

Analyse et Conception par Objets

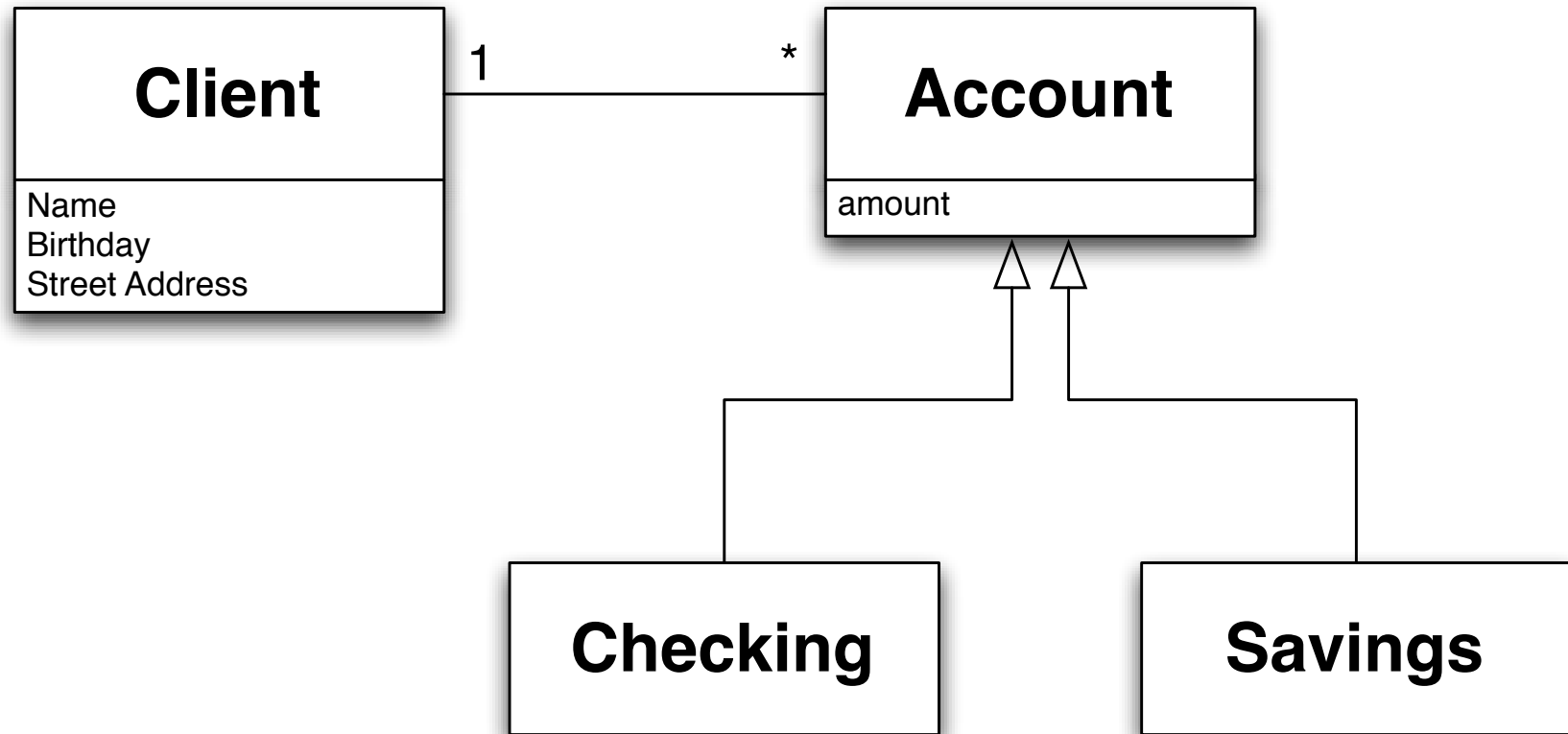
TP5 : Diagrammes d'interaction

Correction Command Pattern

Conceptuel vs Design

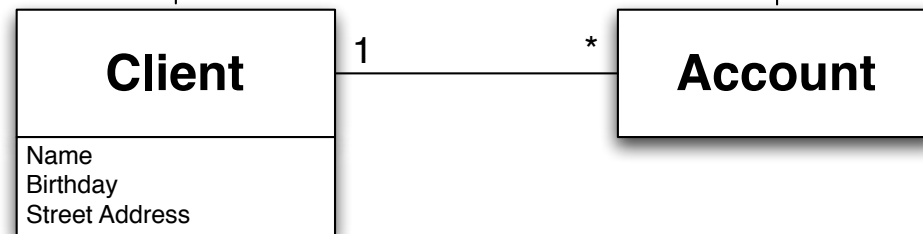
Diagramme de Classe

- Notation UML
- Représente : concepts, propriétés, relations
 - Classe : prototype des objets
 - Objet : instance de Classe



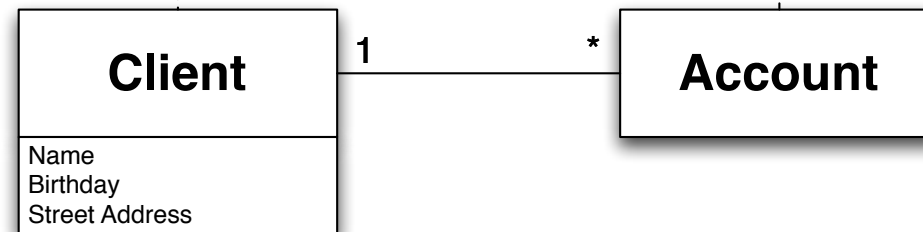
Notation $\neq$ Modèle

- Modèle conceptuel
- Design Class Diagram
- Schéma de Bases de données



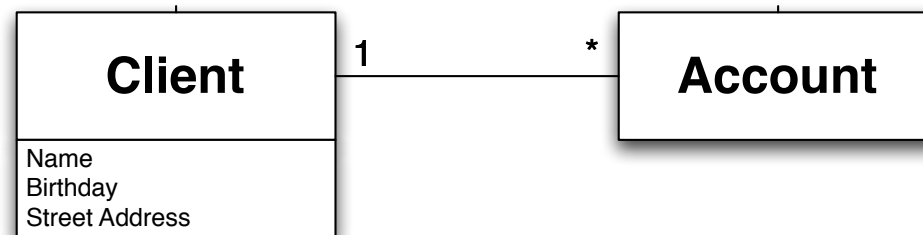
```
public class Client {  
    String name;  
    Date birthday;  
    String streetAddress;  
    List<Accounts> accounts;  
}
```

```
public class Account {  
    Client client;  
}
```



