

PRAXEME ET... LA TERMINOLOGIE

Comment modéliser des concepts en rapprochant un langage orienté objet et deux normes terminologiques orientées concept ?

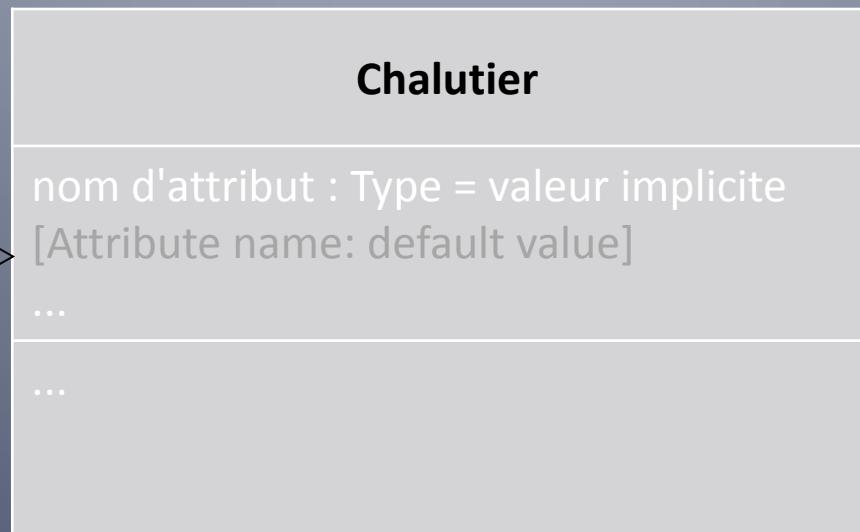
Application de l'ISO 704 et de l'ISO 1087-1 dans l'ISO/TR 24156 sur la base du langage UML



Dr Hendrik J. Kockaert
Professeur agrégé



Classe en UML



[visibility] **name** [[multiplicity]] [: type] [=initial value] [{property}]

Classe & désignation des concepts

UML	ISO 1087-1	UML >> ISO TR 24156
Class	concept	concept
Chalutier	chalutier	chalutier

Surclasse & sous-classe concepts superordonnés & subordonnés

concept subordonné

concept correspondant soit à un concept spécifique, soit à un concept partitif

Sous-classe: manque de parallélisme

? Catégorie particulière = concept subordonné
Sous-classe = concept spécifique

Surclasse & sous-classe concepts superordonnés & subordonnés

concept superordonné

concept correspondant soit à un concept générique, soit à un concept intégrant

Surclasse ≠ concept superordonné

Surclasse = concept générique

? General classifier = concept superordonné

Surclasse = concept générique

Concept générique & concept spécifique
versus
Surclasse & sous-classe
... & sous-classe spécifique
General classifier & specific classifier

concept subordonné

[concept spécifique]

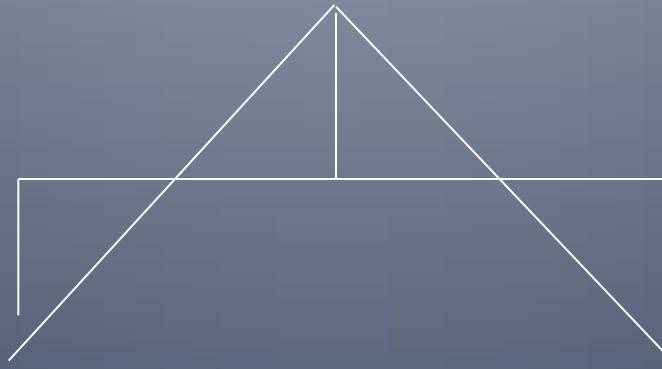
[concept partitif]

nil

[sous-classe]

[composant]

concept superordonné



concept subordonné

concept subordonné

concept superordonné

[concept générique]

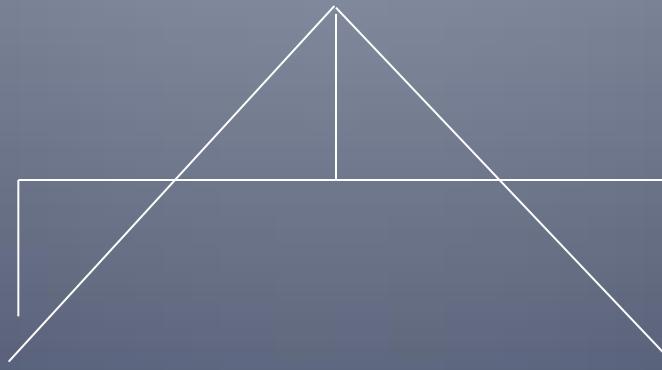
[concept intégrant]

nil

[surclasse]

[agrégat]

