Figure 4.1 EER diagram notation for representing specialization and subclasses.

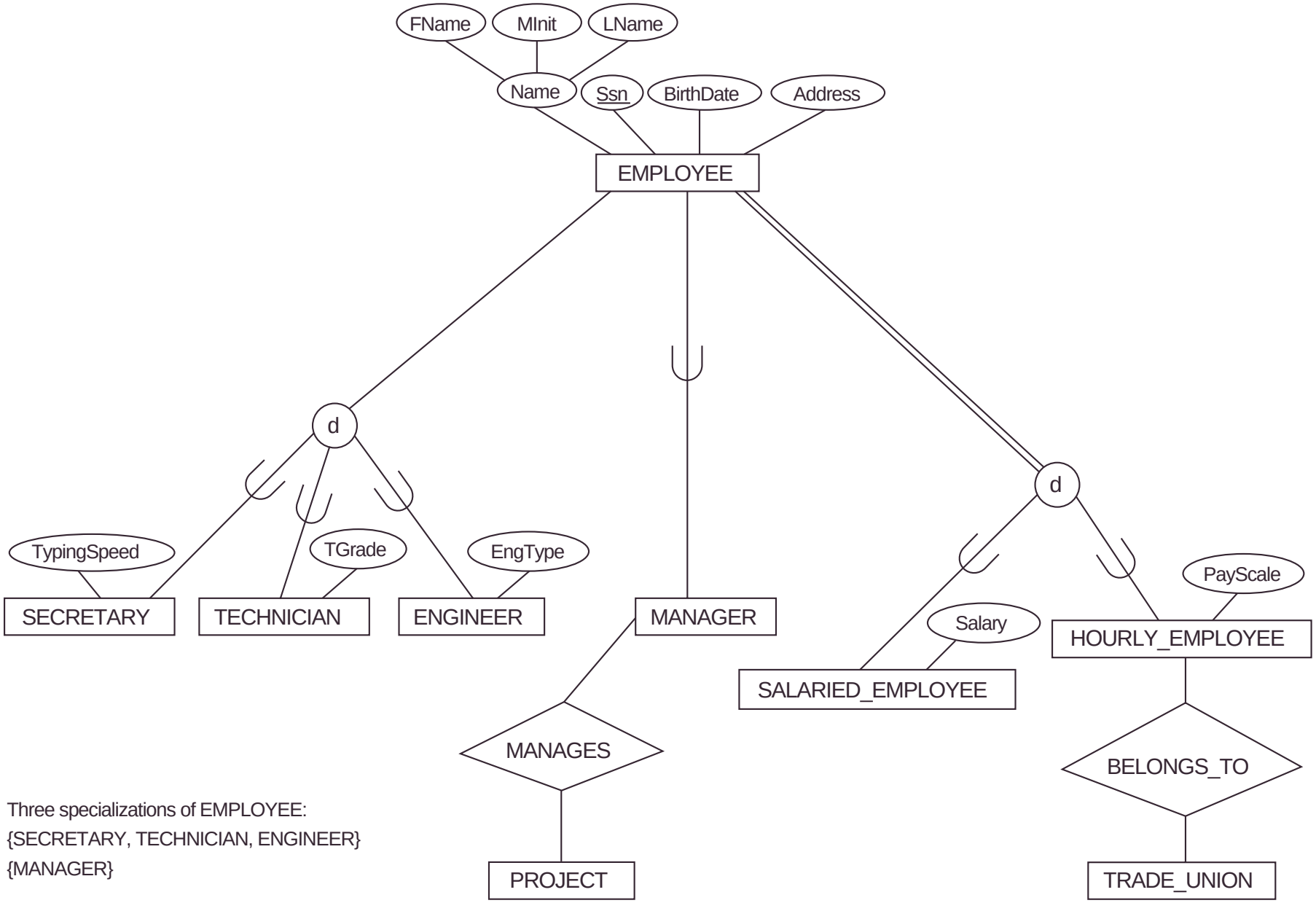

Figure 4.2 Some instances of the specialization of EMPLOYEE into the {SECRETARY, ENGINEER, TECHNICIAN] set of subclasses.

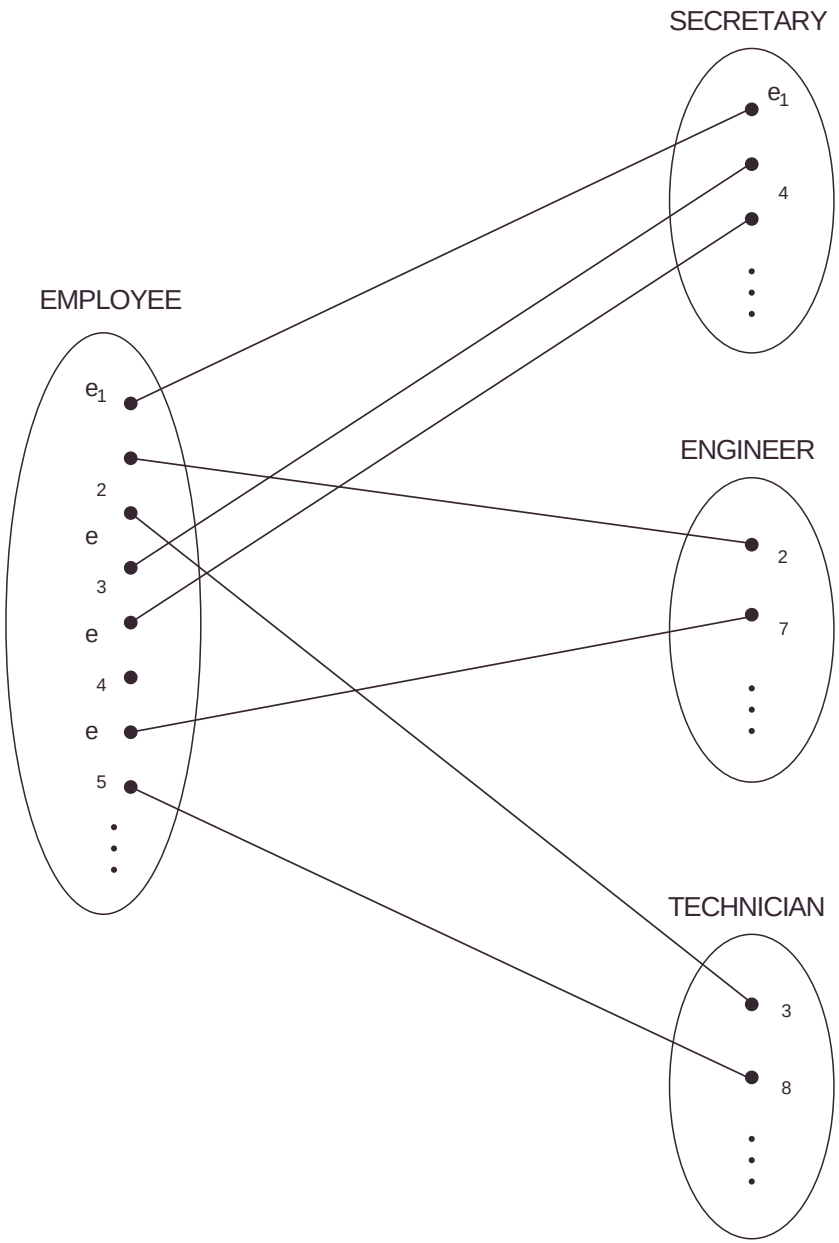

Figure 4.3 Examples of generalization. (a) Two entity types CAR and TRUCK. (b) Generalizing car and TRUCK into VEHICLE.