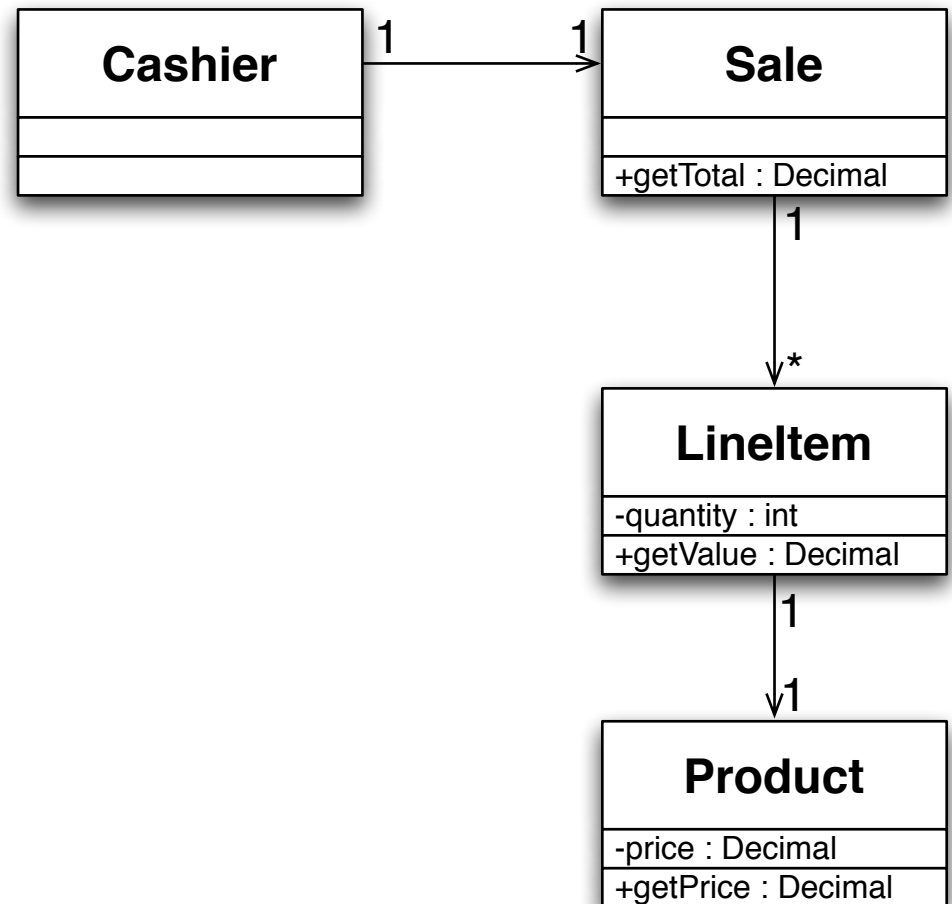
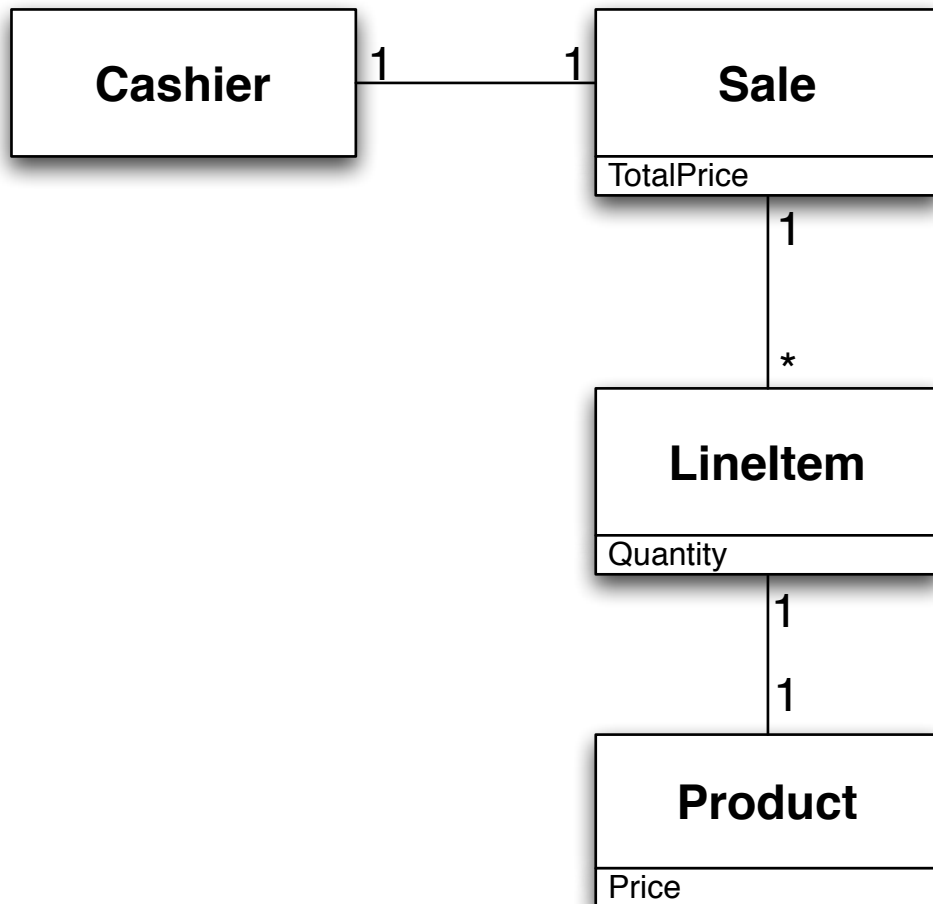
cID	cName	cBirthDay	cStreetAddress
1	Fred	3/4/1983	23, rue de la montagne qui monte
2	Serge	18/12/1981	281, Av. de la couronne

aID	cID
1	1
2	2
3	1



Conceptuel vs Design

- Modèle conceptuel
 - Modélise la réalité, pas l'application
 - Optionnel : méthodes, direction, visibilité
- Modèle design
 - Signature complète des méthodes
 - Correspondance stricte modèle - code

