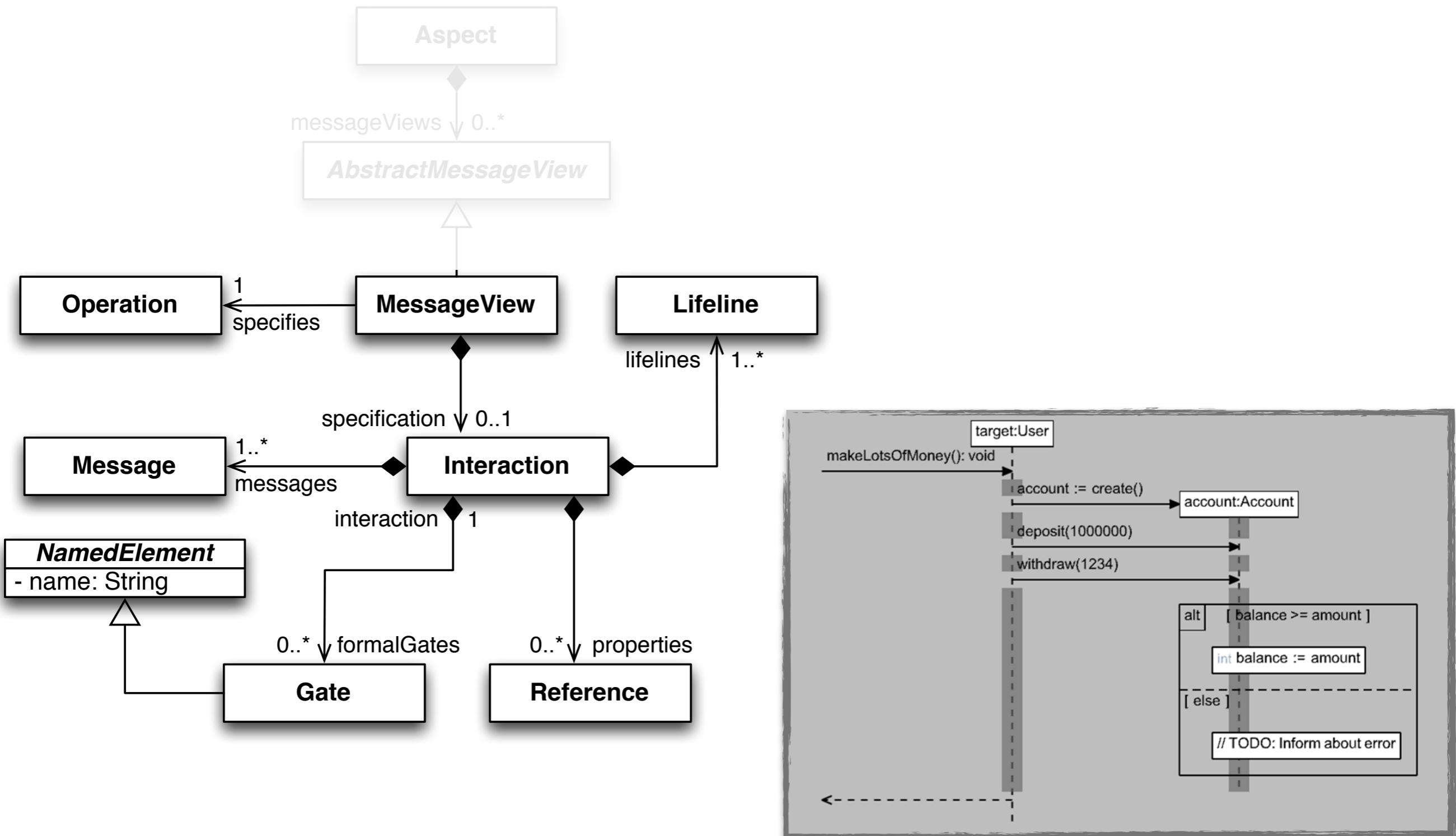
Message View Metamodel



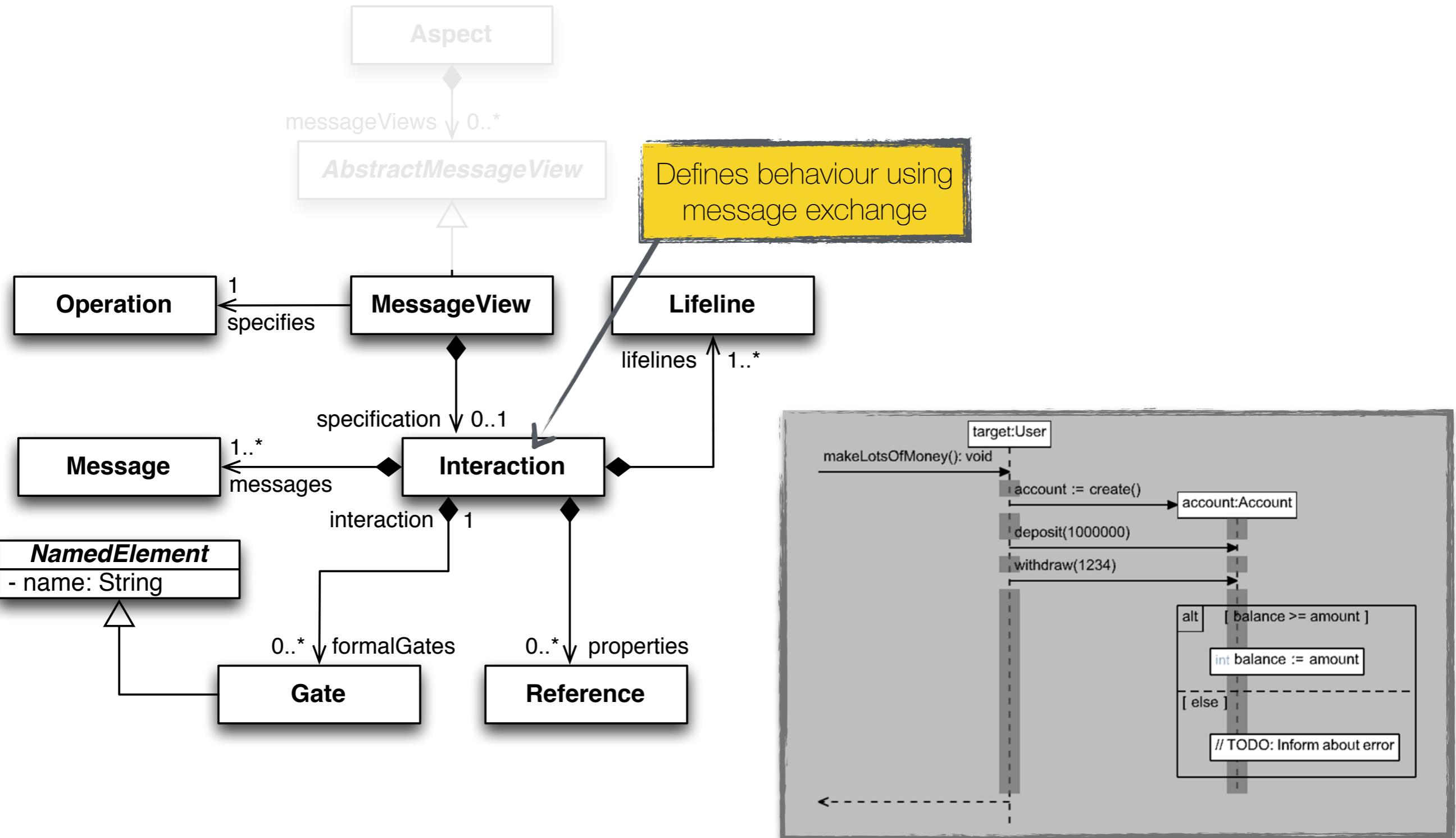
Message View Metamodel



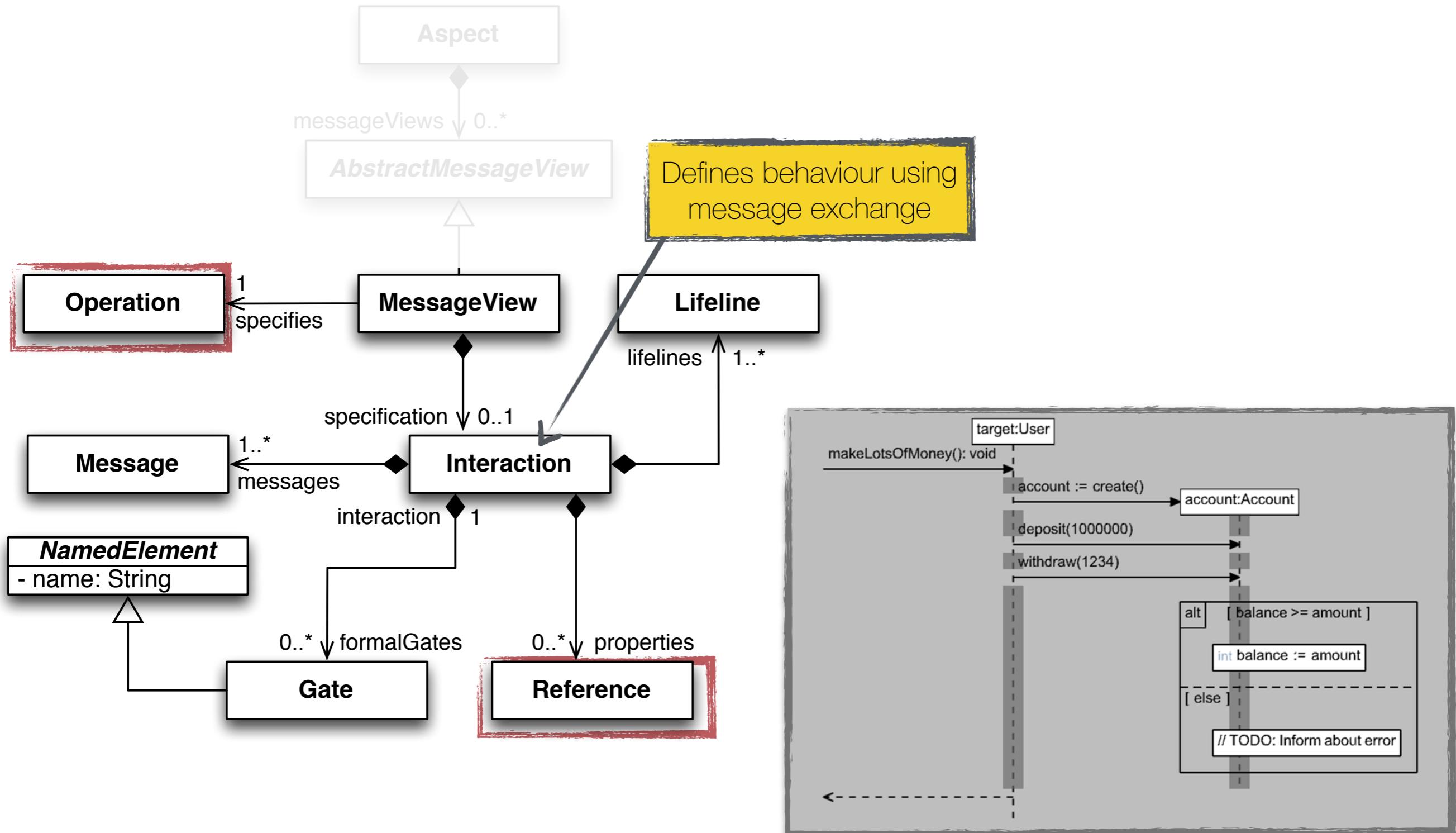
Message View Metamodel



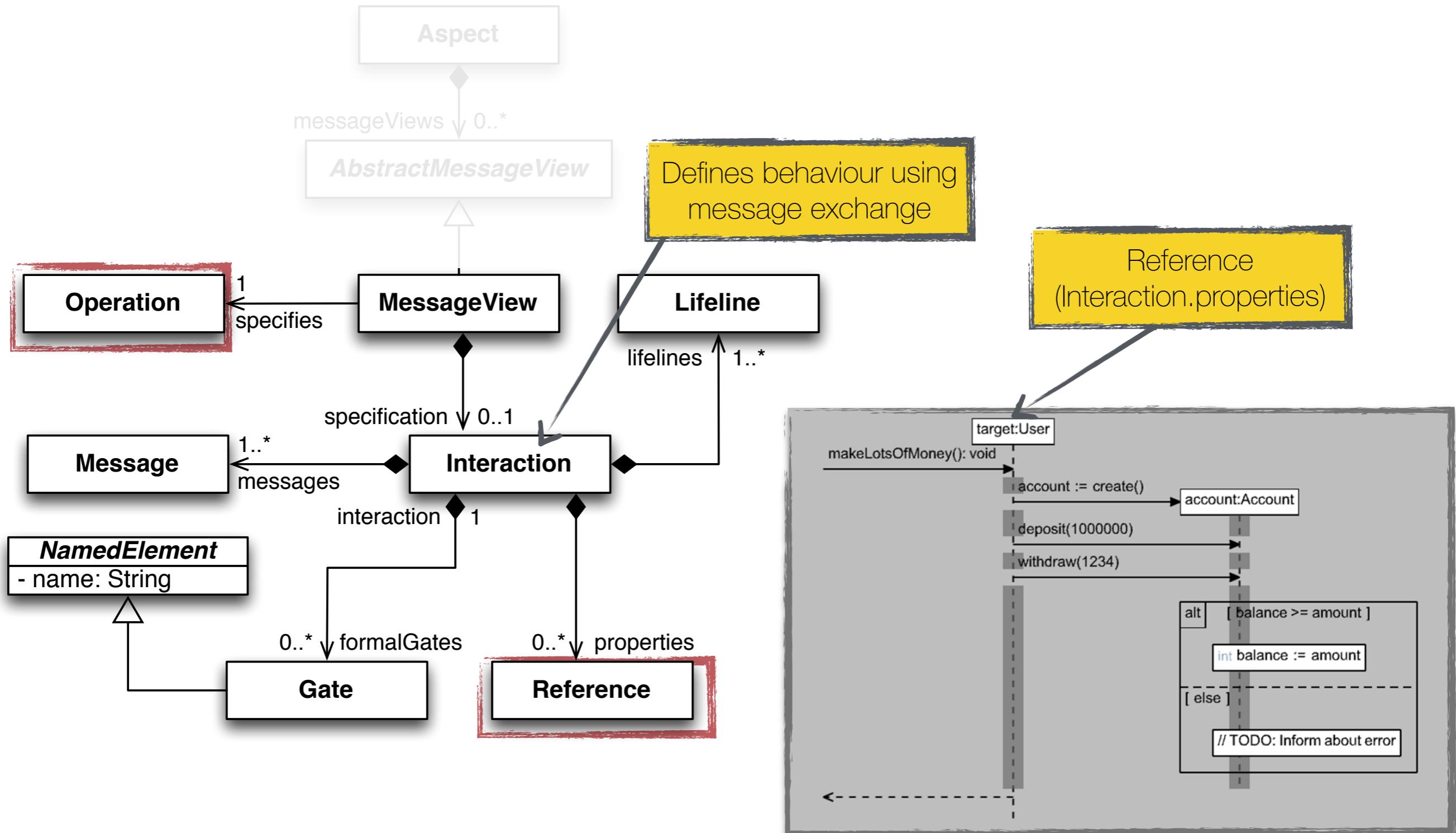
Message View Metamodel



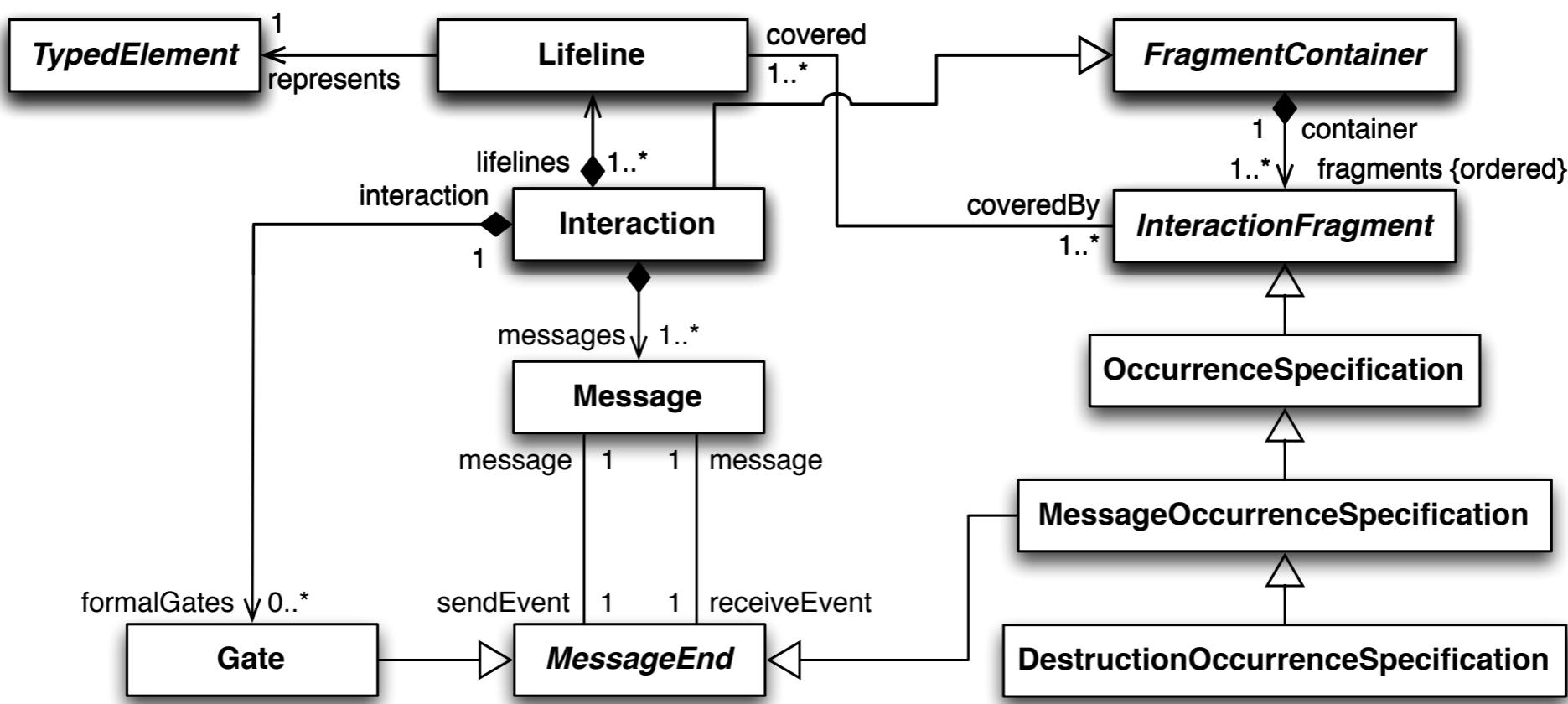
Message View Metamodel



