Class Diagram

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Visibility Prefixes

1. Prefix + indicates that an attribute or operation is **public**.

2. Prefix − denotes that the attribute or operation is **private**.

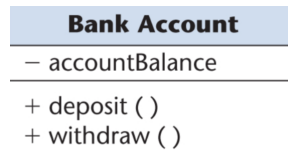3. Prefix # denotes that the attribute or operation is **protected**.

Figure 1: Class Diagram Example

Aggregation

Aggregation is the UML term for the part–whole relationship. i.g. A car consists of a chassis, an engine, wheels, and seats. The open diamonds denote aggregation and is placed at the "whole" end. The numbers next to the ends of the lines denote multiplicity.
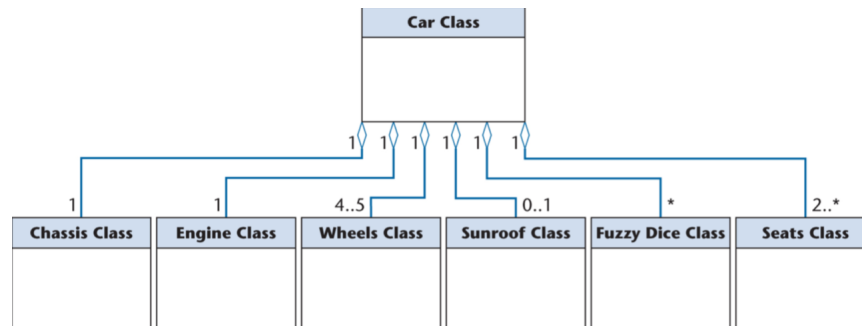

Figure 2: Aggregation Relation

Composition

Composition also models the part–whole relationship. However, it is a stronger form of aggregation. Every part may belong to only one whole, and if the whole is deleted, so are the parts. Composition is depicted by a solid diamond.
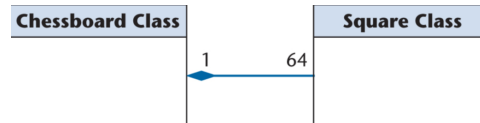

Figure 3: Composition Relation

Generalization

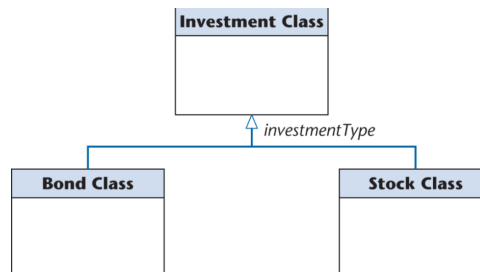The UML notation for generalization is an open triangle and sometimes it is labeled with a discriminator.

Figure 4: Generalization Relation

Association

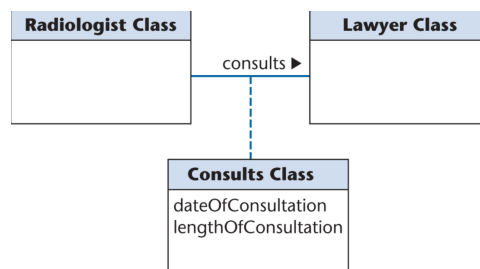The optional navigation triangle shows the direction of the association. And the association between the two classes may be modeled as a class.

Figure 5: Association Relation