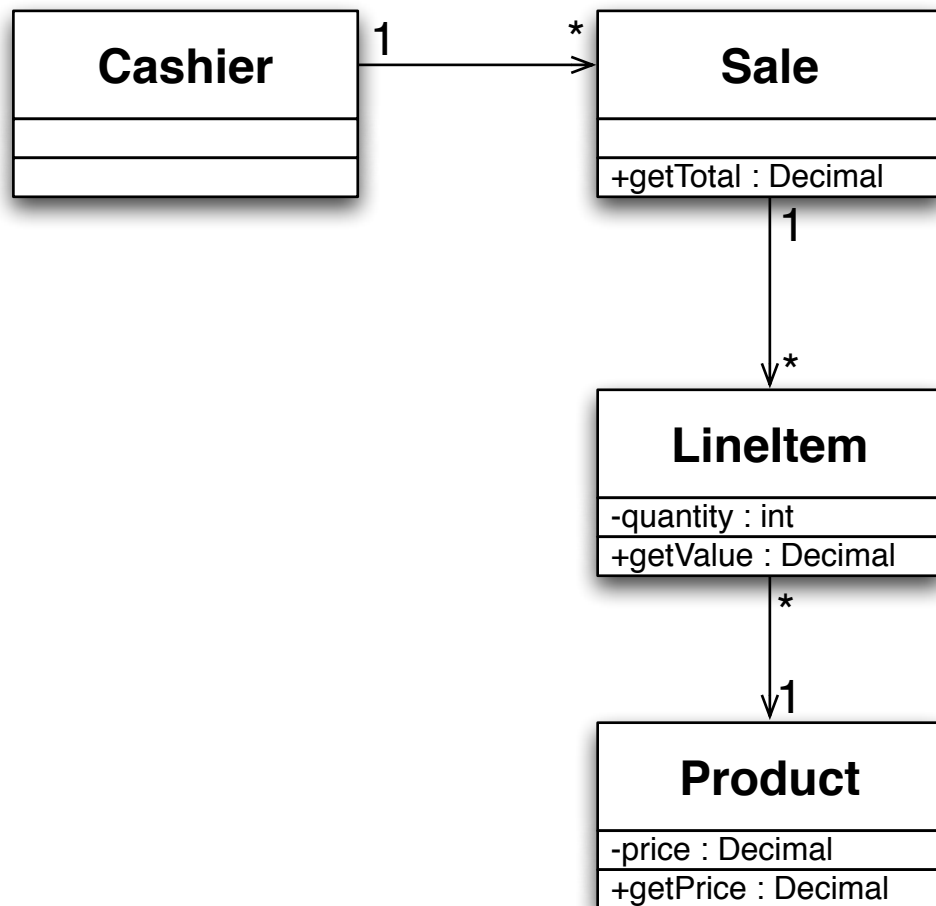


Diagrammes d'interaction

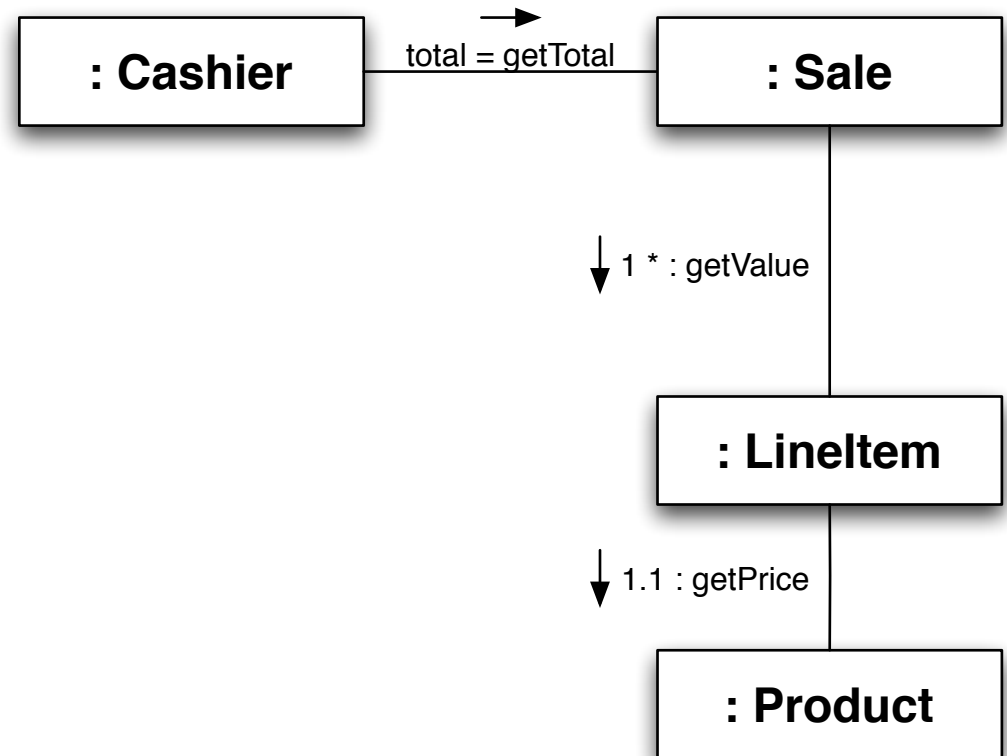
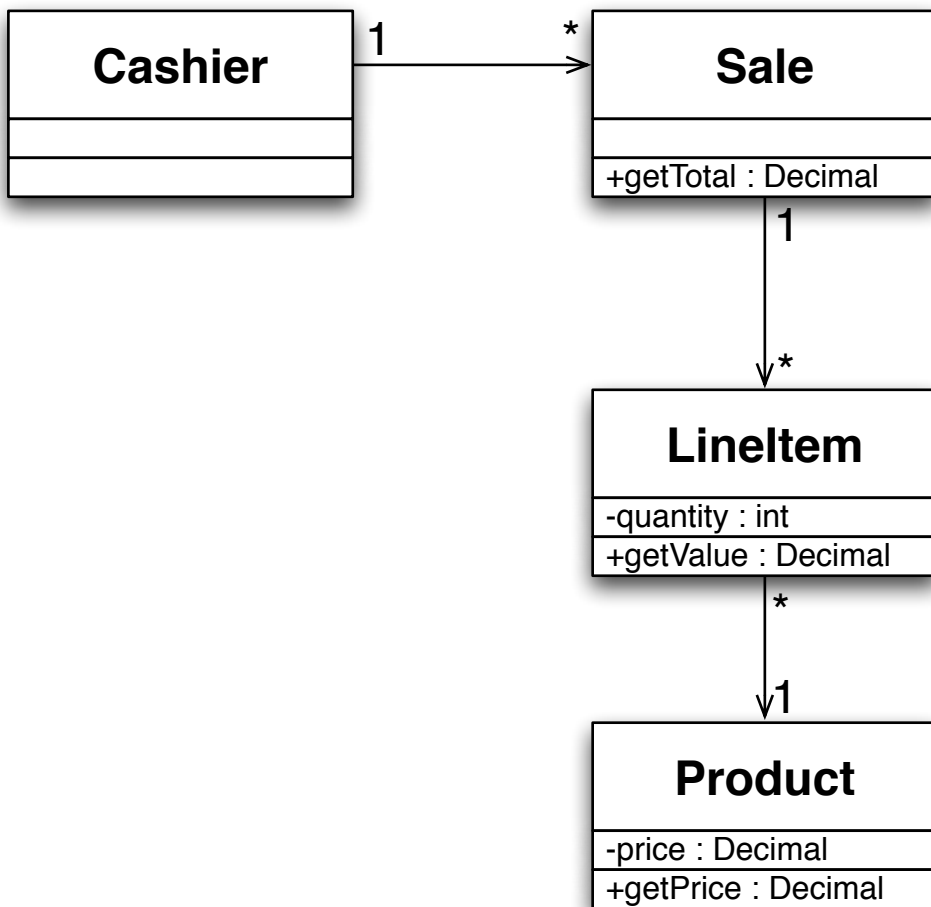
Diagrammes d'interaction