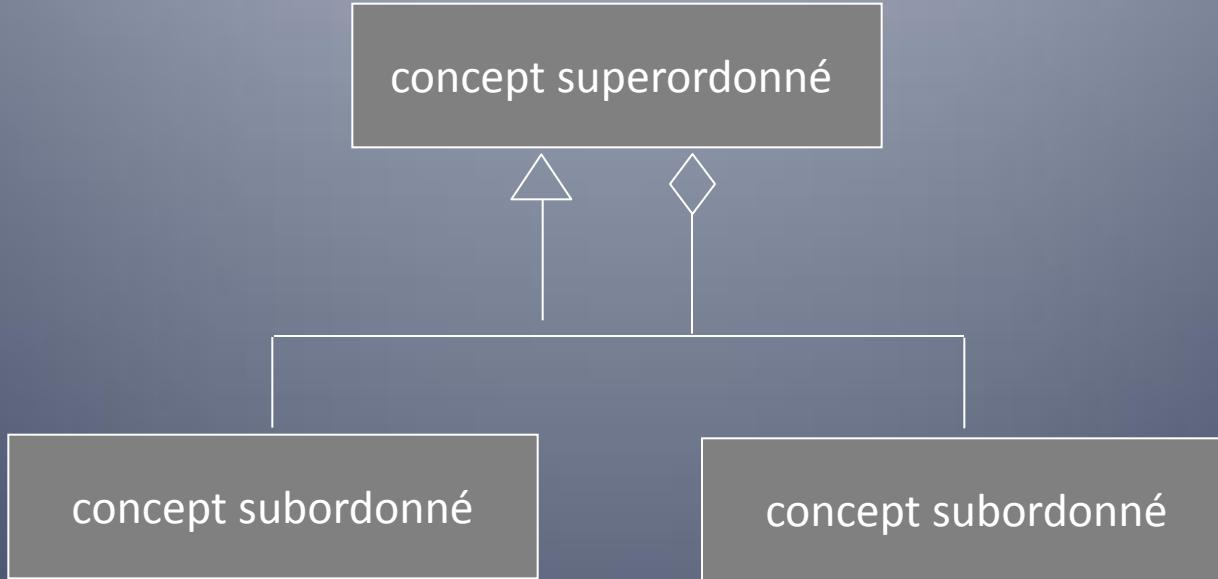
concept superordonné



concept subordonné

concept subordonné

concept superordonné
concept subordonné



concept générique

concept spécifique

surclasse

sous-classe

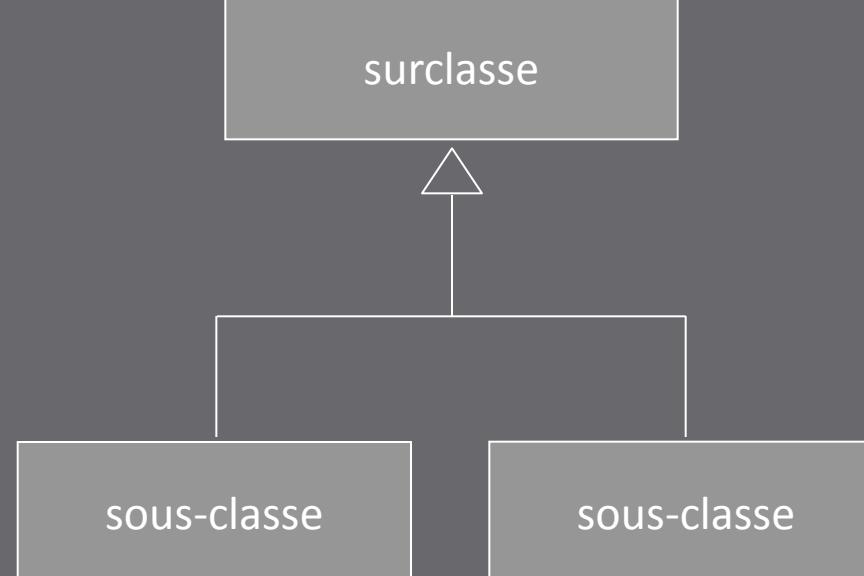
concept générique



concept spécifique

concept spécifique

surclasse

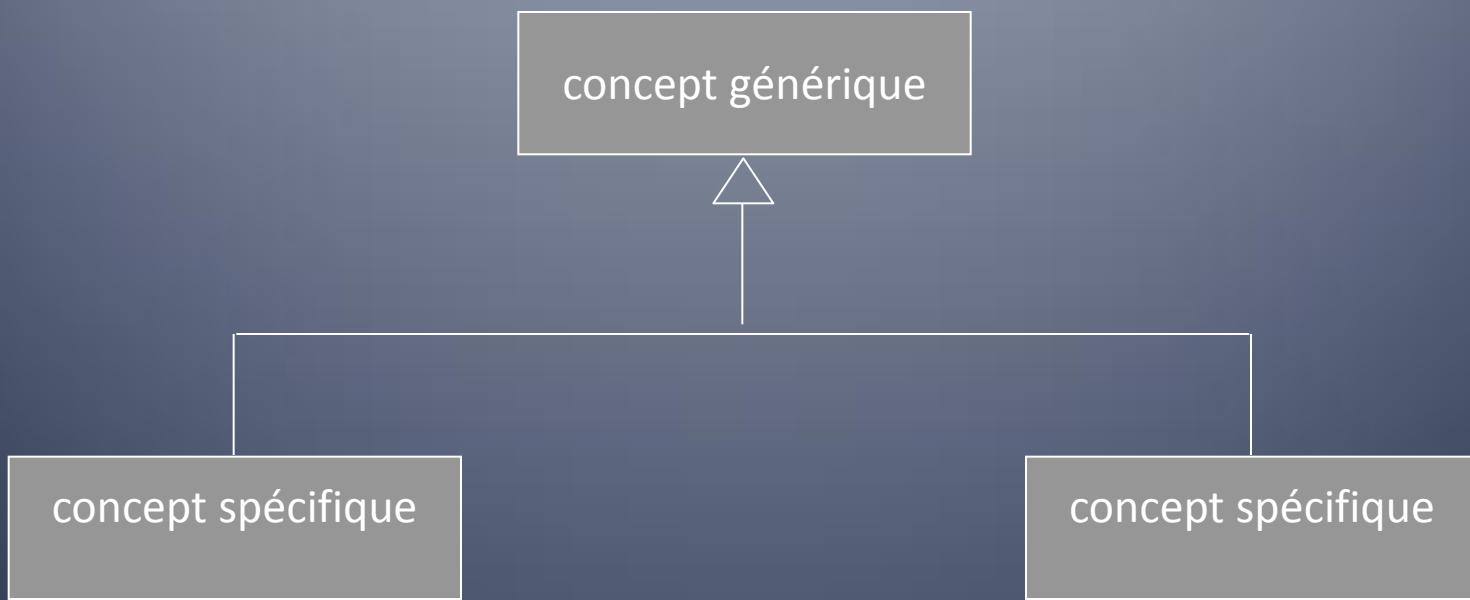


sous-classe

sous-classe

UML >> ISO TR 24156

concept générique
concept spécifique



concept intégrant

concept partitif

agrégat

composant

concept intégrant

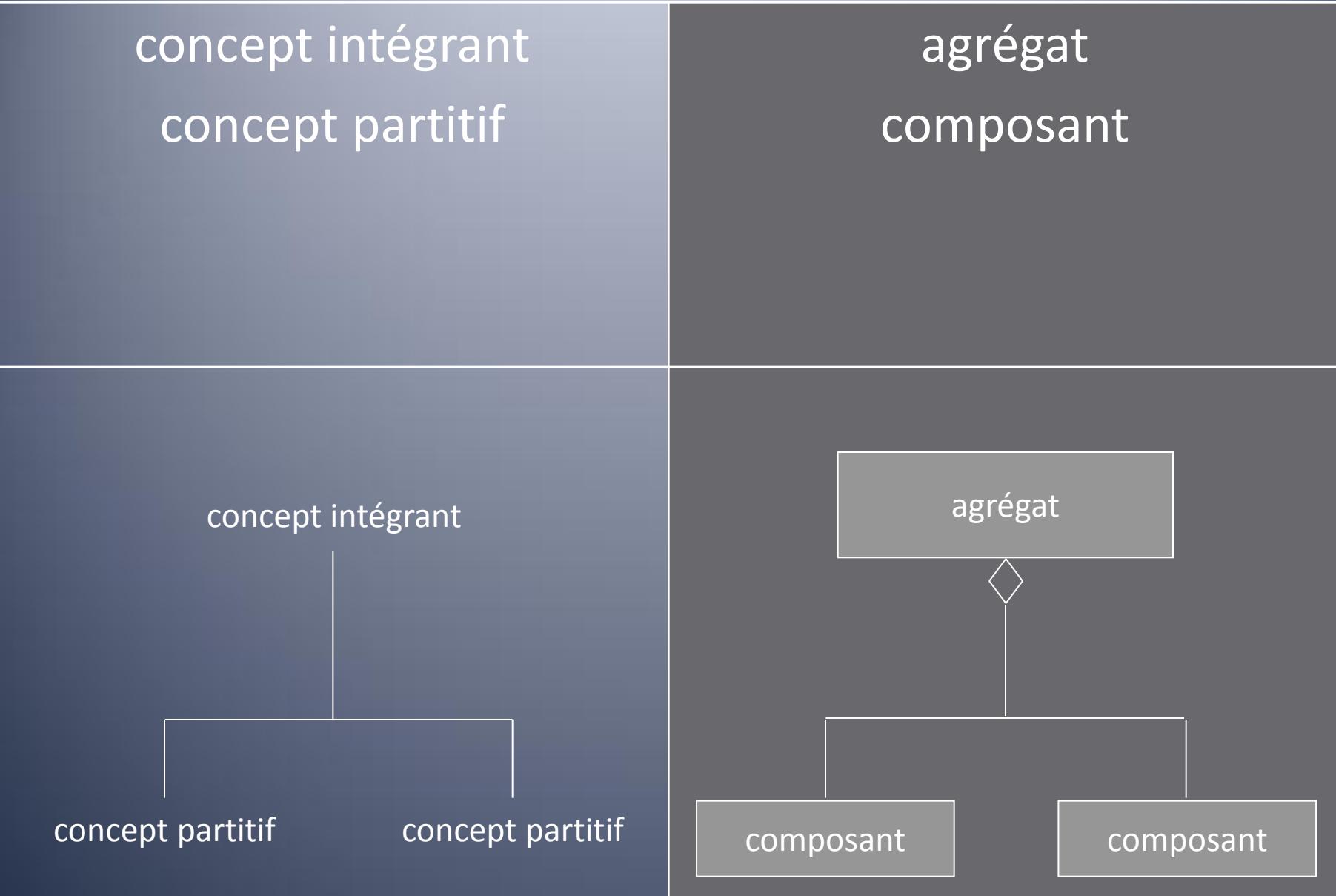
agrégat

concept partitif

concept partitif

composant

composant



concept partitif

composant

agrégation

concept intégrant

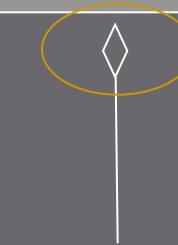
concept partitif

concept partitif

agrégat

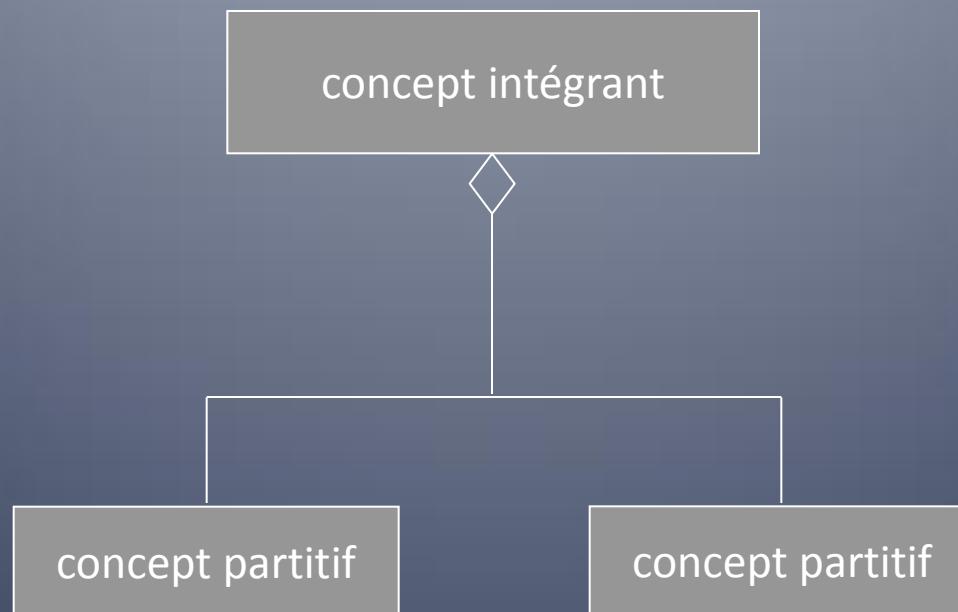