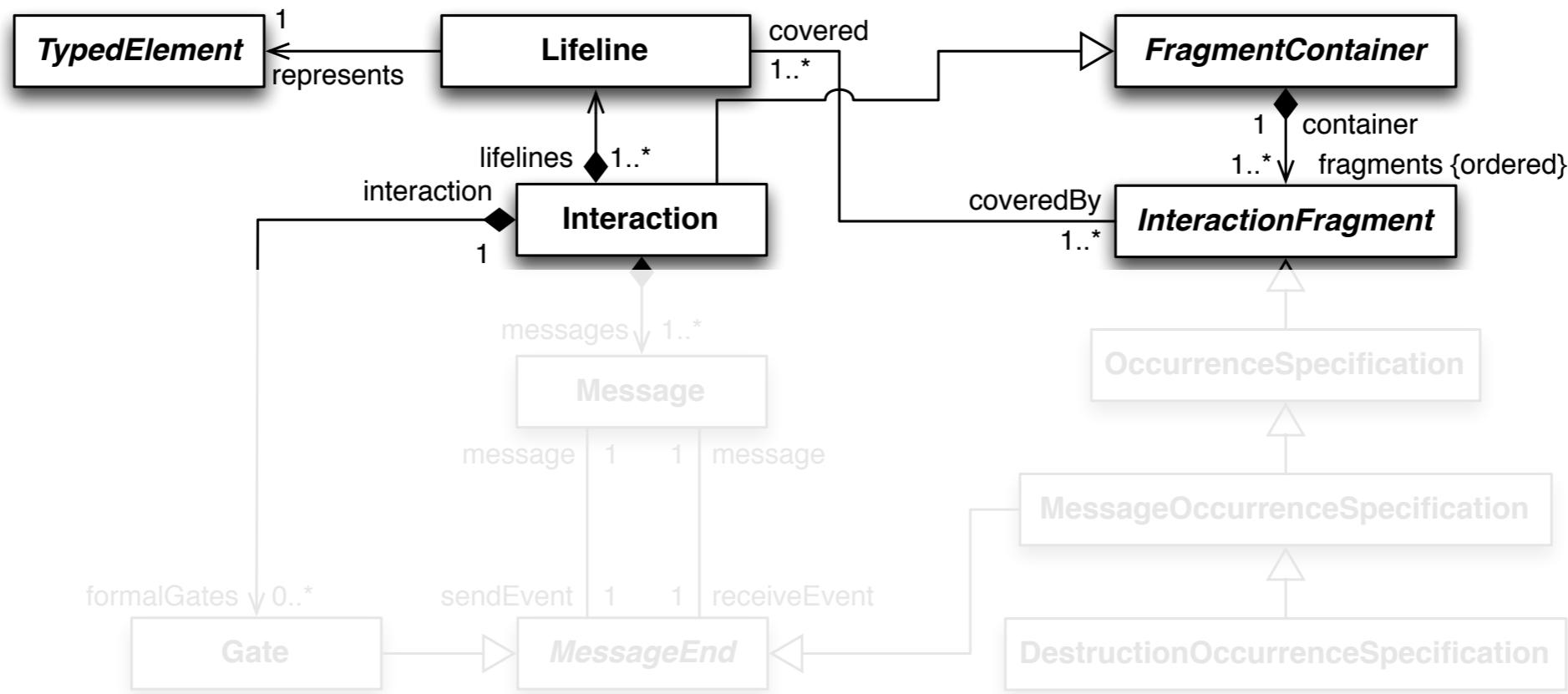
Message View Metamodel



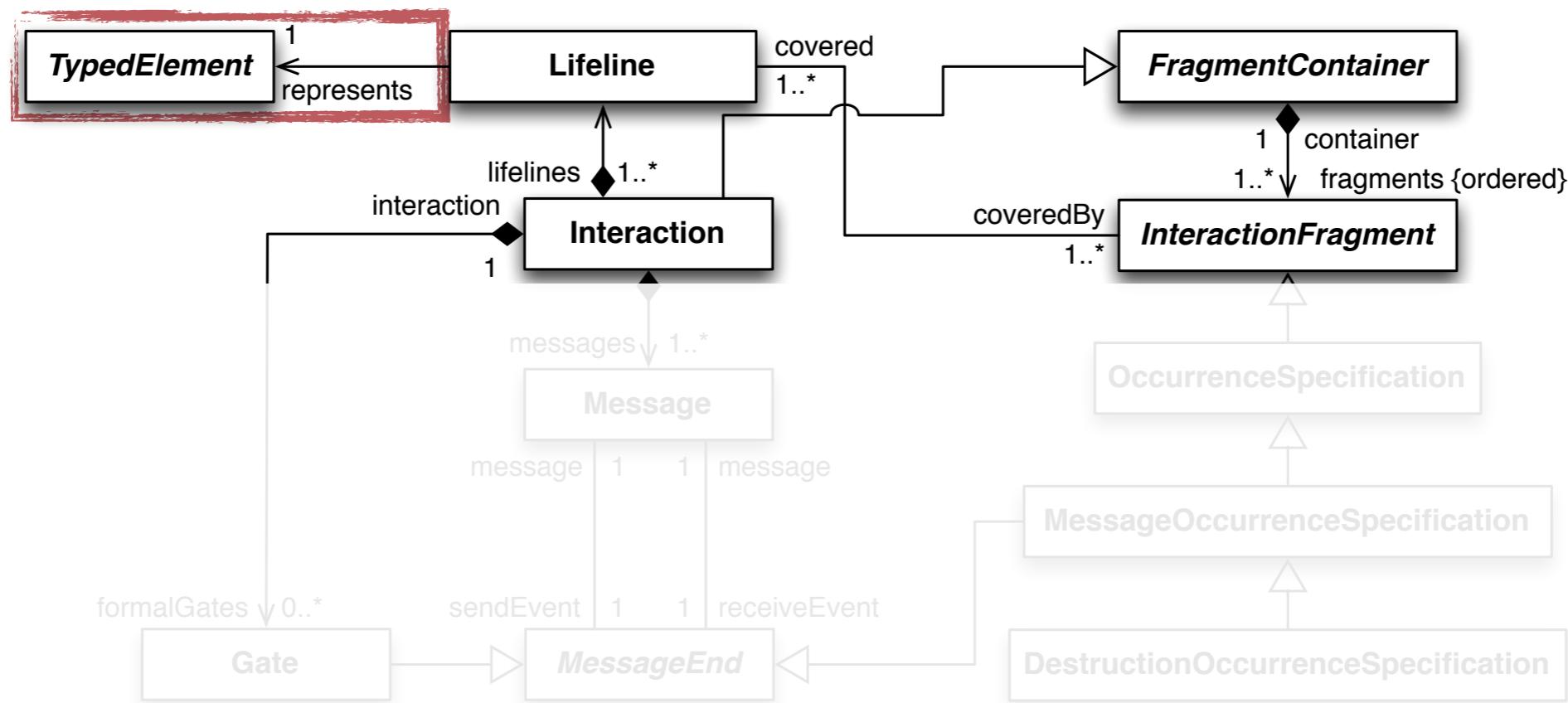
Message View Metamodel



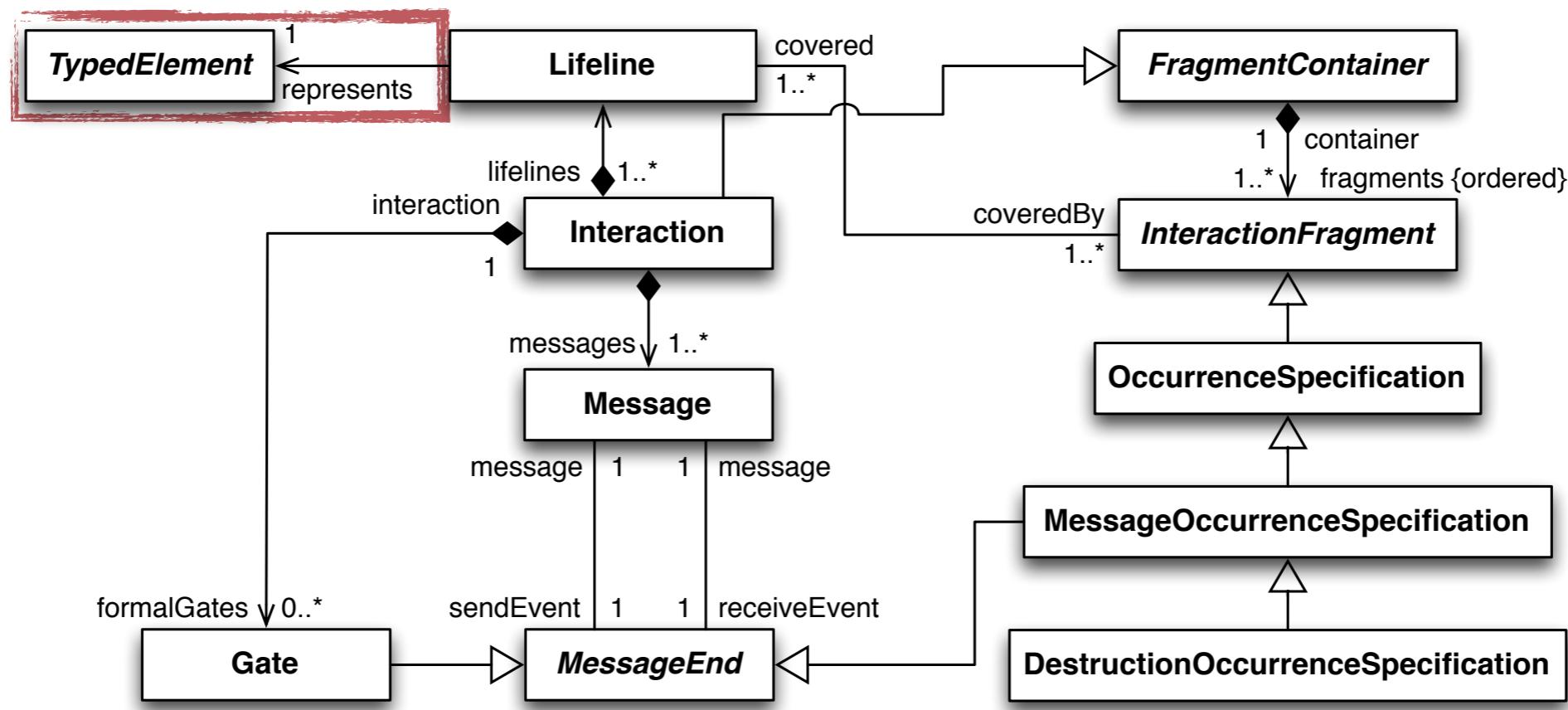
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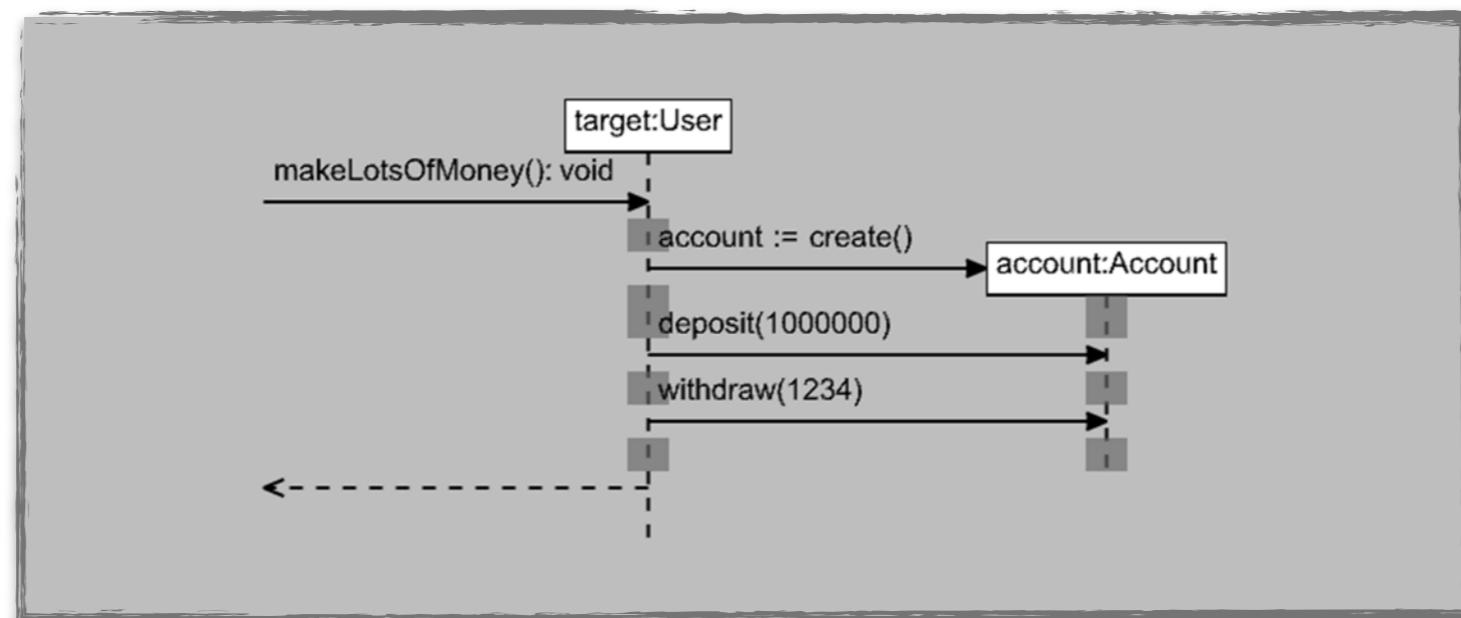
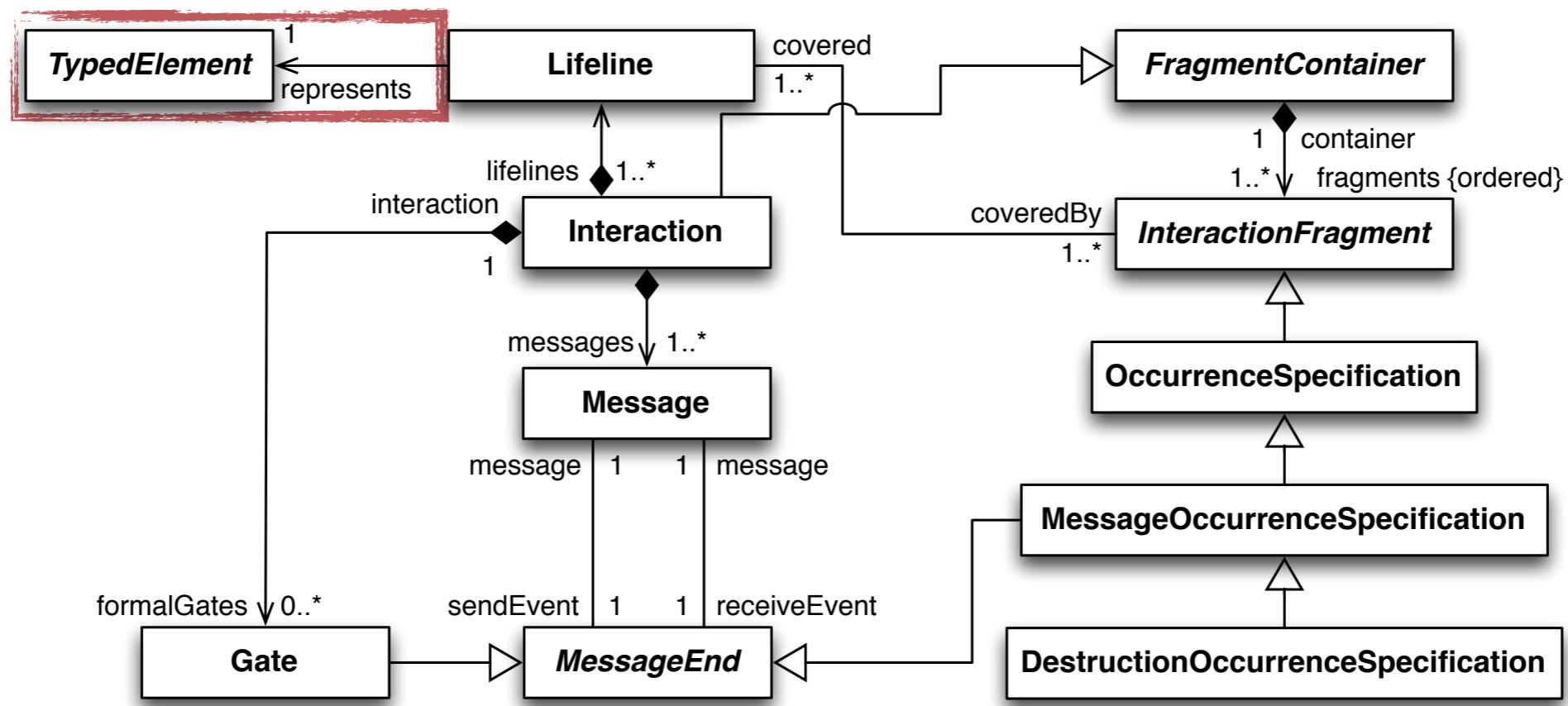
