



Instructions for the Use of Concept Diagrams

Concept diagrams

The relationships between concepts are illustrated with concept diagrams, which have been prepared mainly in accordance with ISO standards and use notation methods based on UML (Unified Modeling Language).

A concept box contains the term, the definition, and a note. Some diagrams also include concepts and expressions that do not appear in the glossary but are essential for understanding the concept system. In the diagrams, such concepts are shown in italics.

An asterisk indicates that the relationships of the given concept are also described elsewhere in the glossary in one or more diagrams.

Types of conceptual relationships and their notation

There are three types of conceptual relationships: hierarchical, partitive, and functional.

Hierarchical relationship

A hierarchical relationship (a line ending in a triangle) holds between a superordinate concept and a more specific subordinate concept.

The subordinate concept includes all the characteristics of the superordinate concept as well as at least one additional characteristic. In other words, the subordinate concept is a type or representative of the superordinate concept.

The tip of the triangle points to the superordinate concept.

Partitive relationship

A partitive relationship (a line ending in a diamond) is a relationship between a whole and its parts. The characteristics of the superordinate concept are not included in the subordinate concept in the same way as in a hierarchical concept system. The diamond is attached to the superordinate concept.





Functional relationship

A functional relationship, also called an associative relationship (a plain line without a symbol), is a type of relationship other than hierarchical or partitive, for example, a relationship between cause and effect, activity and instrument, actor and result, etc. The type of functional relationship is usually evident from the definition. Text placed above the functional line is intended to provide additional information that facilitates understanding of the diagram.

Different types of conceptual relationships may appear in the same diagram.

Dashed line

A dashed line indicates that a concept in a subordinate, partitive, or functional relationship is not essential, or that the relationship between the concepts is not clearly evident from the definitions or notes. A conceptual relationship shown with a dashed line complements the definitions and supports the understanding of the concepts. A dashed line may be used for all types of conceptual relationships.