composant

composant



concept intégrant

concept partitif



concept partitif

composant

composite aggregation
composition

concept intégrant

concept partitif

concept partitif

agrégat

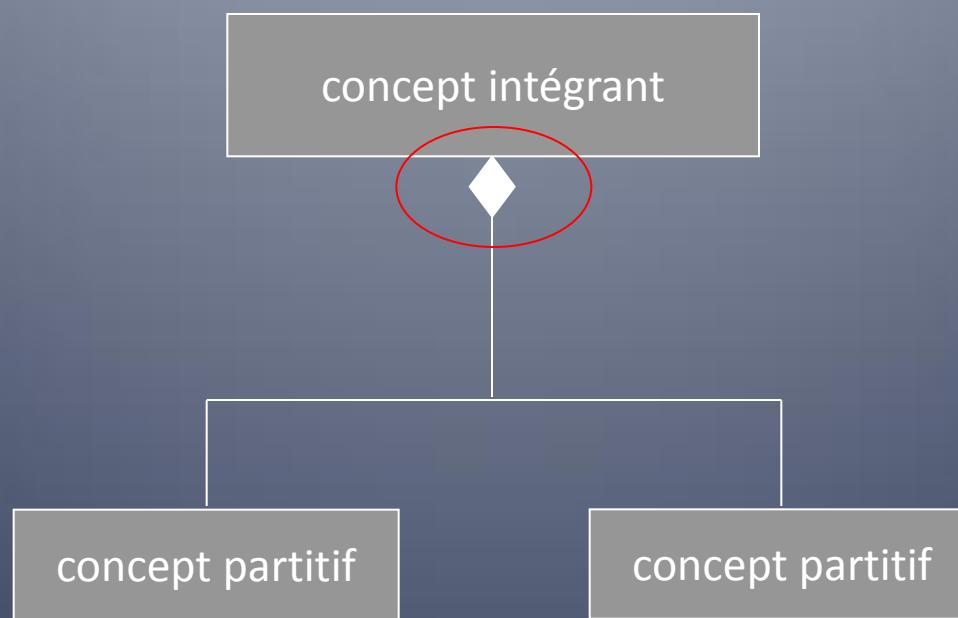


composant

composant

UML >> ISO TR 24156

concept intégrant²
concept partitif



concept général

concept individuel

class

concept général

concept individuel

Class

UML >> ISO TR 24156

concept général

concept individuel

concept général

concept individuel

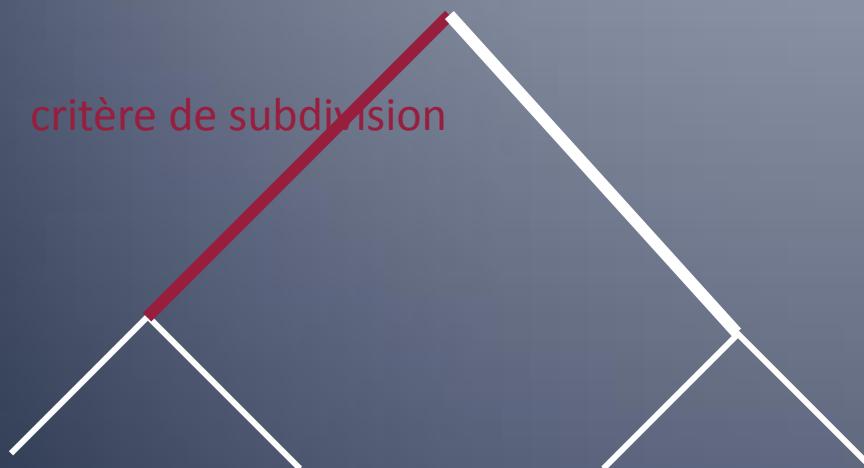
Attributs-valeurs Caractères

UML (ISO/IEC 19501)
class
attribute 1 = default value 1..n
attribute 2 = default value 2..n
operation 1
operation 2

ISO/TR 24156
concept
caractère nécessaire 1 = caractère distinctif 1..n
caractère nécessaire 2 = caractère distinctif 2..n
opération 1
opération 2