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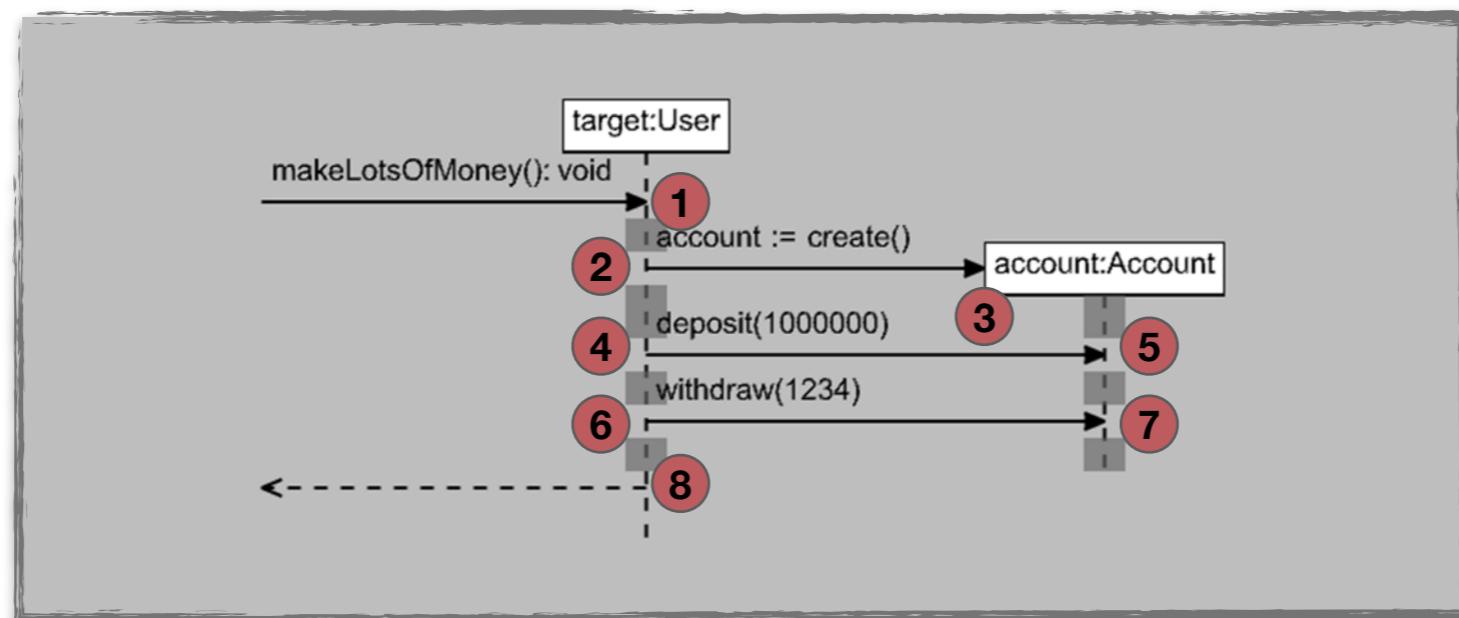
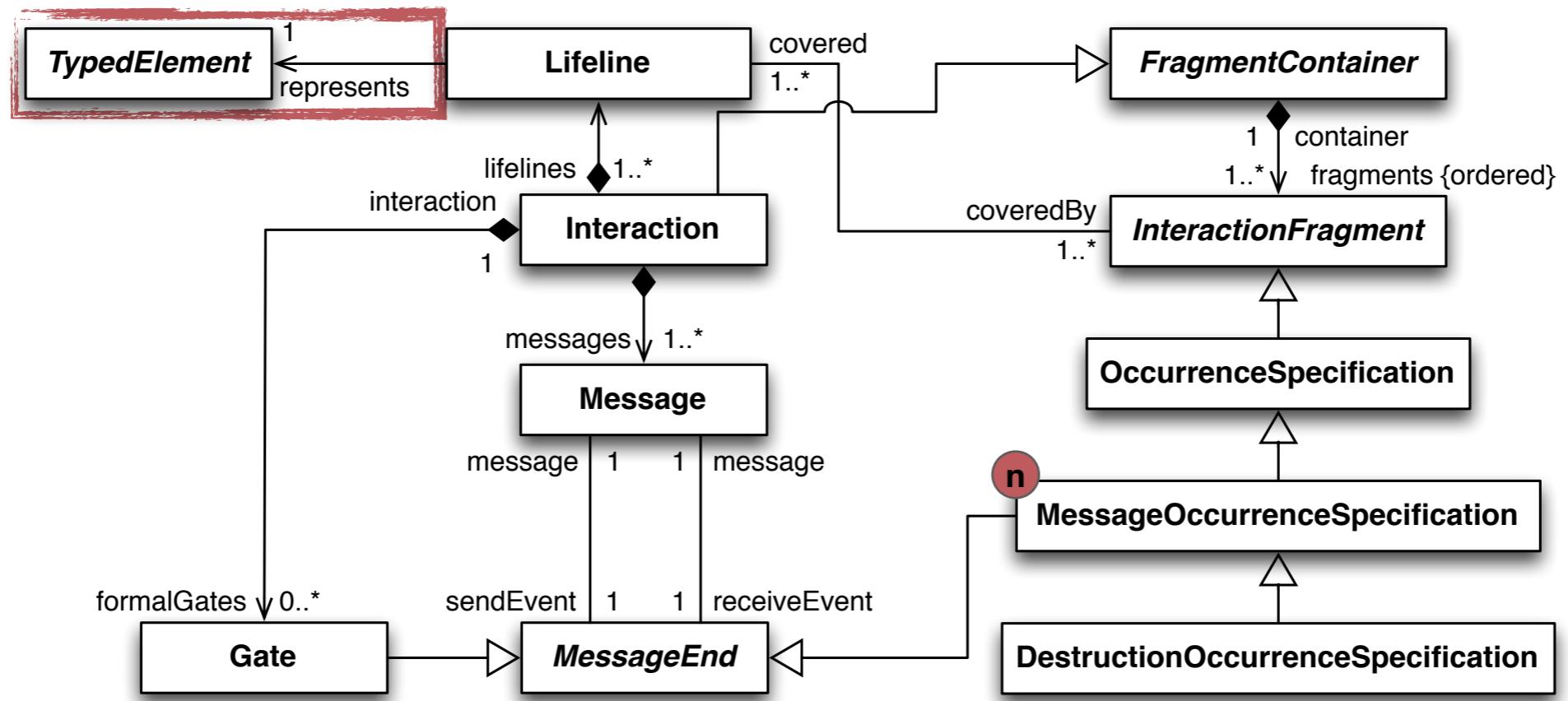
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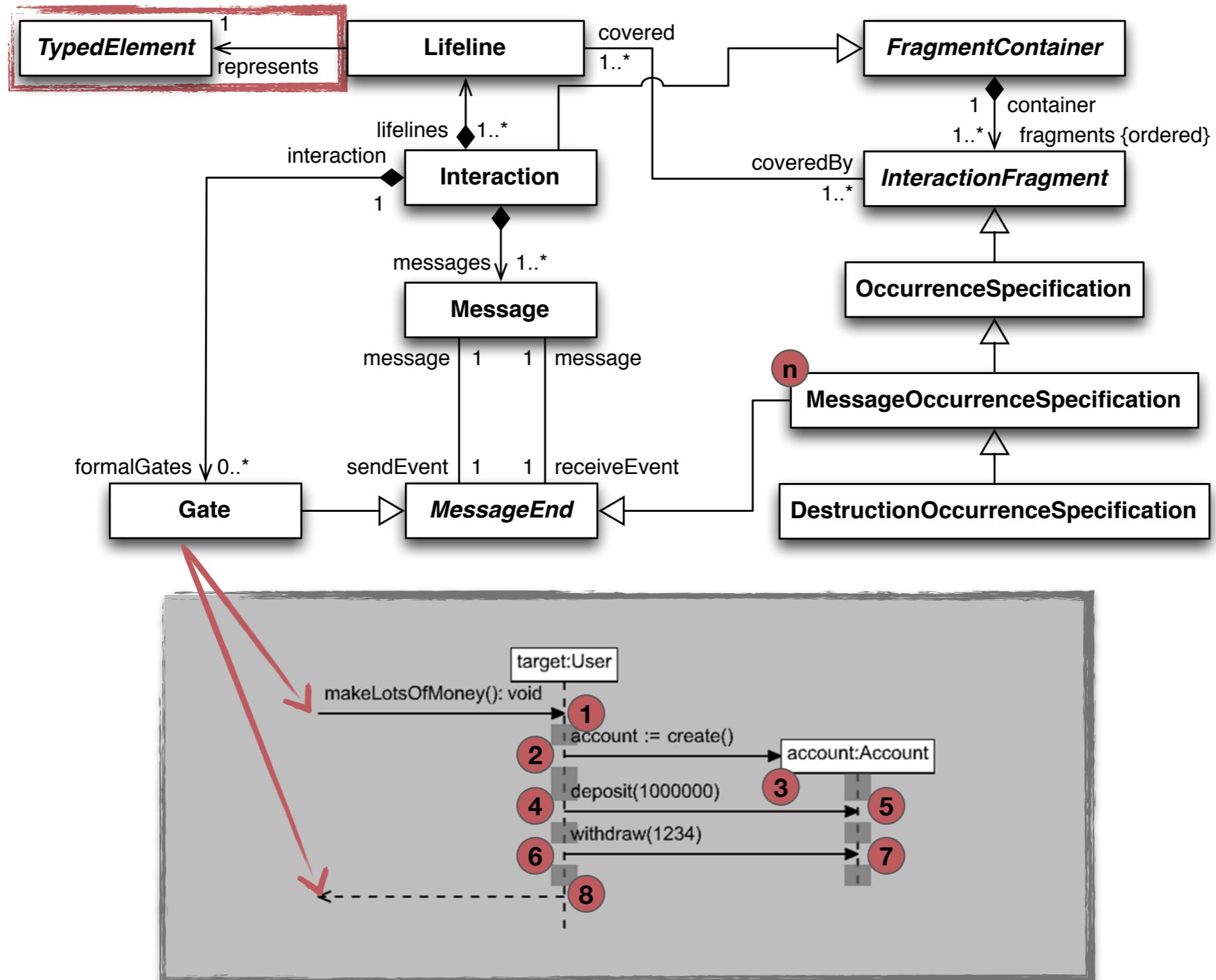
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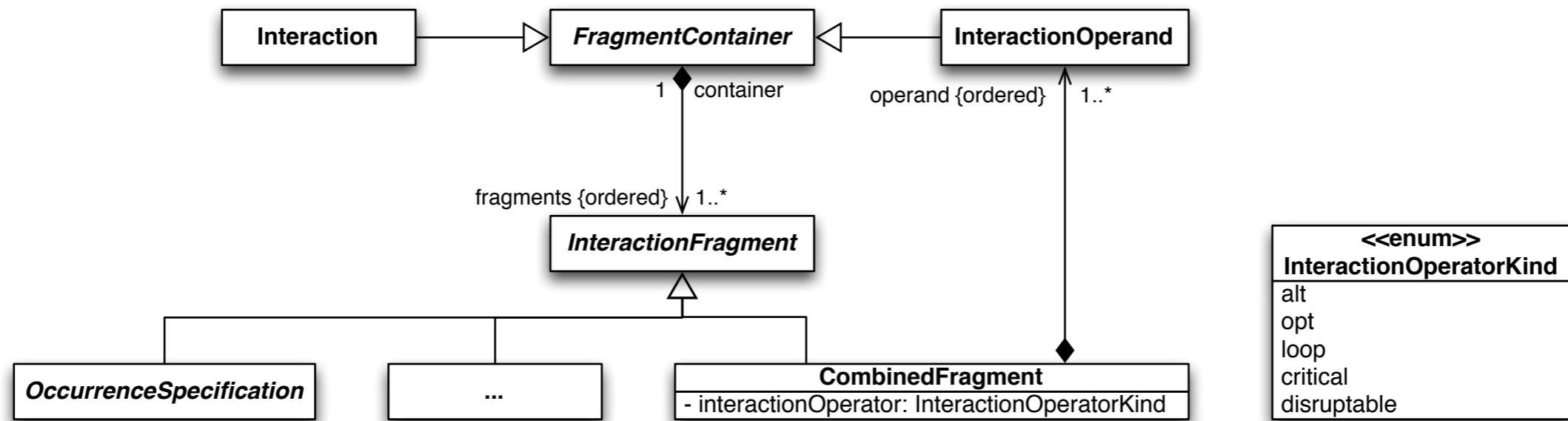
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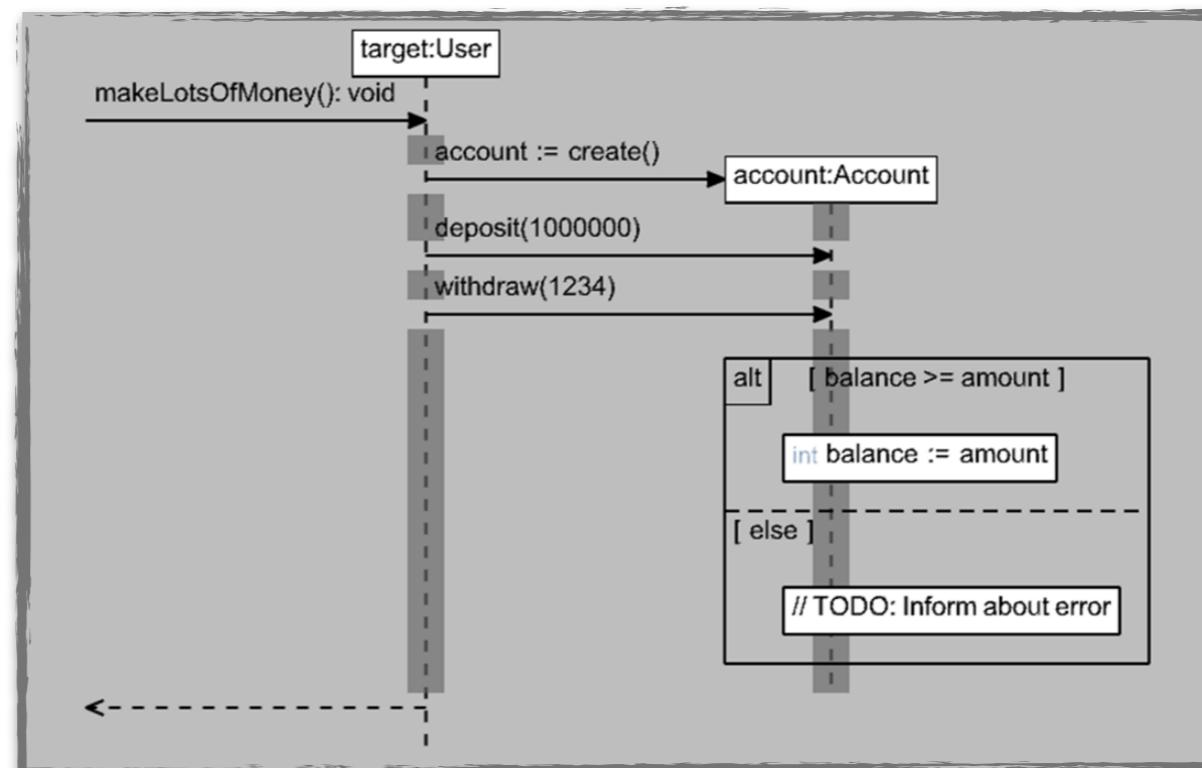