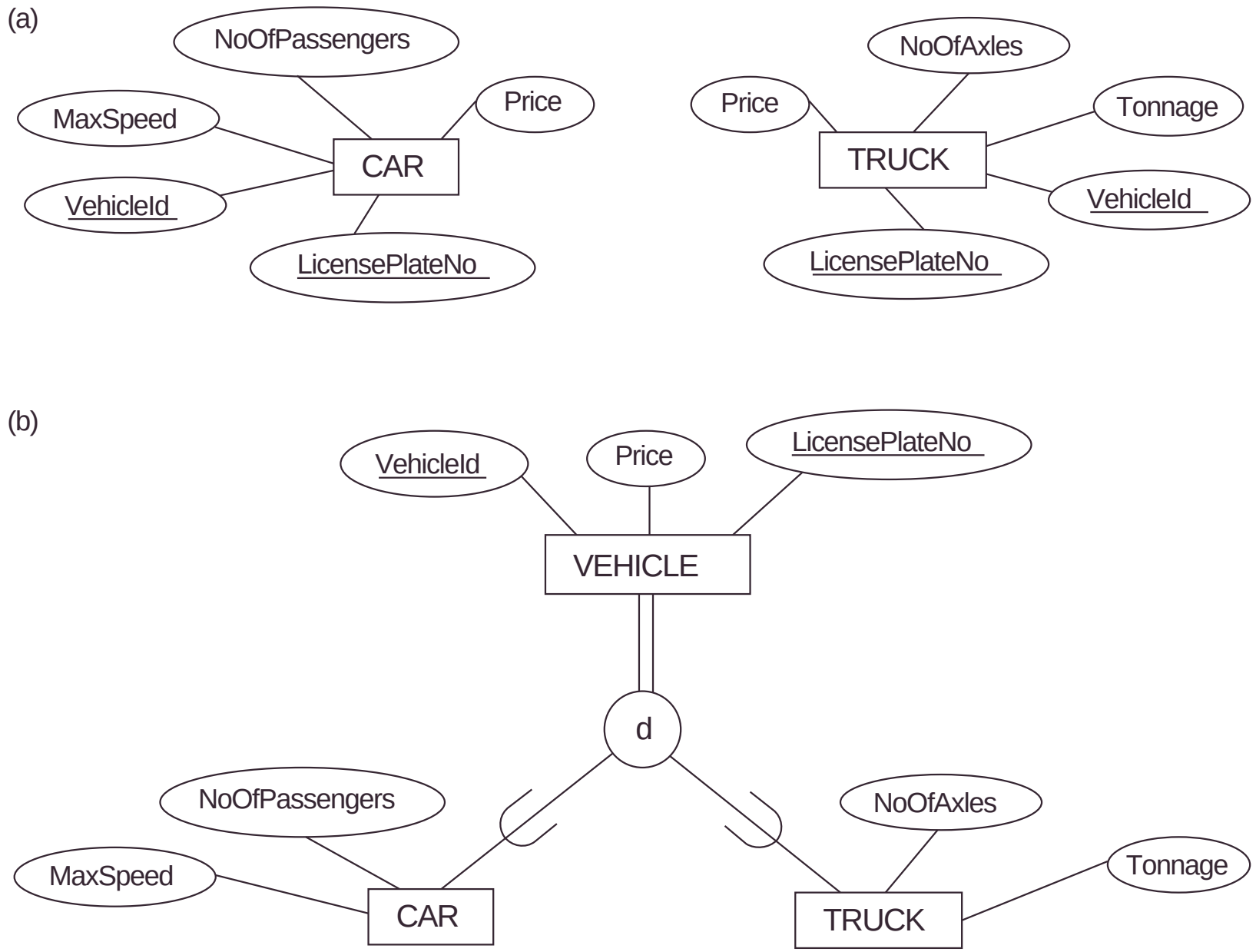

Figure 4.4 An attribute-defined specialization on the JobType attribute of EMPLOYEE.

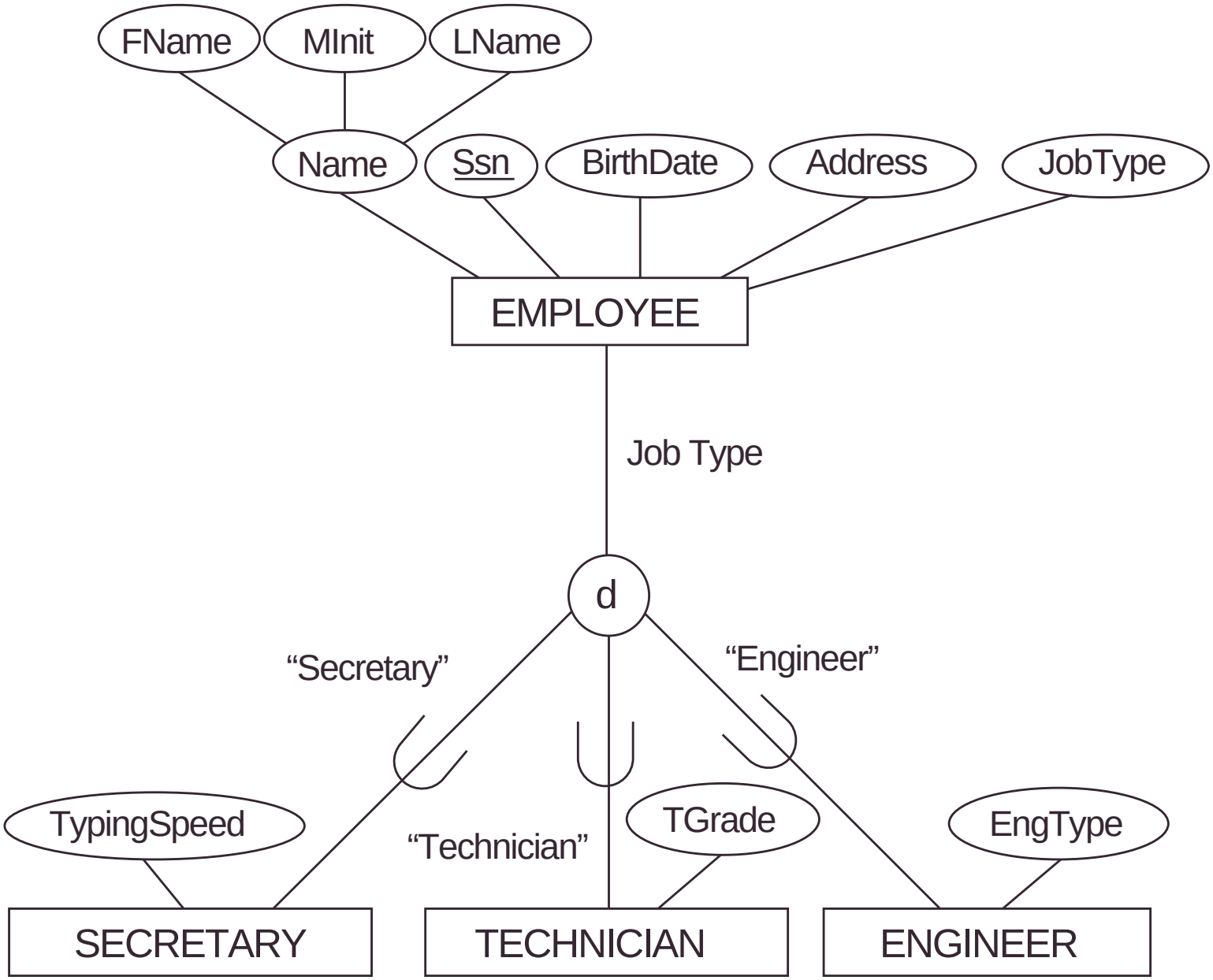

Figure 4.5 Notation for specialization with overlapping (nondisjoint) subclasses.