- Description dynamique
- Décrit une interaction particulière du système
- Insiste sur les échanges de messages entre objets

Class vs Communication



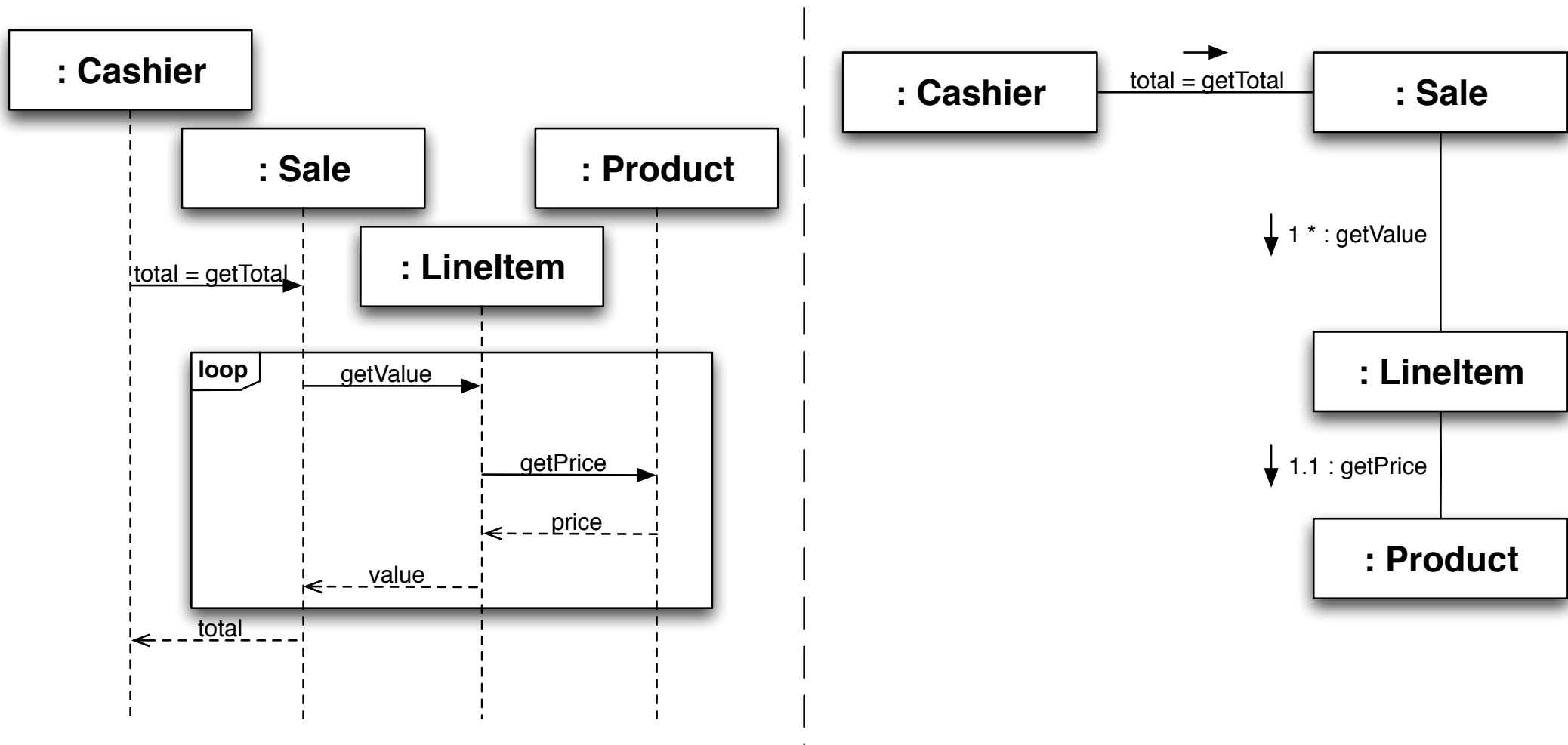
Class vs Communication



Deux types

- Diagramme de communication
(collaboration en UML 1.x)
 - Insiste sur les relations entre objets
- Diagramme de séquence
 - Insiste sur l'ordonnancement temporel
- Sémantiquement équivalents
 - Conversion automatique possible entre les deux types

Sequence vs Communication



Notation

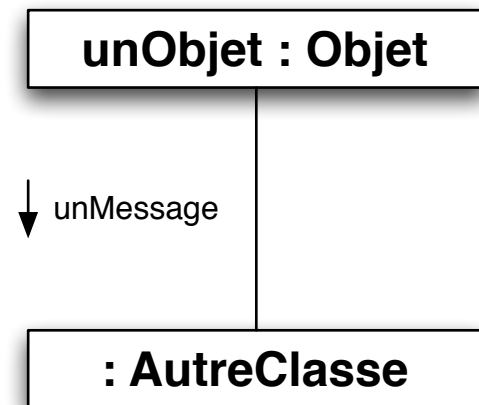
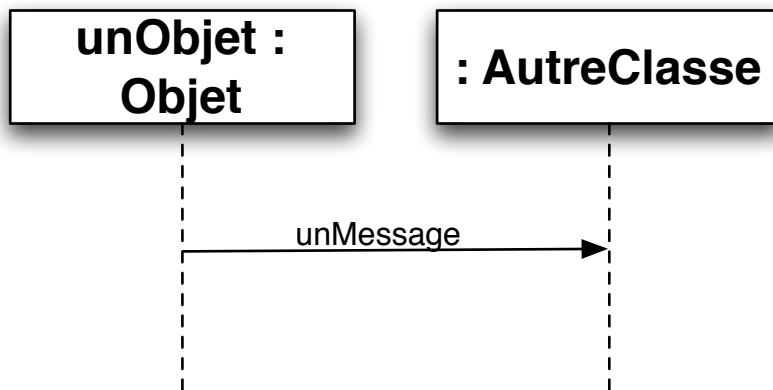
Objets

