UNIVERSITÉ DE MONTPELLIER

I.U.T MONTPELLIER - SETE

Diagramme de Séquence

Bases de la Conception Orientée Objet - AS

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Diagramme de séquence

Définition

- **Diagramme de Séquence** permet de modéliser un point de vue temporel des interactions User-System et/ou Object-Object.

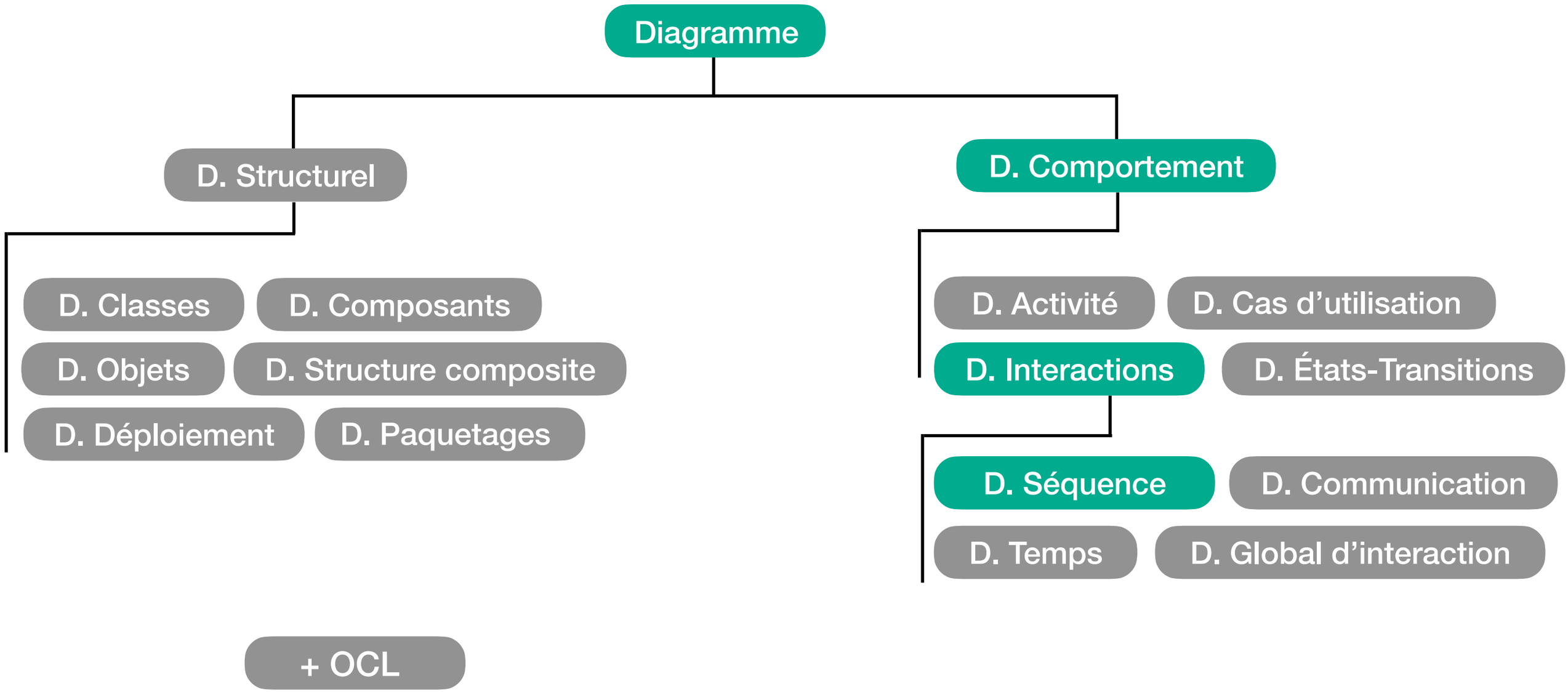
- **Phase d'analyse (User-System)**
  - Système = boite noire
  - Interaction entre acteurs et système
  - Description des cas d'utilisation

- **Phase de conception (Object-Object)**
  - Système = boite blanche
  - Interaction entre les objets
  - Affectation des responsabilités (création, accès, IHM,…)

- **Elaboration en parallèle avec le diagramme de classes**
  - Controle de cohérence entre les diagrammes