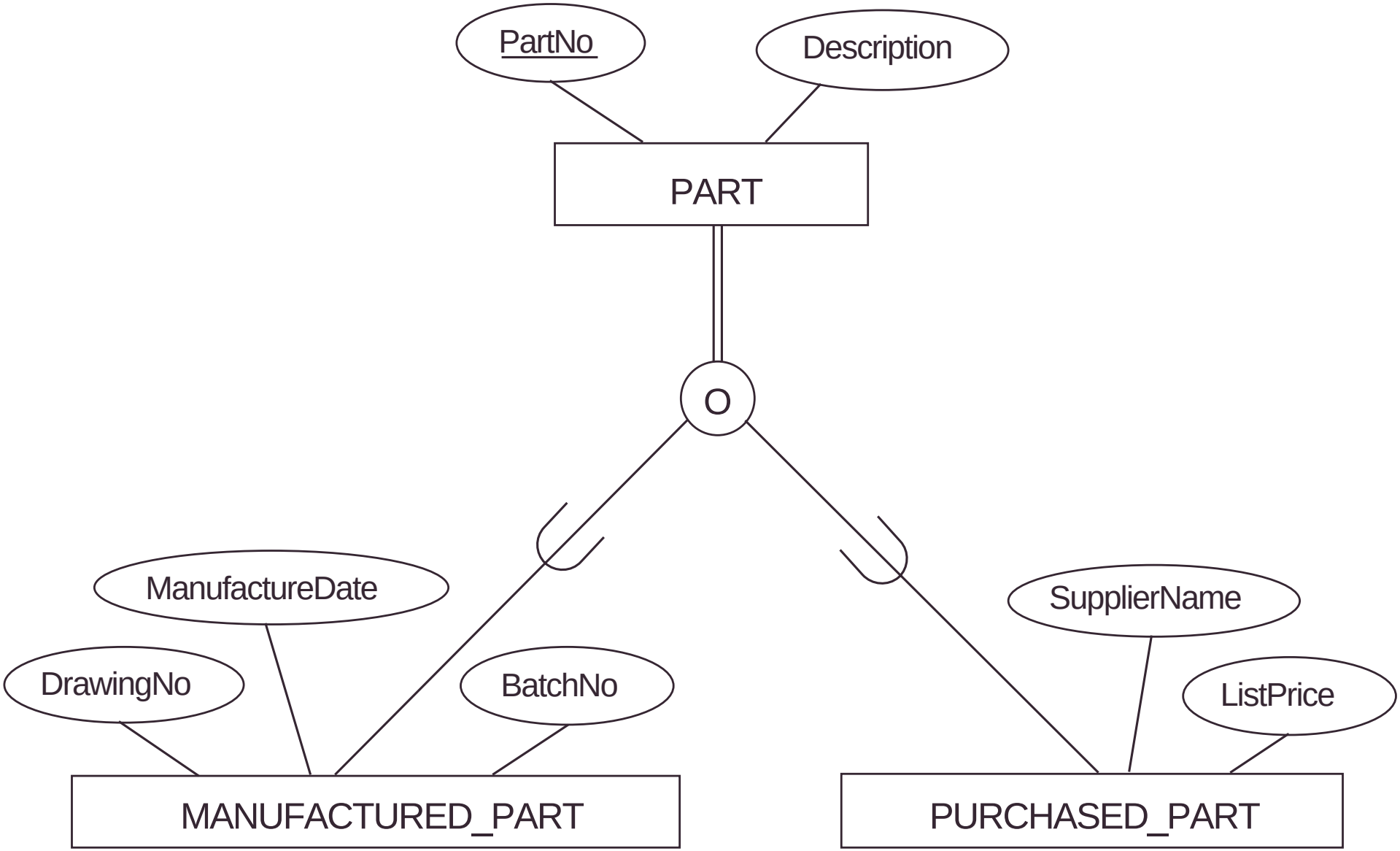

Figure 4.6 A specialization lattice with the shared subclass ENGINEERING_MANAGER.

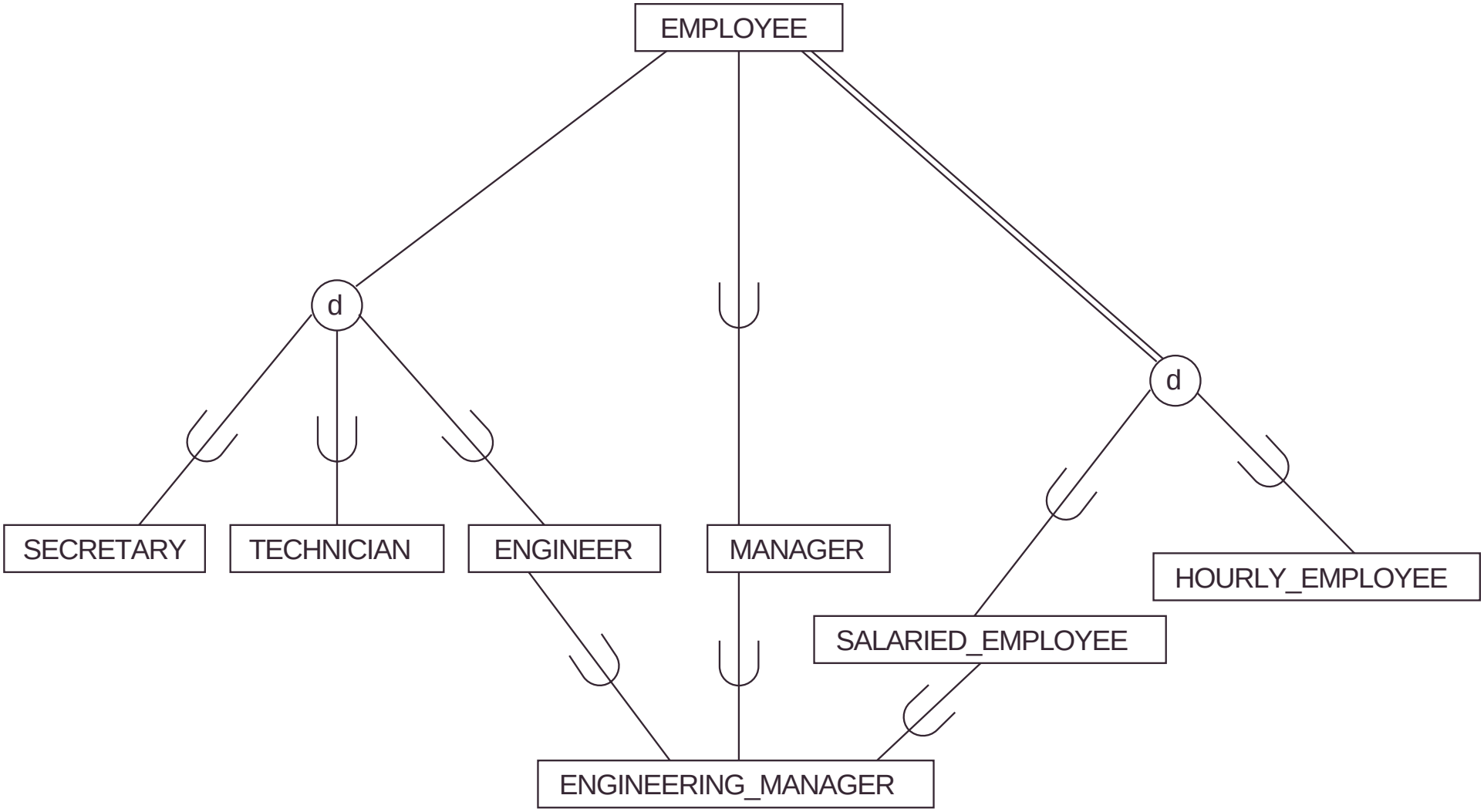

Figure 4.7 A specialization lattice (with multiple inheritance) for a UNIVERSITY database.

