## **Complete and disjoint subclasses**

This variation means that an instance can only be classified by one of the subclasses. The instance cannot be classified as only the superclass, and it cannot be classified by two subclasses at the same time.

For example, in the subsequent diagram, two instances are shown. One is an instance of "Windshield Manufacturer", and one is an instance of "Car Manufacturer". There can be no instance of "Manufacturer" that is not also an instance of one of the subclasses, and there can be no instance that is classified as both a "Windshield Manufacturer" and a "Car Manufacturer" at the same time.



Complete and disjoint instances.

The diagram below shows an example of complete and disjoint 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, disjoint} notation declares that the subclasses are complete and disjoint.



Complete and disjoint subclasses in standard UML notation.

## **Related pages**

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