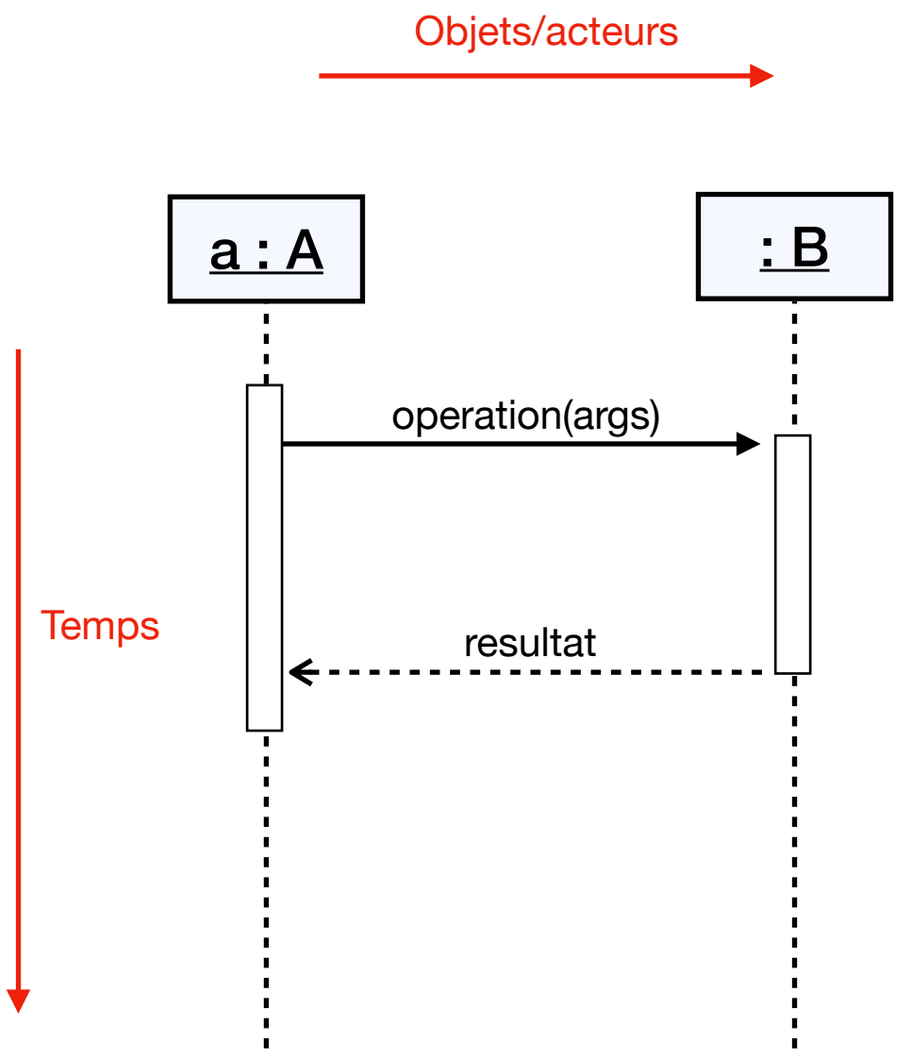
UML

Les diagrammes



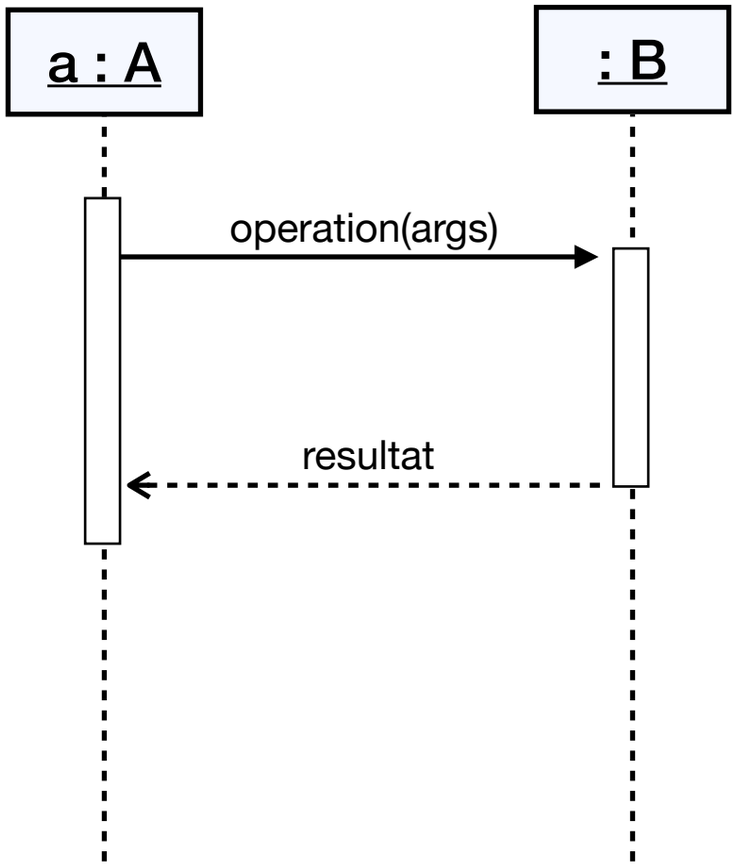
Syntaxe

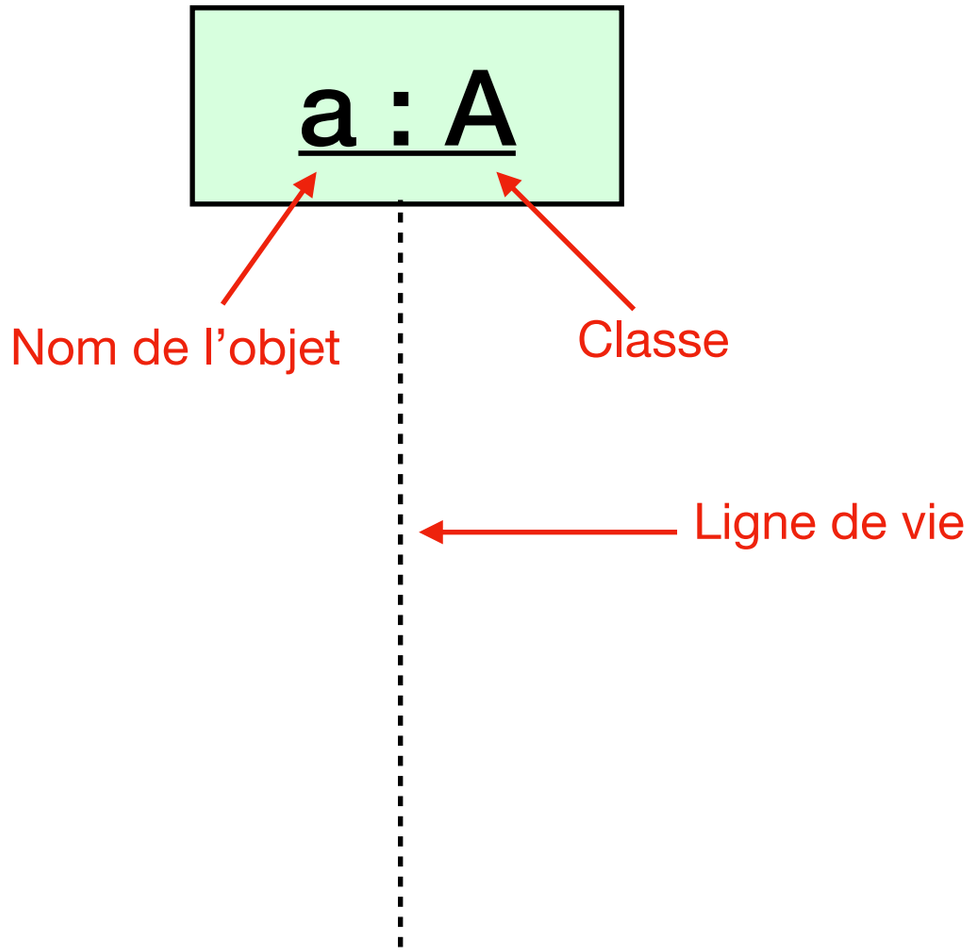
Dimensions



Syntaxe

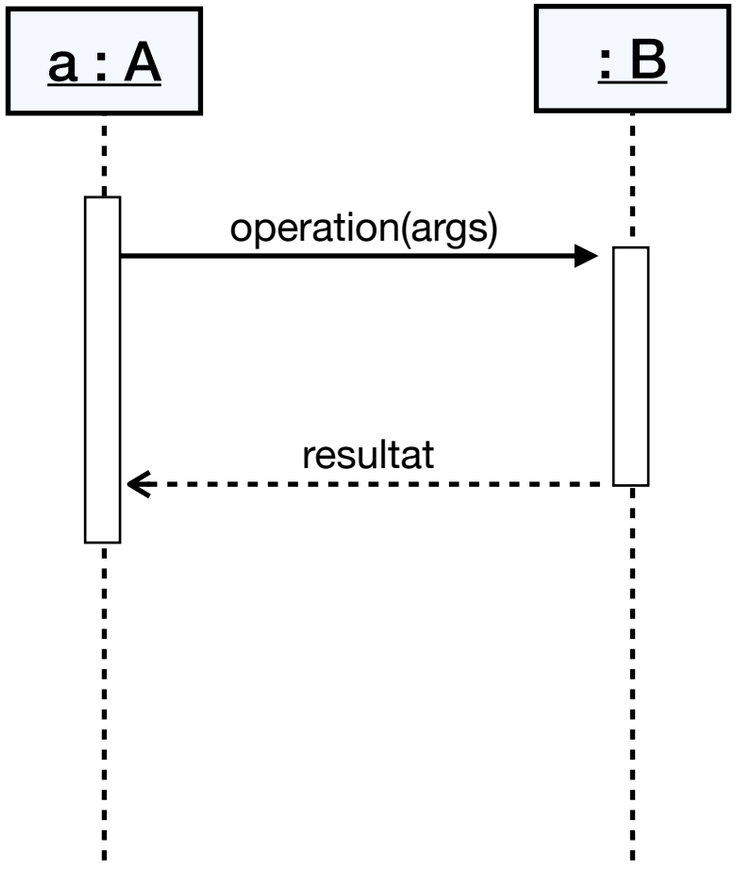
Ligne de vie

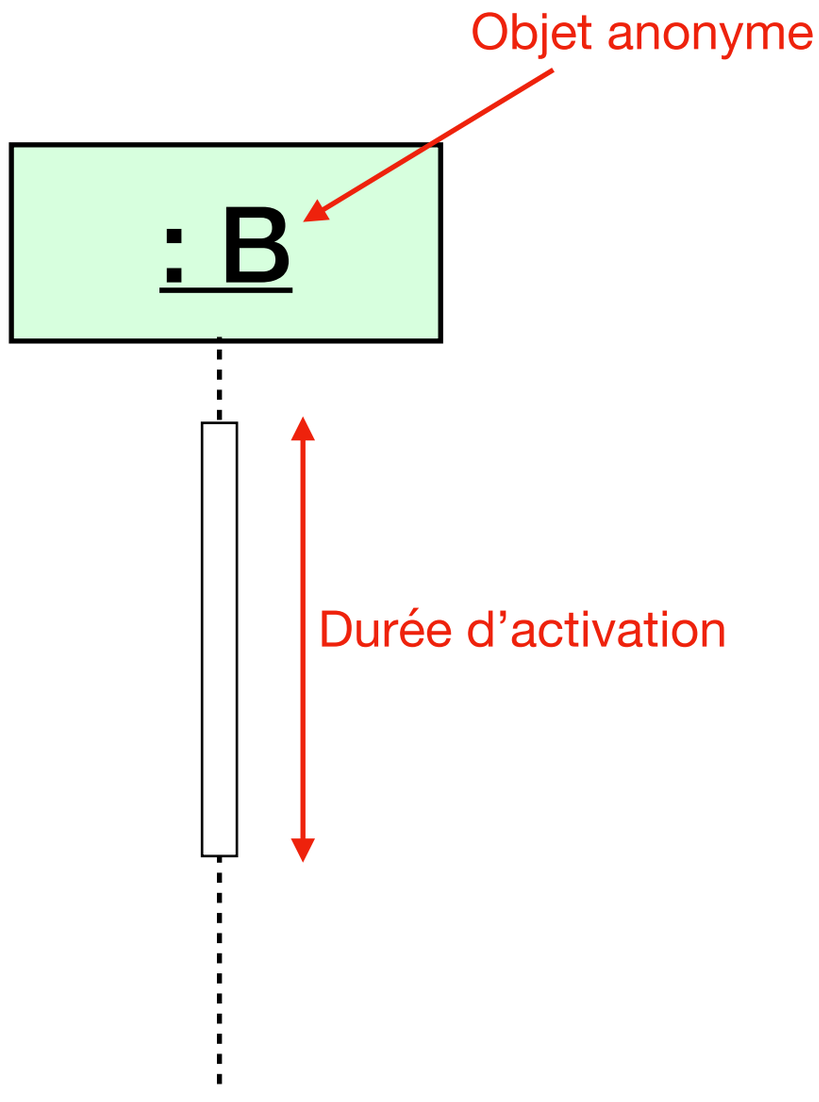




Syntaxe

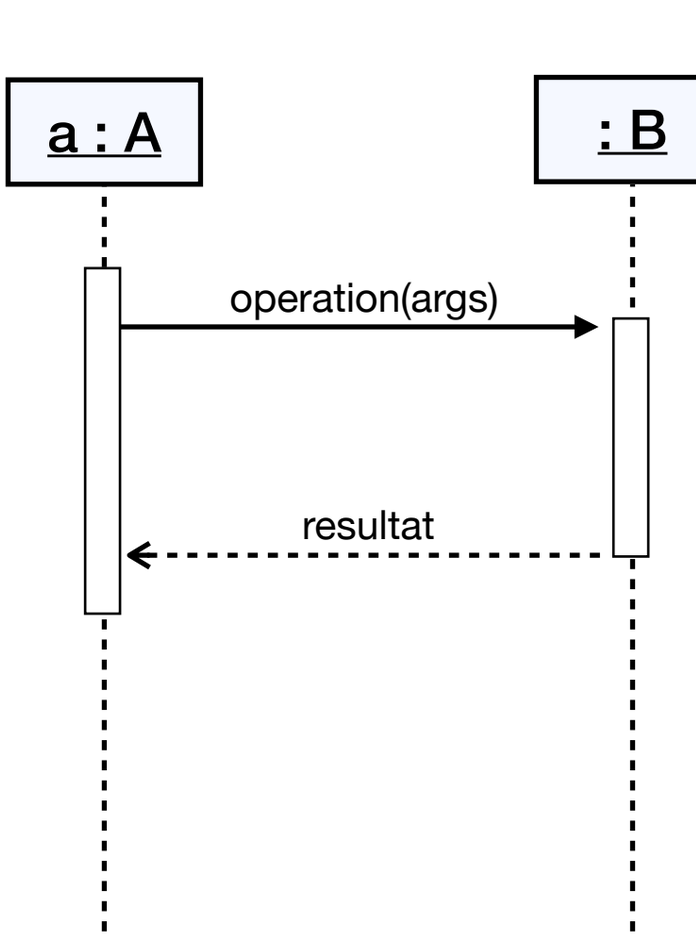
Objet anonyme

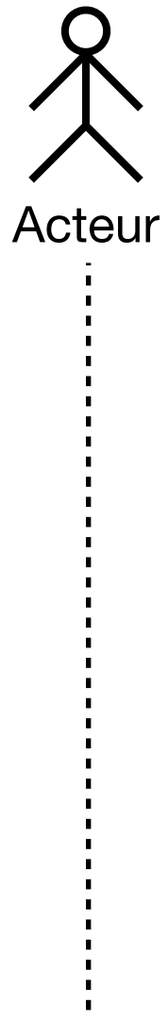




Syntaxe