unObjet : Classe

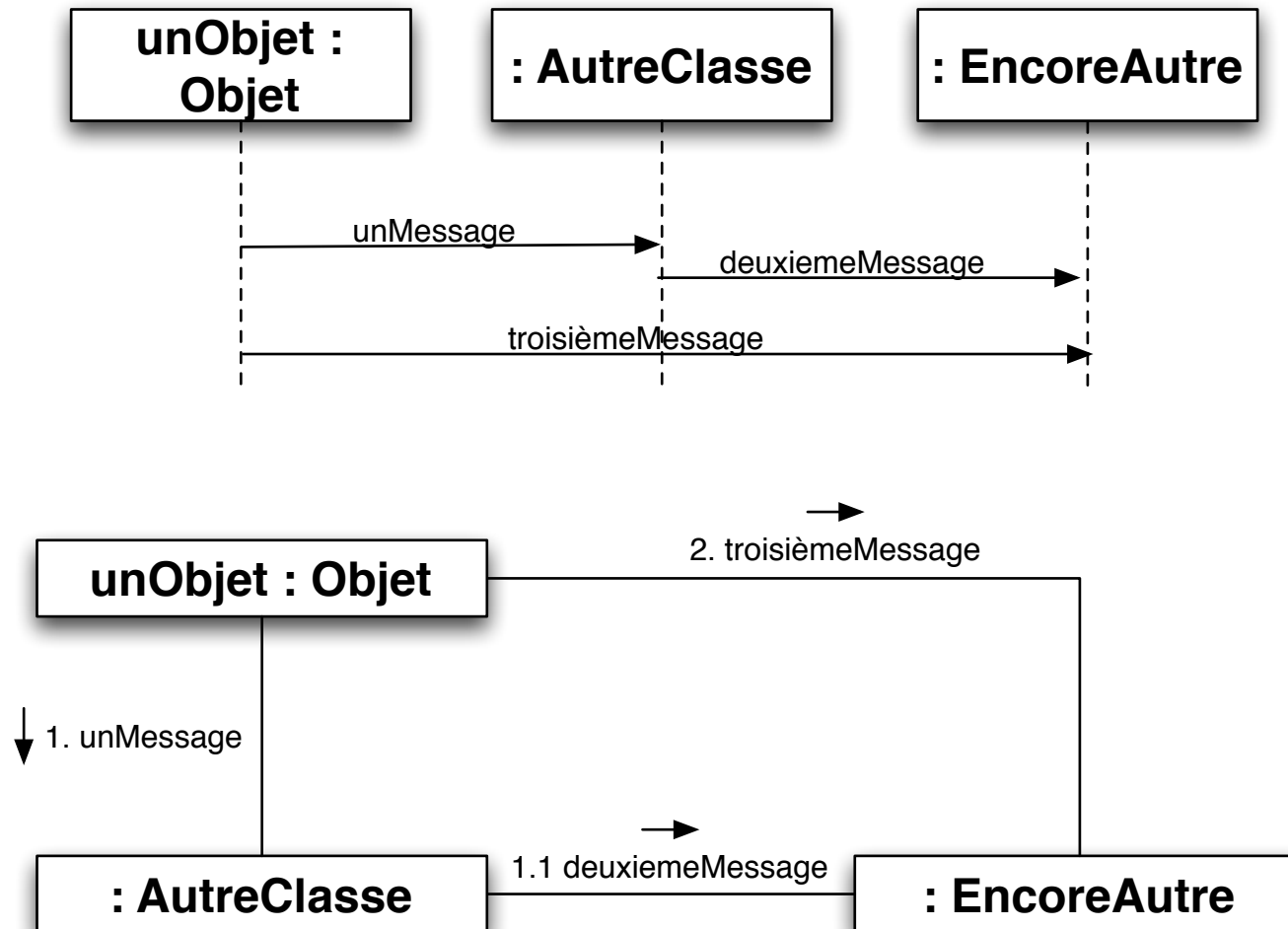
unObjet : Interface

: Classe

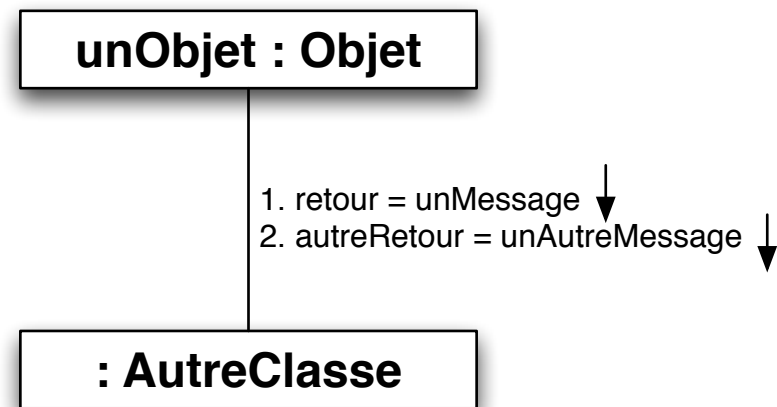
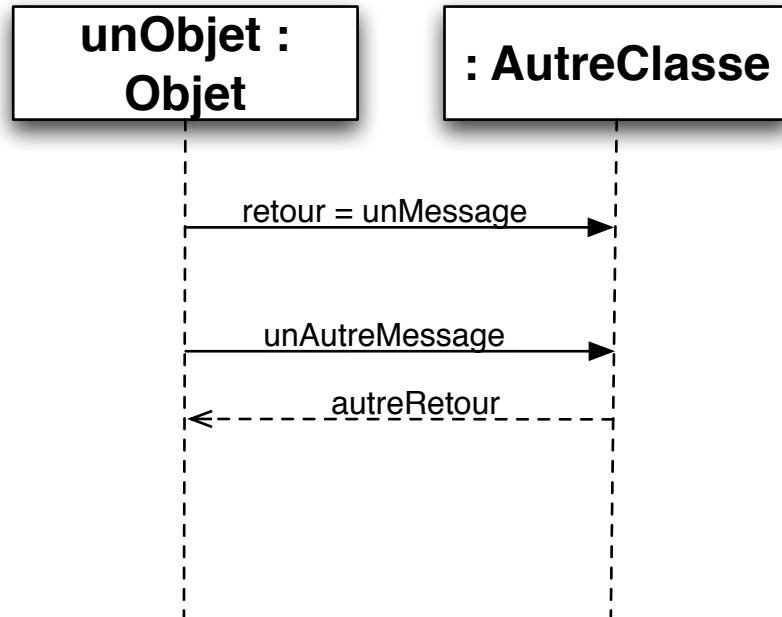
Messages



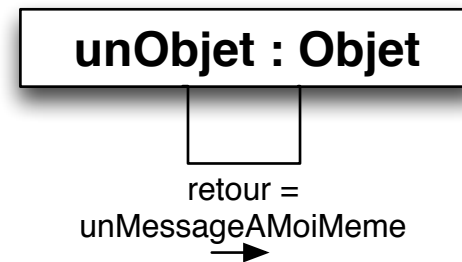
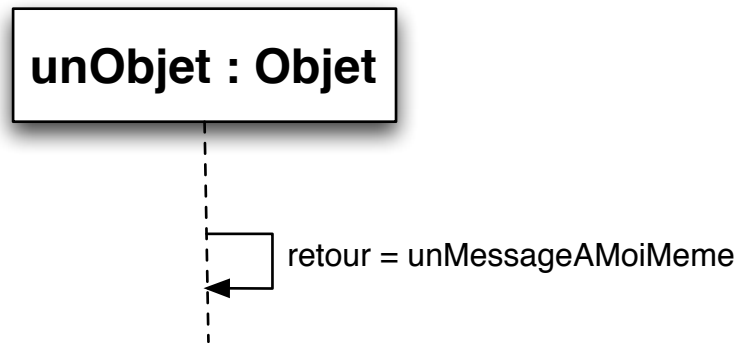
Enchaînement