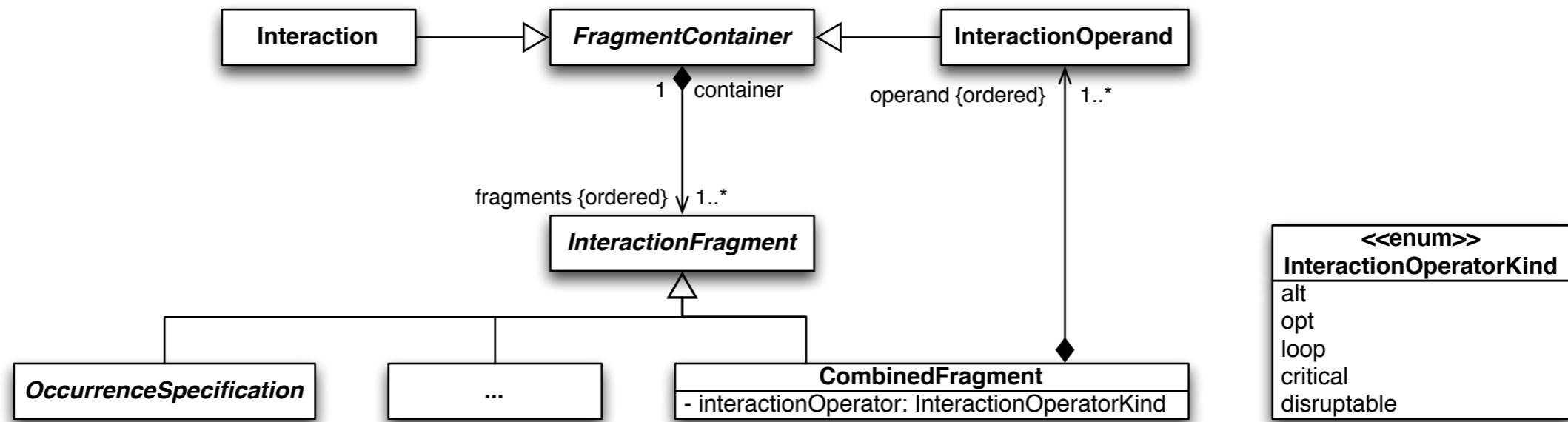
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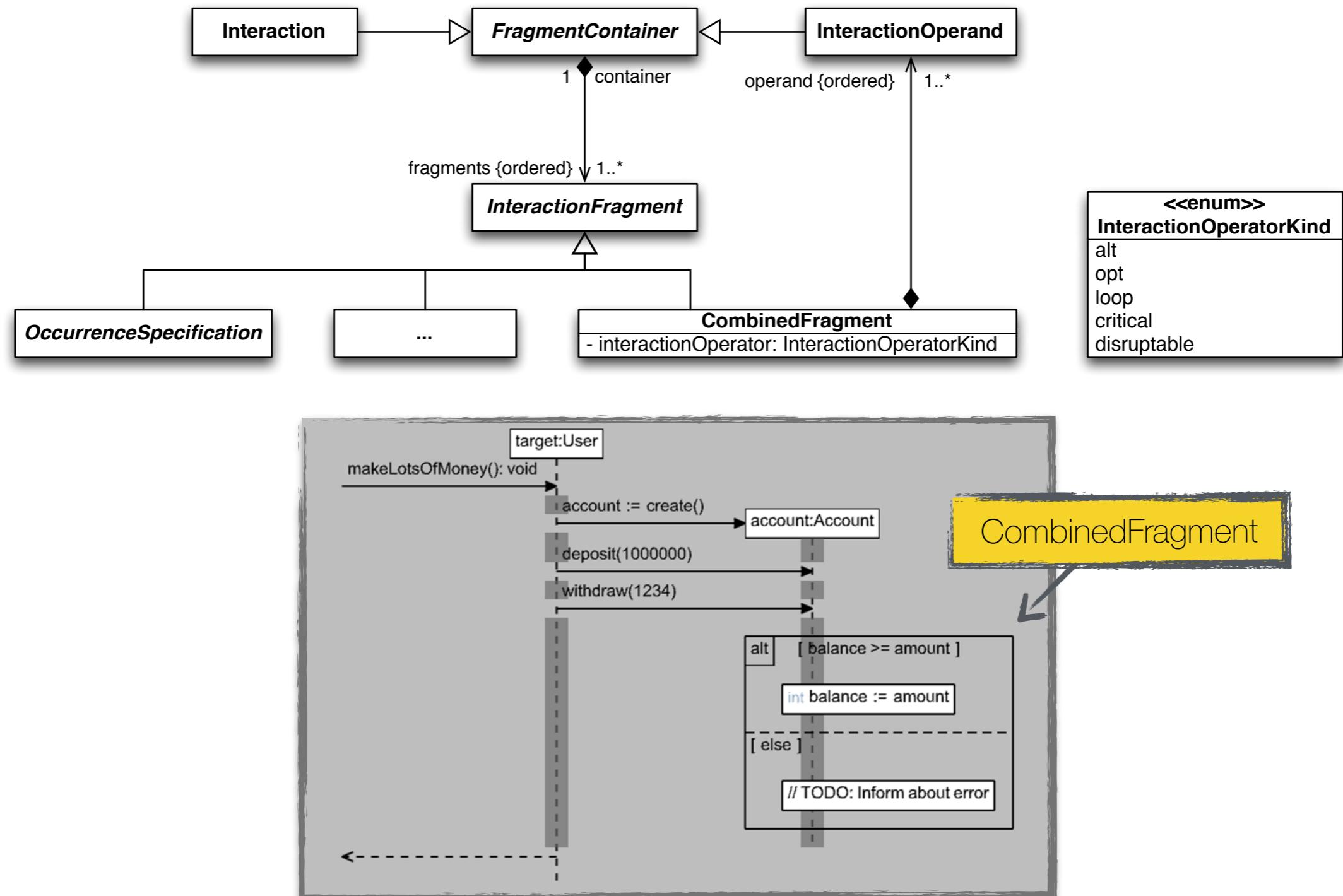
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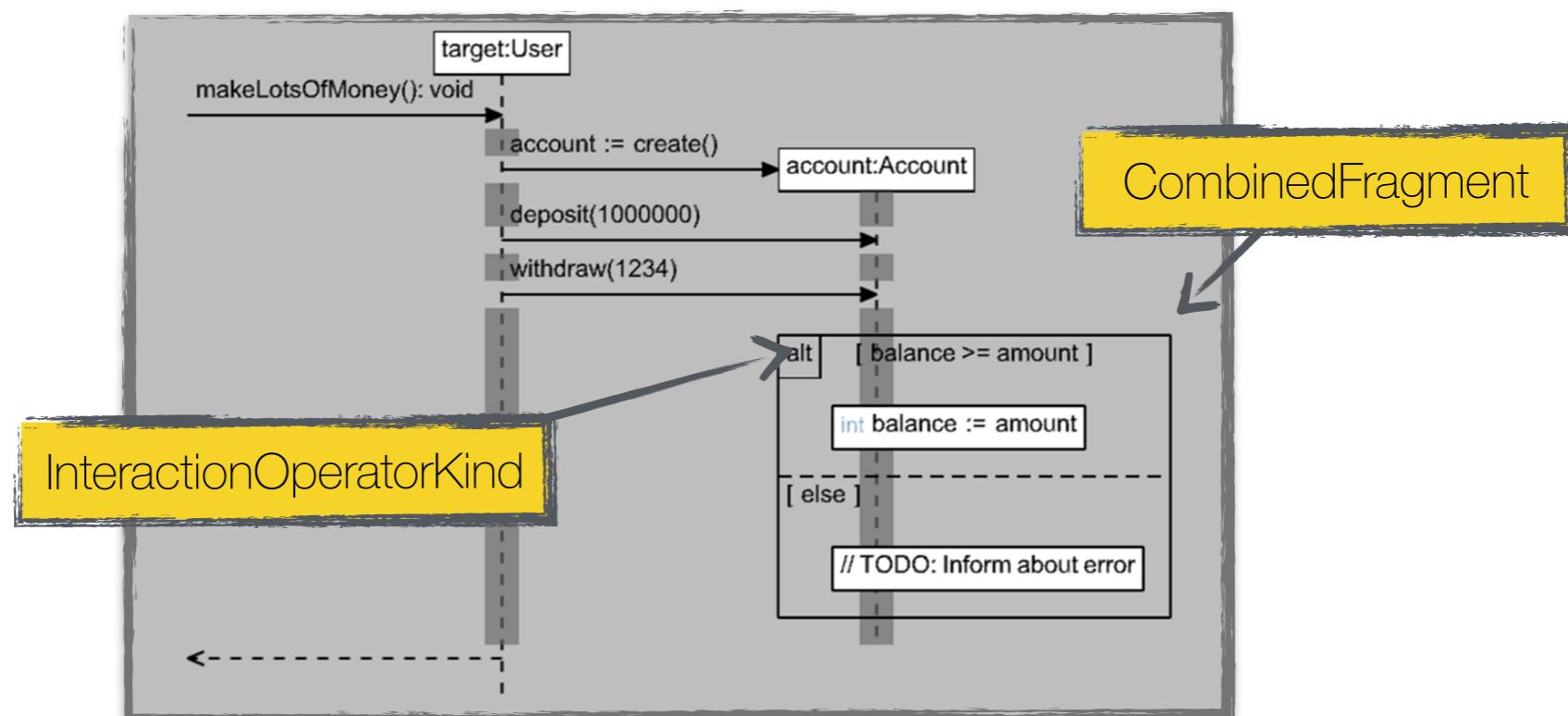
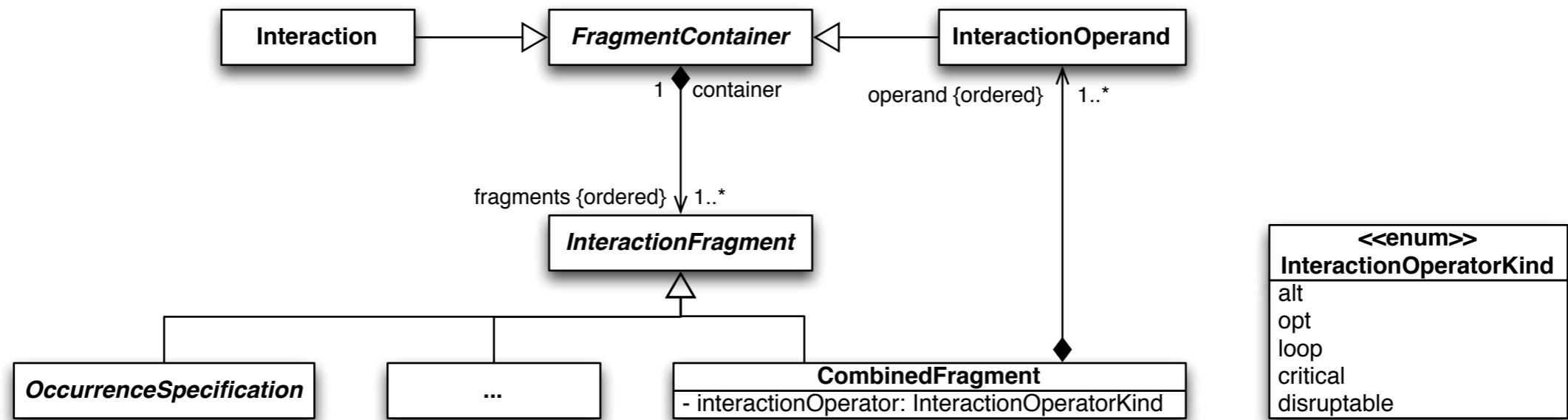
Message View Metamodel