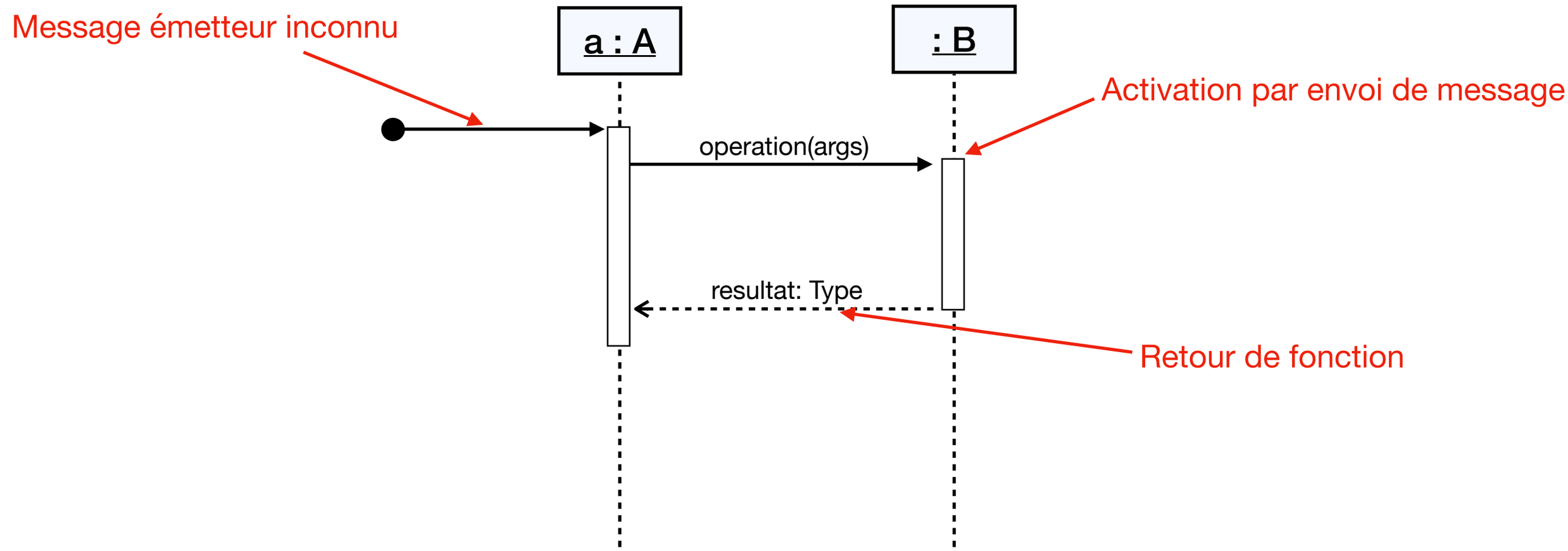
Acteurs





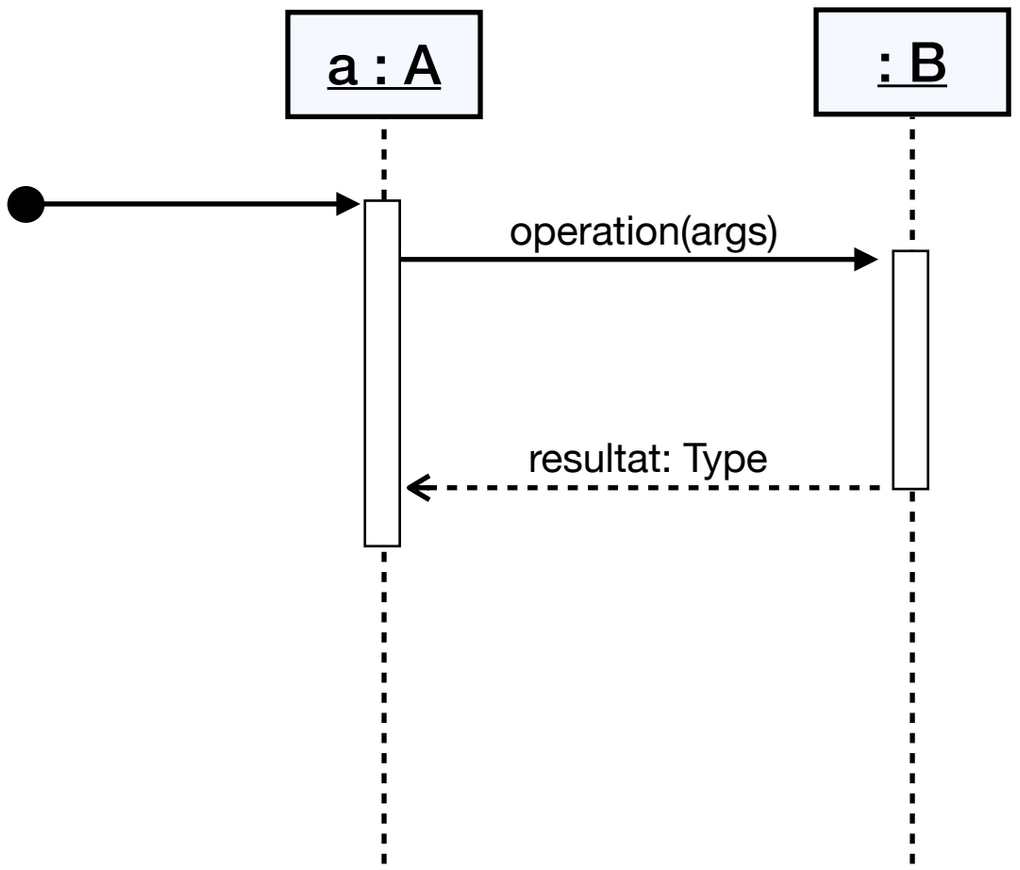
Syntaxe

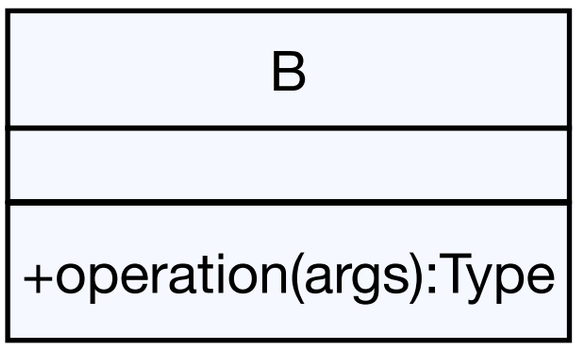
Messages et Activation



Syntaxe

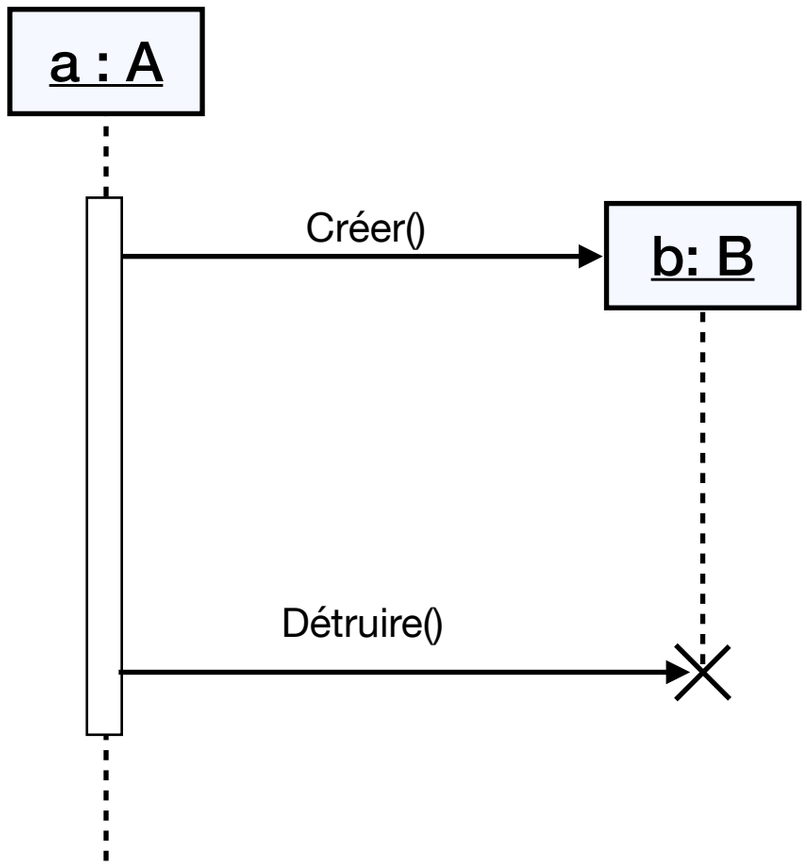
Cohérence avec les Classes





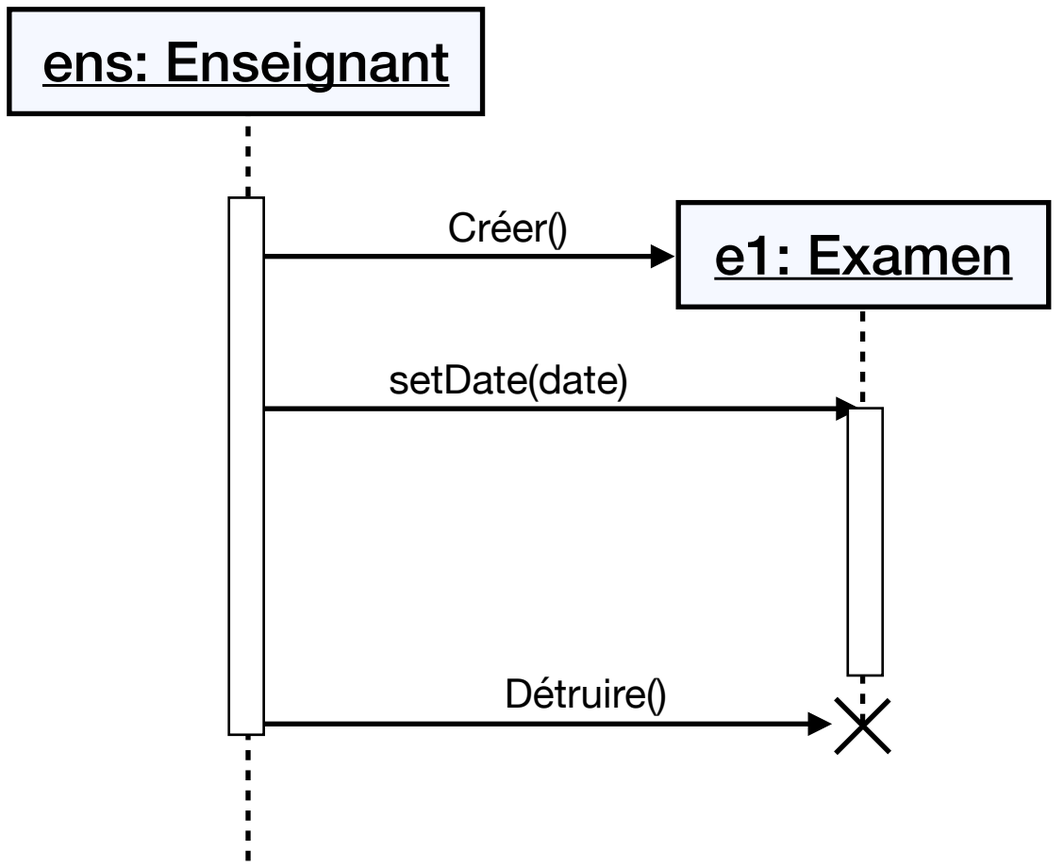
Syntaxe

Création / Destruction



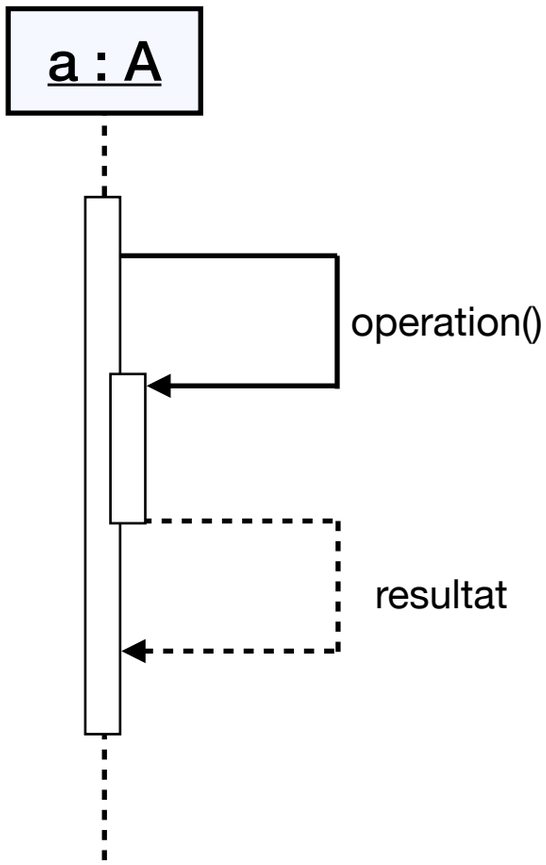
Syntaxe

Création / Destruction (exemple)