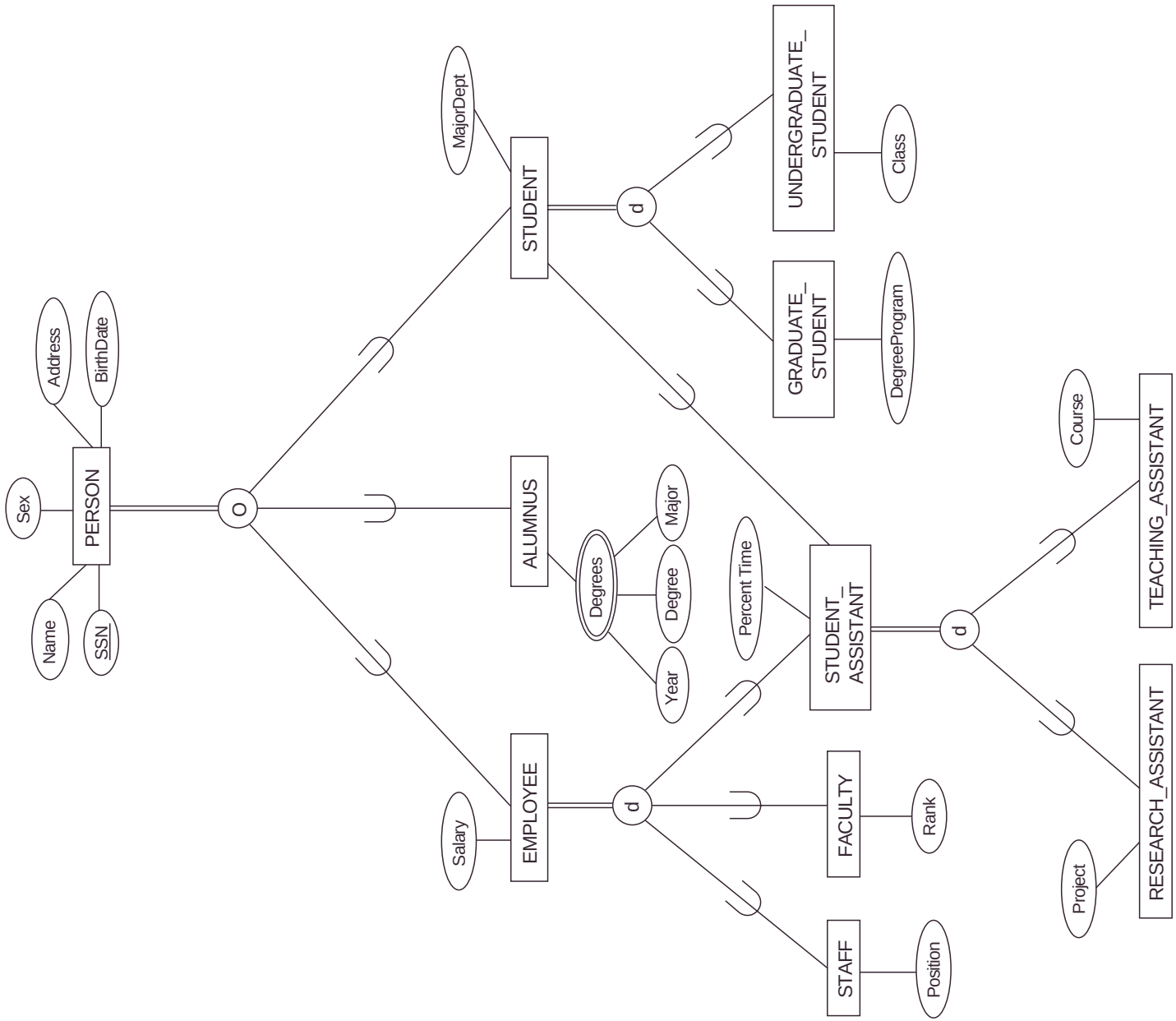

Figure 4.8 An illustration of how to represent the UNION of two or more entity types/classes using the category notation. Two categories are shown: OWNER and REGISTERED_VEHICLE.

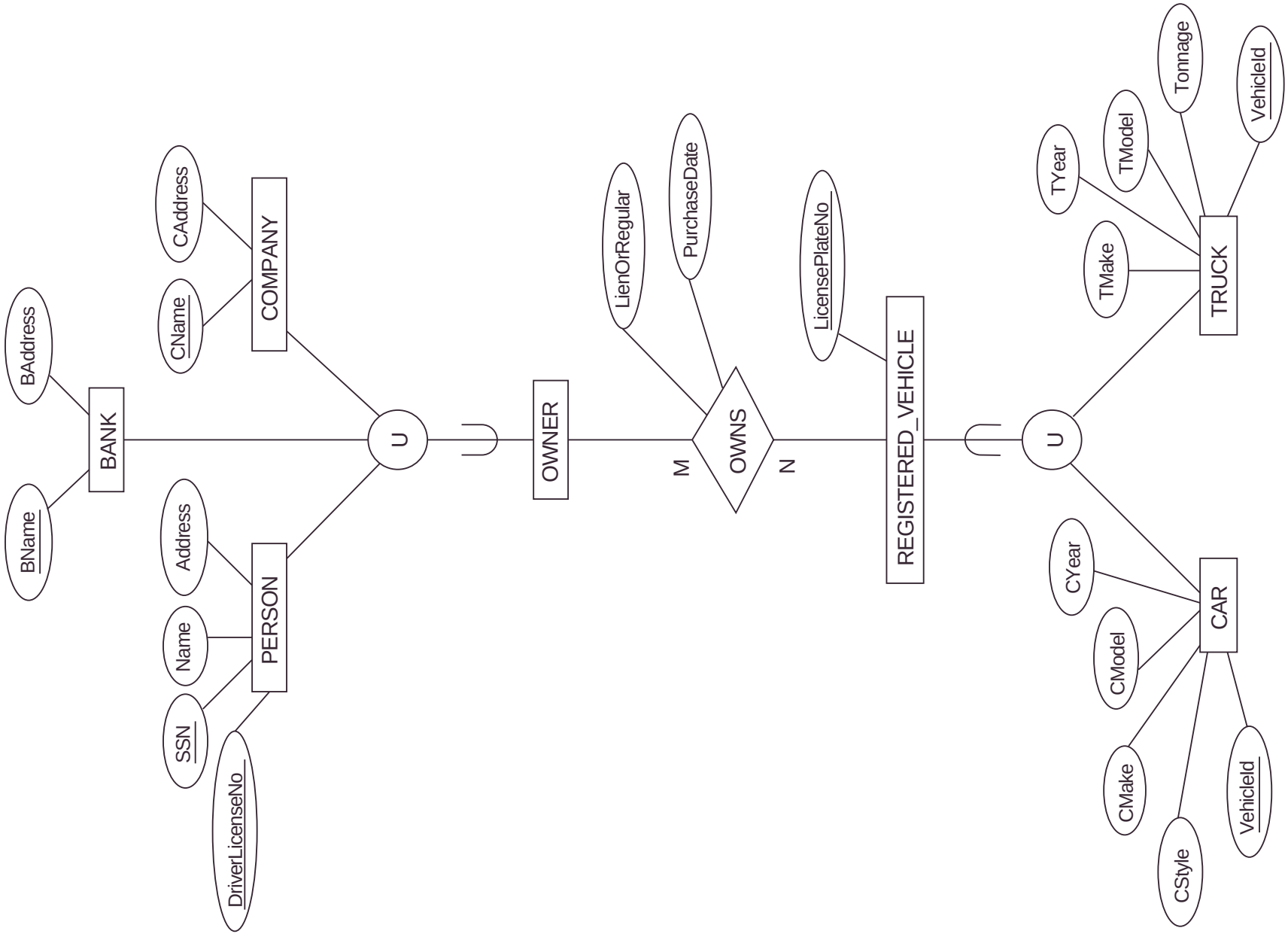

Figure 4.9 Total and partial categories. (a) Partial category ACCOUNT_HOLDER that is a subset of the union of two entity types COMPANY and PERSON. (b) Total category PROPERTY and a similar generalization.

