Mapping of Specialization or Generalization

- Step 8: Options for Mapping Specialization or Generalization (see pages 294-295)
  - **Option 8A: Multiple relations—superclass and subclasses**
    - For any specialization (total or partial, disjoint or overlapping)
  - **Option 8B: Multiple relations—subclass relations only**
    - Subclasses are total
    - Specialization has disjointedness constraint

Mapping of Specialization or Generalization (cont'd.)

- **Option 8C: Single relation with one type attribute**
  - Type or discriminating attribute indicates subclass of tuple
  - Subclasses are disjoint
    - Potential for generating many NULL values if many specific attributes exist in the subclasses
- **Option 8D: Single relation with multiple type attributes**
  - Subclasses are overlapping
  - Will also work for a disjoint specialization

Mapping of Shared Subclasses (Multiple Inheritance)

- Apply any of the options discussed in step 8 to a shared subclass

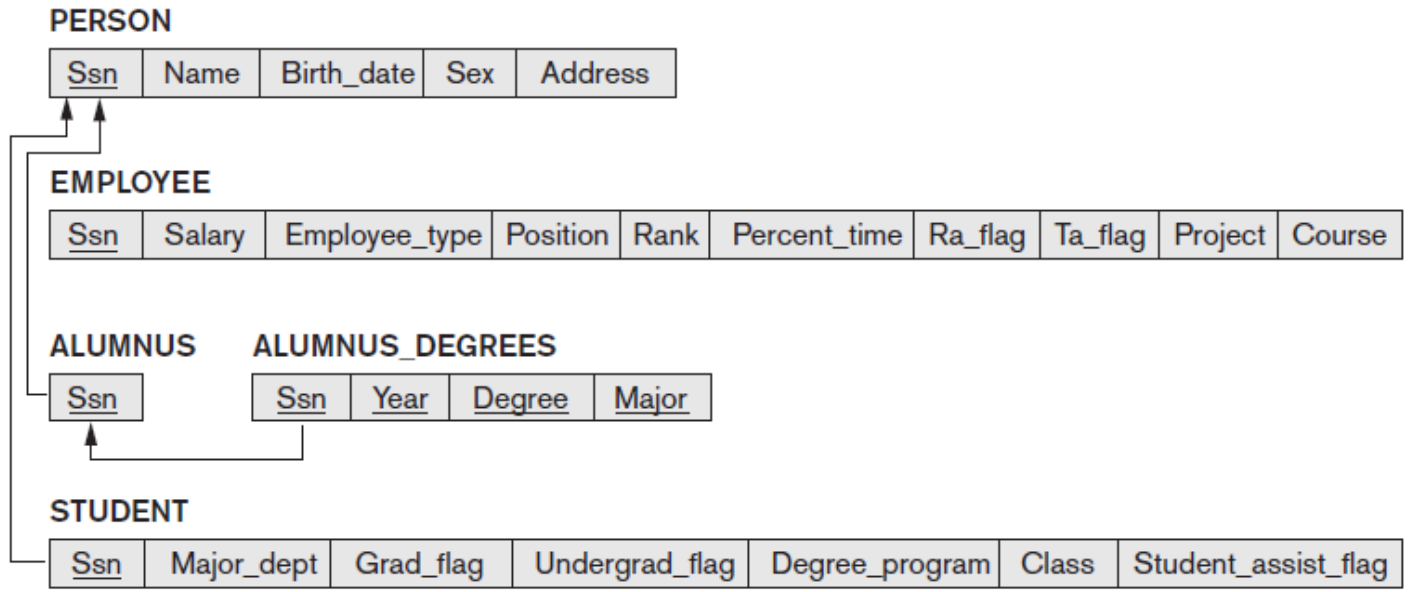
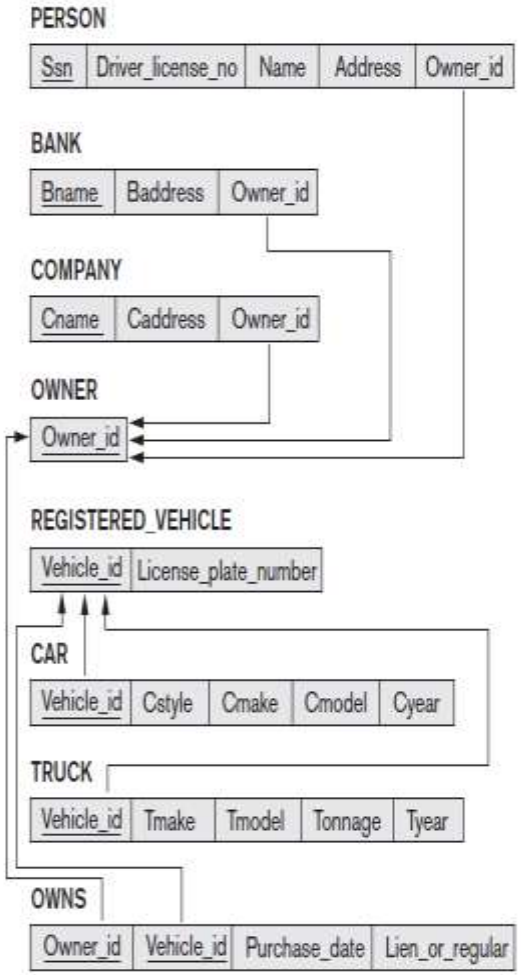


Figure 9.6
Mapping the EER specialization lattice in Figure 8.8 using multiple options.

Mapping of Categories (Union Types)

- Step 9: Mapping of Union Types (Categories)
  - Defining superclasses have different keys
  - Specify a new key attribute
    - **Surrogate key**

Figure 9.7
Mapping the EER categories (union types) in Figure 8.8 to relations.



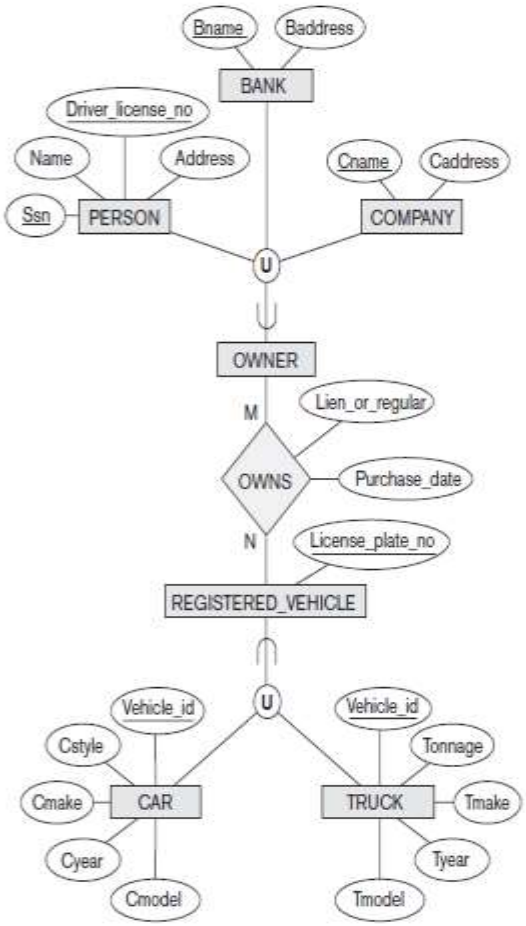


Figure 8.8
Two categories (union types): OWNER and REGISTERED_VEHICLE.