Critères de subdivision 1

critère de subdivision

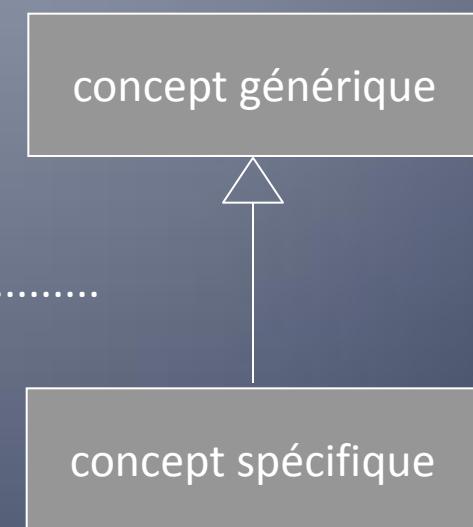


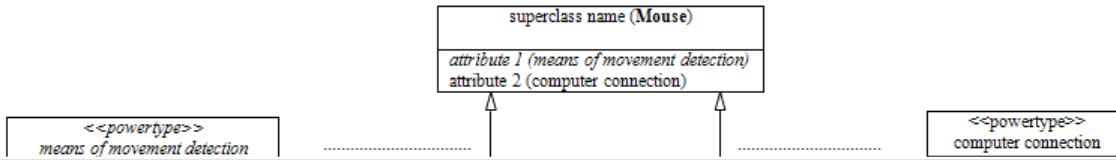
<<powertype>>

<<powertype>>
critère de subdivision

Critères de subdivision 1

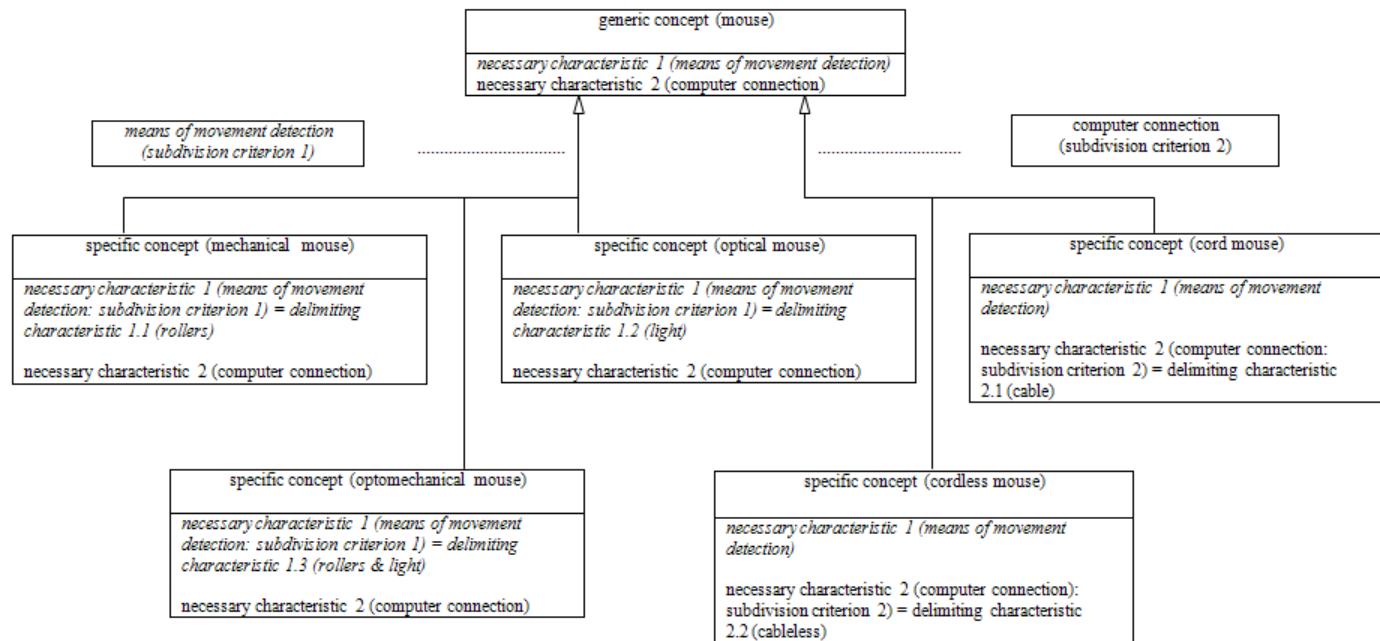
<<powertype>>
critère de subdivision





attribute > AttributeName: Attribute type?

means of movement detection >
meansOfMovementDetection: Integer
 (Picklist: rollers, light, rollers & light)



ISO TR 24156 revisité

caractères distinctifs

Data type (i.e. Attribute type)

A data type is a type whose instances are identified only by their value

Semantics

A data type is a special kind of classifier, similar to a class. It differs from a class in that instances of a data type are identified only by their value

All copies of an instance of a data type and any instances of that data type with the same value are considered to be the same instance

Attribute type caractère distinctif

concept

caractère nécessaire = caractère distinctif

Class

AttributeName: **TypeName** = default value



ISO TR 24156 revisité

caractères distinctifs

A data type is denoted using the rectangle symbol with keyword «dataType» or, when it is referenced by (e.g., an attribute) denoted by a string containing the name of the data type.

