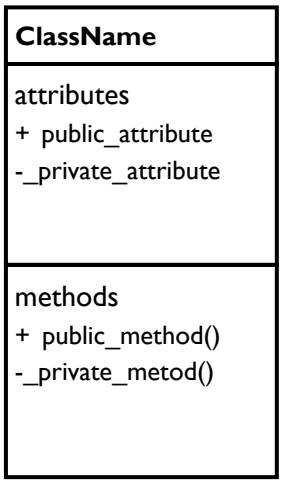
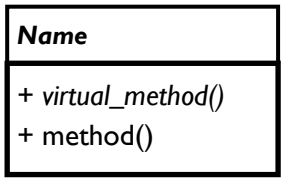
Class diagram in UML

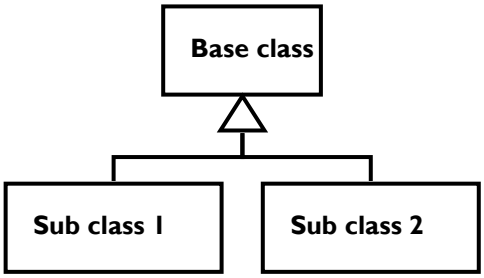
Class



Abstract class



Inheritance(is-a)



Attribute/Parameter

name:datatype

name:list<datatype>

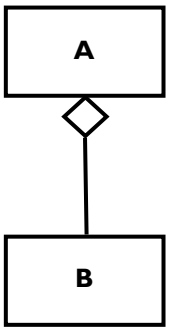
Complex datatype. Ex.: list<int> - list of integers

Methods

name(parameter,…): return_type

Return type is omitted if there is no return value or if the datatype is obvious.

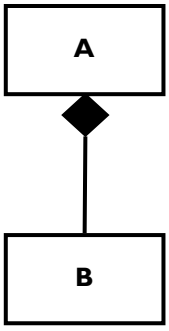
Aggregation (has-a)



A can have one or more instaces of B.

- A and B can have different life-times.
- B can be shared with other objects.

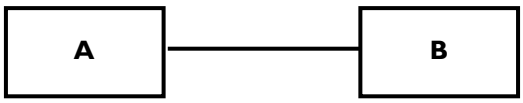
Composition (is-part-of)



A is partly consisting of instances of B

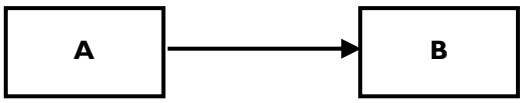
- A controls the life-time of B.
- B is not shared with other objects.

Associations (uses, interacts-with)



Example:

A calls a method for an instance of B



Reachability

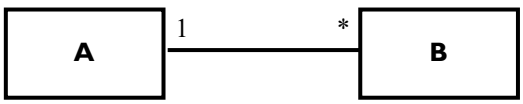
B can be reached from a A (not the other way around)

Counts on aggregation, composition and association

*	arbitrary count	0..1	zero or one
1	exactly 1	1..*	one or more
n	exactly n	n..m	between n and m

Follow the line from start class to end class, note the count at the end. Say "every <start_class> is associated with <count> <end class(es)> "

Example:



Every A is associated with an arbitrary number of B. Every B is associated with exactly one A.