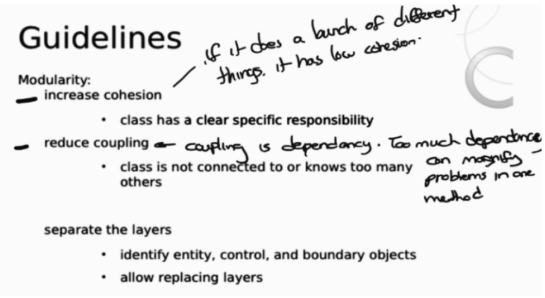
UML

Activity diagram



Class diagram

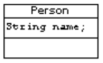
Classes. Standard representation contains three *compartments*:

1. The *name compartment* (required) contains the class name and other documentation-related information: E.g.:

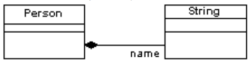
```
Some_class «abstract»

{ author:      George Jetson
  modified:    10/6/2999
  checked_out: y
}
```

   - Guillemets identify ***stereotypes***. E.g.: **«utility»**, **«abstract»** **«interface»**.
   - Can use a graphic instead of word.(**«interface»** often represented as small circle)
   - Access privileges (see below) can precede name
   - Use italics for abstract-class and interface names.

2. The *attributes compartment* (optional):
   - *During Analysis*: identify the attributes (i.e. defining characteristics) of the object.
   - *During Design*: identify a relationship to a stock class:
     This:



     is a more compact (and less informative) version of this:



     Everything except constant values must be private. Always. Period.

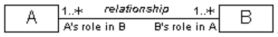
3. The *operations compartment* (optional) contains method definitions:

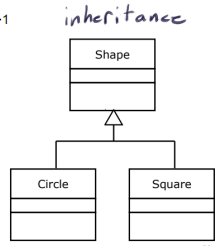
```
message_name(arguments): return_type
```

   Resist the temptation to use implementation-language syntax.

   Visibility (**access privileges**) indicated as follows:[>1]

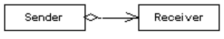
+	public
#	protected





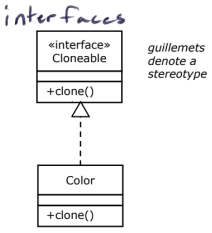
Associations (relationships between classes).

- Associated classes are connected by lines.
- The **relationship** is identified, if necessary, with a < or > to indicate direction (or use solid arrowheads).
- The role that a class plays in the relationship is identified on that class's side of the line.
- Stereotypes (like **«friend»**) are appropriate.
- Unidirectional message flow can be indicated by an arrow (but is implicit in situations where there is only one role):



- Cardinality:

1	(usually omitted if 1:1)
n	(unknown at compile time, but bound)
0..1	(1..2 1..n)
1..*	(1 or more)
*	(0 or more)



Aggregation (comprises) relationship relationship.[1] Destroying the "whole" does not destroy the parts.

Composition (has) relationship.[1] The parts are destroyed along with the "whole."