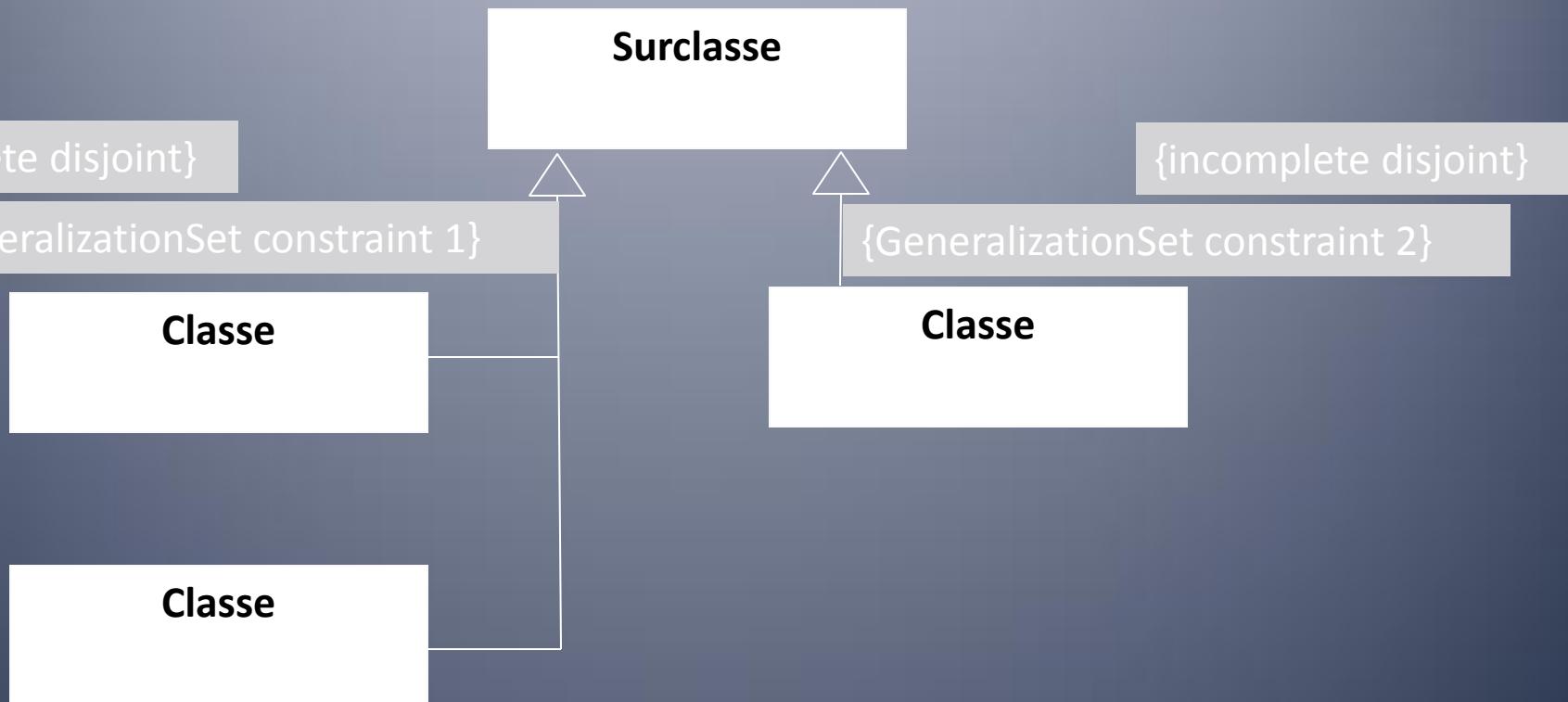
Examples

```
«dataType»  
Integer
```

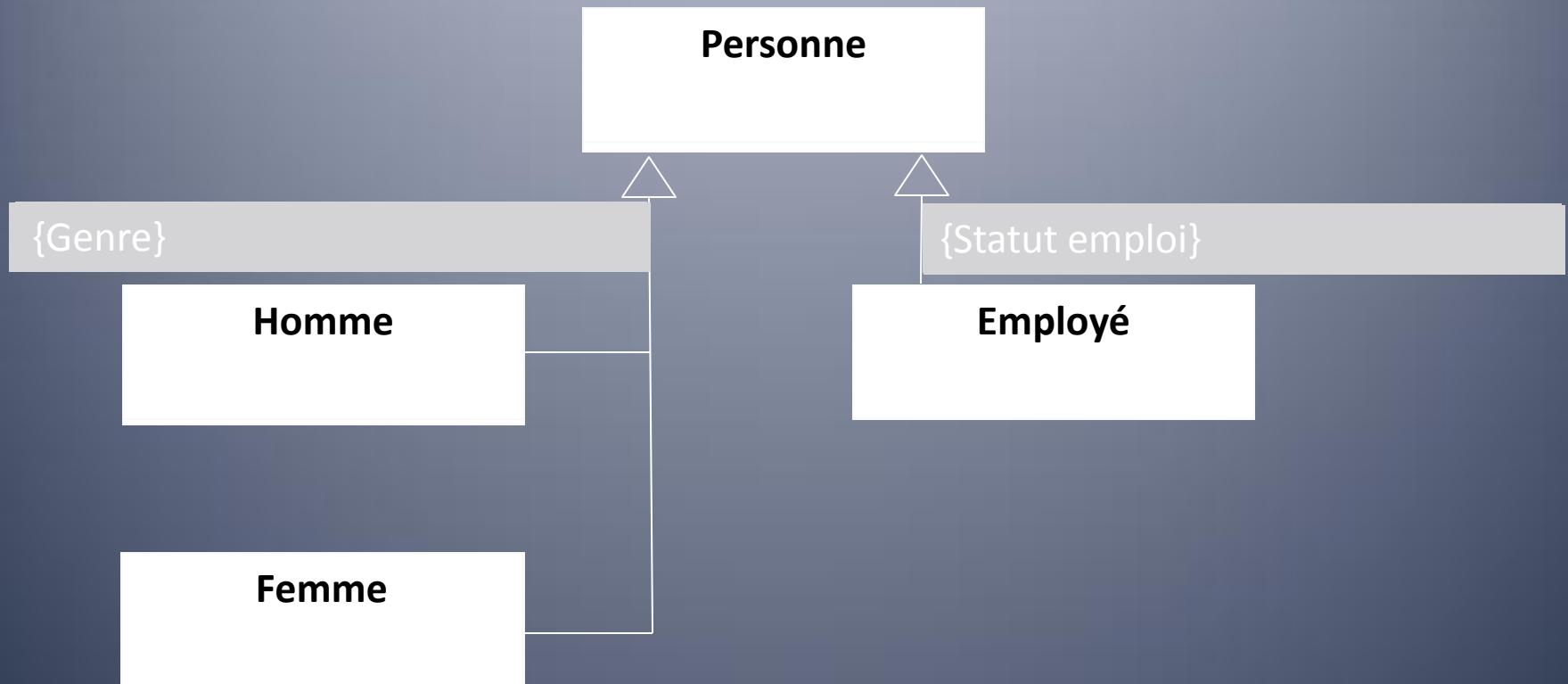
```
size: Integer
```

GeneralizationSet Constraint notation

UML v2.2



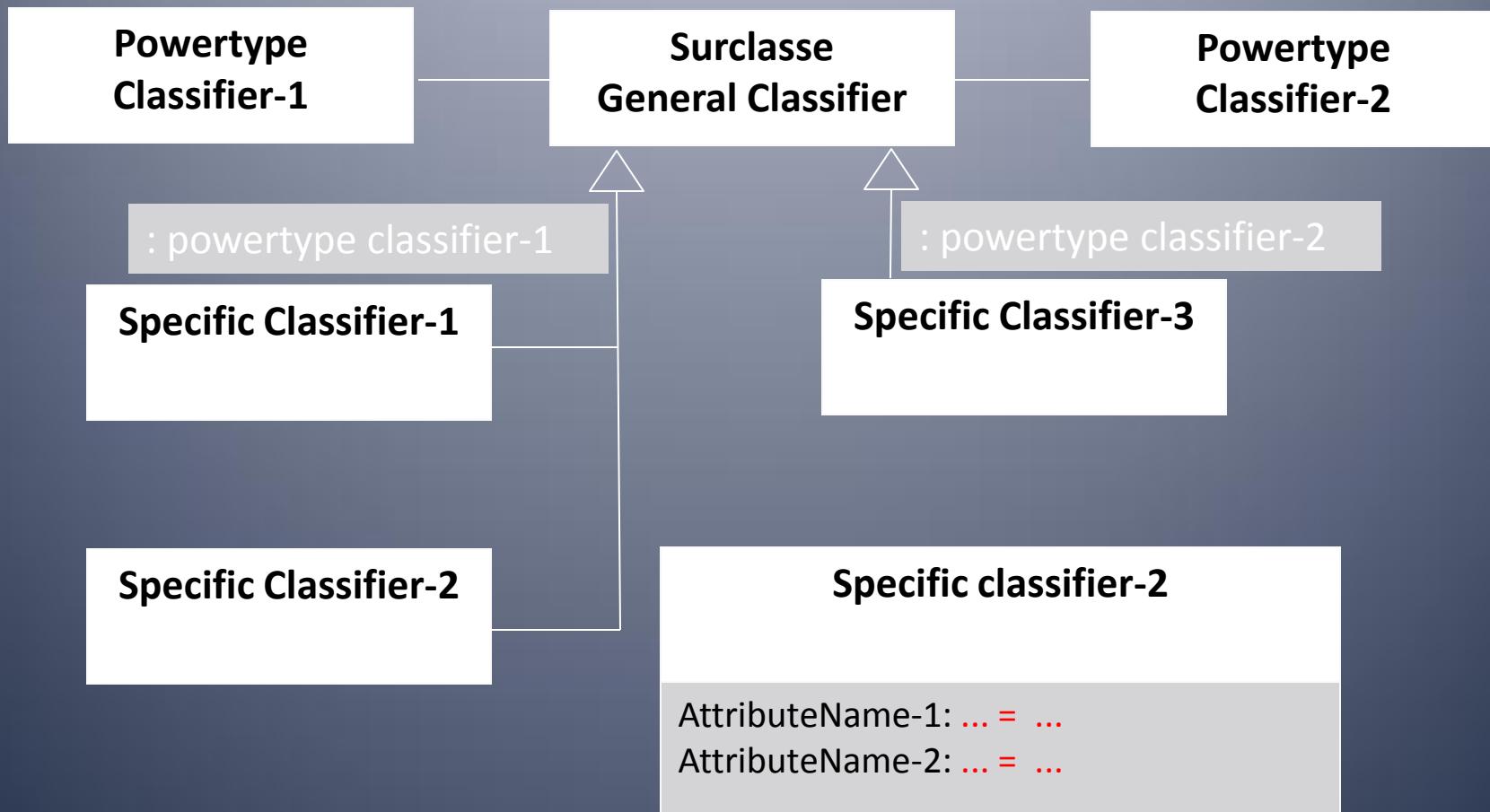
GeneralizationSet Constraint notation UML v2.2