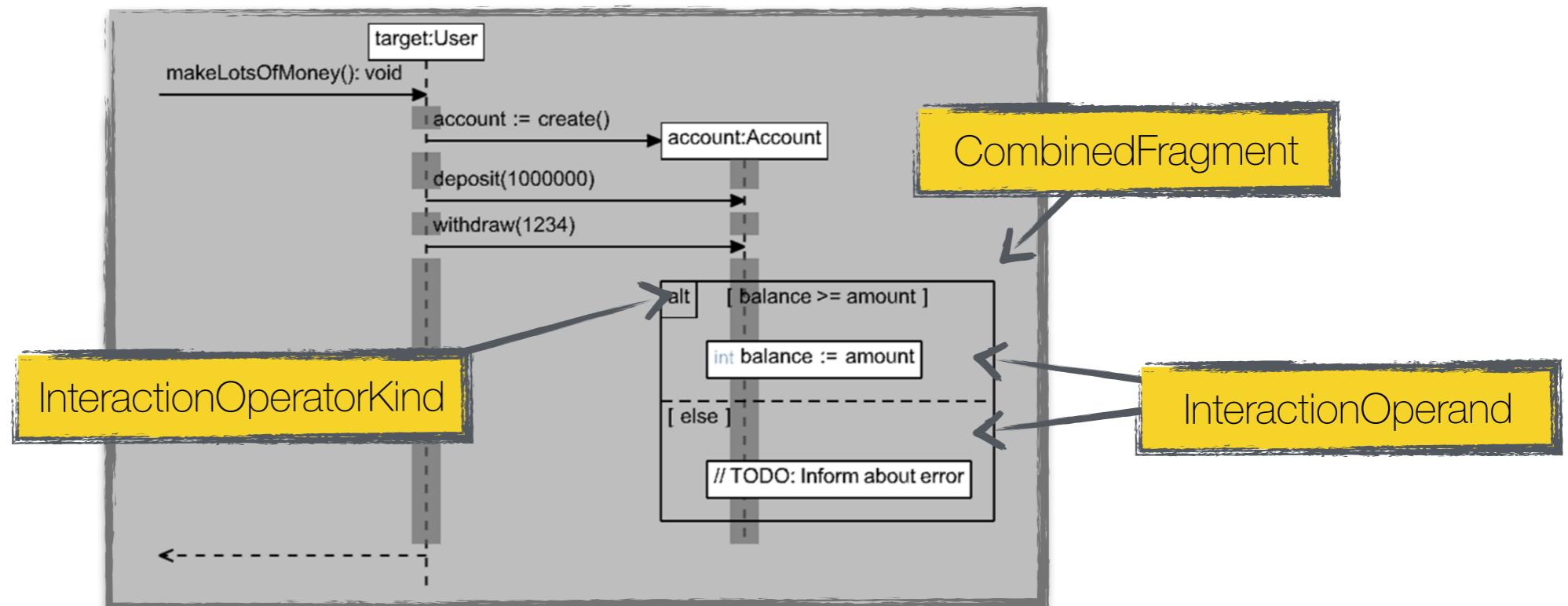
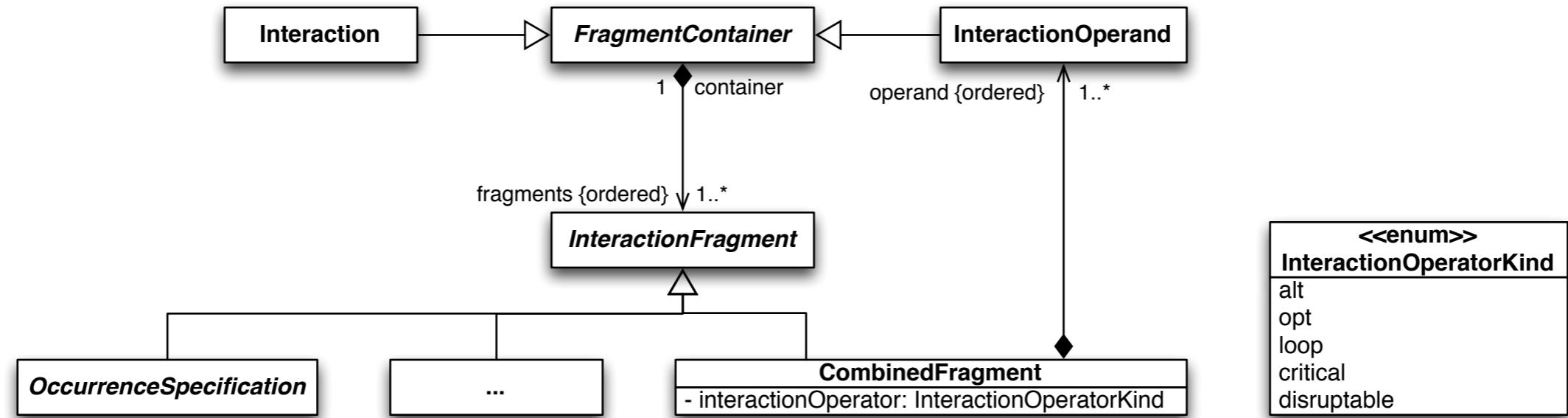
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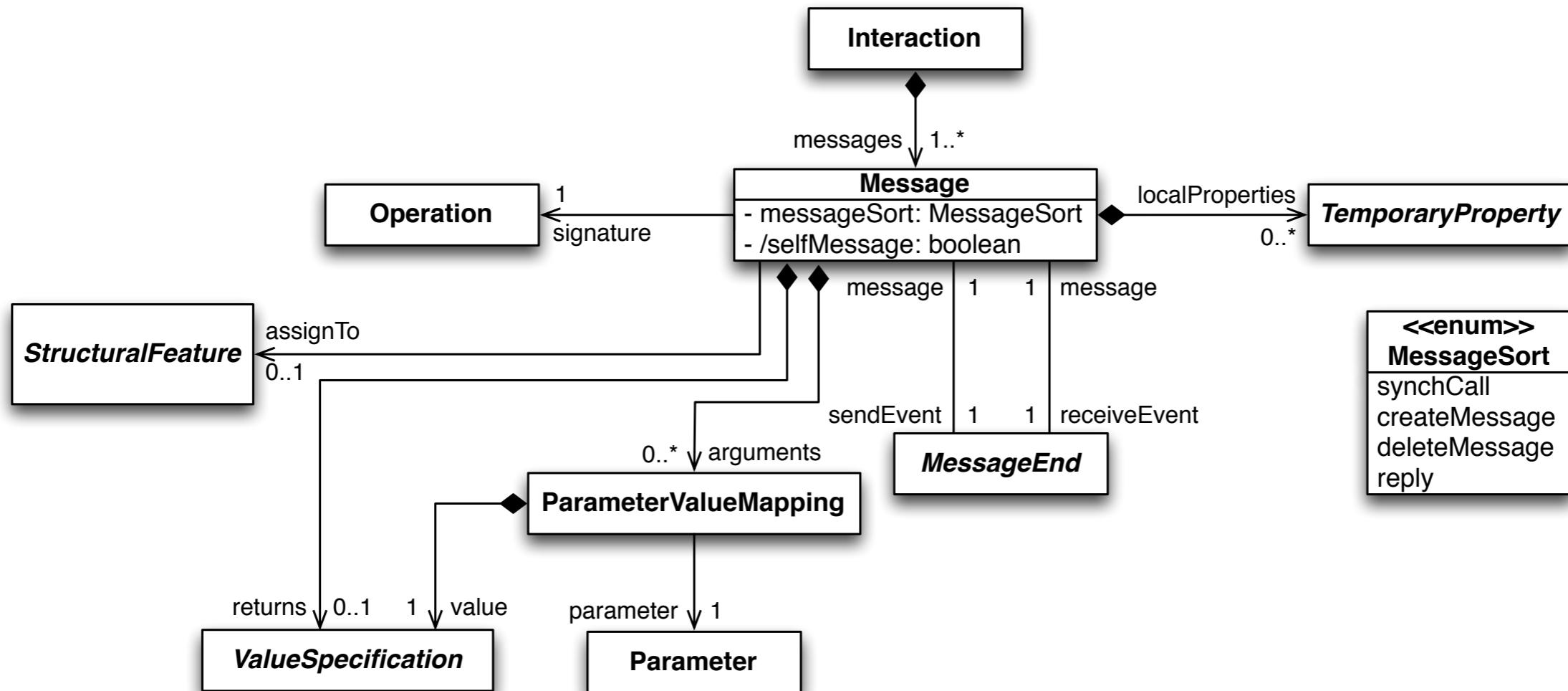
Message View Metamodel