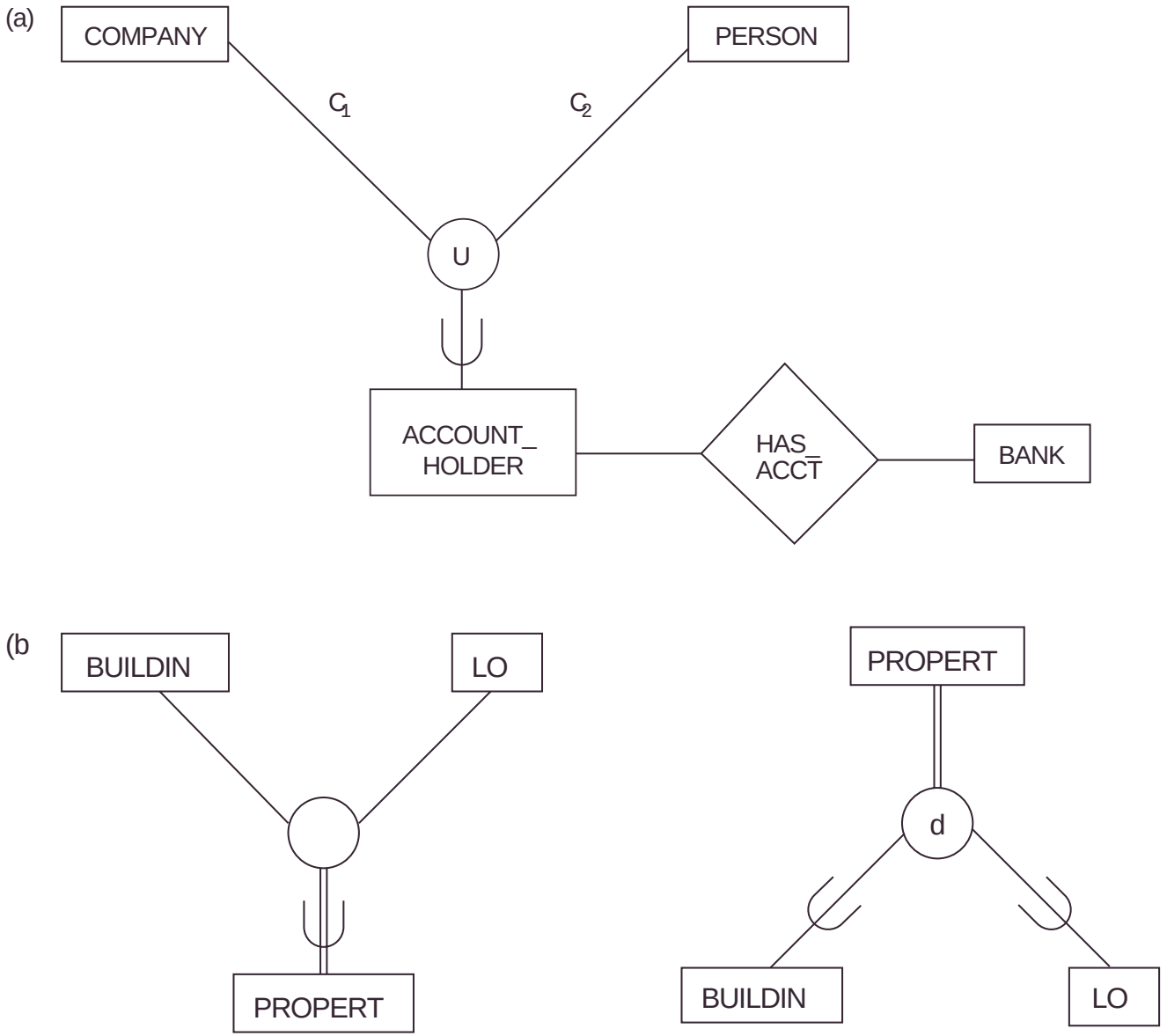

Figure 4.10 An EER conceptual schema for a UNIVERSITY database.

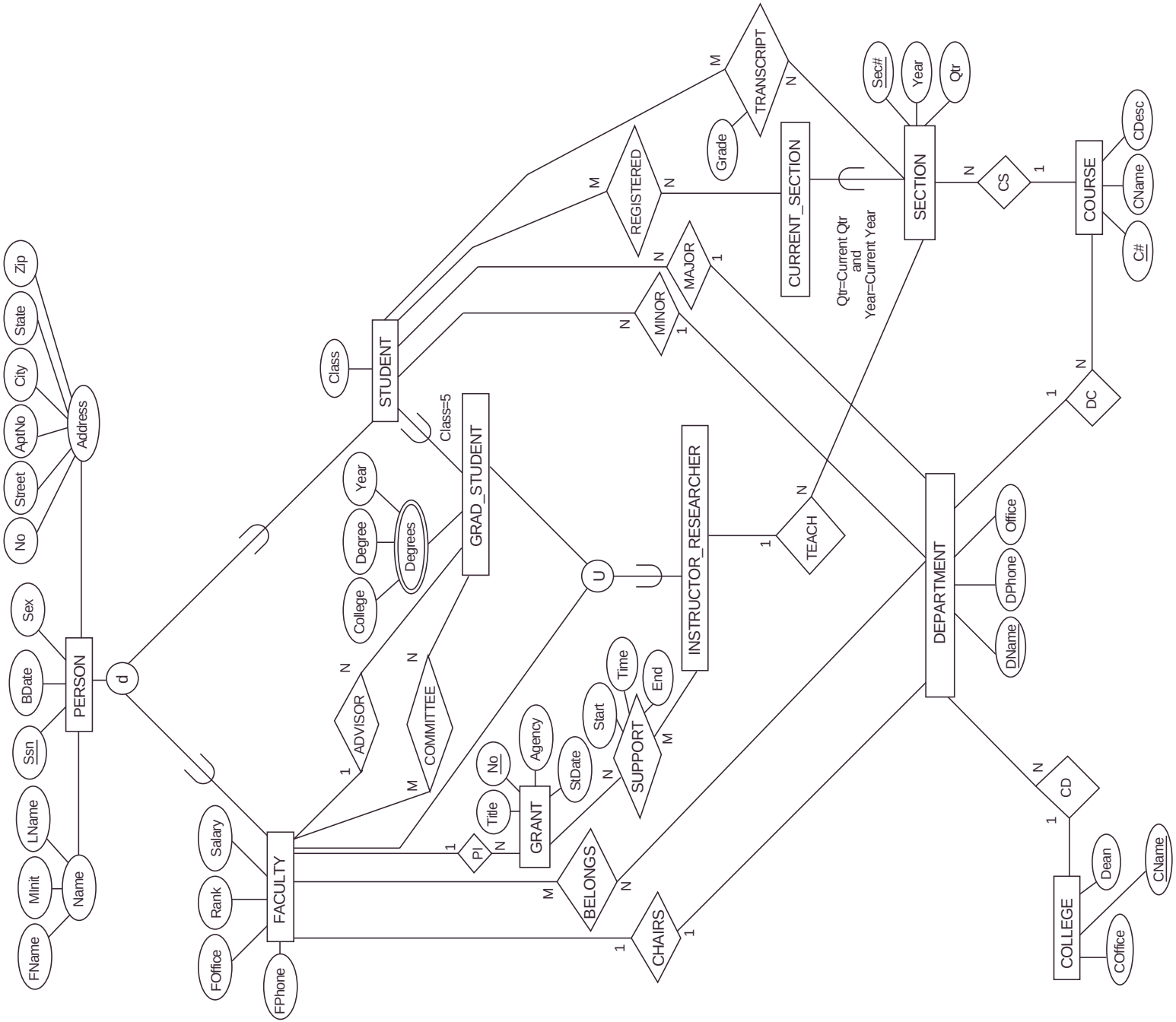

Figure 4.11 The UML conceptual schema for the COMPANY database in Figure 3.15.