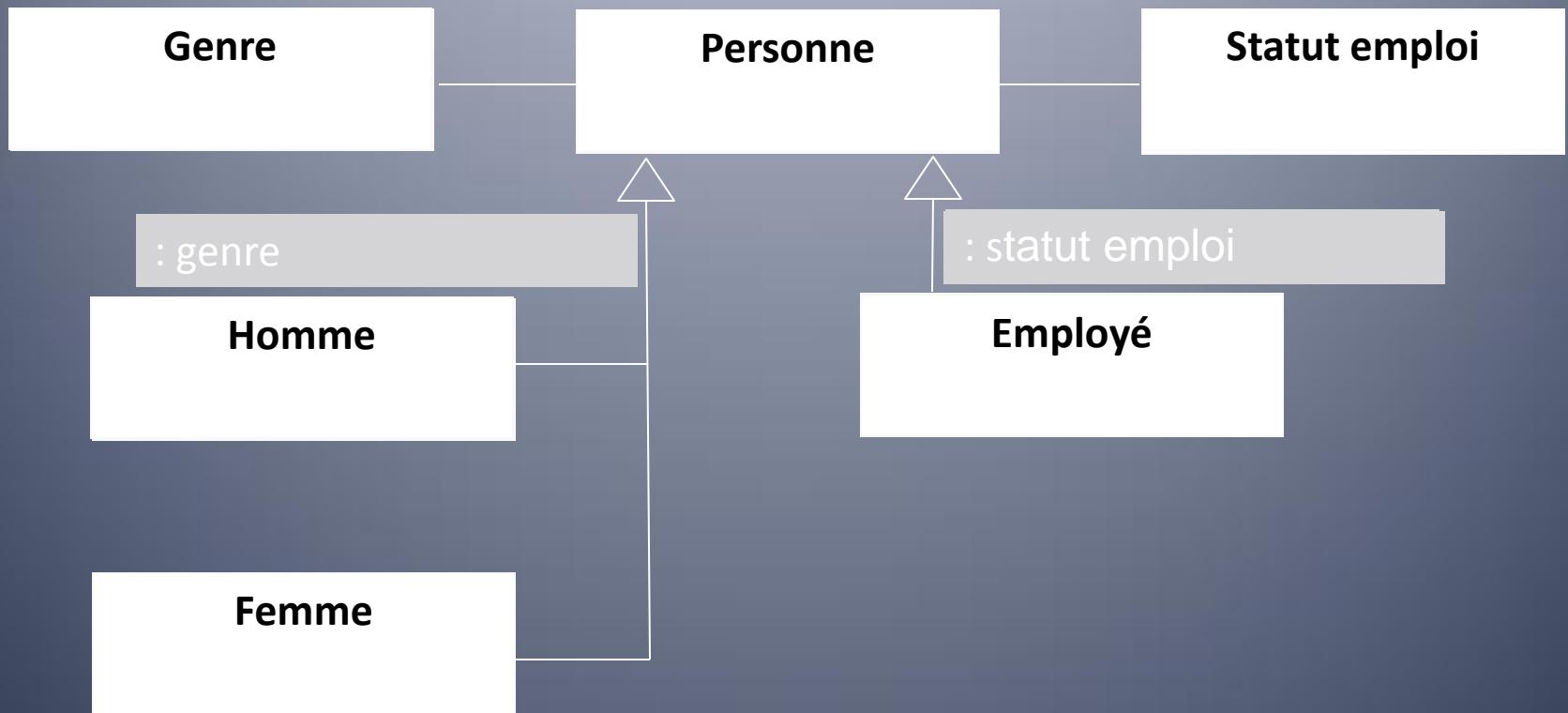
GeneralizationSet

Powertype notation

UML v2.2



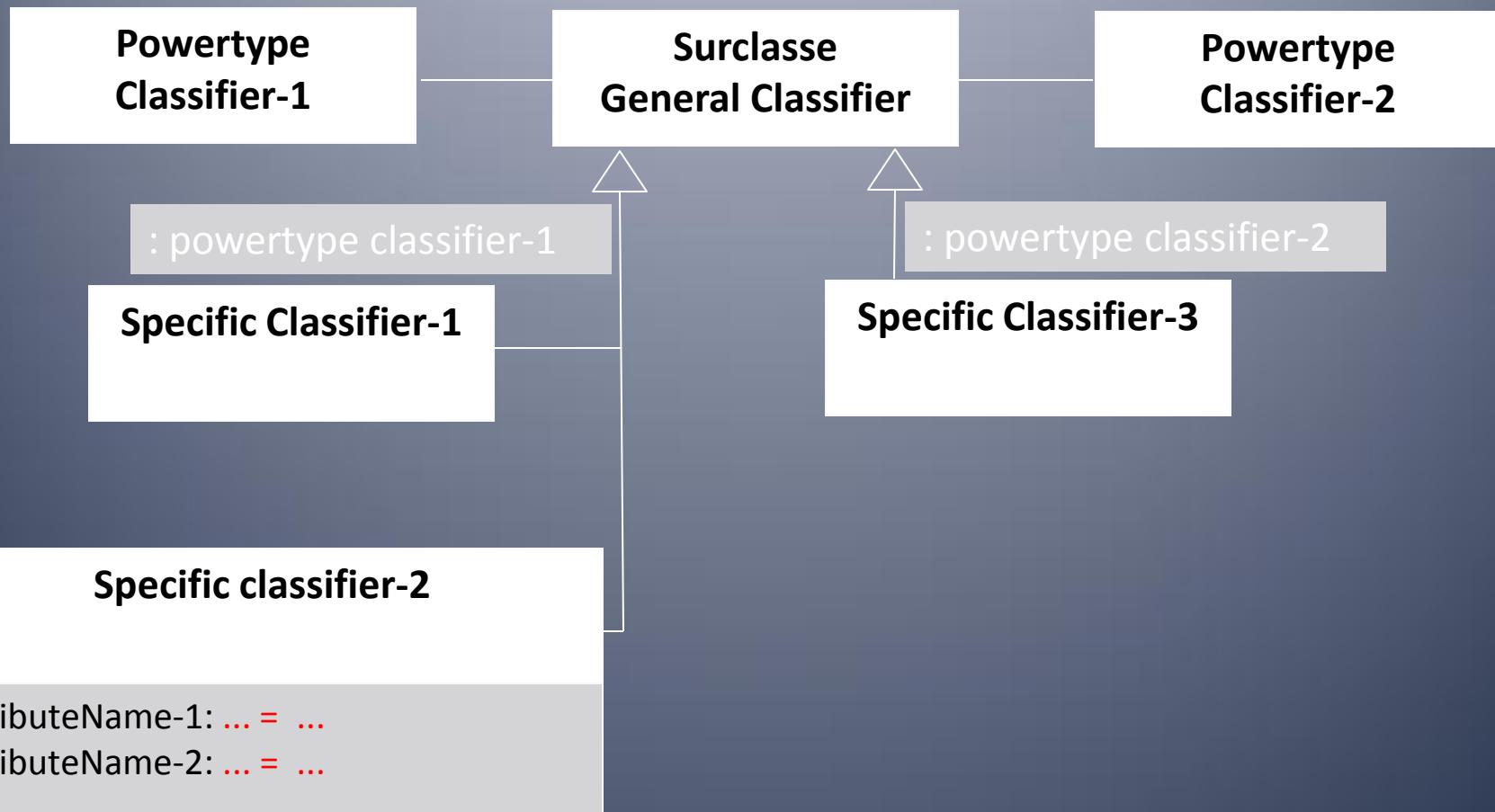
GeneralizationSet Powertype notation UML v2.2