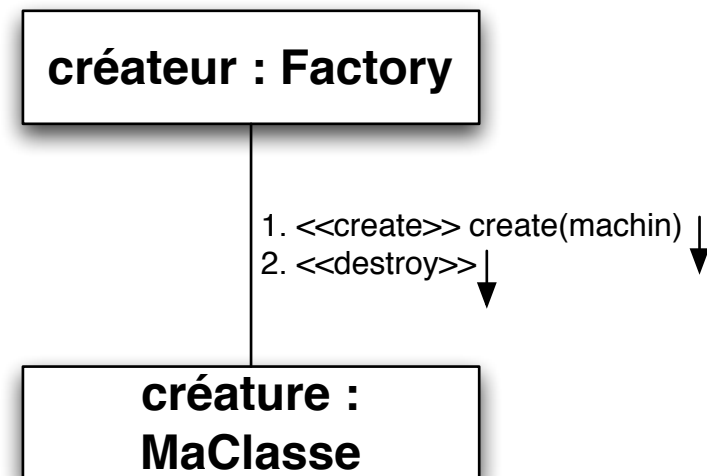
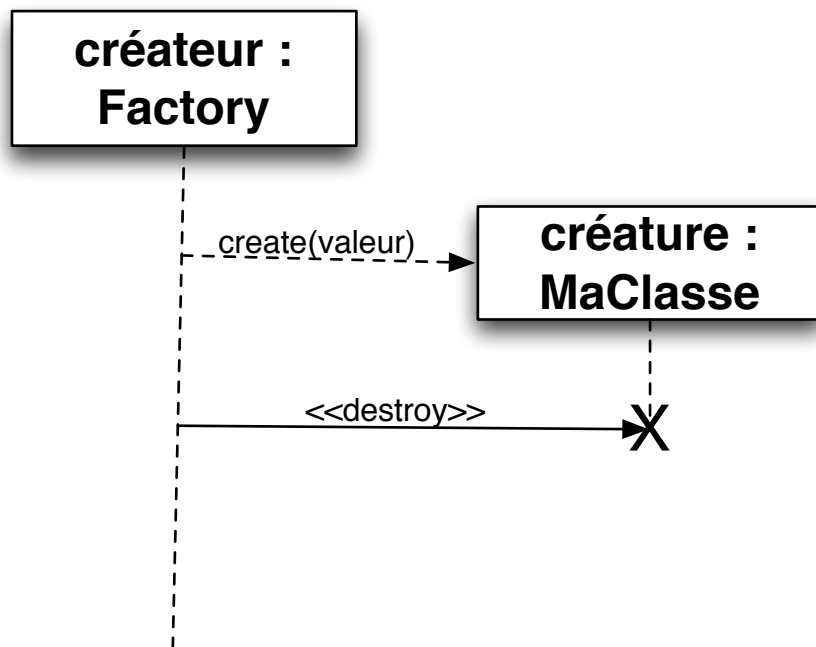
Valeurs de retour



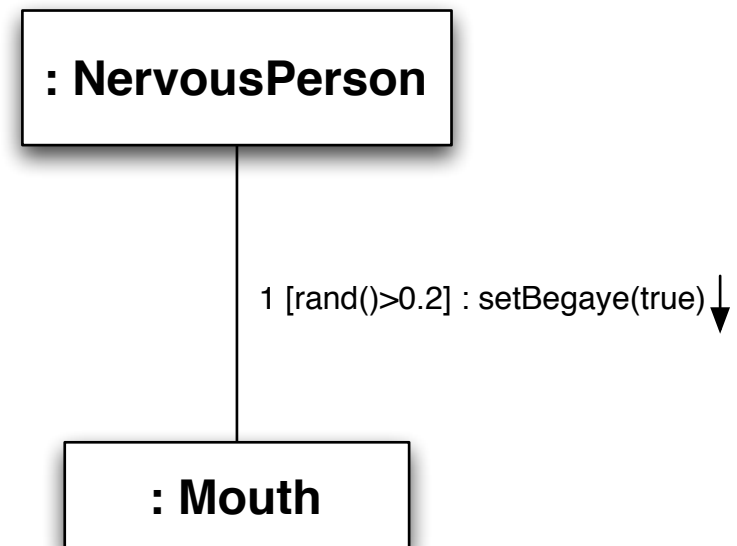
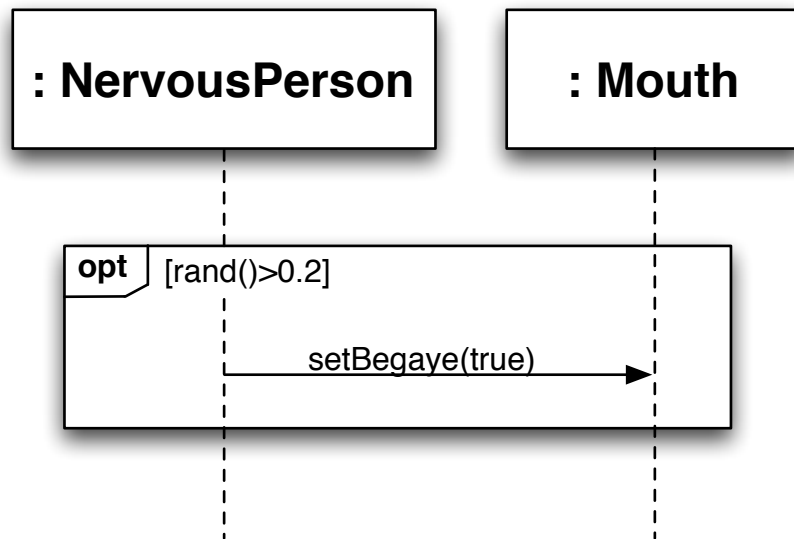
Self-message