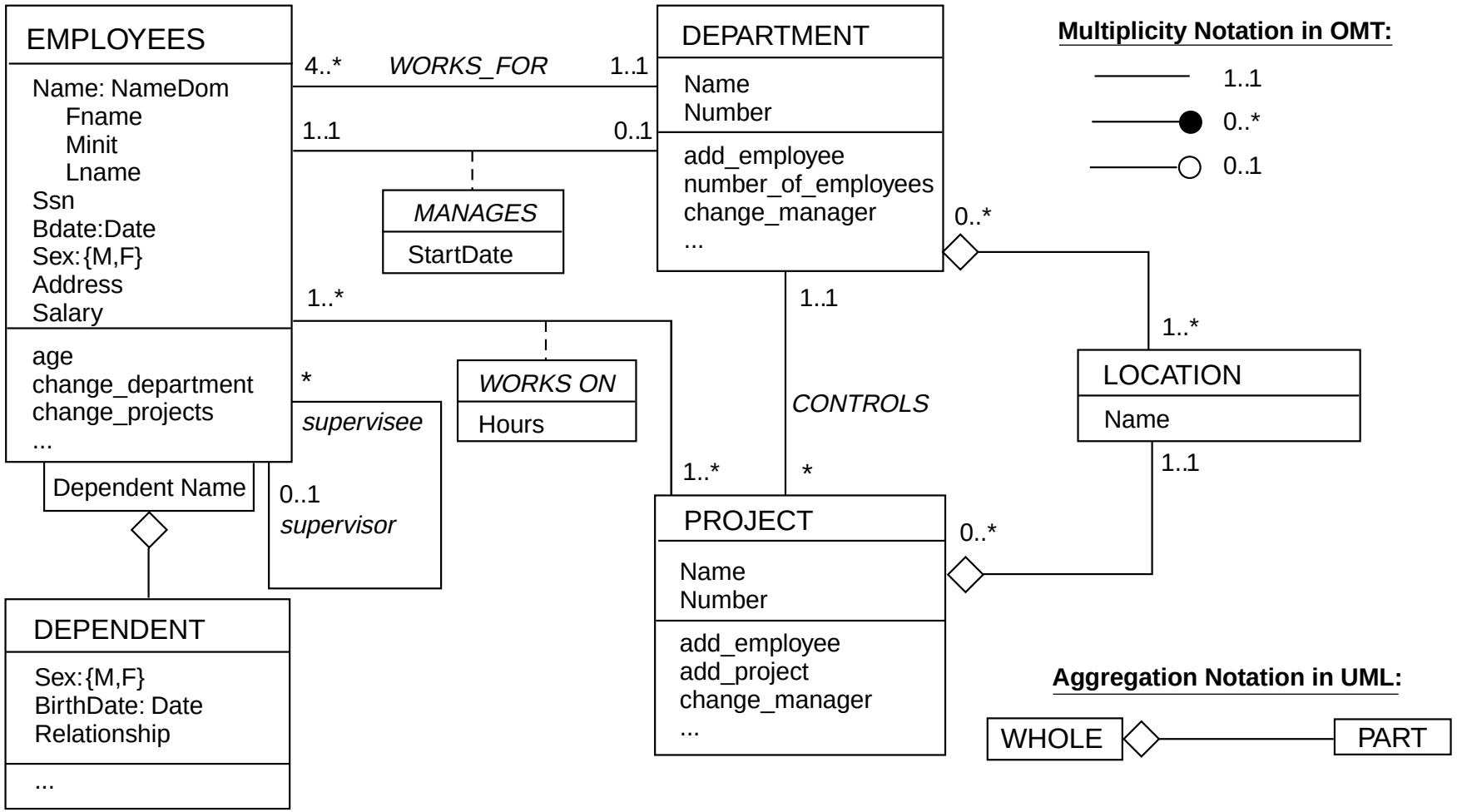

Figure 4.12 Specialization/generalization notation in UML shown by a class diagram corresponding to the EER diagram in Figure 4.7.

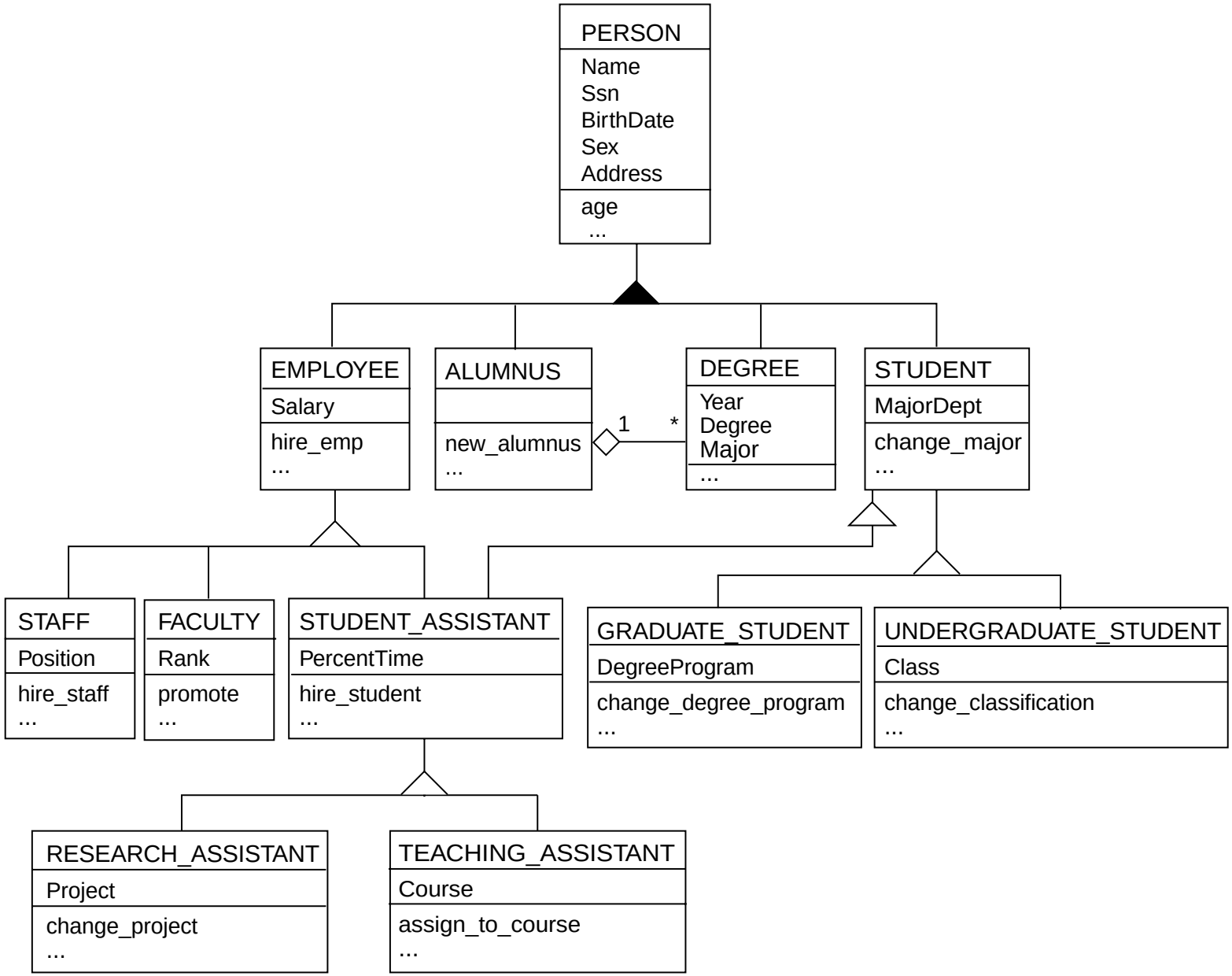

Figure 4.13 An illustration of ternary relationship types. (a) The ternary relationship type SUPPLY. (b) Three binary relationship types that are not equivalent to the ternary relationship type SUPPLY. (c) SUPPLY represented as a weak entity type.

