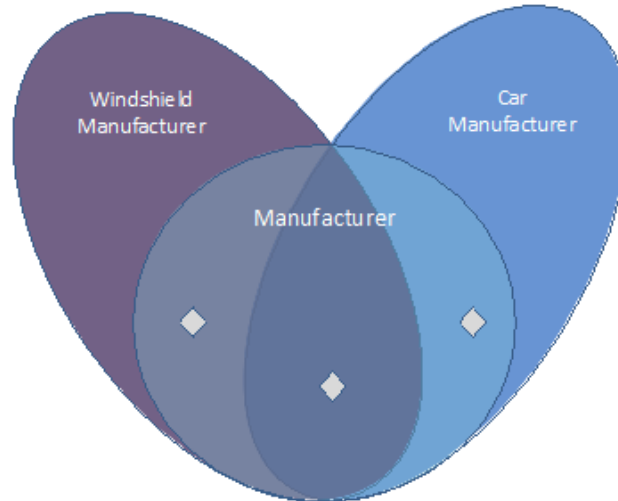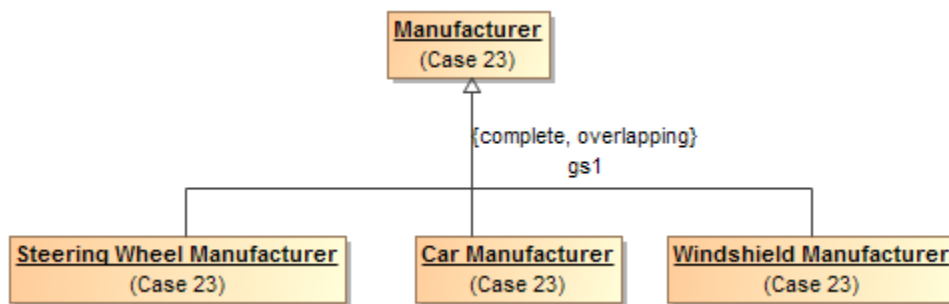# Complete subclasses

This variation means that an instance can only be classified by one of the subclasses; it cannot be classified by only the superclass. However, an instance of a subclass is indirectly an instance of a superclass at the same time.

For example, the following diagram shows three instances. One is an instance of "Windshield Manufacturer", one is an instance of "Car Manufacturer", and one is an instance of both "Car Manufacturer" and "Windshield Manufacturer". Note that there can be no instance of "Manufacturer" that is not also an instance of one of the subclasses.

An example of complete subclasses.

The following diagram shows an example of complete subclasses in standard UML notation. The diagram shows that "Steering Wheel Manufacturer", "Car Manufacturer", and "Windshield Manufacturer" are all subclasses of "Manufacturer". In addition, the standard UML {complete, overlapping} notation declares that the subclasses are complete and overlapping.

Complete subclasses in standard UML notation.

Related pages

- Concept Modeling Semantics
- Generalization
- Disjoint and complete subclasses
- Disjoint Subclasses
- Overlapping and incomplete subclasses