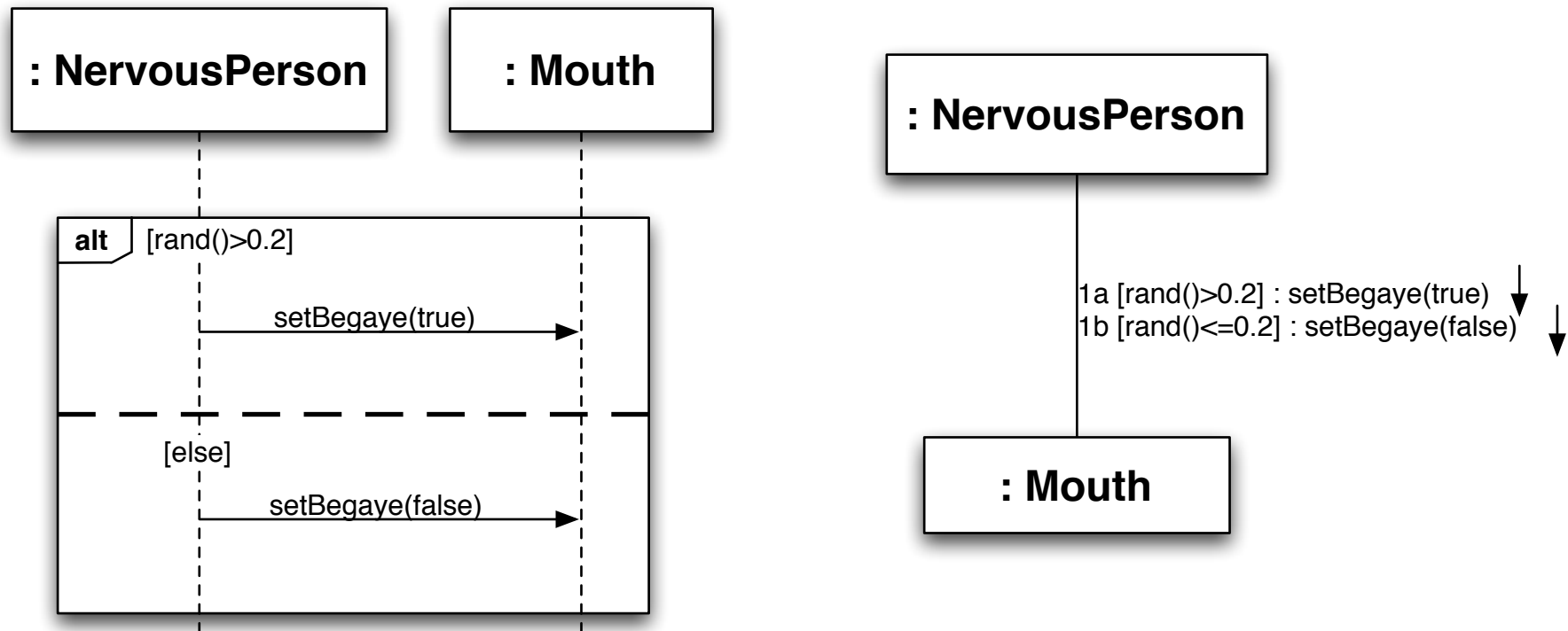
Création d'objet



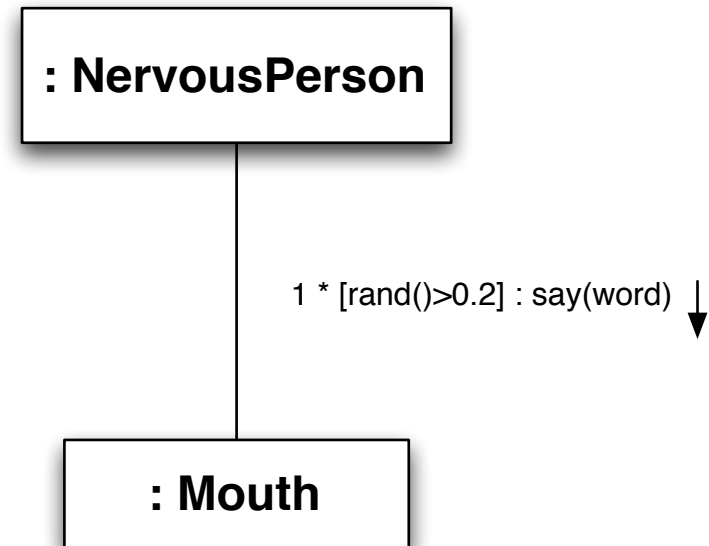
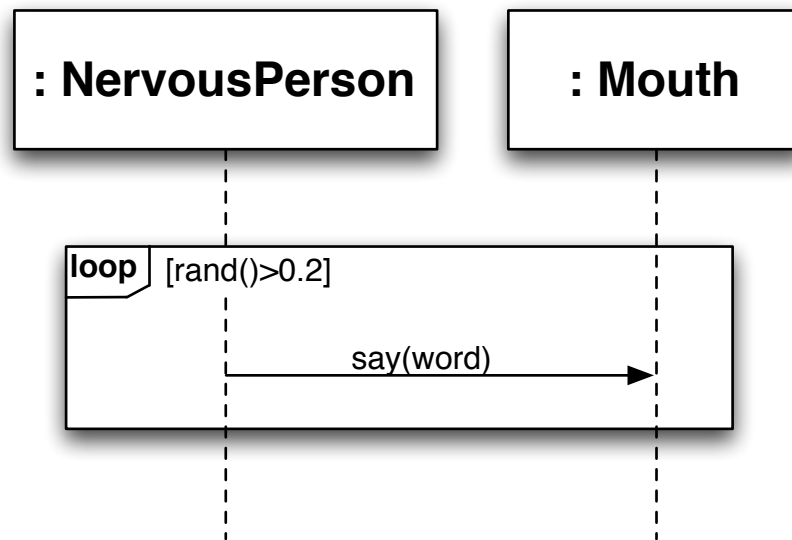
Messages conditionnels



