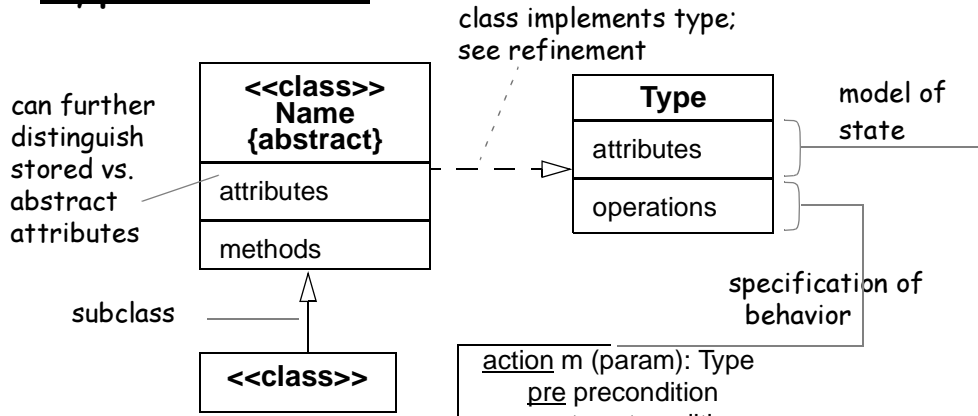
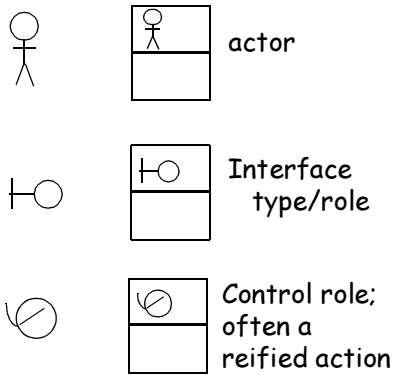


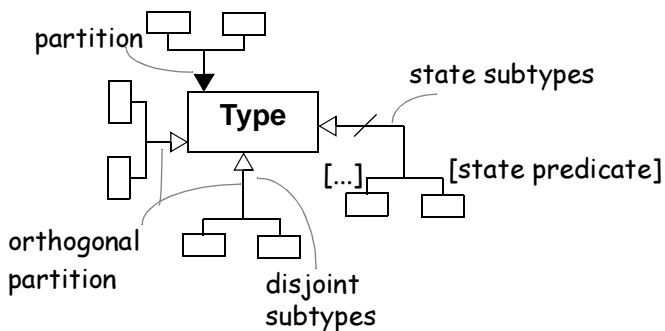
Type and Class



Other Type Icons



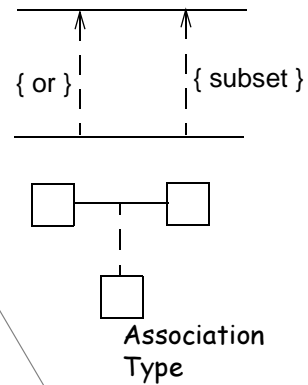
Subtypes



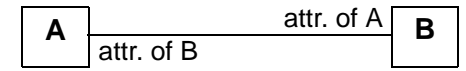
Textual Attributes

attribute: Type
 optional_attribute: [Type]
 /derived_attribute
 parameterized_attribute (params): Type

inv static invariant

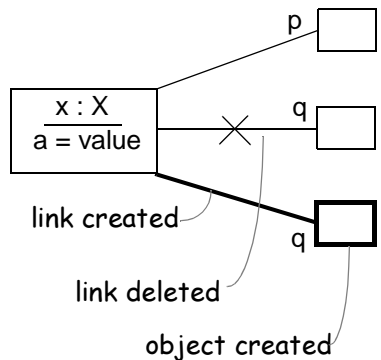


Graphical Associations

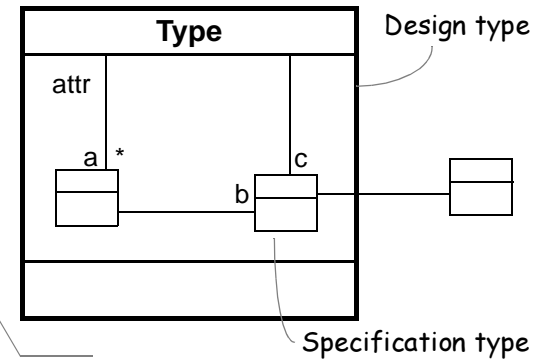


1	one
0..1	optional
*	0 or more (a flat set)
m..n	between m and n
→	directed
⊗	not defined
⊄	derived
r(x,y)	parameterized
{seq [x]}	ordered [by x]
const	constant