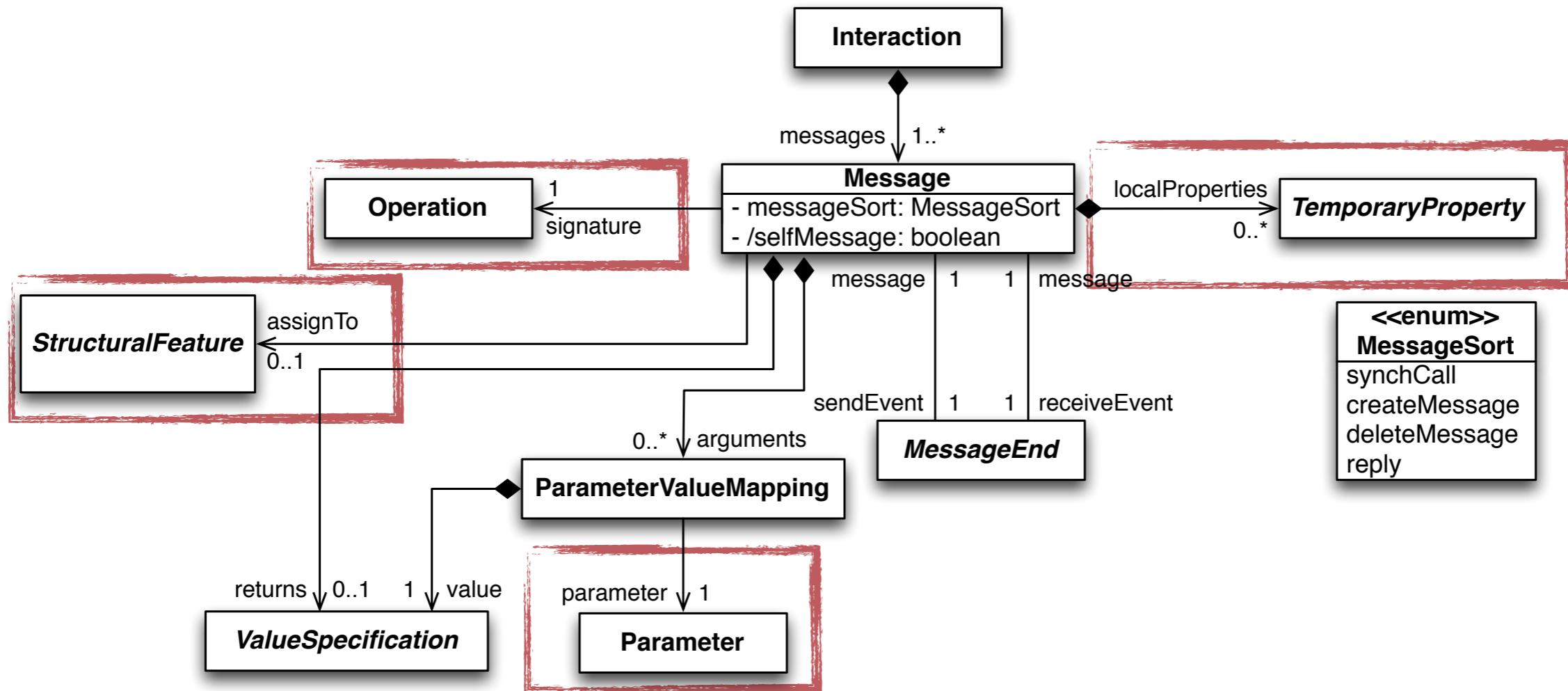
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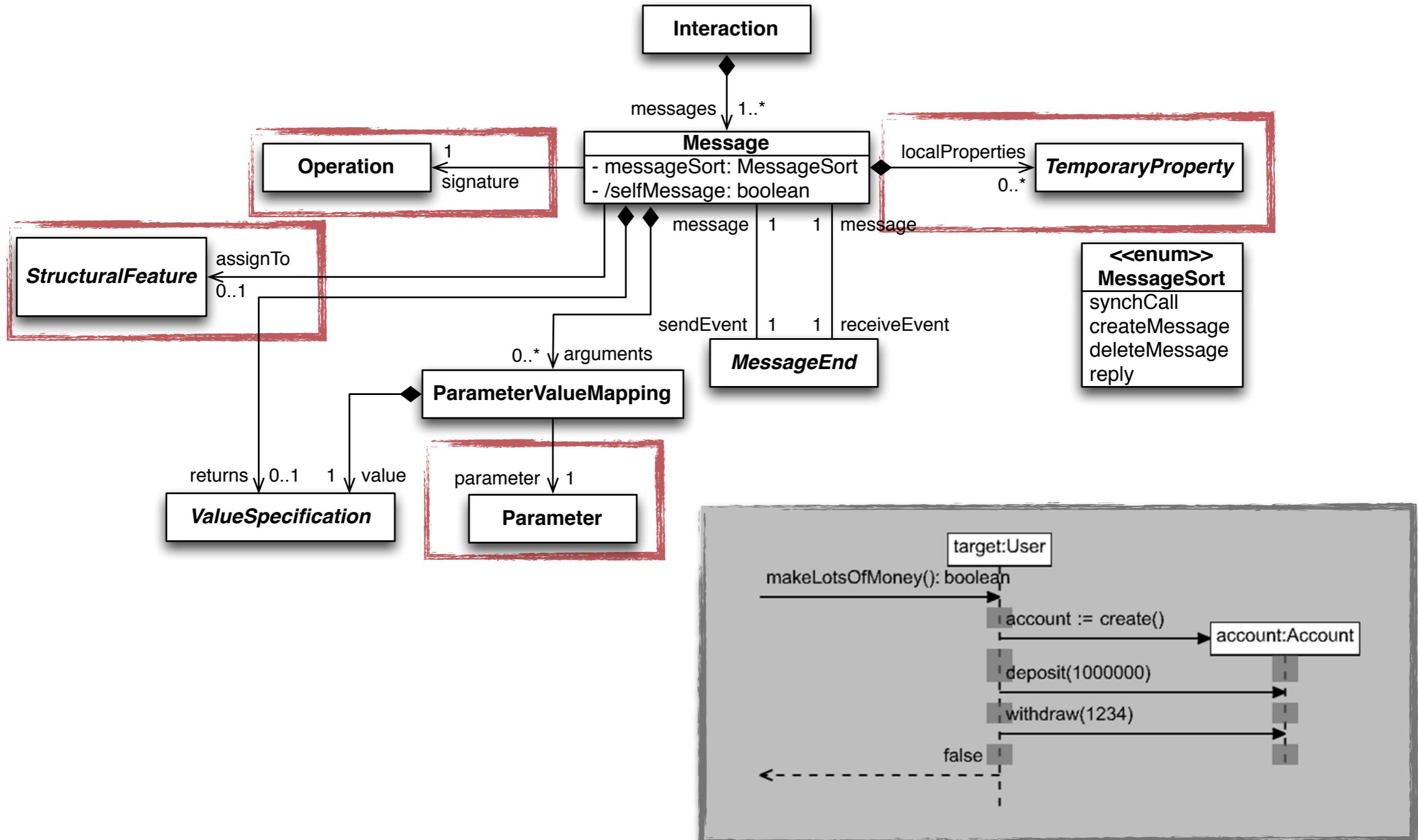
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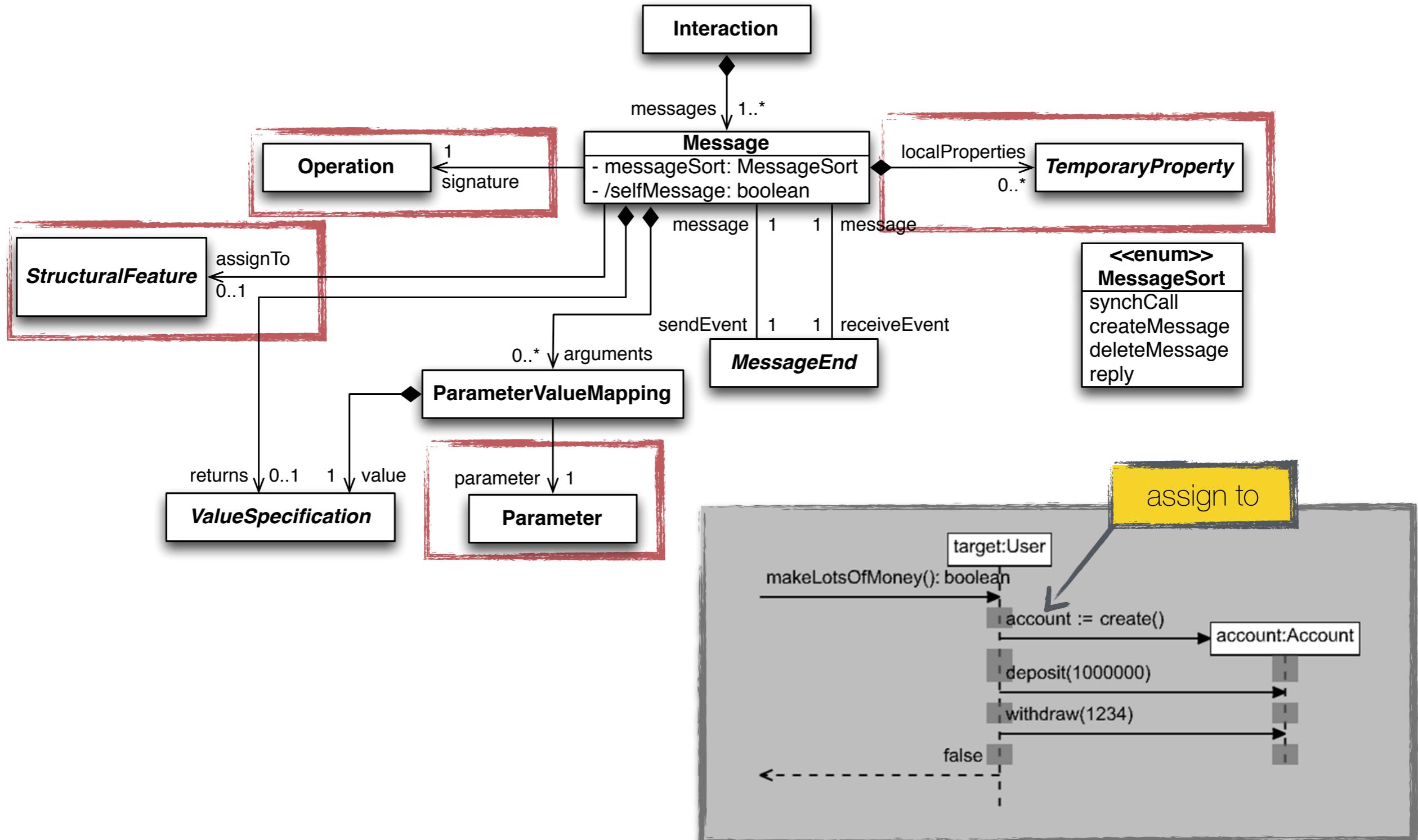
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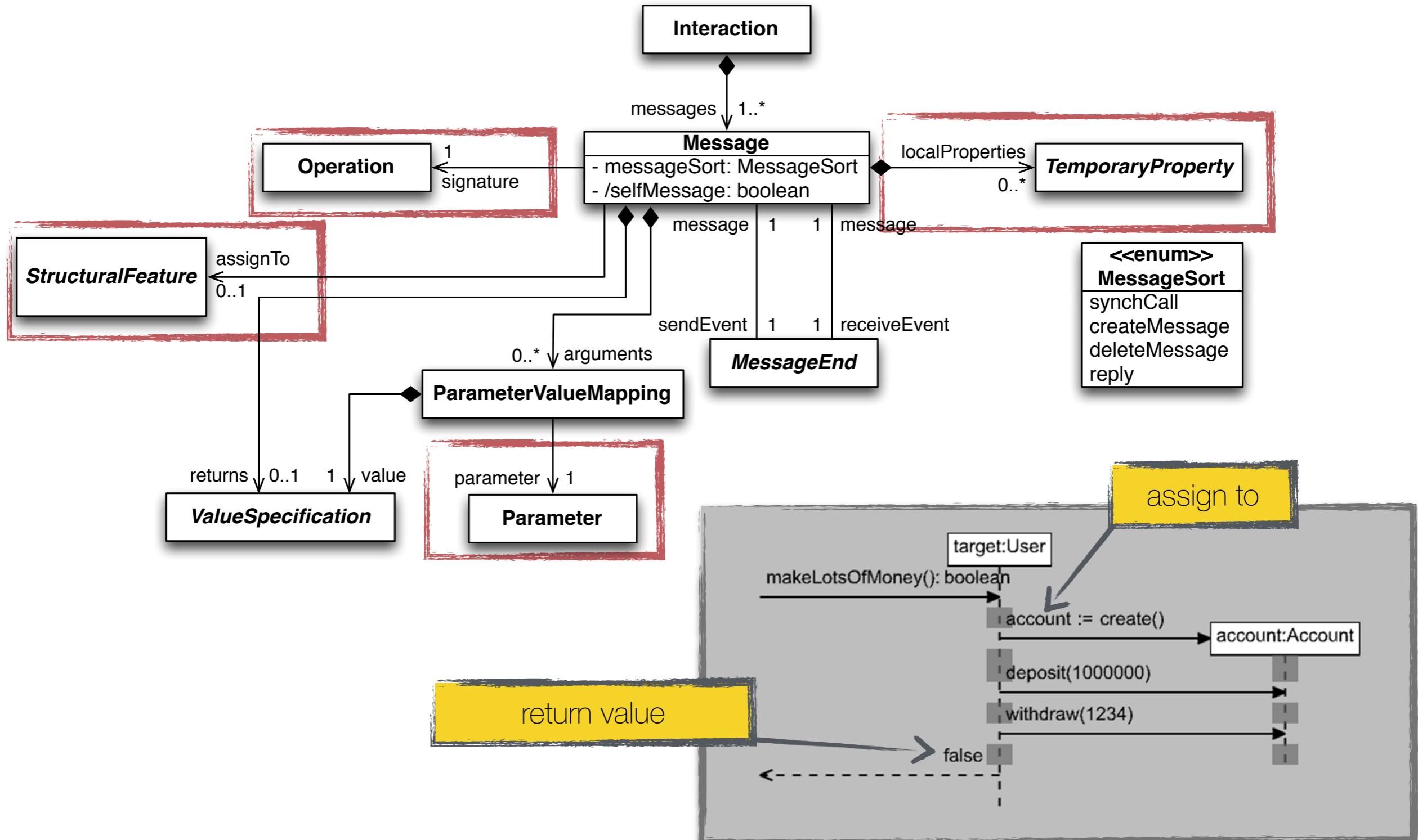
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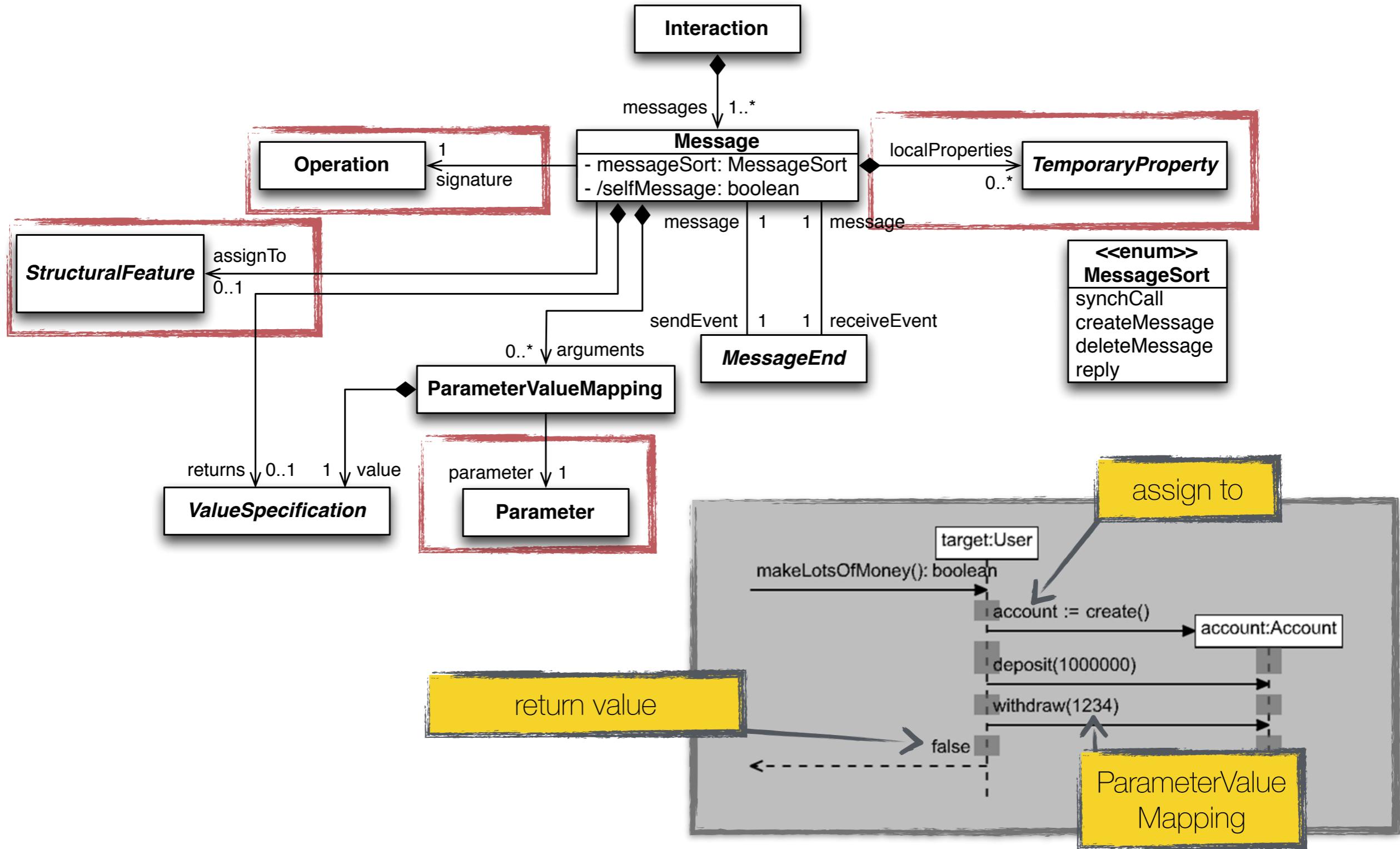
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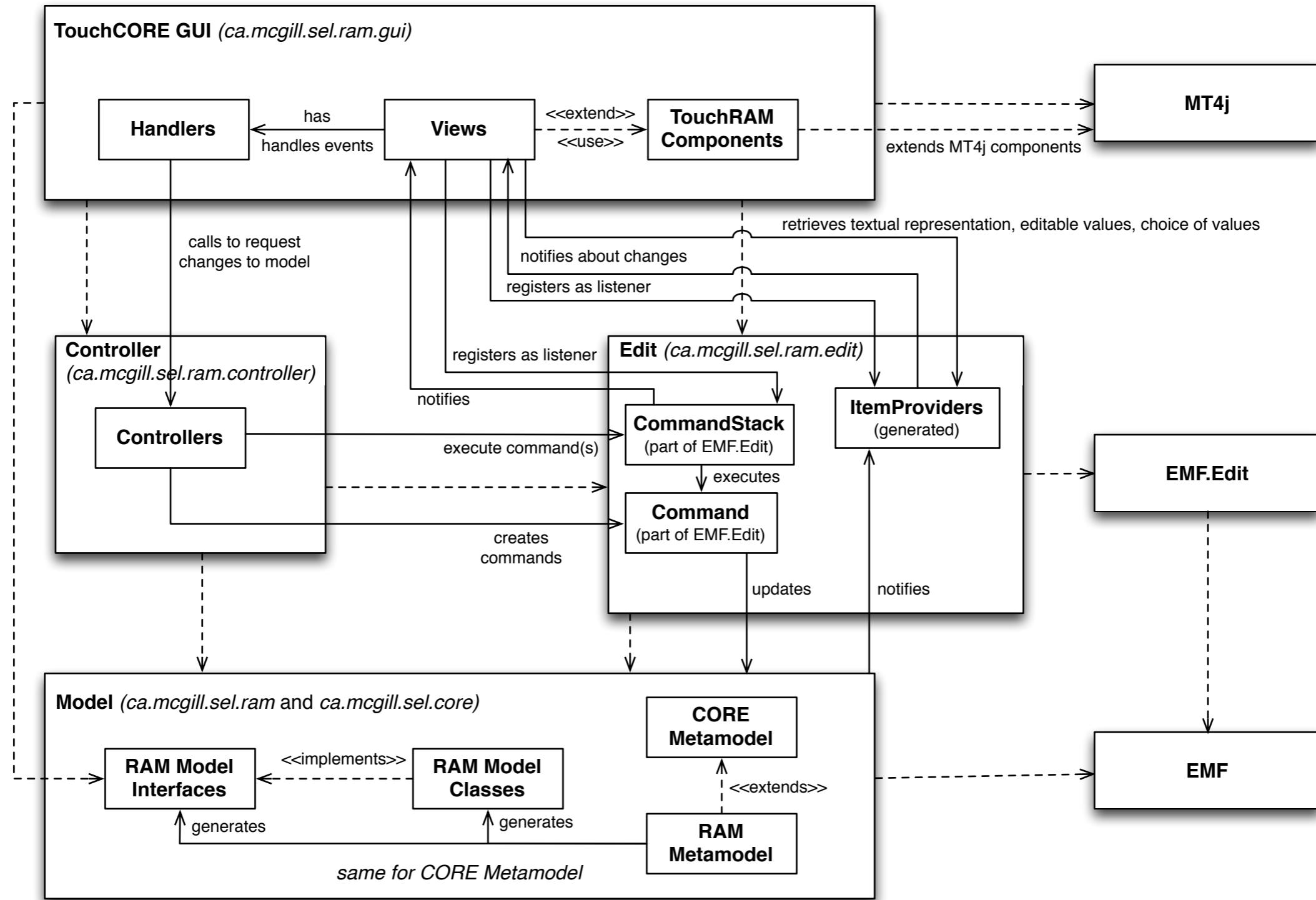
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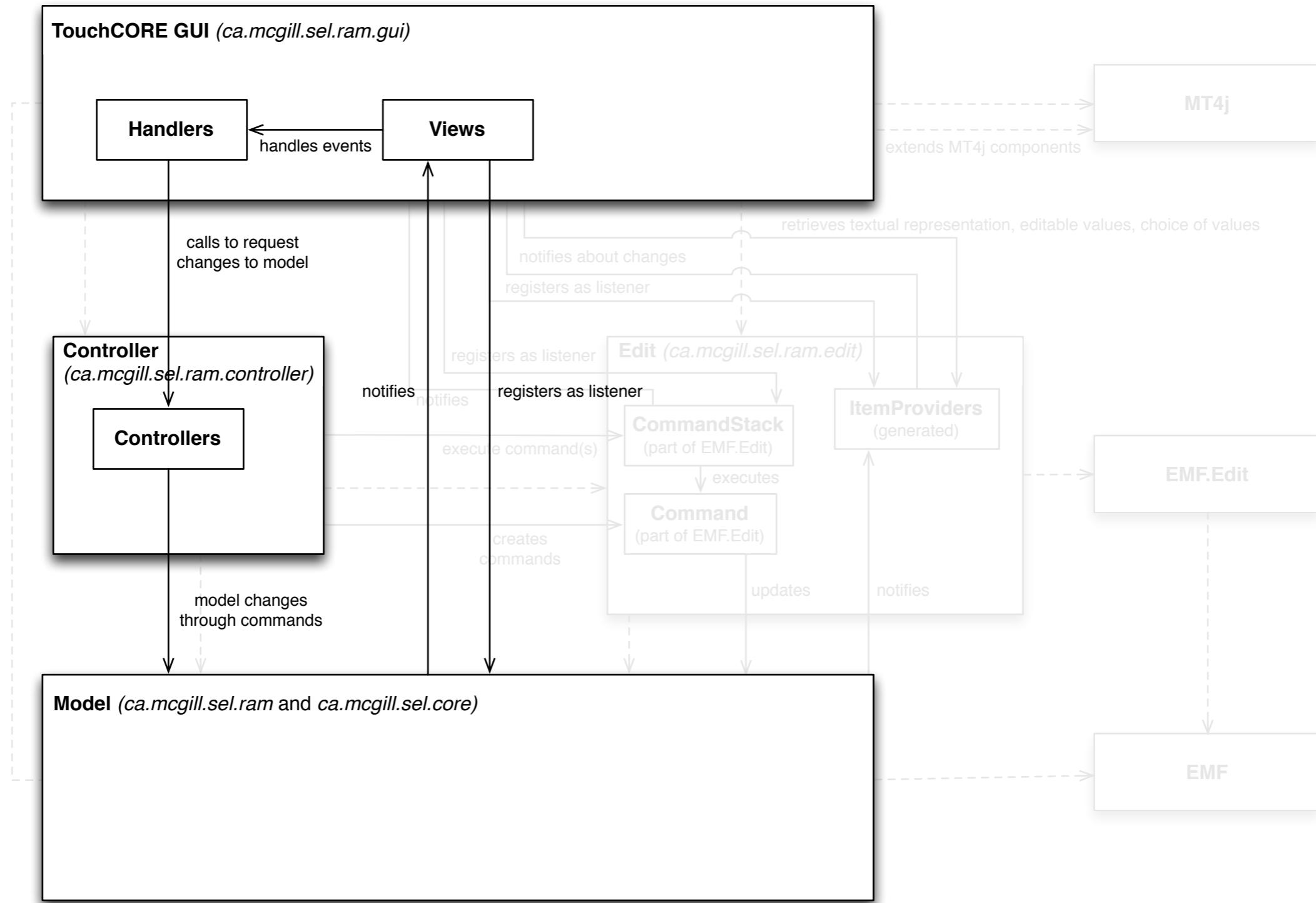
Message View Metamodel