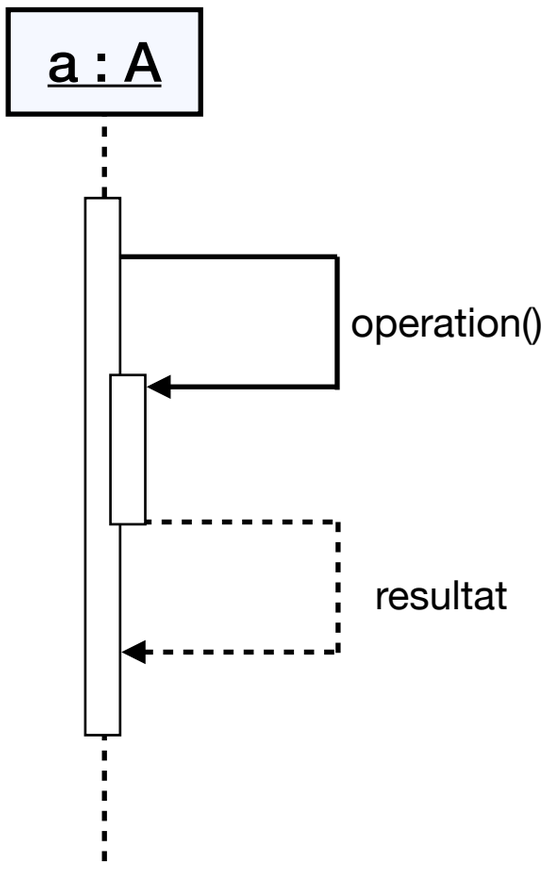
Syntaxe

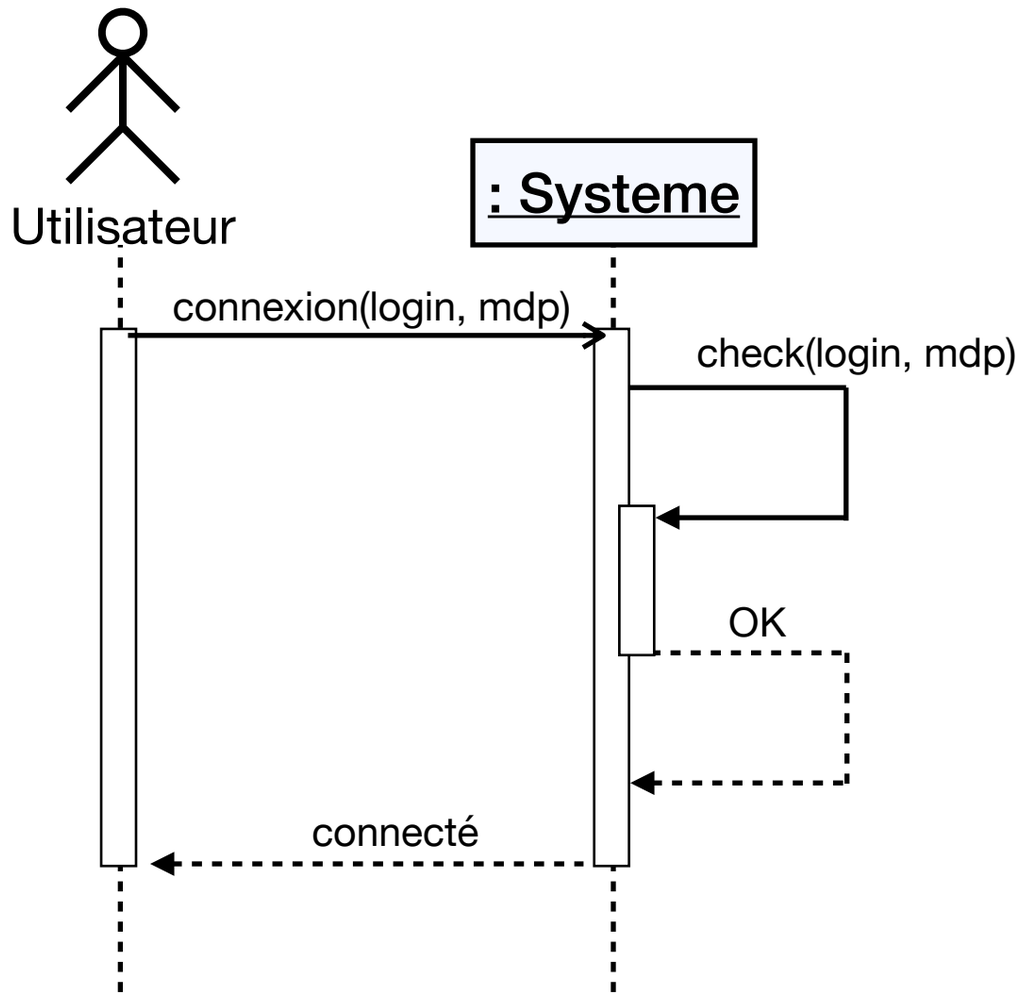
Messages réflexifs



Syntaxe

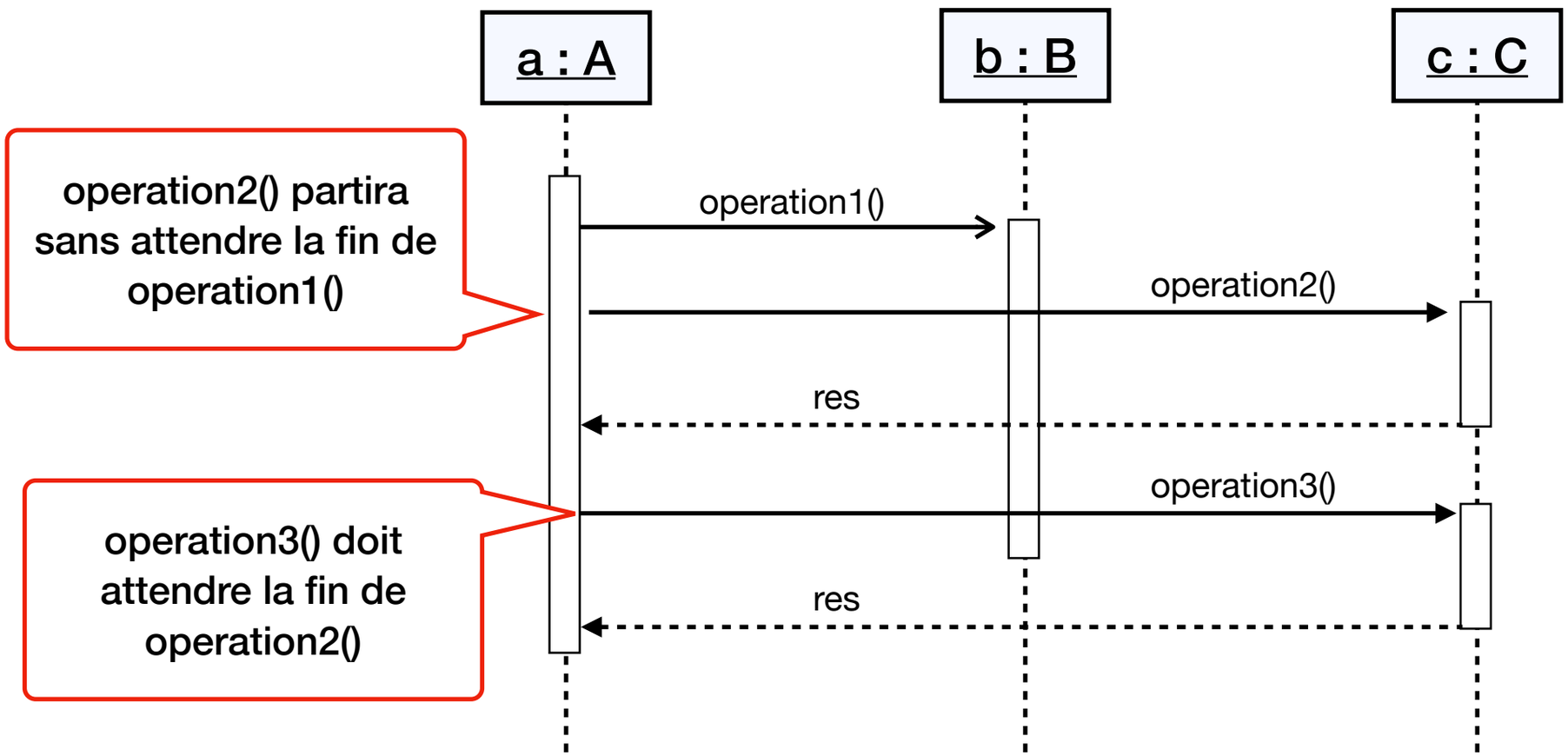
Messages  (exemple)





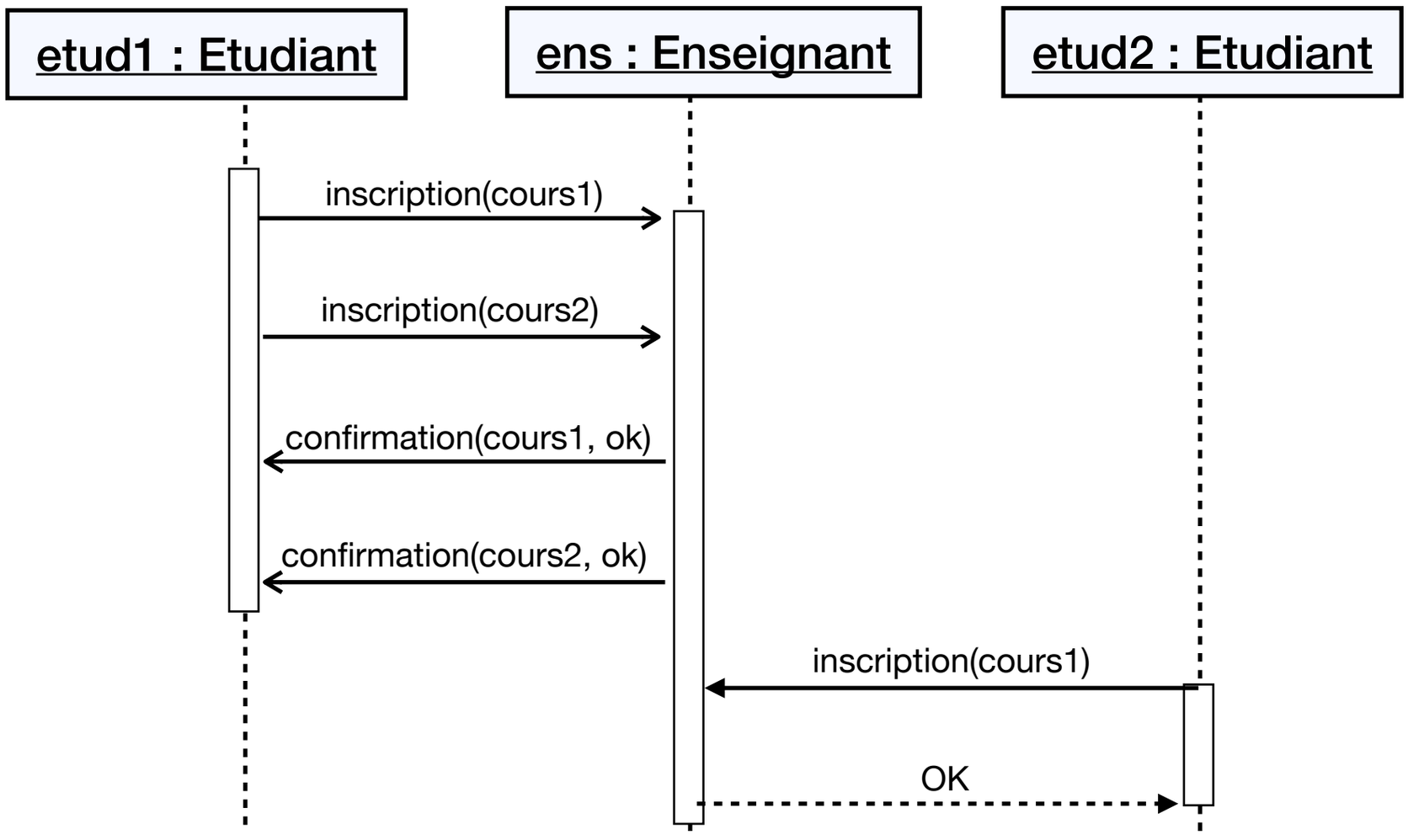
Syntaxe

Messages synchrones → / asynchrones →



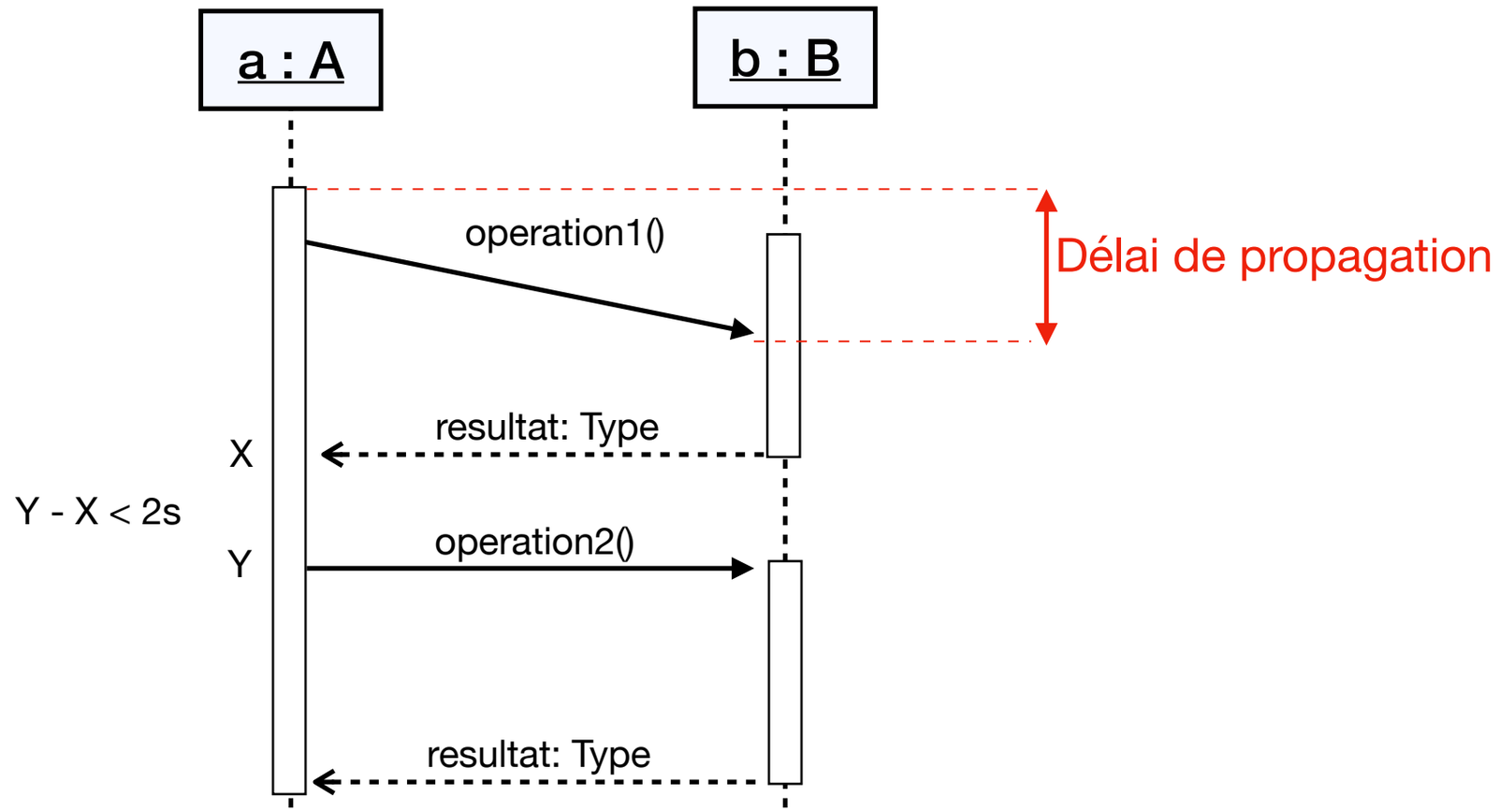
Syntaxe

Messages → / → (exemple)