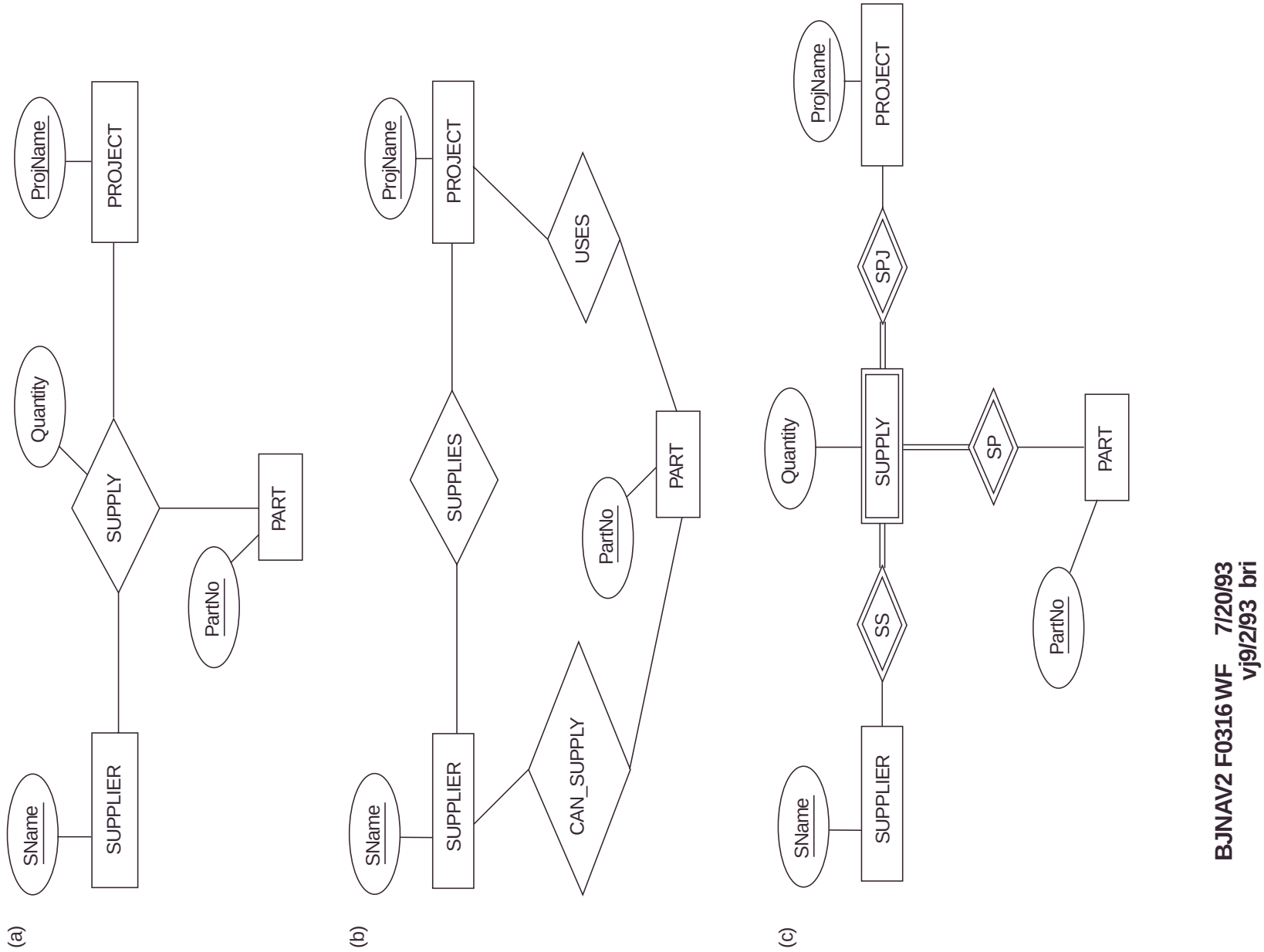

Figure 4.14 Another example of ternary versus binary relationship types.

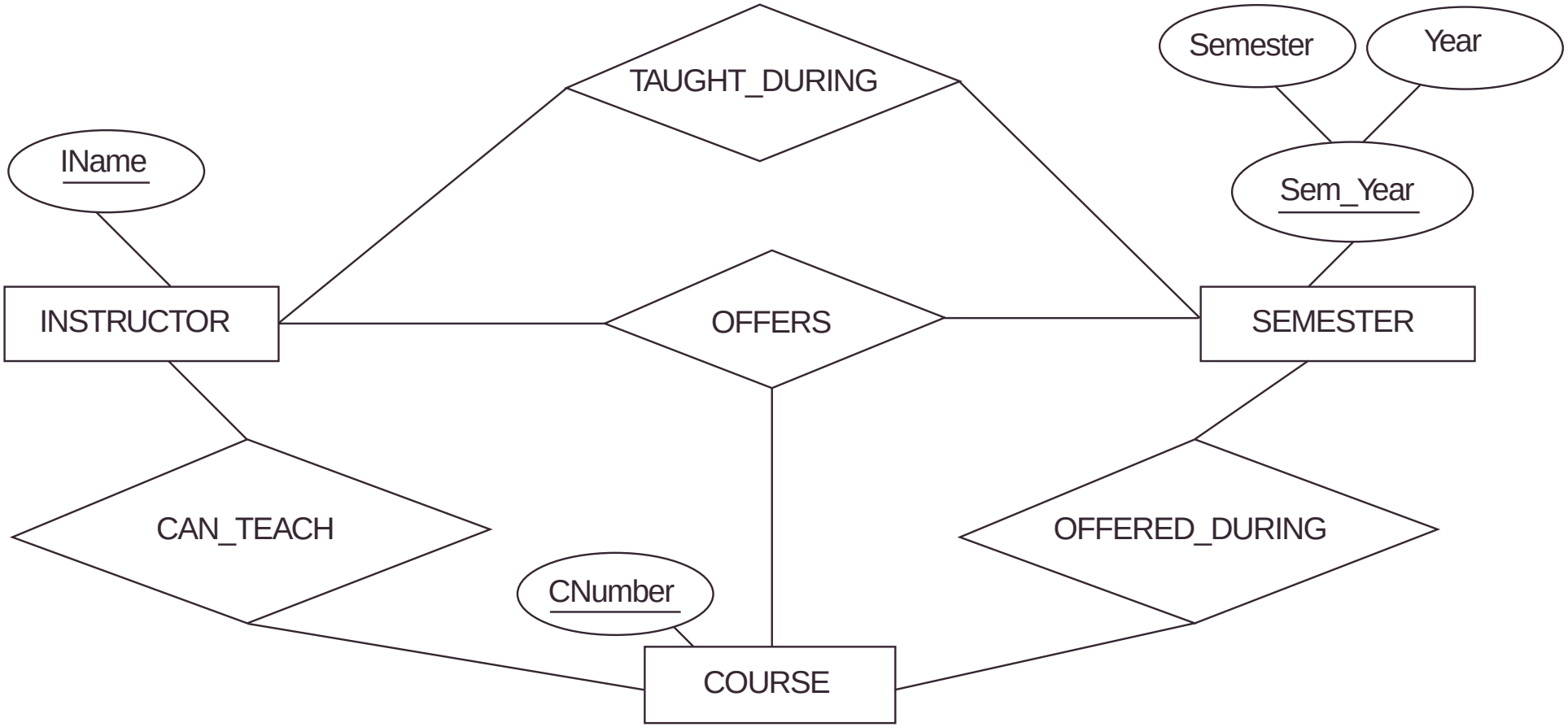

Figure 4.15 A weak entity type INTERVIEW, with a ternary identifying relationship type.