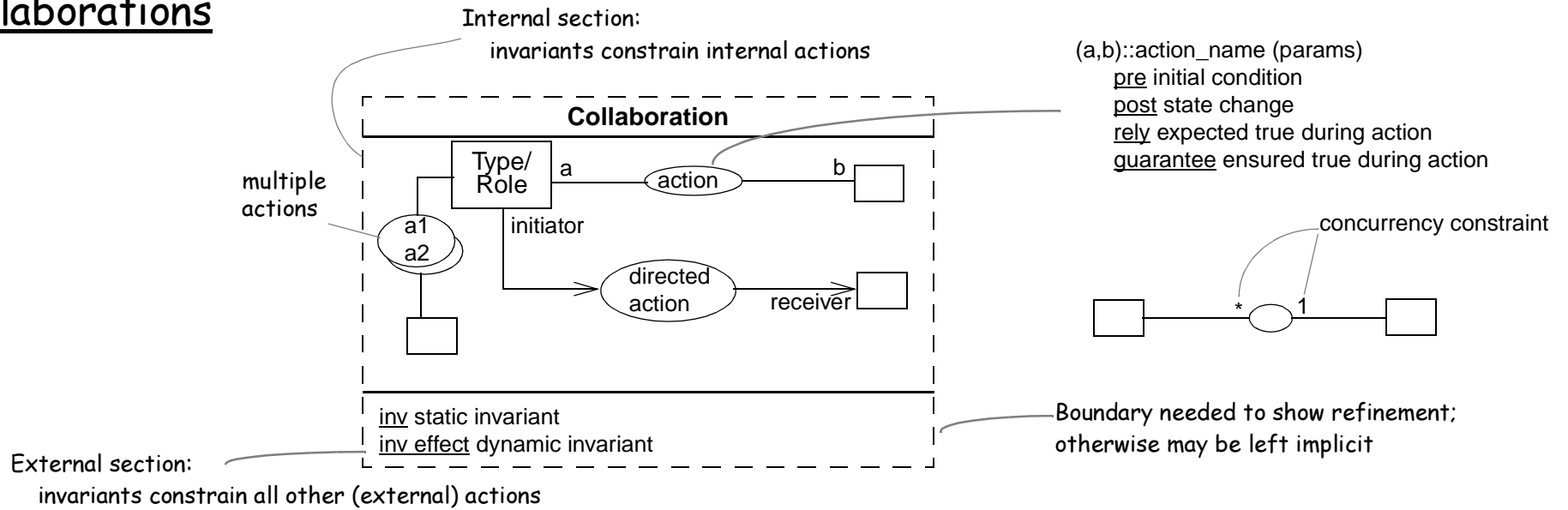
Snapshots/Instance diagrams



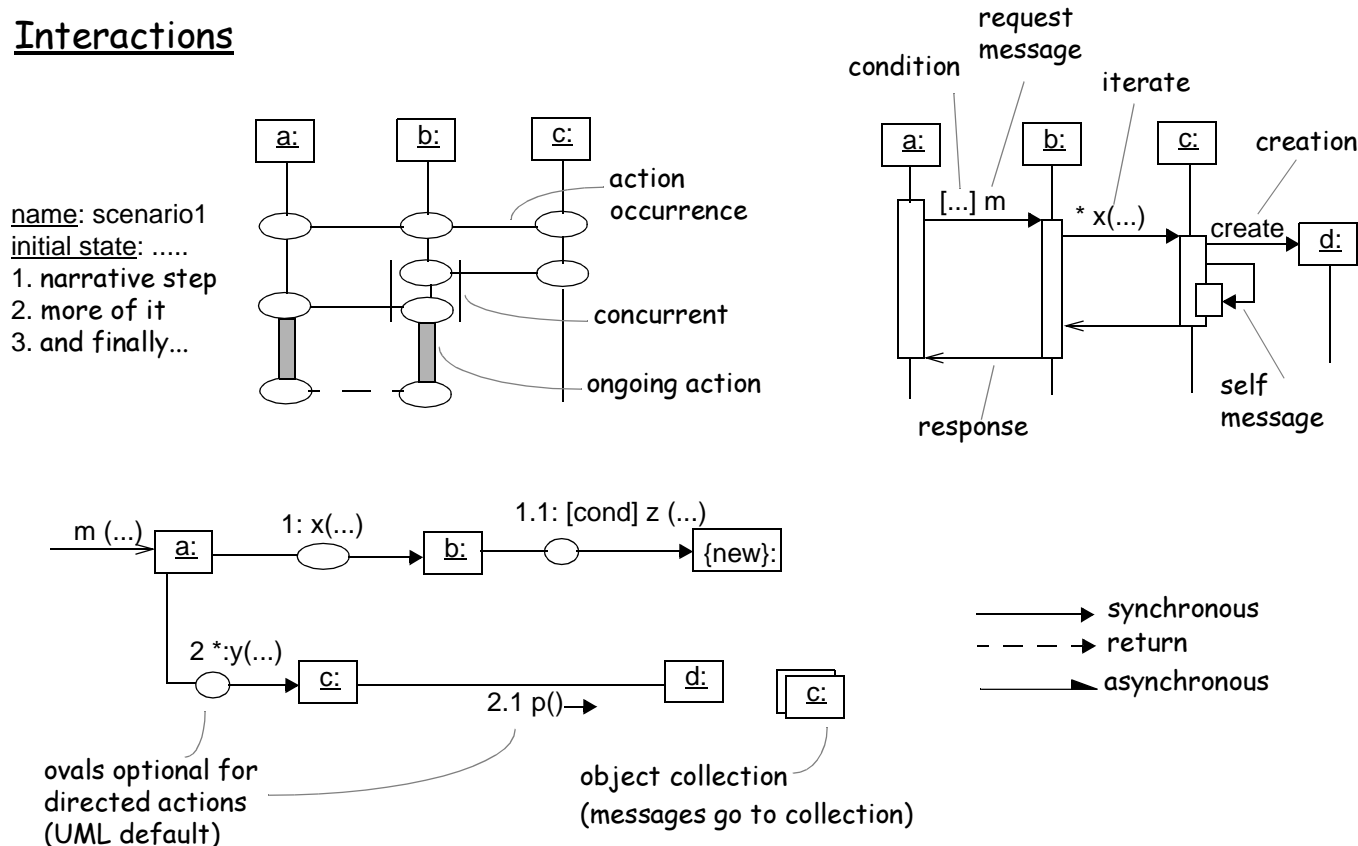
Visual Type Containment



Collaborations



Interactions



Use case template

use case name of use-case / action

intent ...

initiator ...

reciever ...

participants ... parameters ...

pre post rely guarantee

nonfunctionals: frequency, performance, data volume, etc.

refinement

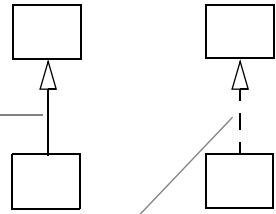
steps 1. ...
 2. ...

exceptions ...

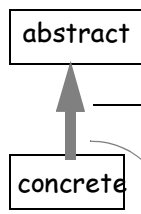
exception indicator ...

Refinement

Subtype= a trivial refinement as the subtype is defined as an extension of the supertype

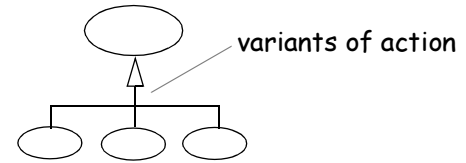


class implements type (UML refinement)

