

ER model

An entity is a thing that exists either physically or logically. Entities can be thought of as nouns: a company, a computer.

A relationship captures how entities are related to one another.

Relationships can be thought of as verbs, linking two or more nouns.

Entities and relationships can both have attributes.

Instance-level r/s in class diagrams

dependency connection between dependent and independent model elements; exists when changes to one element may cause changes in dependent element; this relation is uni-directional

association association is a relationship between two classes when, that allows one instance to perform an action on behalf of another

aggregation aggregation is a variant of "has a" relationship; it can occur when a class is a collection of other classes

composition more specific version of aggregation; when container destroyed every instance if contains will be destroyed as well; composition unlike aggregation is a "whole-part" relationship

Both aggregation and composition are types of association between classes. The aggregation relationship is often "catalog" containment to distinguish it from composition's "physical" containment.

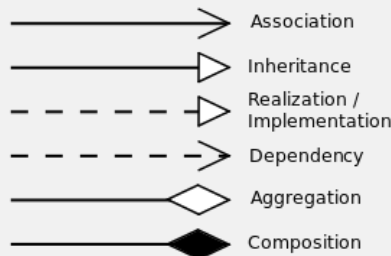
UML diagrams

class diagram a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations, and the relationships among objects.

object diagram shows a complete or partial view of the system at a given moment of time

domain model conceptual model of the domain that incorporates both: behaviour and data

UML relations notation



class level relationship

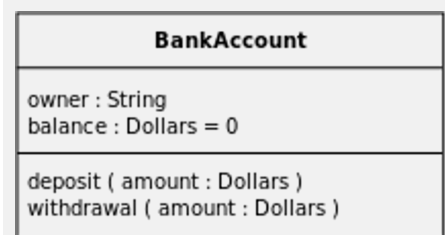
inheritance implements "is a" relationship;

realization relationship between component and it's interface

general relationship

dependency weaker form of bond that indicates that one class is dependent on the other; one class depends on another when the independent class is a parameter or local variable

Class diagram



Three compartments of class diagram:-

Name of the class

Attributes of the class

Methods of the class

Class visibility diagram

+ public
- private
protected
/ derived
~ package

To specify the visibility of a class member (i.e. any attribute or method), these notations must be placed before the member's name