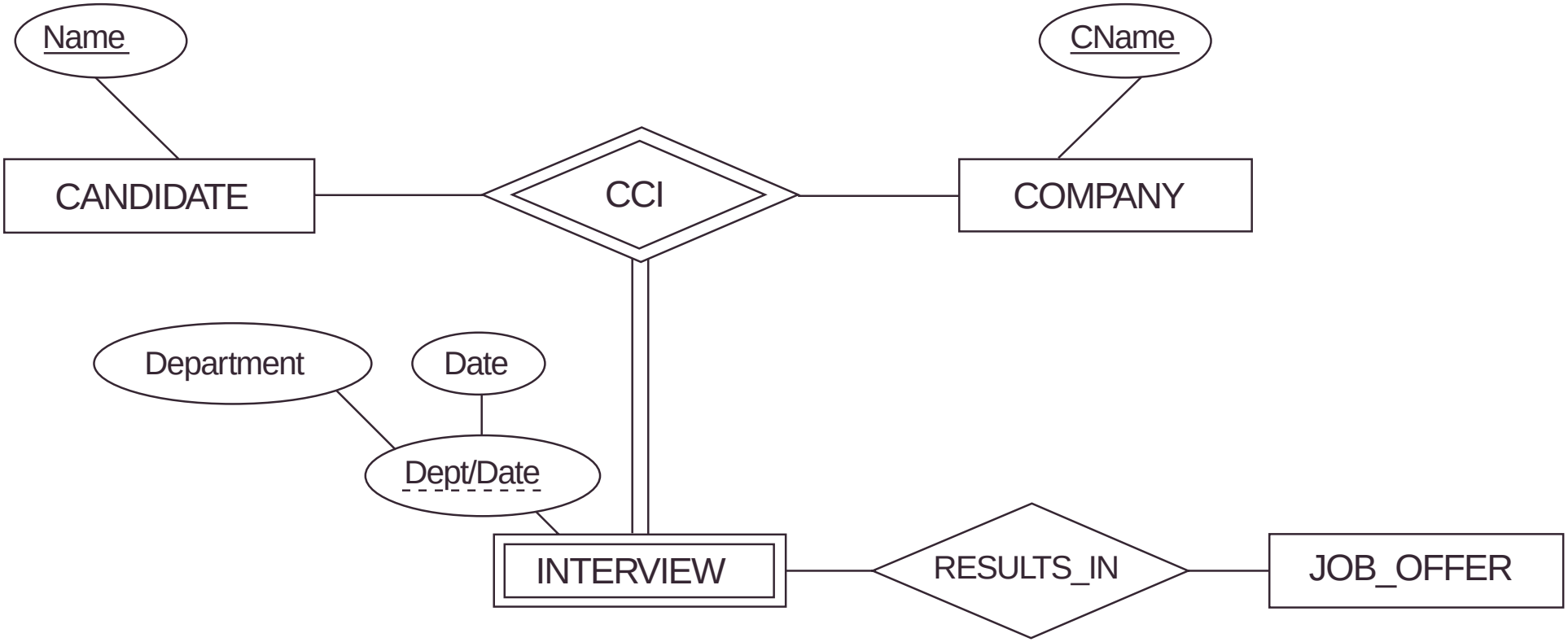

Figure 4.16 An illustration of aggregation. (a) The INTERVIEW relationship type. (b) Including JOB_OFFER in a ternary relationship type (incorrect). (c) Including JOB_OFFER by having a relationship in which another relationship participates (generally not allowed in ER). (d) Using aggregation and a composite (molecular) object (generally not allowed in ER). (e) Correct representation in ER.

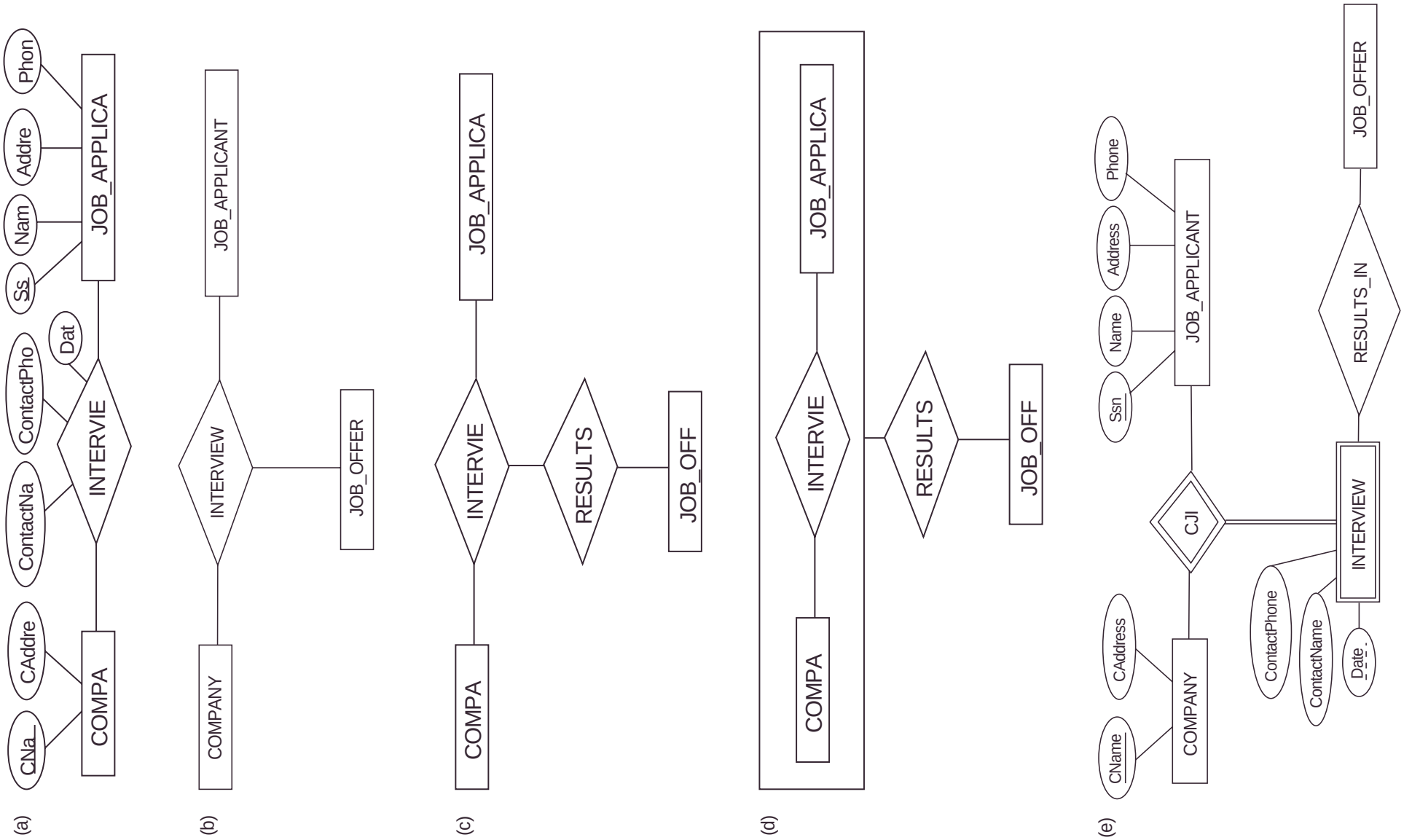

Figure 4.17 EER schema for a SMALL AIRPORT database.