Software Design

Generalization and Aggregation

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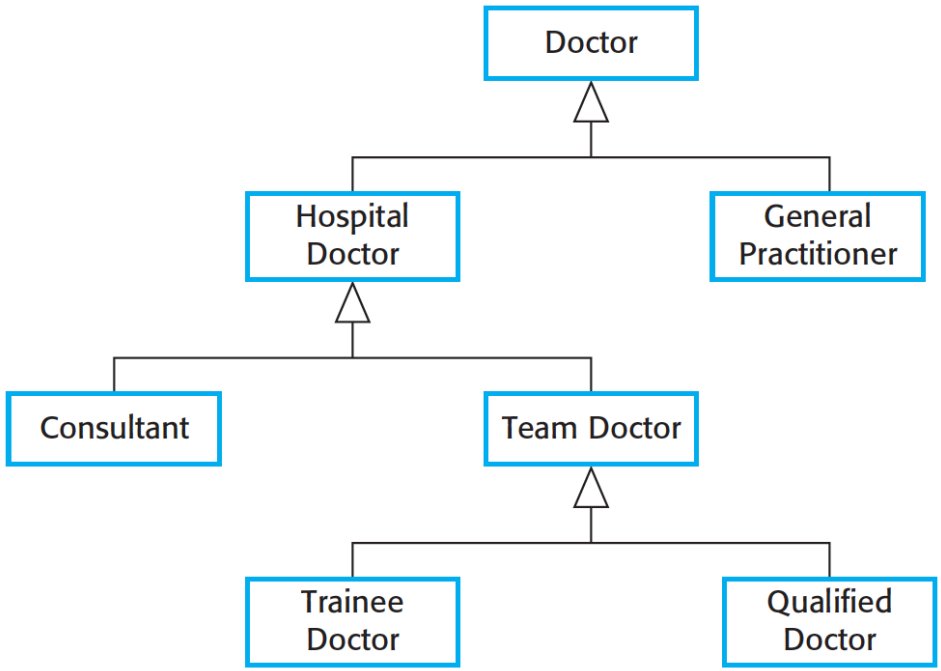
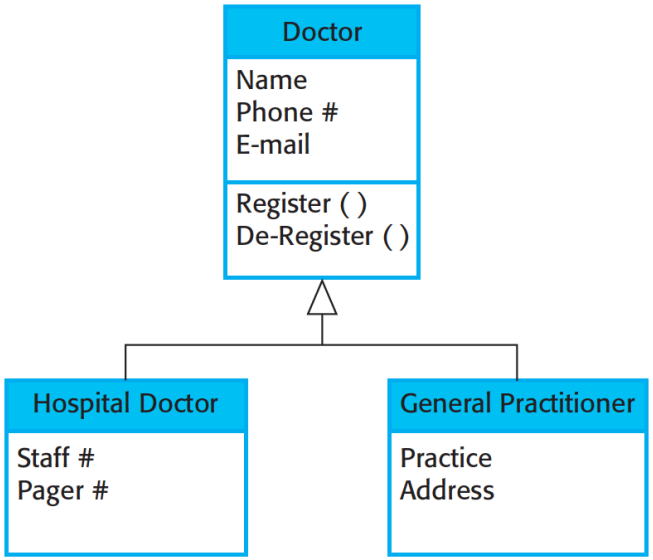
Generalization

- A specific type of association between a base (parent) class and subclass (child)
- Shown as an arrowhead pointing up to the more general class
- Common information maintained in one place only
- Good design practice – if changes are proposed, then you do not have to look at all classes in the system to see if they are affected by the change

Example: The Generalization Hierarchy in MHC-PMS





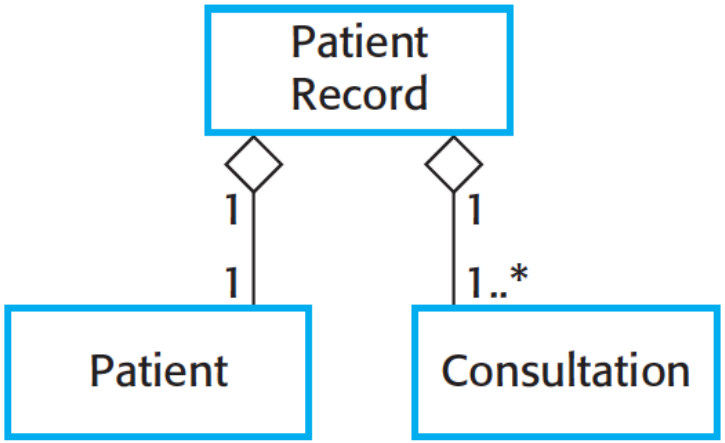
Generalization Details

- The attributes and operations associated with higher-level classes are also associated with the lower-level classes
- The lower-level classes are subclasses inherit the attributes and operations from their superclasses
- These lower-level classes then add more specific attributes and operations

Aggregation

- A special type of association between classes
- Means that one object (the whole) is composed of other objects (the parts)
- Uses a diamond shape next to the class that represents the whole

Example: Aggregation Association in MHC-PMS



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