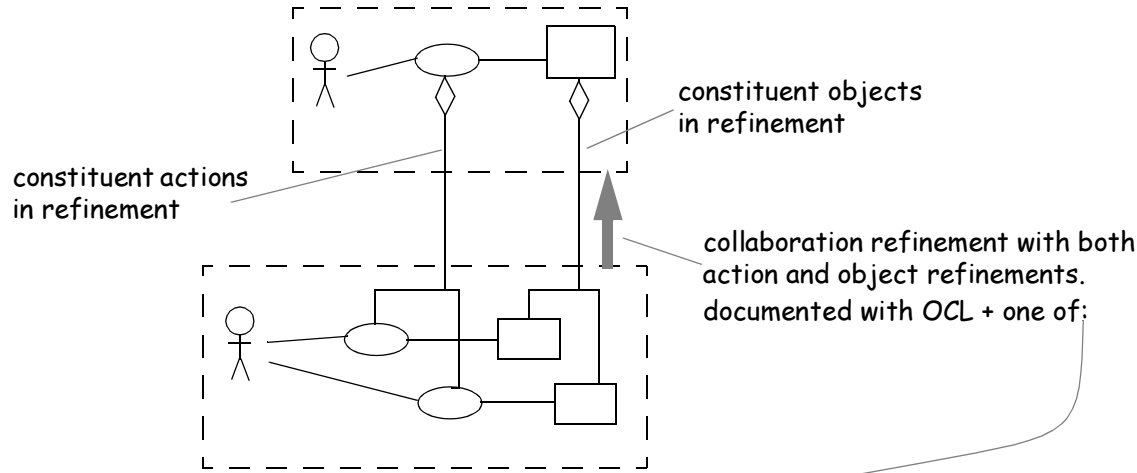


general refinement

Justification mapping/retrieval tests



variants of action

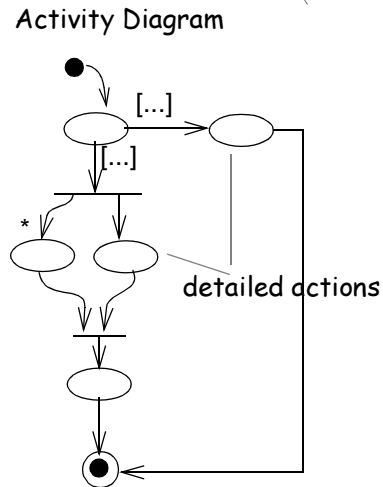
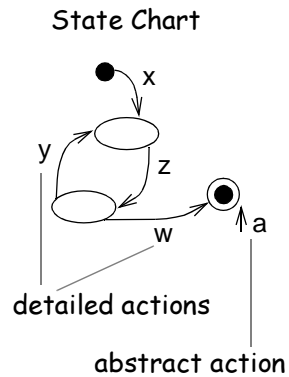
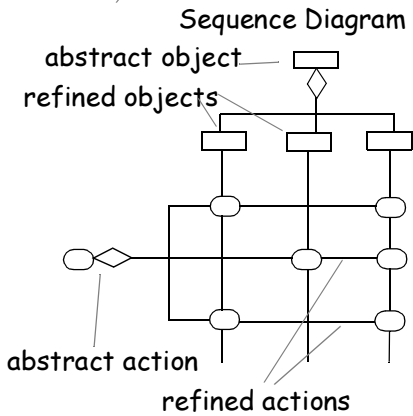
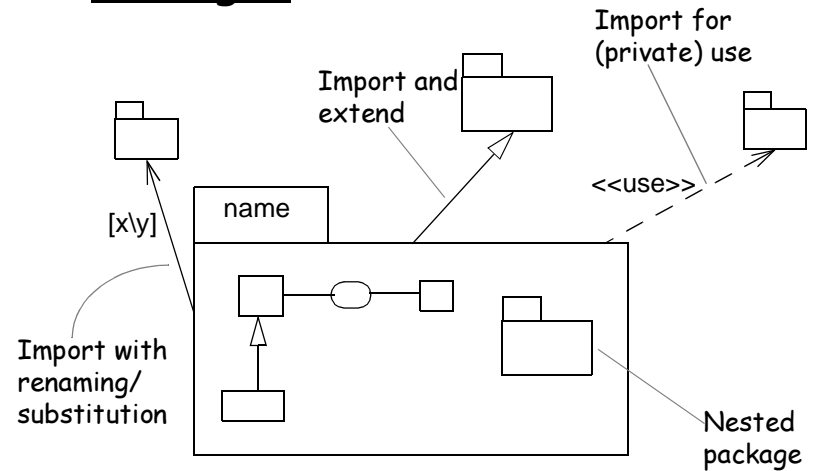


constituent actions in refinement

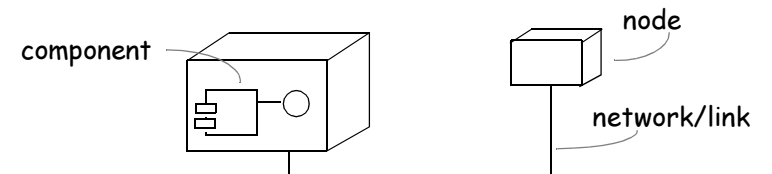
constituent objects in refinement

collaboration refinement with both action and object refinements. documented with OCL + one of:

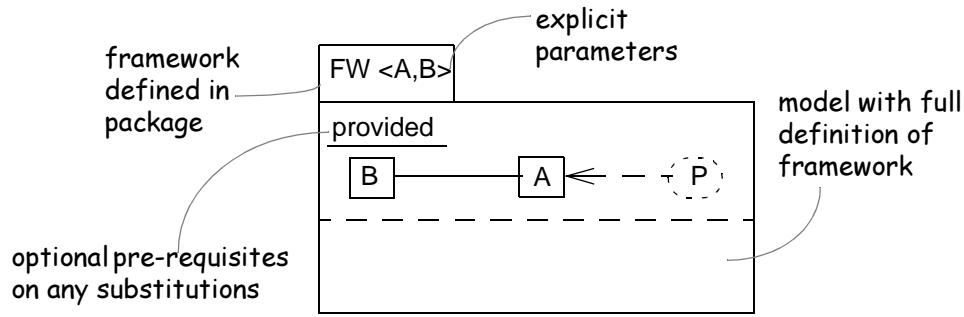
Packages



Deployment

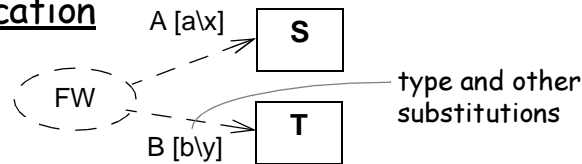


Frameworks

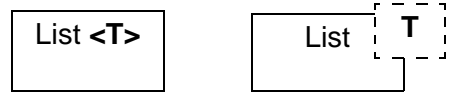


Framework Application

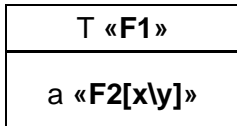
(a) as UML pattern



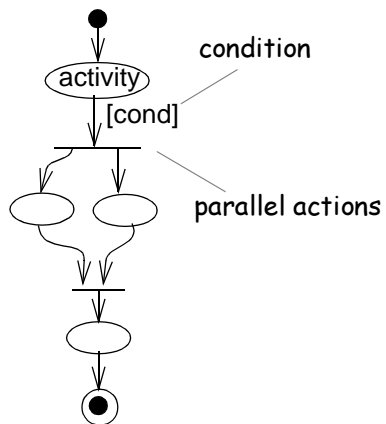
(b) as parameterized type



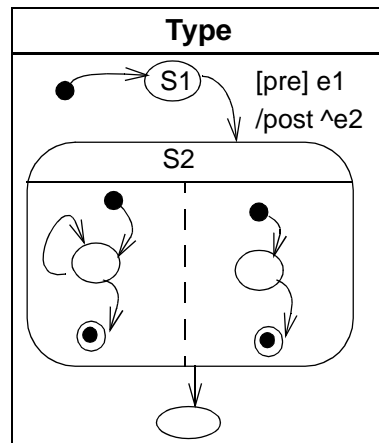
(c) as stereotype



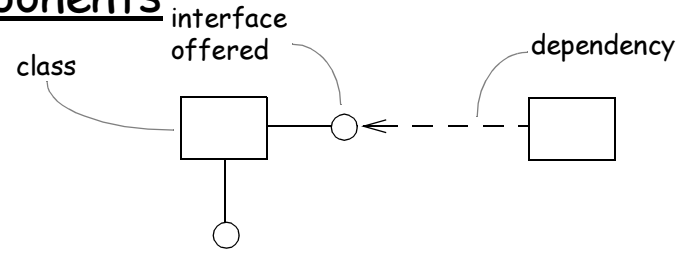
Activity Diagram



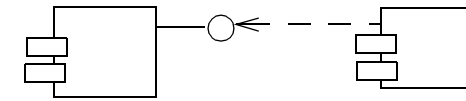
State Chart



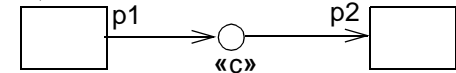
Components



(UML) component



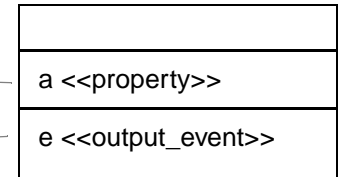
component, ports, connectors



connector stereotype (defined as framework)

component properties and events as stereotypes

framework for properties; defines access operations, register/update, etc.



framework for output events; defines registration protocol, updates

state-event matrix

	e1	e2	e3
S1			
S2			

state-definition matrix

	defining expression
S1	
S2	