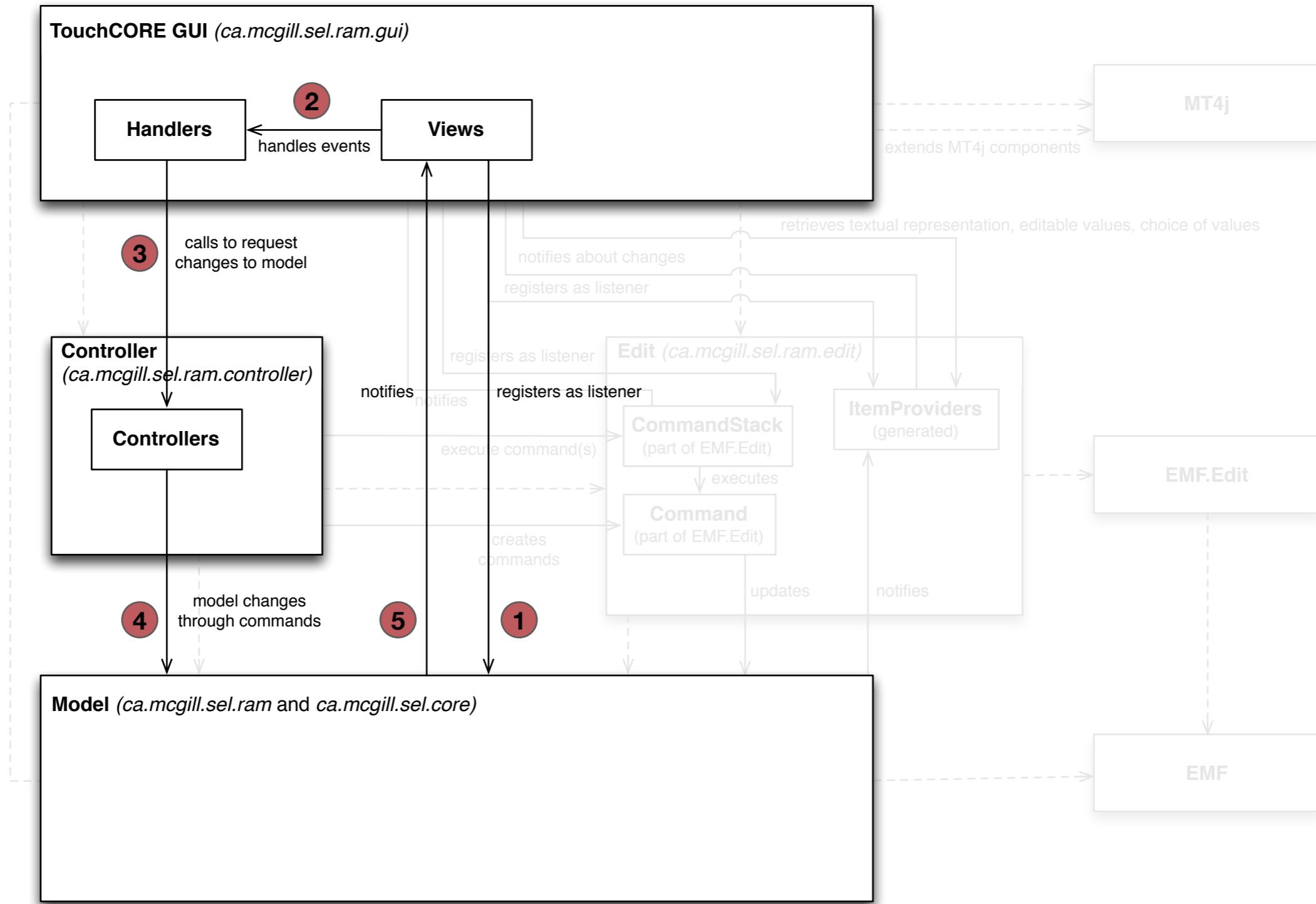
TouchCORE Architecture



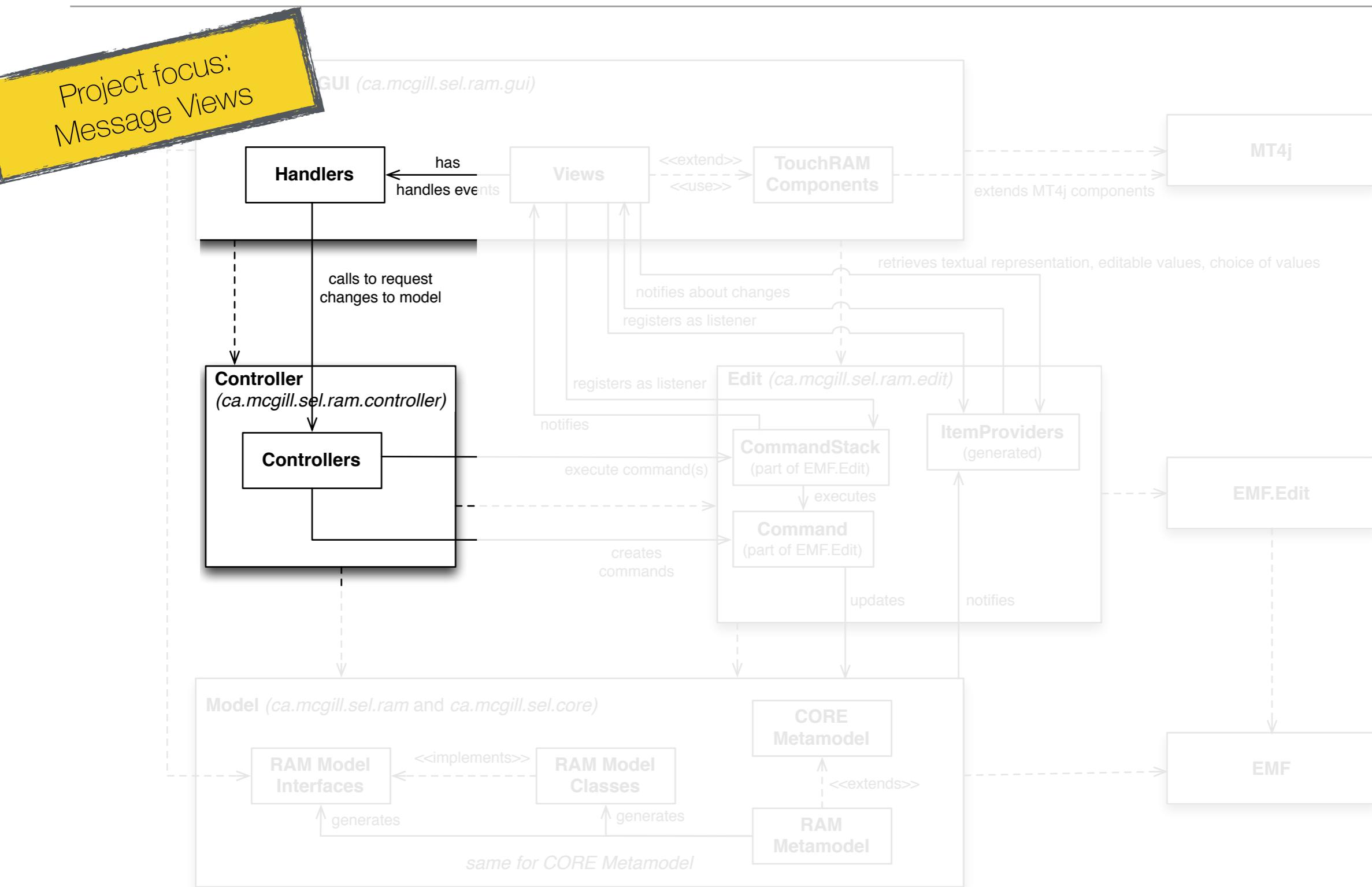
TouchCORE Architecture



TouchCORE Architecture



TouchCORE Architecture





eclipse

commit fd4fb95
“Fixes several severe bugs! mwahaha”

-Malicious Committer

TouchCORE: ECSE 429 Project

Your task

Follow instructions to get started

Explore the tool

Understand how it works

README

Code

Debug

Understand what it can do/is supposed to do

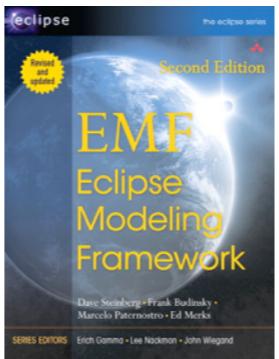
Javadoc

Start early!