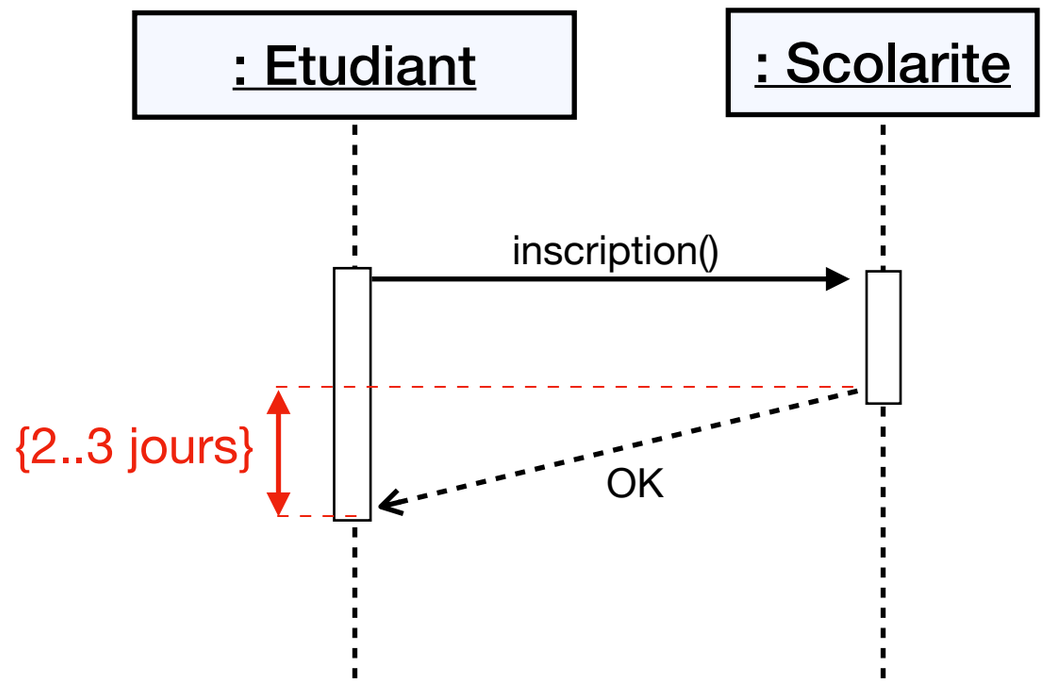
Syntaxe

Contraintes temporelles



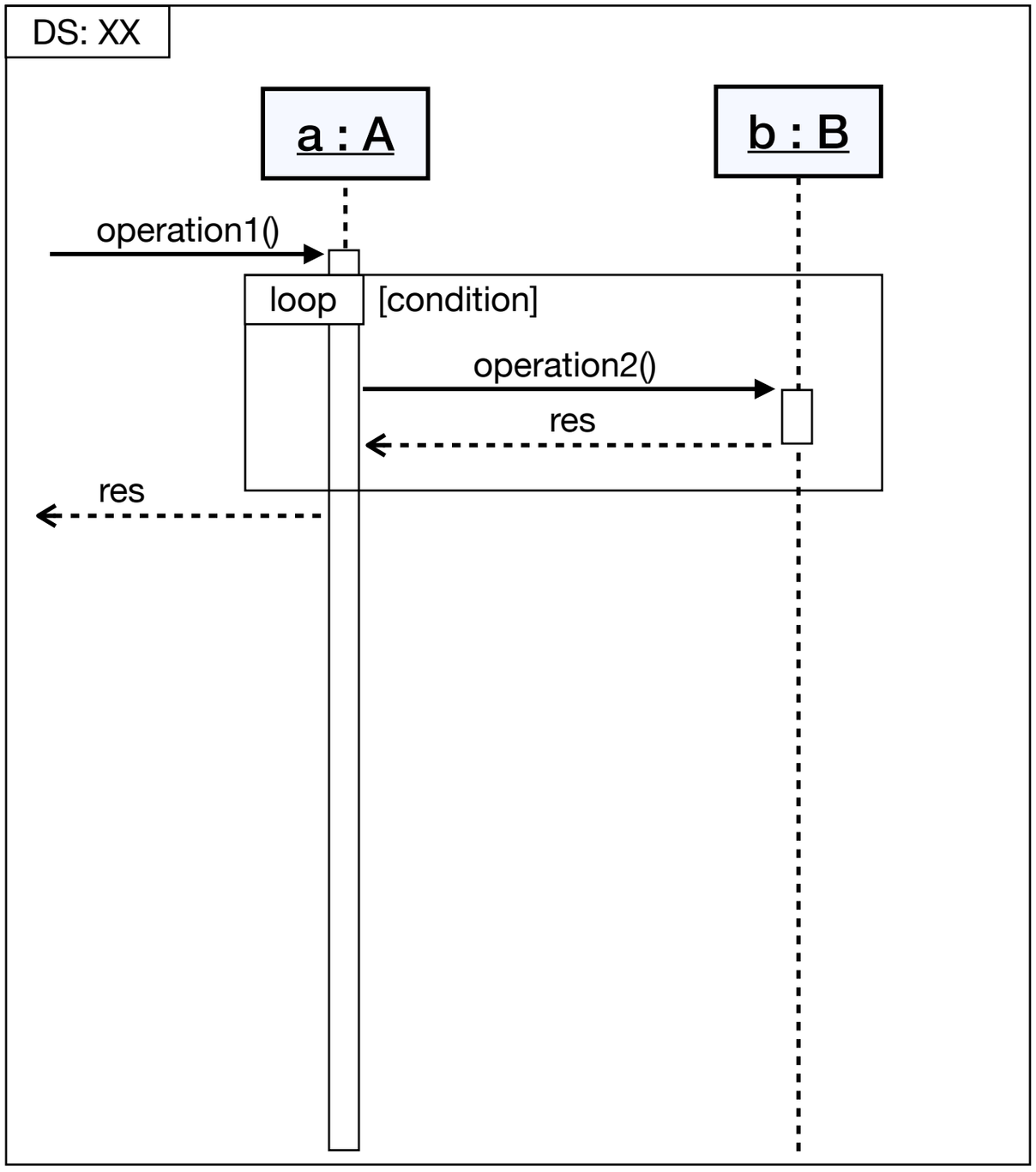
Syntaxe

Contraintes temporelles (exemple)