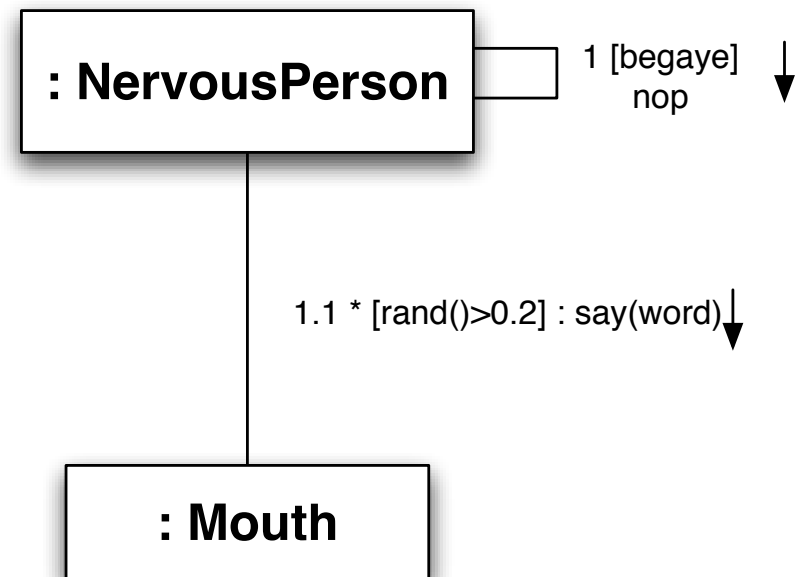
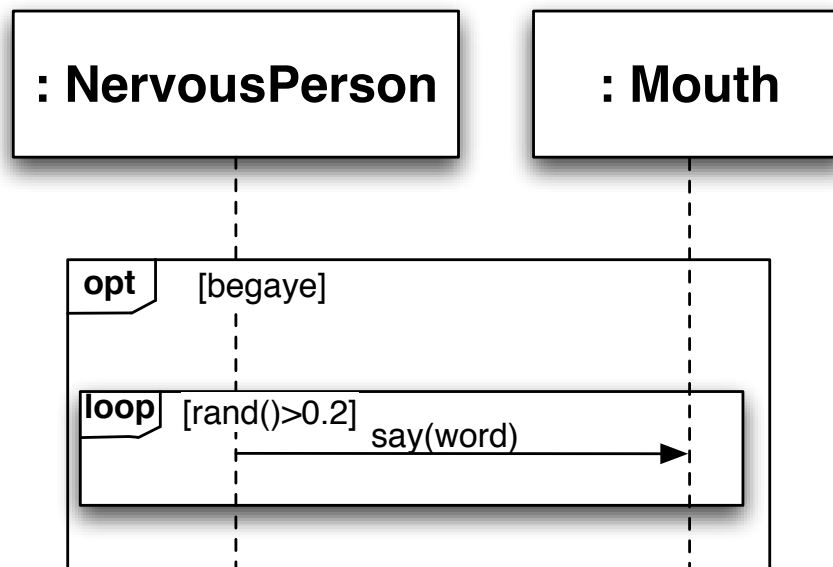
Messages mutuellement exclusifs



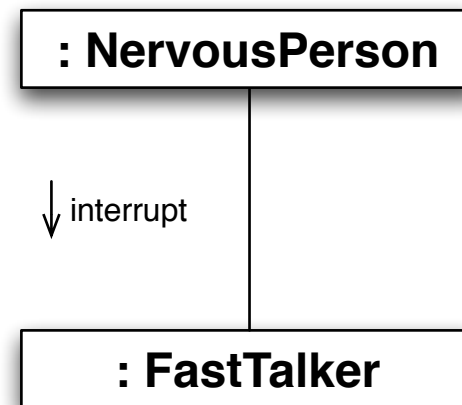
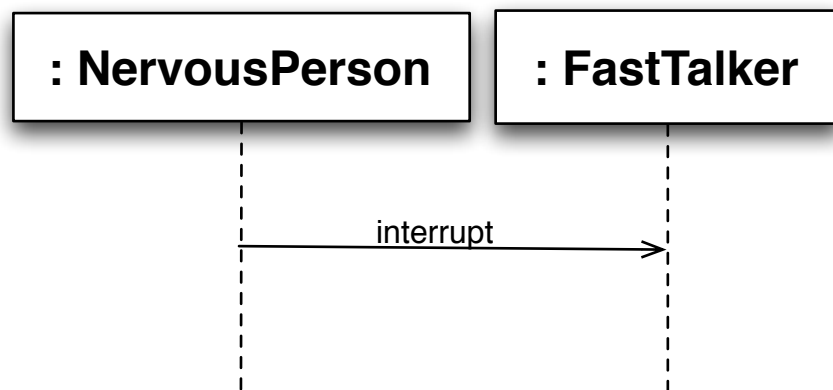
Boucles



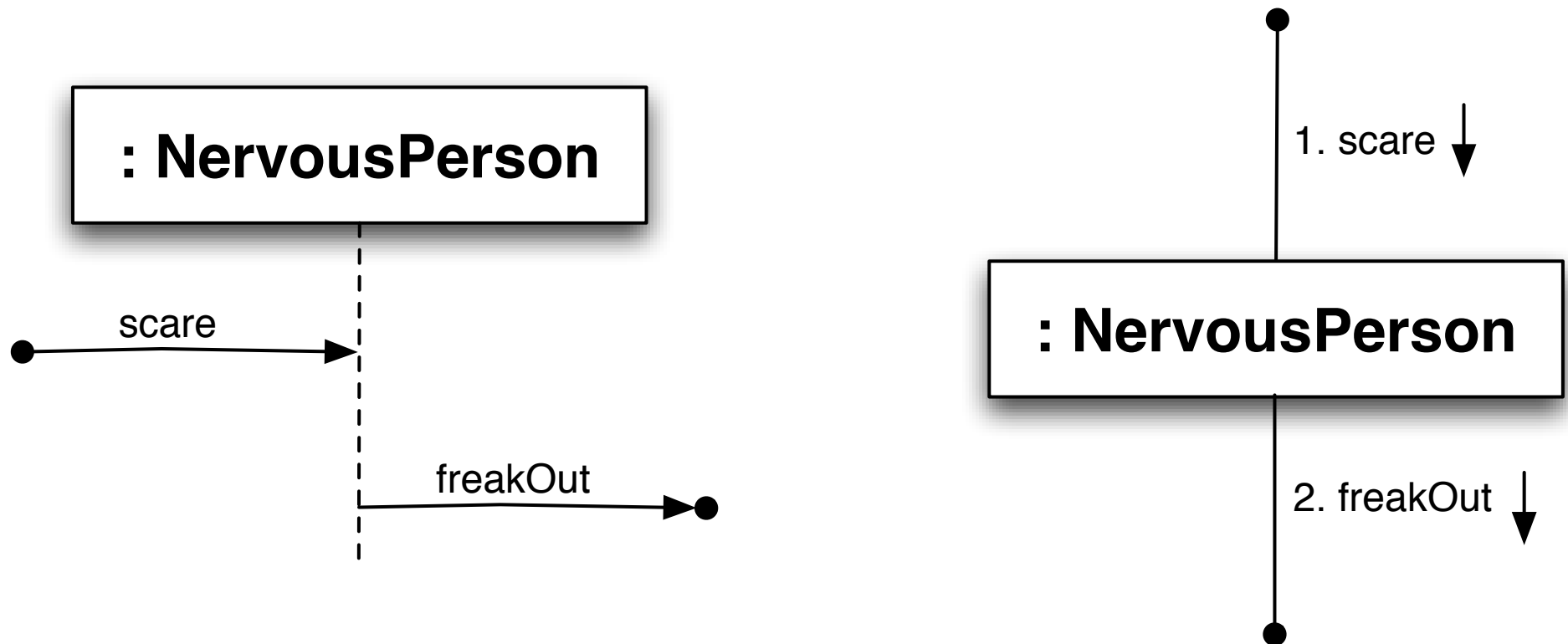
Cadres imbriqués



Messages asynchrones



Messages perdus / trouvés



Communication vs Séquence

- Communication :
 - Insiste sur les relations entre objets
 - Peu de messages, beaucoup d'objets
- Séquence
 - Insiste sur l'ordonnancement temporel
 - Beaucoup de messages, peu d'objets

