Generalizable Element Encyclopedia Article

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Generalizable Element

A generalization element is a model element—an element that is an **abstraction** of the system being modeled--that can take part in a generalization relationship. A generalization relationship is one where the child element that has been derived from a **parent** element is sufficiently specialized to be capable of substituting for a more generalized parent. Generalizable elements are most often associated with the **Unified Modeling Language** (**UML**).

The generalizable element specifies an element that can take part in the generalization relationship. There are three properties, or instances, that can be assigned to a generalizable element. All three instances are Boolean; that is, they lead to a true or false outcome. A generalizable element may be related to other so-called supertypes and is itself a supertype for other underlying subtypes. Three properties, or attributes, specify these supertype and subtype relationships.

The Root **attribute** specifies whether there are any supertypes. The Boolean default **value** is false, meaning that the element can have supertypes. The Leaf attribute specifies whether there are any subtypes. The default value is false, meaning that the element can have subtypes. Finally, the Abstract attribute specifies if the element can have elements associated with it. The default value is false, meaning that the element can have associated elements.

There are three subtypes of a generalizable element: stereotype, package, and type. These subtypes are repositories for information that help relate elements to one another so that UML is meaningful.