Syntaxe

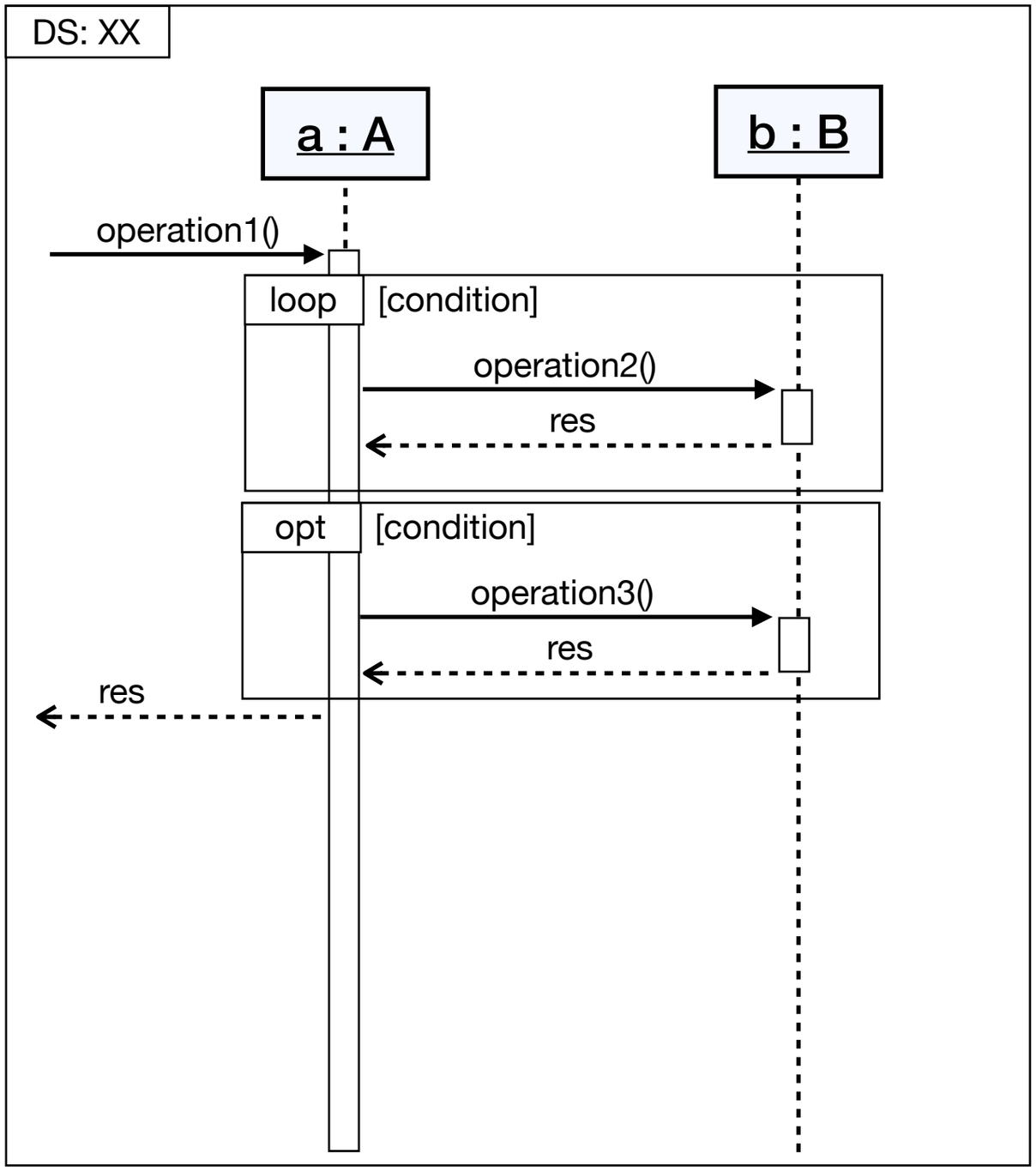
Les boucles



Les boucles

Syntaxe

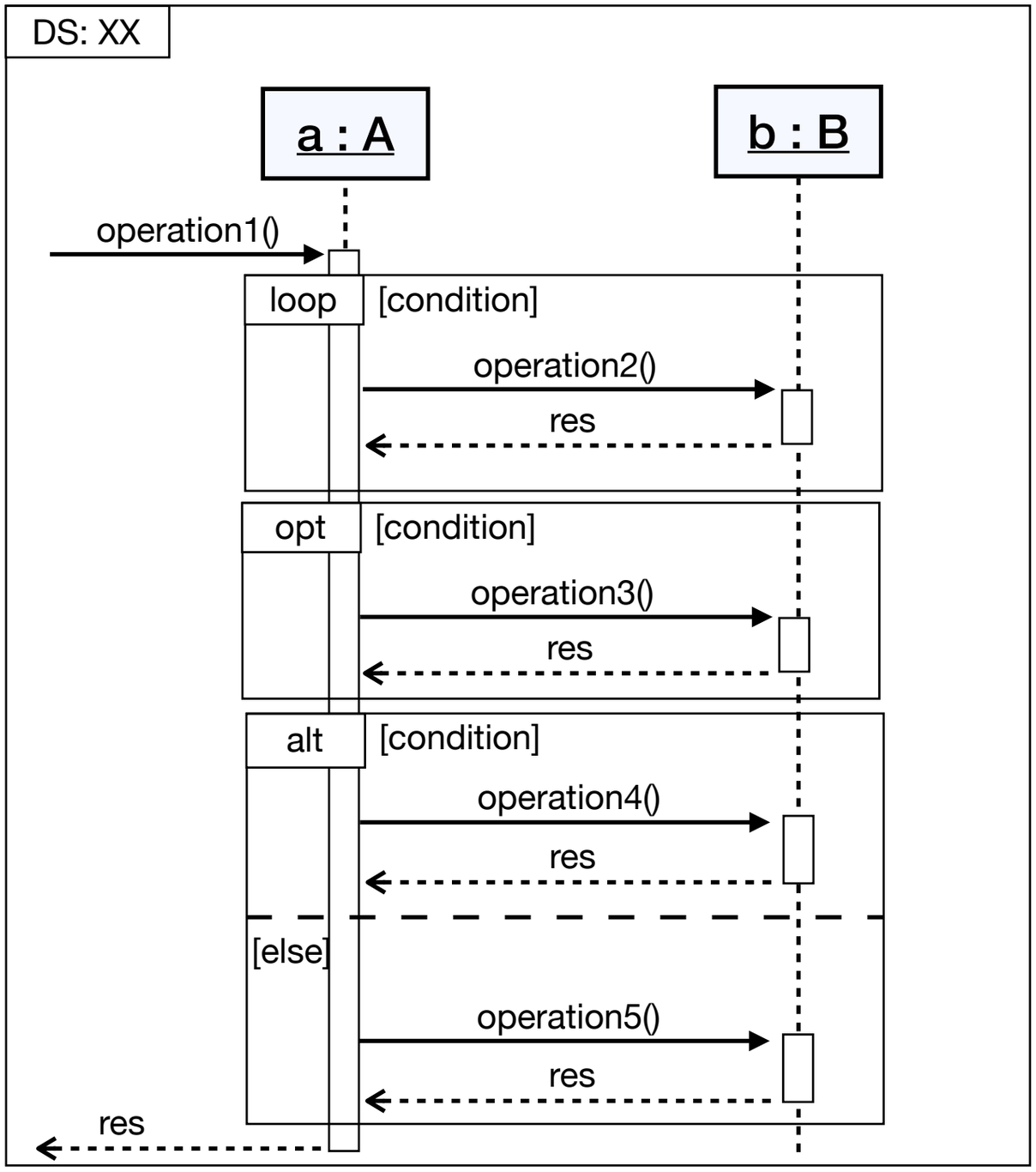
Les optionnels



Les optionnels

Syntaxe

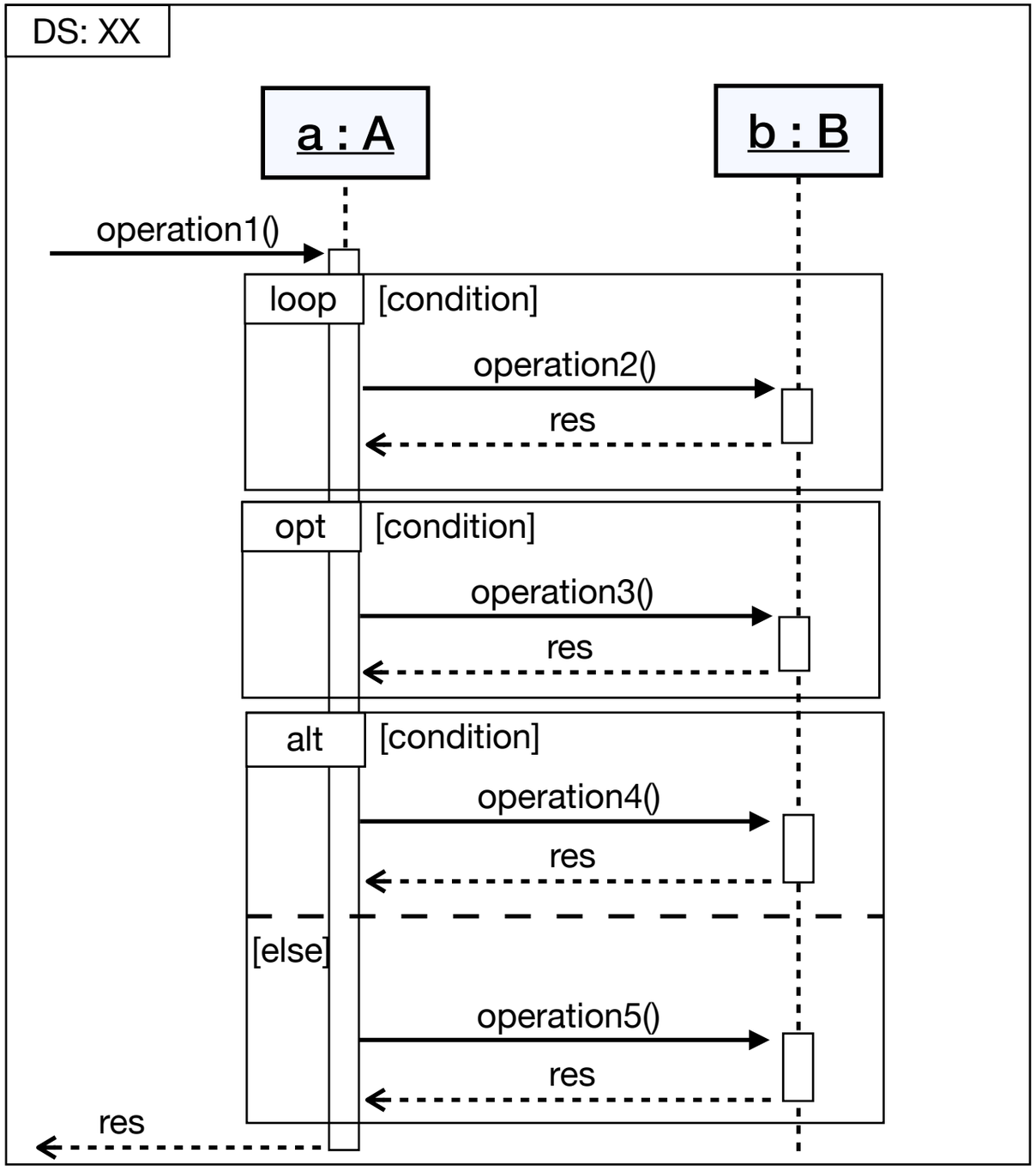
Les conditionnelles

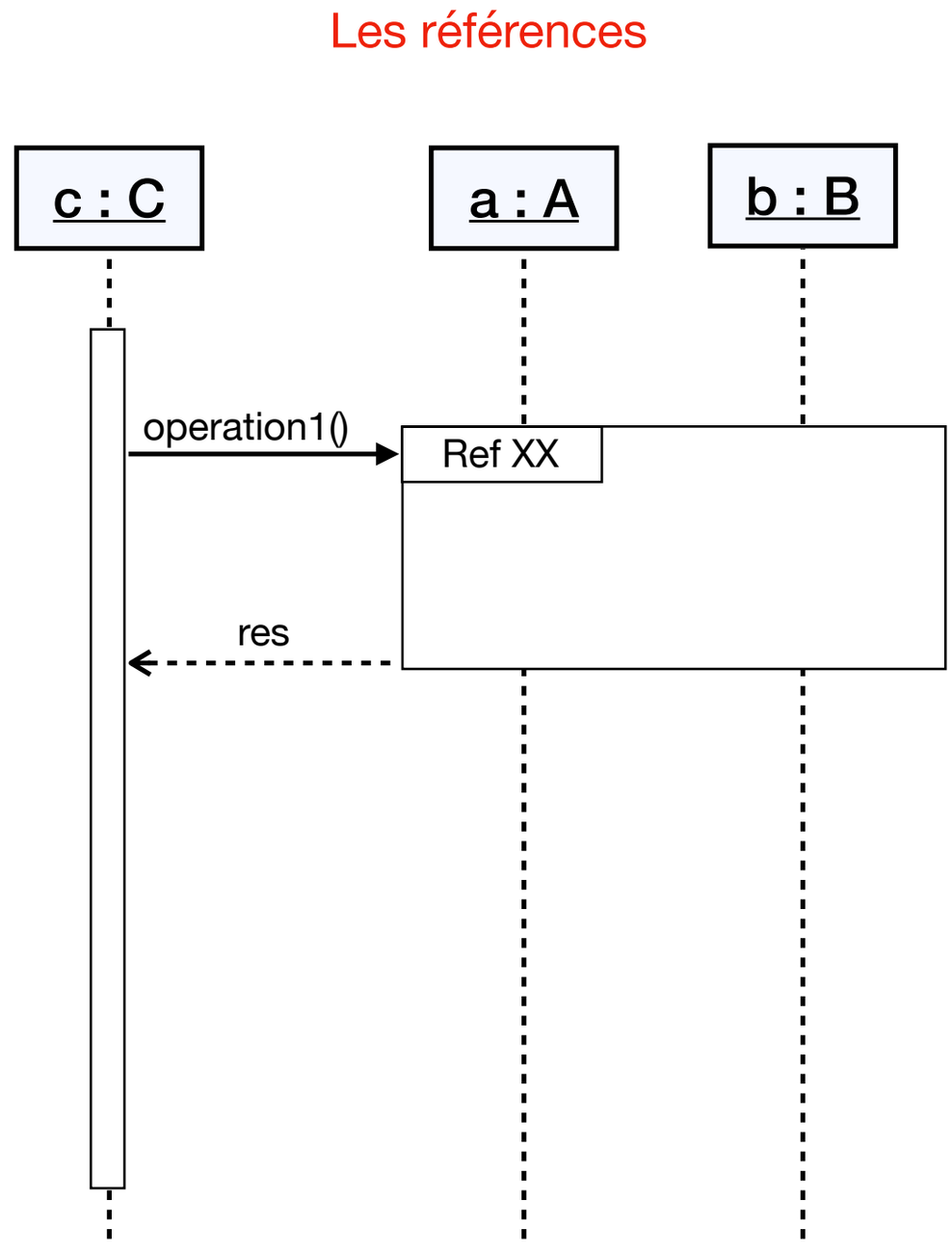


Les conditionnelles

Syntaxe

Les références





Syntaxe

Mais aussi…

- Parallélisme
- L’opérateur break
- La séquence faible
- La séquence stricte
- La négation
- La section critique
- L’assertion

Diagramme de séquence Système

Site de téléchargement

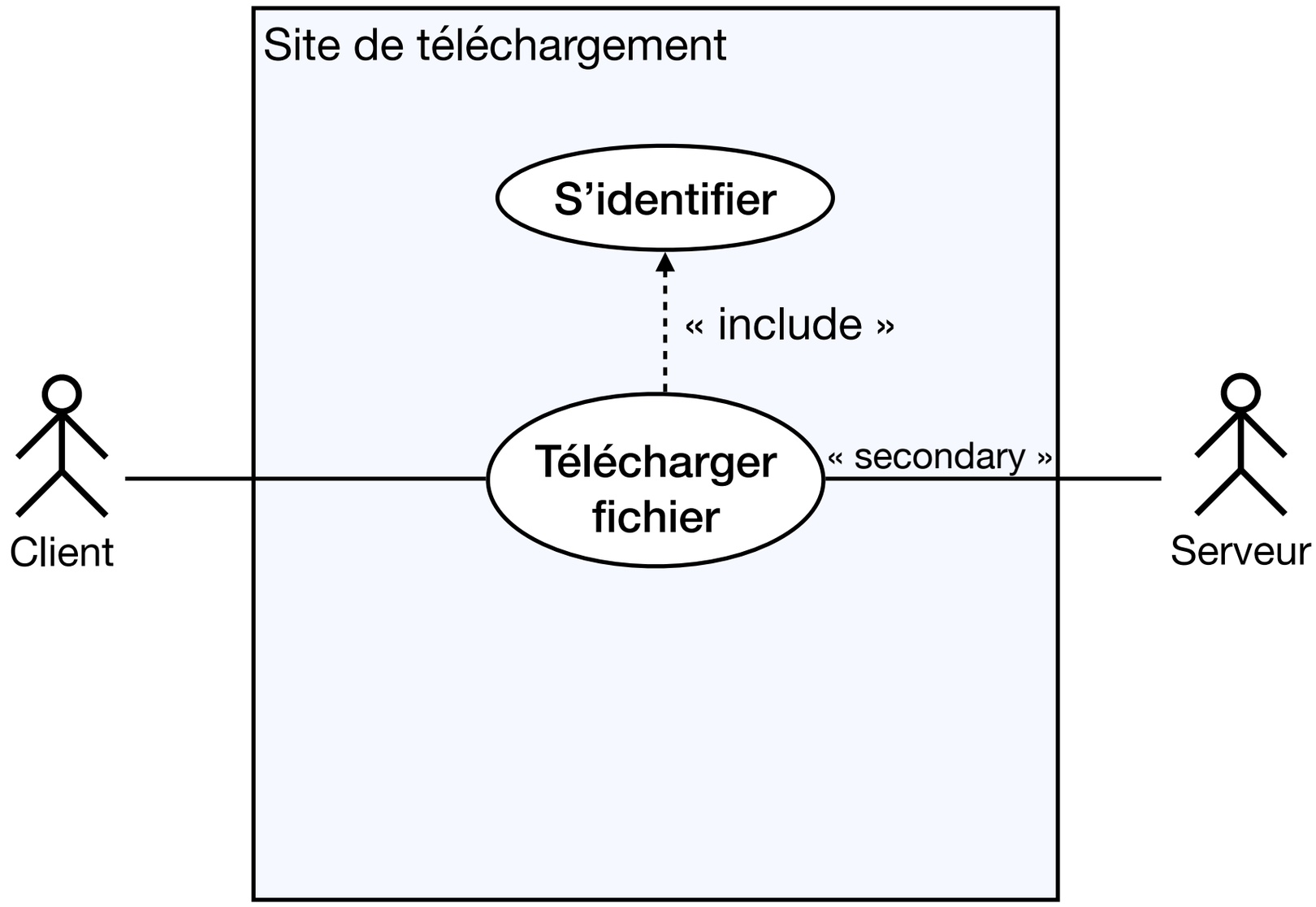


Diagramme de séquence Système

Site de téléchargement (S’identifier)

