

Classes

A class is a group of objects that have the same structure and behavior. A class describes the attributes, actions, connections, and meanings of the class's instances or objects. Each object that makes a class has its own set of attribute values. The name of a class, which you should be able to determine from the language of the system you're modeling, indicates the system's or one of its responsibilities.

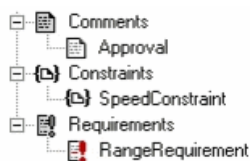


- The top compartment displays the class name.
- The middle compartment displays a list of attributes.
- The bottom compartment displays a list of operations.

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Annotations

Annotations supplement model elements with additional information. There are four kinds of annotations. A constraint is a textual requirement or limitation. It is usually a Boolean statement that must be true for an associated model element. A comment is a written annotation that offers information that may be valuable to the reader and is shown in the browser. A note is a textual annotation that does not contribute semantics but offers information that the reader may find valuable. A requirement is a textual annotation that specifies the element's intention.



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Dependency

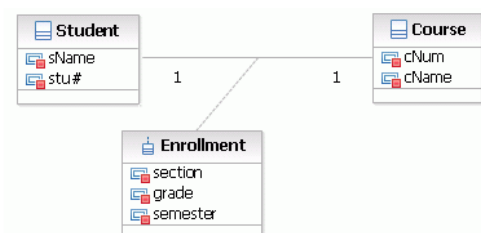
A dependency relationship is one in which one element, the client, utilizes or is dependent on another, the provider. Dependency relationships can be used to show that a change to the supplier may imply a change to the customer. A dependency relationship may also be used to express precedence, where one model element must come before another. A dependency is represented by a dashed line and an open arrow pointing from the client to the provider.



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Association

An association relationship is a class that is part of a relationship between two other classes. It can be attached to an association connection to offer more information about the relationship. It's similar to other classes in that it can have operations, properties, and other associations. An association class is represented by a dotted line.



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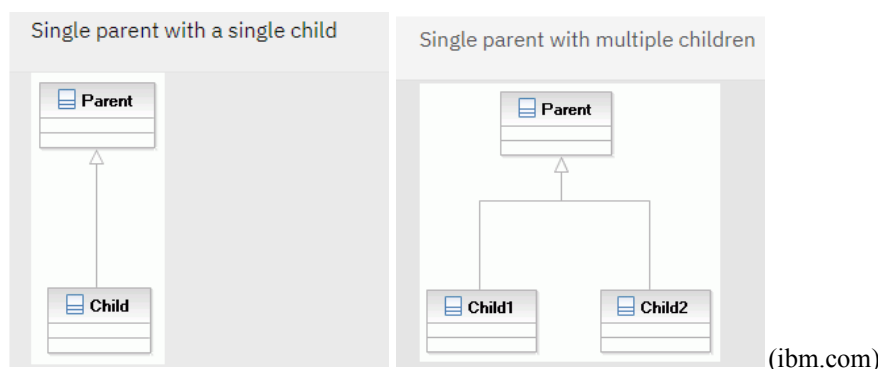
Realization/Implementation

A realization relationship is a relationship between two model elements, in which one model element realizes the behavior that the other model element specifies. Several clients can realize the behavior of a single supplier. A realization is displayed as a dashed line with an unfilled arrowhead that points from the client to the supplier.



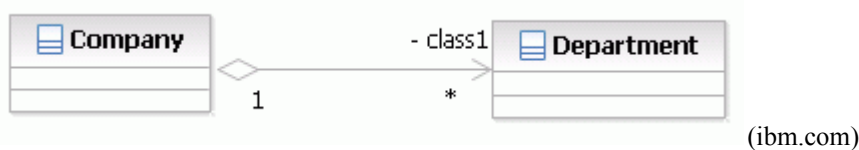
Generalization/Inheritance

A generalization relationship is a relationship where one model element is based on another model element. Generalization relationships are used to show that the child inherits all of the parent's properties, operations, and connections. Any child model element can have one or more parents, and any parent model element can have one or more children. A generalization relationship is displayed as a solid line with a hollow arrowhead that points from the child model element to the parent model element.



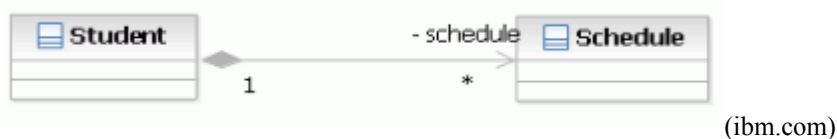
Aggregation

An aggregation relationship shows one classifier as a component of or subservient to another. An aggregation is a sort of relationship in which elements are combined or arranged to form a more complicated object. It explains a collection of items as well as how you interact with them. The control object is also used by aggregation to determine how the assembled items respond to changes or instructions that may impact the collection. An aggregation association is displayed as a solid line with an unfilled diamond at the association end, which is connected to the classifier that represents the aggregate.



Composition

A composition association relationship represents a whole part relationship and is a form of aggregation. A composition association relationship specifies that the lifetime of the part classifier is dependent on the lifetime of the whole classifier. Data usually flows in only one direction, from the whole classifier to the part classifier. A composition association relationship is displayed as a solid line with a filled diamond at the association end, which is connected to the whole, or composite, classifier.



References

<https://www.ibm.com/docs/en/rsm/7.5.0>