GeneralizationSet

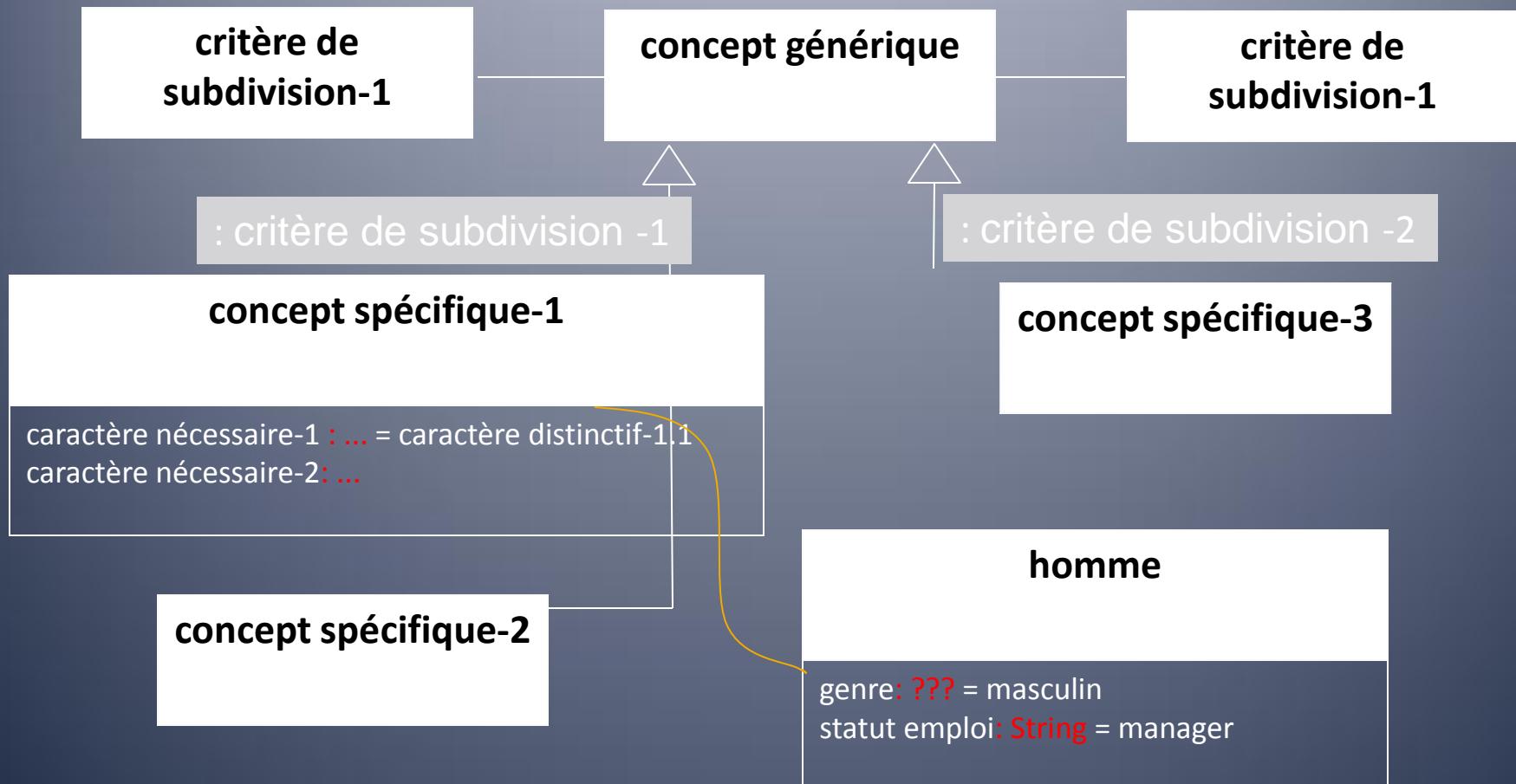
Powertype notation

UML v2.2



Concept system

ISO/TR 24156



Relations



relation associative

association

[association]

association simple

[Audibert]

concept 1



concept 2

classe 1

classe 2

classe 1

classe 2

relation associative



relation hiérarchique

relation générique

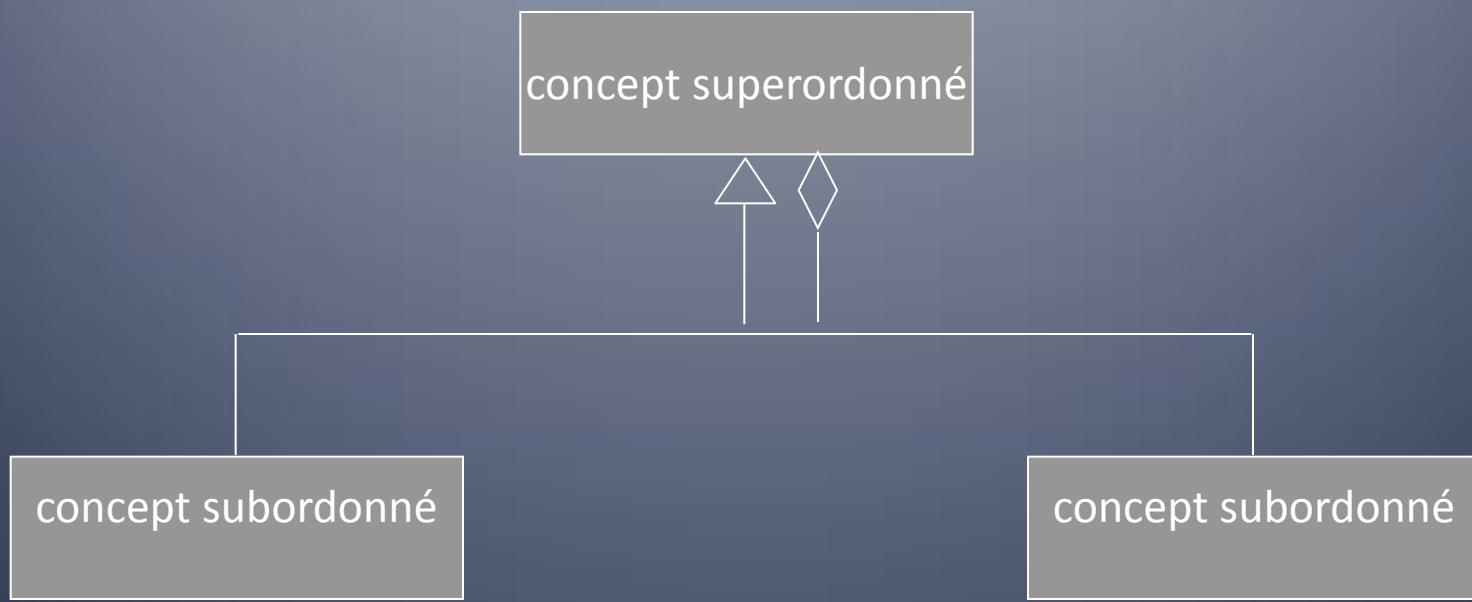
relation partitive

(DirectedRelationship)

