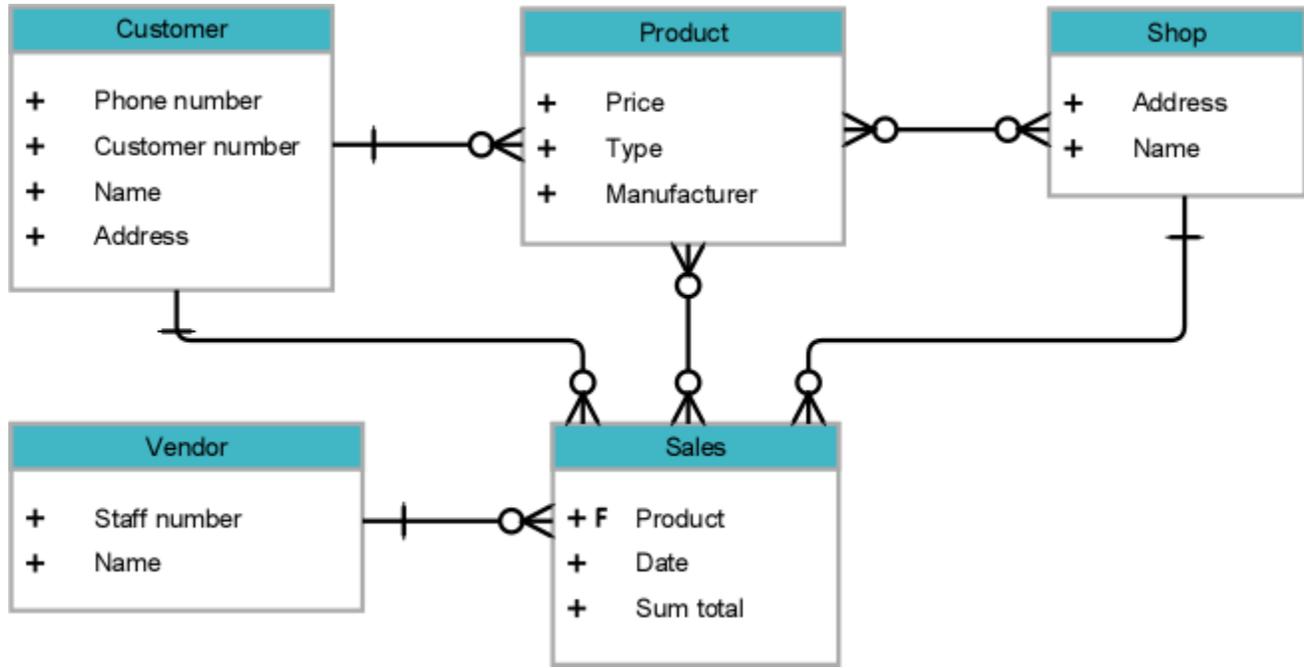# Modeling with ERD

What are entity-relationship diagrams?

Entity-relationship diagrams (ERD), or entity-relationship models, are used for describing and defining data models. The data is modeled as components (entities) that are connected to each other by relations that express the dependencies and requirements between them.

Example of an entity-relationship model

An entity-relationship model consists of one or more views with data models. Data models can be modeled on different levels, in different types of views.

ERD in Enterprise Studio

A basic understanding of entity-relationship diagrams is assumed for modeling with ERD in Enterprise Studio.

Notation

Different notations can be used for ERD. Enterprise Studio supports the *Crow's foot notation*. In the Crow's foot notation entities are represented as boxes and relations as lines between the boxes. Different shapes at the ends of these lines represent the cardinality of the relation. Based on the Crow's foot notation there is also the possibility for NIAM-inspired modeling (Natural language Information Analysis Method).

Modeling levels

Generally, entity-relationship modeling can be done on different abstraction levels: on the conceptual (descriptive) level, logical (analytical) level, and physical (executive) level. Enterprise Studio supports creating models on the *conceptual* and *logical* level.

Used terminology

Within the ERD terminology, we know the terms entity type, entity, relation type, and relation. An entity type is regarded as the object on which information is recorded, an entity is regarded to be an instance of this object. For example the entity type *Person* and the entities *John*, *Jim,* and *Jack*. The same applies to relation types and relations. In practice, the terms are often used interchangeably; the entity types and relation types are in fact always modeled, but for convenience, they are referred to as entities and relations. That is why this documentation only discusses entities and relations.

Model templates

Enterprise Studio has model templates containing the basics for ERD modeling. You can use these templates to start a model.

Introductory eLearning course

Check out the free Enterprise Studio introductory eLearning course to learn about ERD modeling in Enterprise Studio.

View course