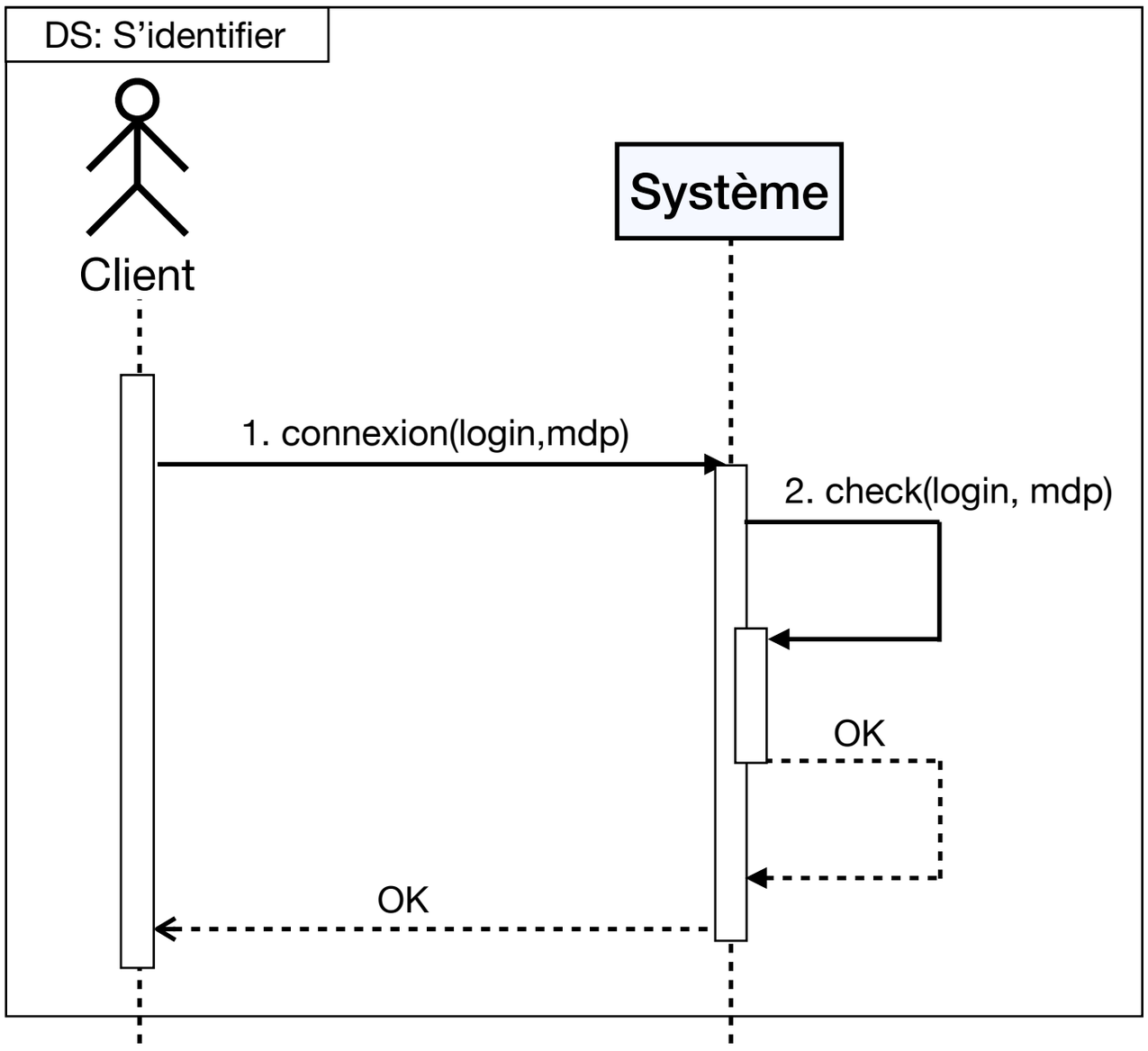


Diagramme de séquence Système

Site de téléchargement (Télécharger Fichier)

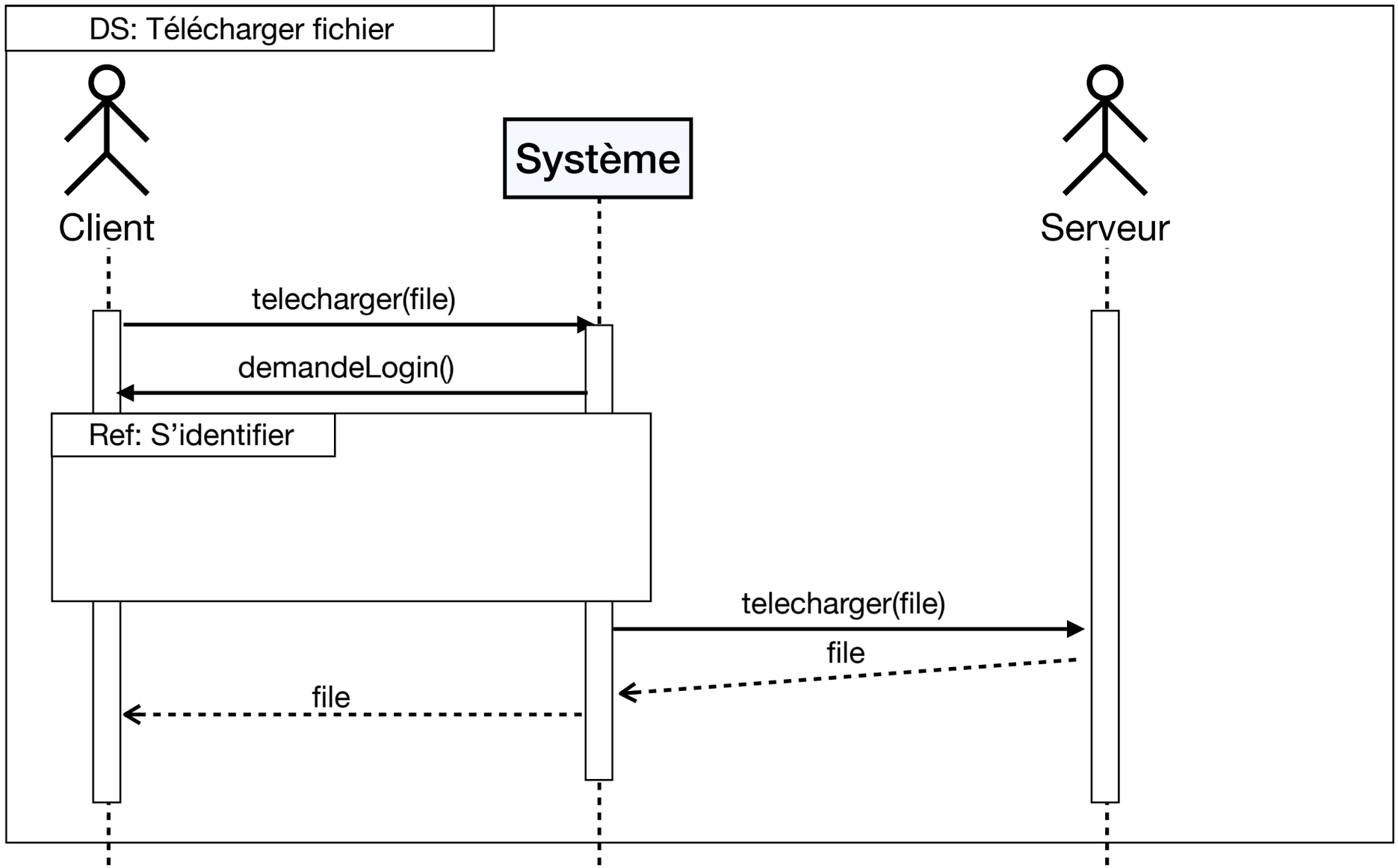


Diagramme de séquence Système

Site de téléchargement (Télécharger Fichier)

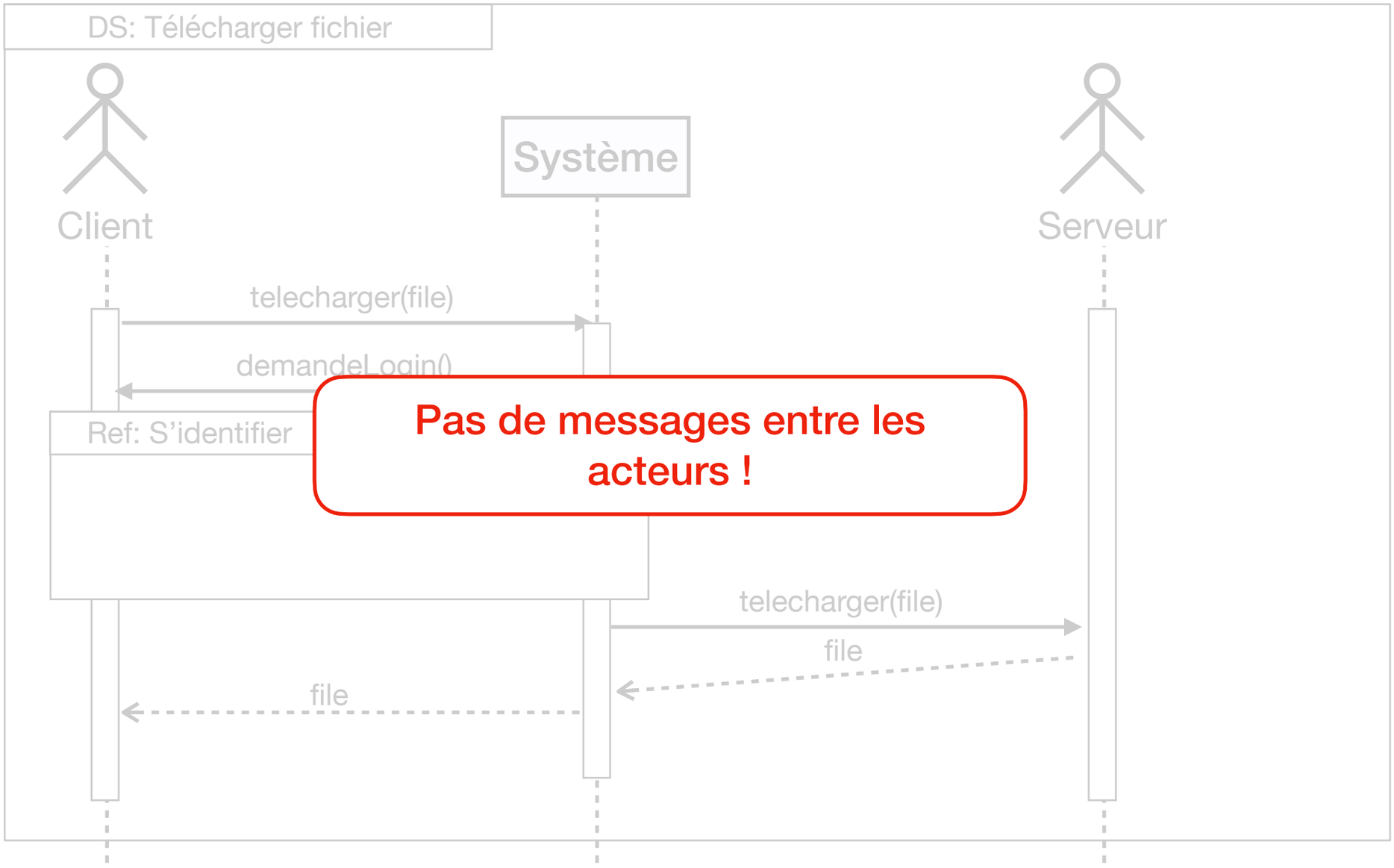


Diagramme de séquence Système

Site de téléchargement (Classes)