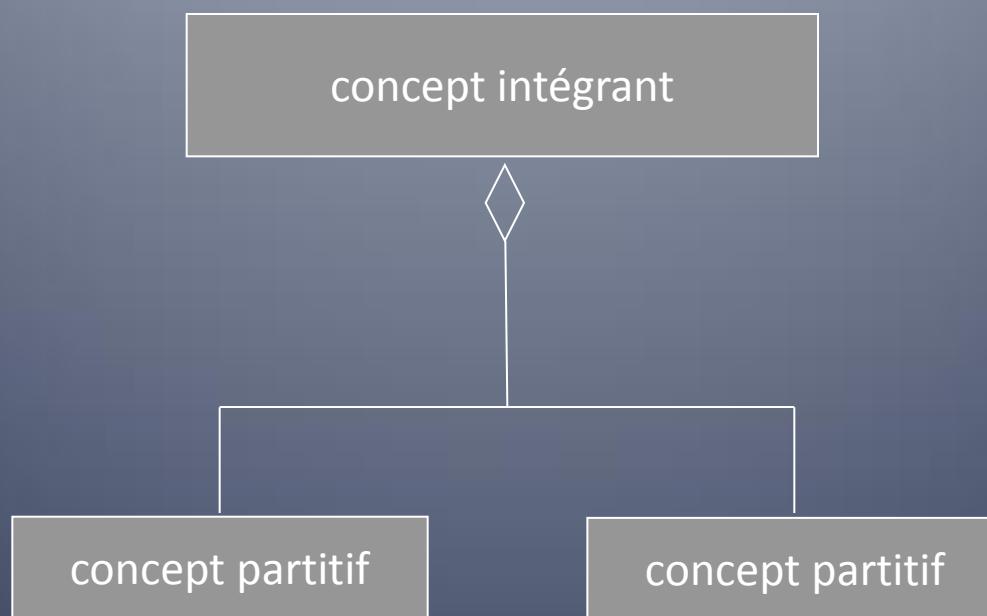
relation de généralisation
agrégation



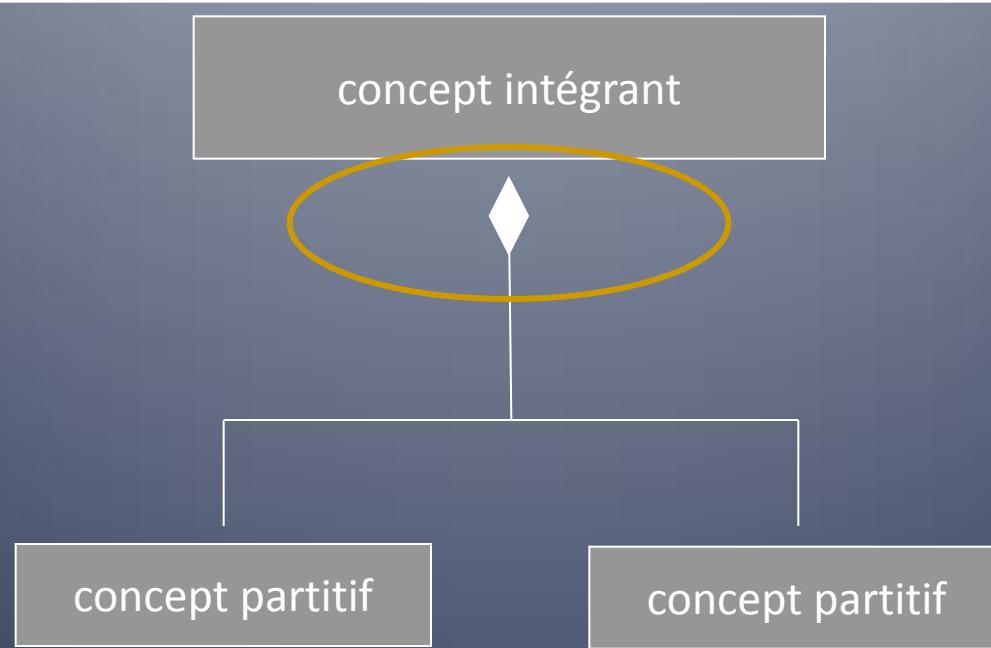
relation hiérarchique



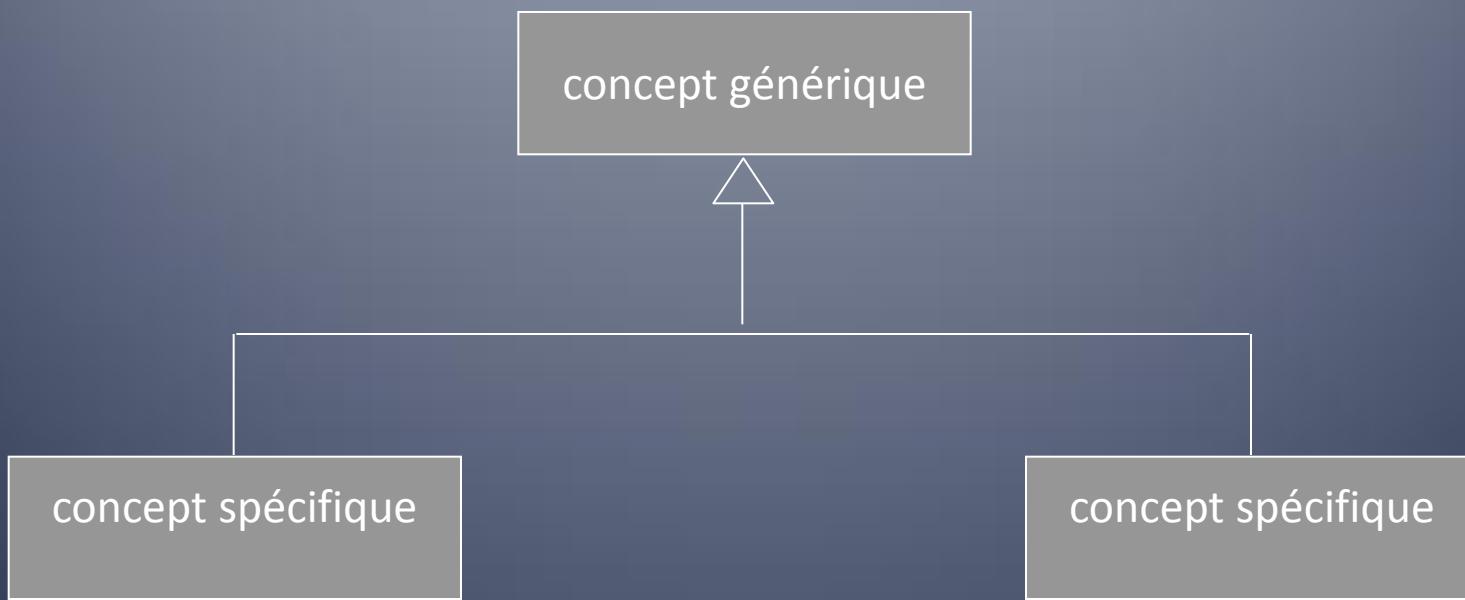
relation partitive



composition



relation générique



Merci de votre attention

