DETAILED DESIGN WITH UML

Software Engineering Process and Practice

18 May 2003

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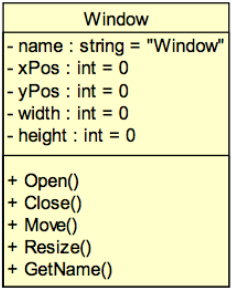
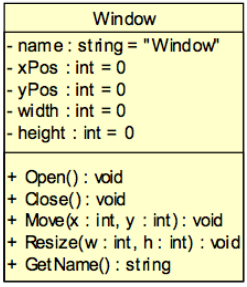
OVERVIEW

- Class Diagrams
- Inheritance and Abstract Classes
- Attributes and Associations
- Roles
- Aggregation and Composition
- Association Multiplicity
- Qualified Associations
- Programmer Notes

UML CLASS DIAGRAMS



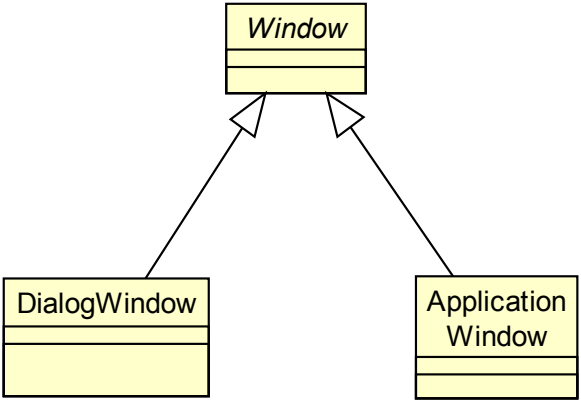


ATTRIBUTE AND METHOD VISIBILITY

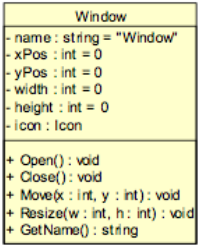
Attributes and methods can be prefixed with symbols to denote if they are private, protected or public.

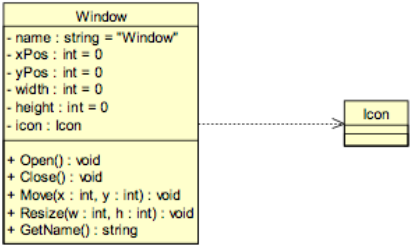
- – Private
- # Protected
- + Public

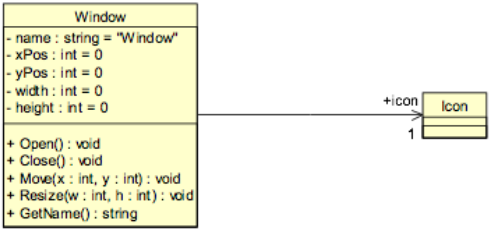
INHERITANCE AND ABSTRACT CLASSES



ATTRIBUTES AND ASSOCIATIONS

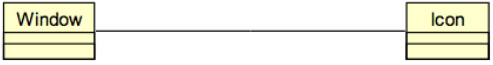






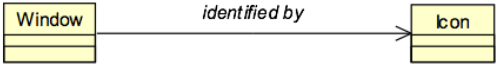
ASSOCIATIONS

Bi-Directional Association

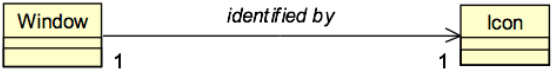


Uni-Directional Association
Through Navigation
(Navigability)

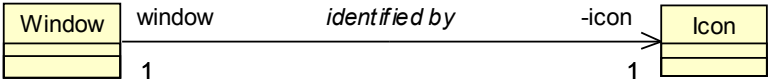
Association Name



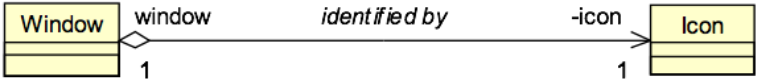
Multiplicity

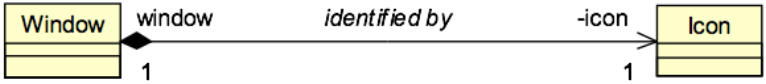


ASSOCIATION ROLES

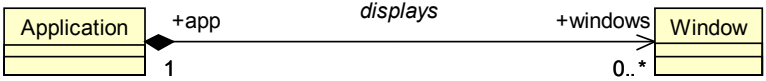


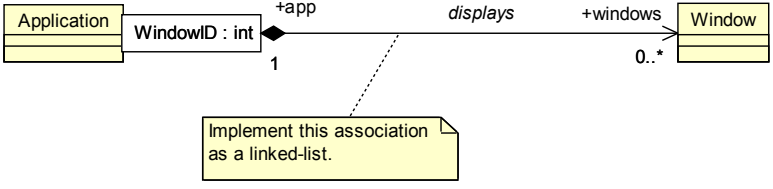
AGGREGATION AND COMPOSITION





MULTIPLICITIES IN ASSOCIATIONS



QUALIFIED ASSOCIATIONS

NOTES FOR THE PROGRAMMER