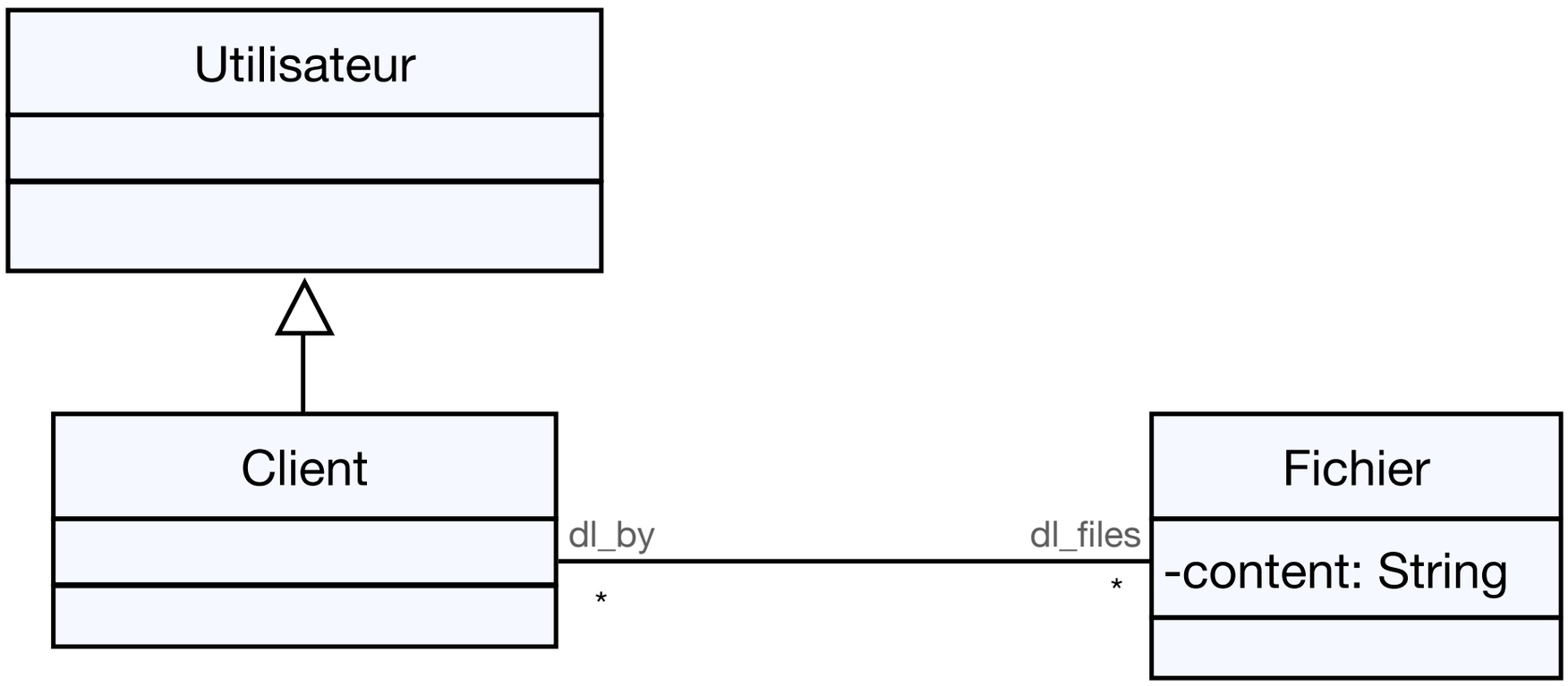


Diagramme de séquence Conception

Site de téléchargement

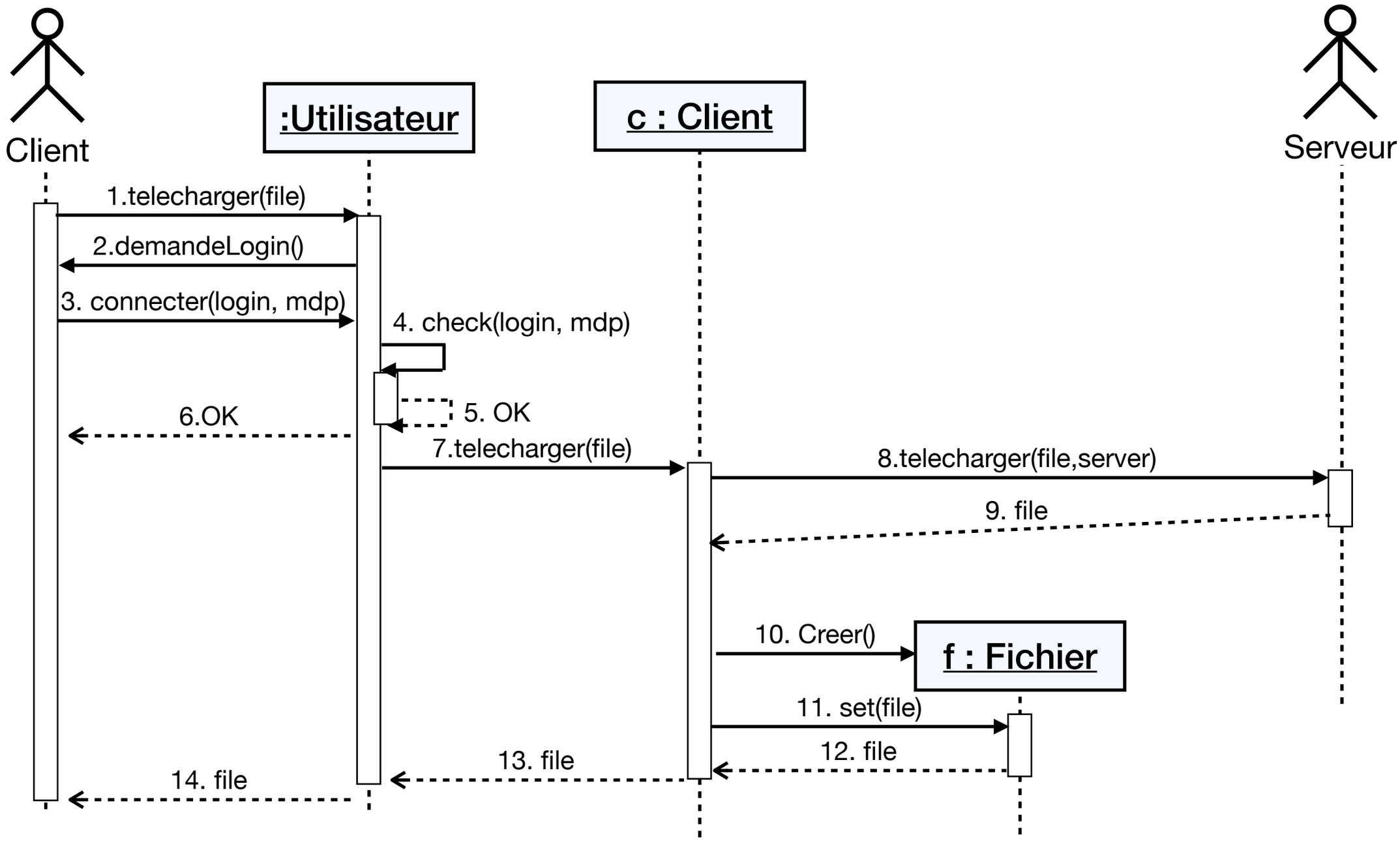
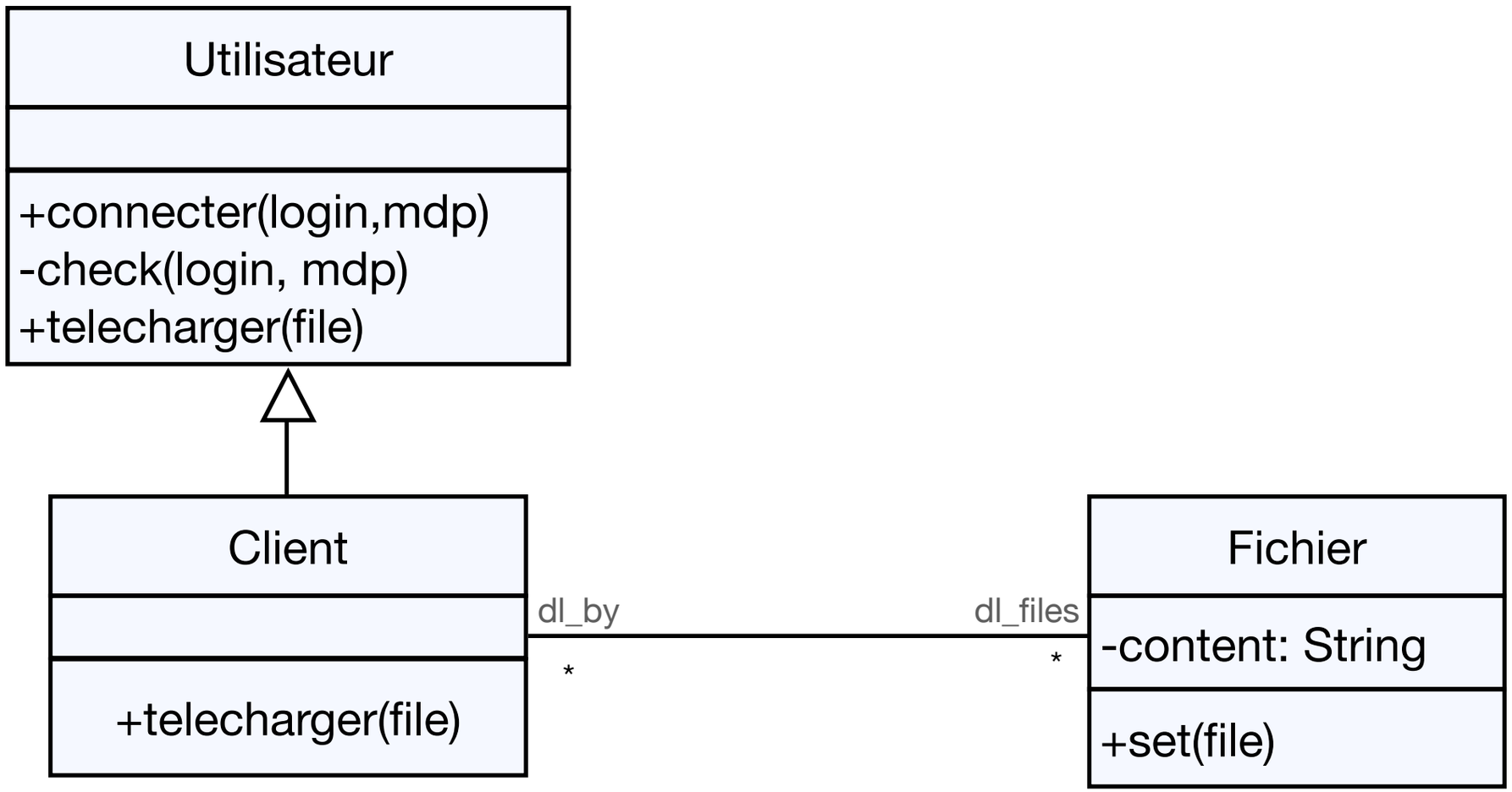


Diagramme de séquence Conception

Site de téléchargement (Classes)



Références

Books

- **UML Distilled (Third Edition): A Brief Guide to the Standard Object Modeling Language.** M Fowler 2004.

- **Object-Oriented Software Engineering (Second Edition): Practical Software Development Using UML and Java.** T. Lethbridge and R. Laganière 2005.

- **UML in Practice: The Art of Modeling Software Systems Demonstrated through Worked** P. Rogues 2004.

- **Requirements Engineering: From System Goals to UML Models to Software Specifications.** A. Lamsweerde 2009.

- **Software Engineering with UML.** B. Unhelkar 2018.

Many

Thanks to

- Arnaud Gotlieb, SIMULA Research Lab., Oslo, Norway
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