Resources: EMF

EMF Book, 2nd ed. (2009)
by Ed Merks et al.



Eclipse Forums:

<https://www.eclipse.org/forums/index.php/f/108/>

Eclipse Wiki:

<https://wiki.eclipse.org/Category:EMF>

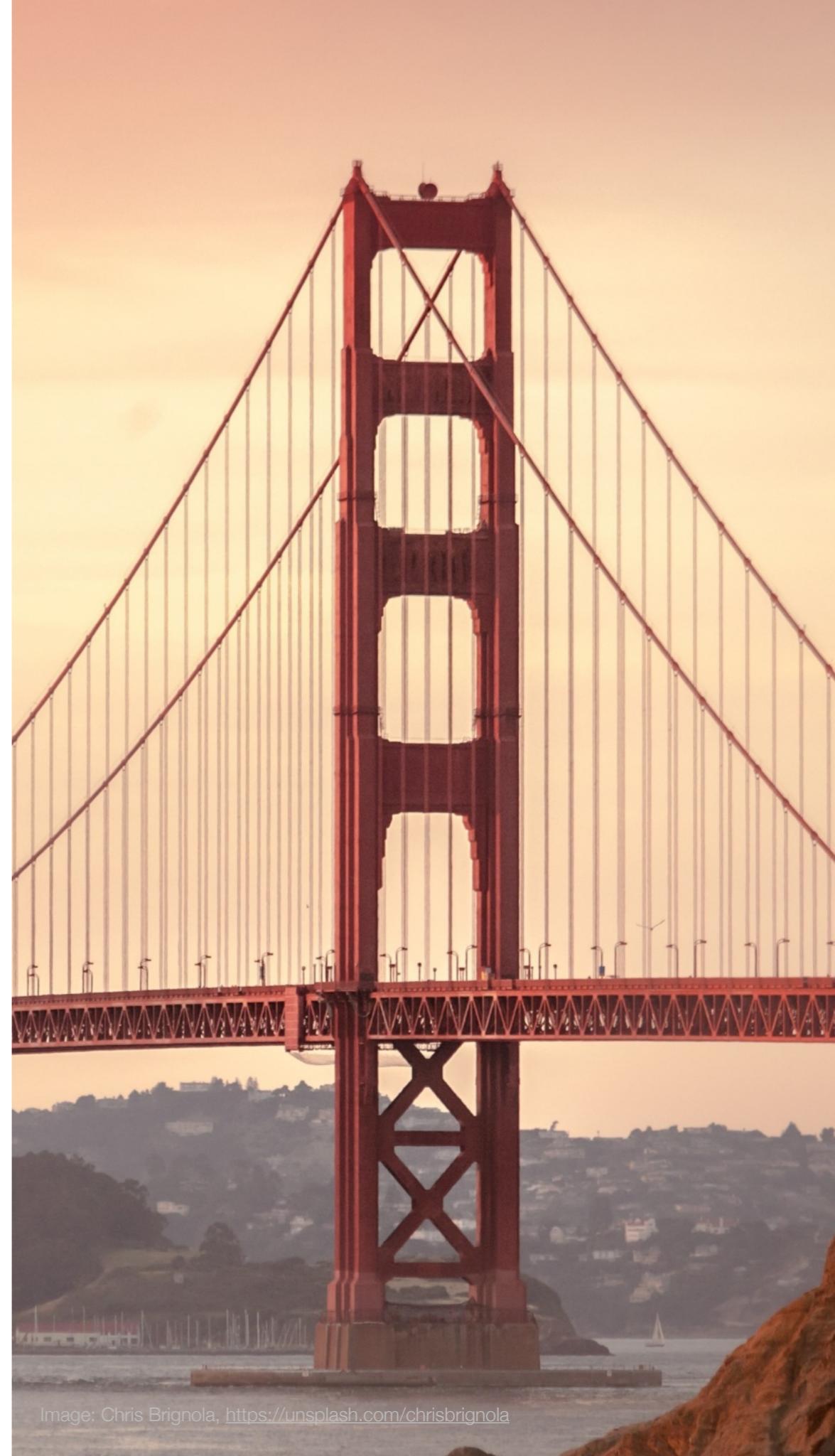
EMF Documents:

<https://www.eclipse.org/modeling/emf/docs/>

More Tutorials:

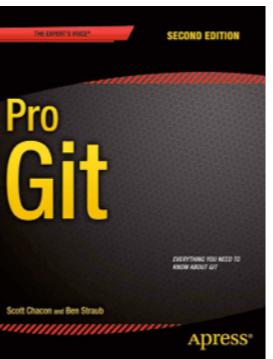
<http://www.vogella.com/tutorials/eclipse.html>

<http://developer.eclipsesource.com/tutorials/#emf>



Resources: Git

Pro Git Book, 2nd ed. (2014)
<http://git-scm.com/book>



Git Immersion:

<http://gitimmersion.com/>

Git Learn Interactively:

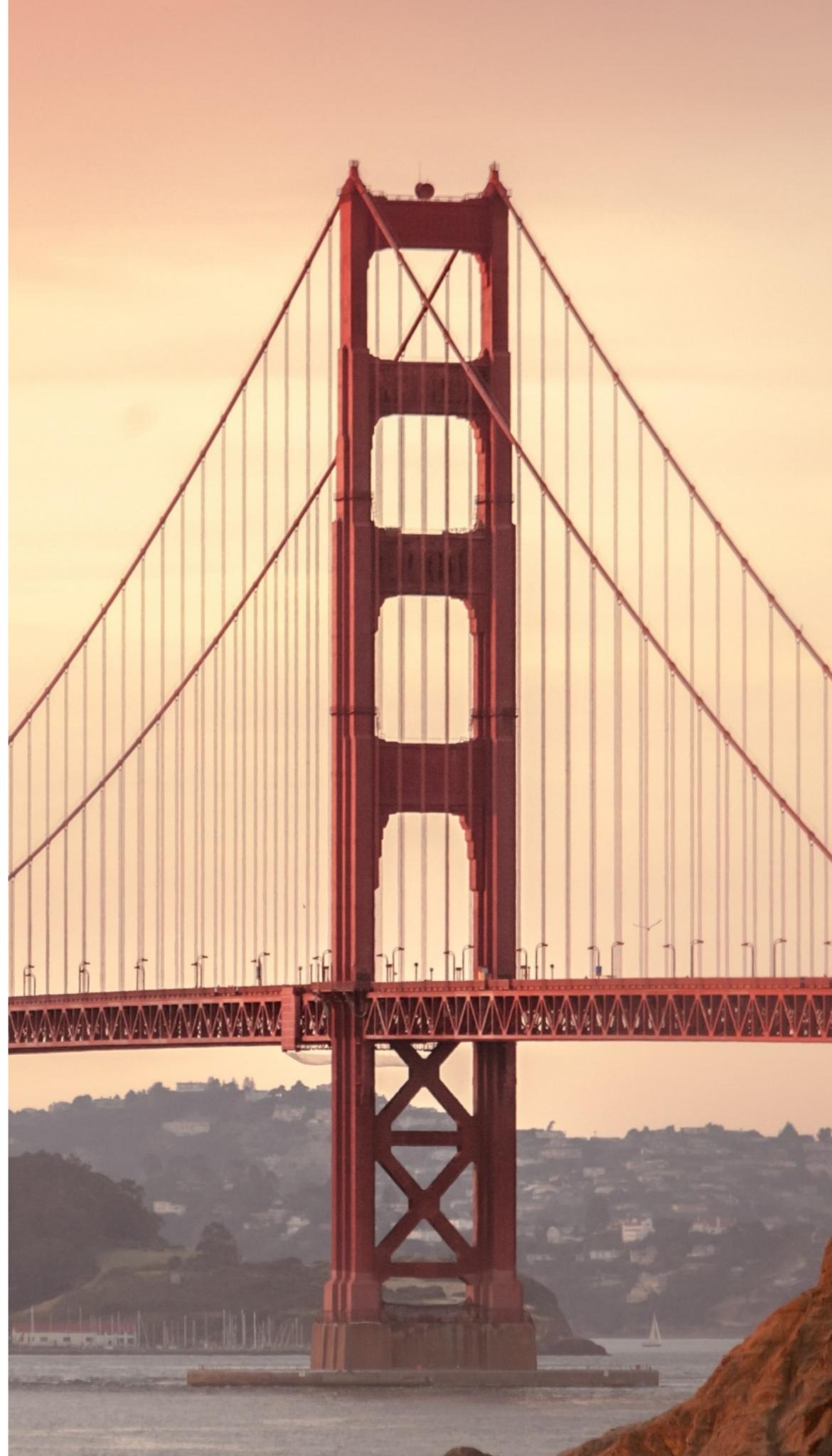
<https://try.github.io/levels/1/challenges/1>

Egit User Guide:

http://wiki.eclipse.org/EGit/User_Guide

Subversion Re-education:

<http://hginit.com/00.html>



Contact

Discussion Board:

<https://mycourses2.mcgill.ca/>

Email:

mschoettle (at) cs.mcgill.ca
Subject: “ECSE429 Project: ...”

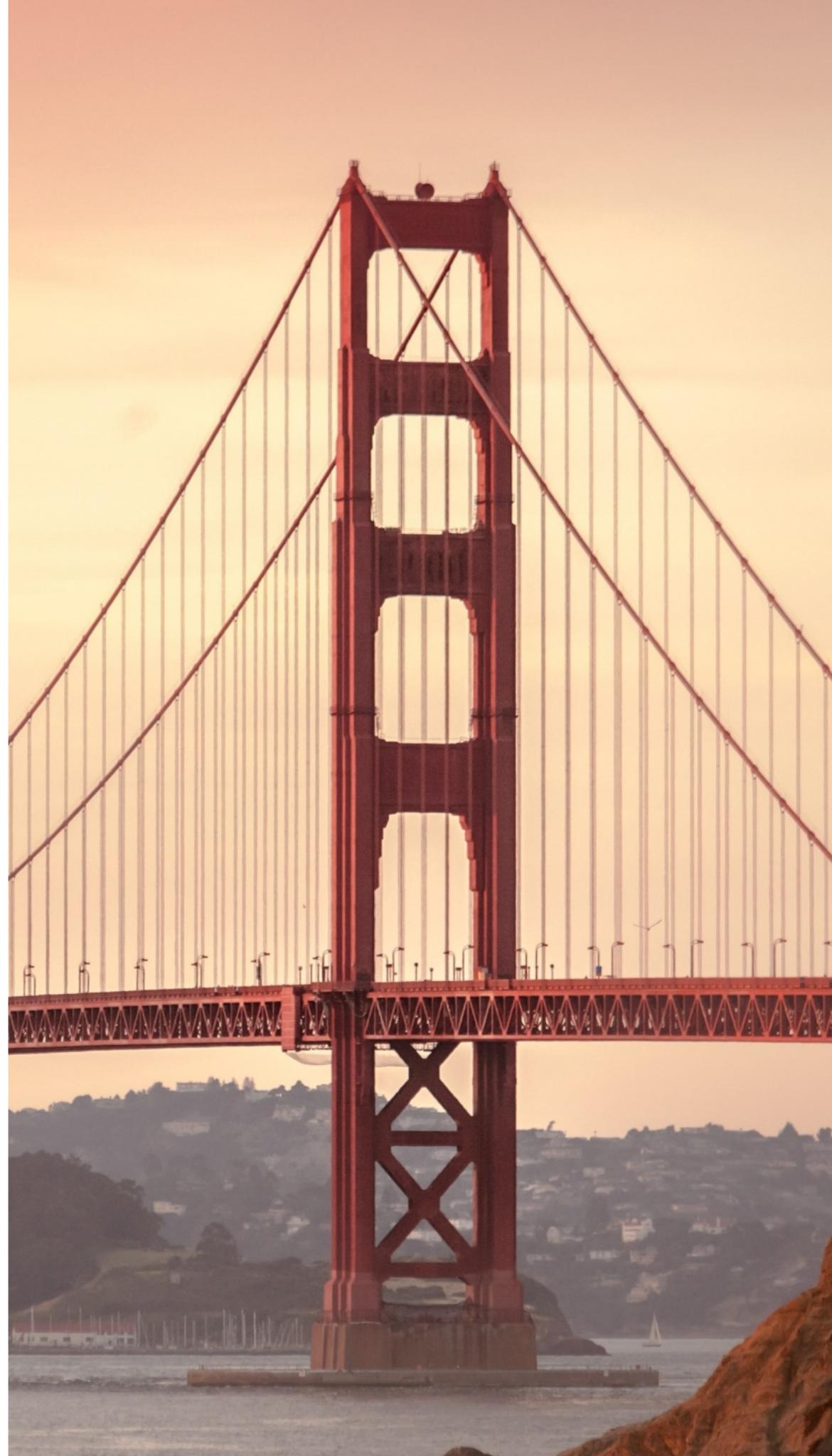
Office Hours:

Tuesdays, 13:30 - 14:30

Software Engineering Lab

McConnell 322

Or send an email



Questions?

