

1. Review the following terms.

Entity

Attribute

Sample attribute, Composite attribute

Single-valued attribute, Multi-valued attribute

Relationship

Degree

Cardinality ratio (Chen notation): 1:1, 1:N, N:M

Participation constraint: partial or total

Cardinality limits: [min, max]

Primary key

Weak entity, Strong entity

Specialization

2. Construct an ER diagram for a car insurance company whose customers own one or more cars each. Each car has associated with it zero or more recorded accidents. Each insurance policy covers one or more cars, it has one or more payments associated with it. Each payment is for a particular period of time, it has an associated due date and the date when the payment was received. In general, include two or three attributes for each entity type.

When constructing the ER diagram, aim for a minimal design without unnecessary ID attributes.

Include information about cardinality ratios (1, N, M; Chen notation - see the slides) and graphical notation (directed line or undirected line) with participation constraints (single or double line segments). Include also cardinality limits (using [min, max]).