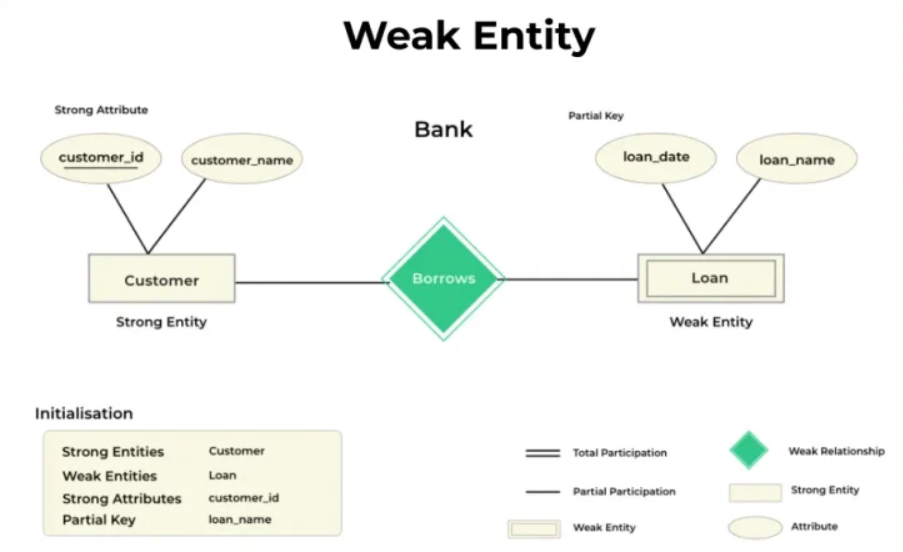
A screenshot of a computer

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A computer screen shot of a computer code

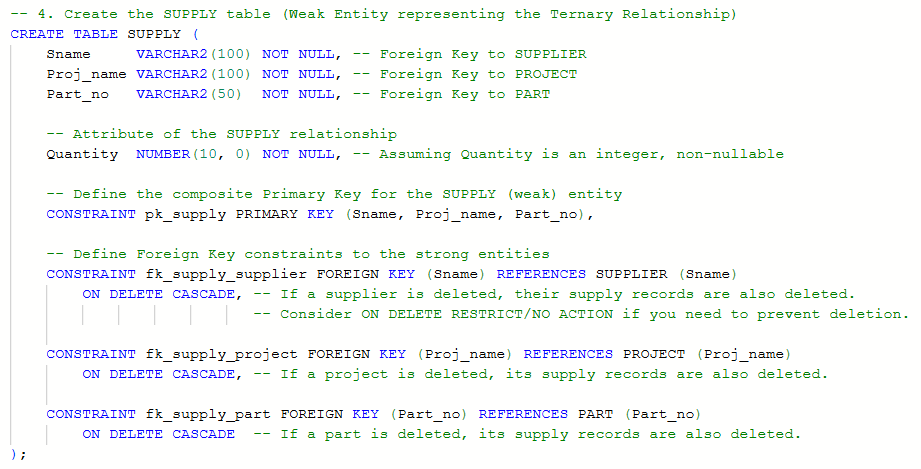
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A diagram of a supply chain

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A screenshot of a computer code

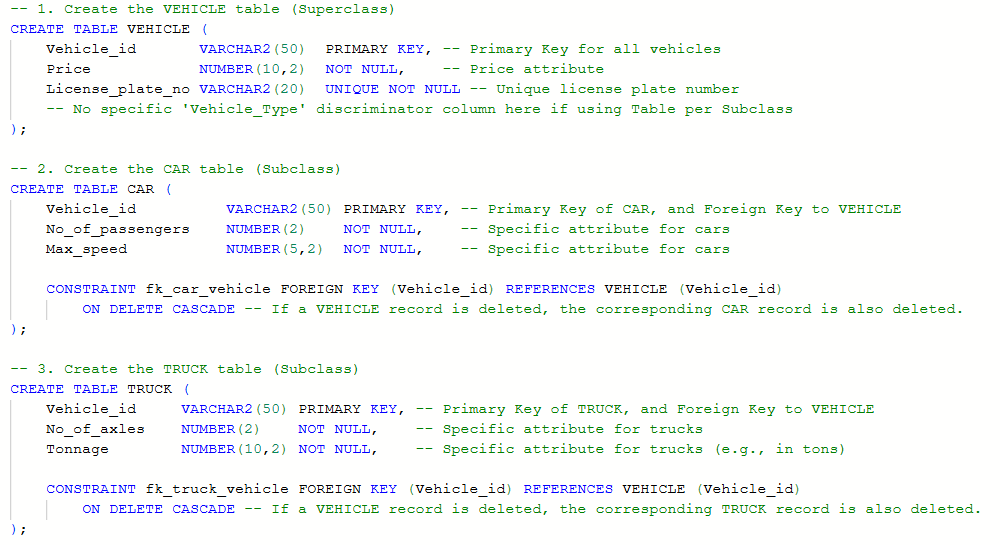
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A diagram of a vehicle

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**Separate Tables Approach (More common):**



**Disjointness:** The disjoint constraint is not enforced in the separate table approach. This is typically done using **either** a trigger on the VEHICLE table **or** a combination of triggers on the CAR and TRUCK tables, or through application logic.

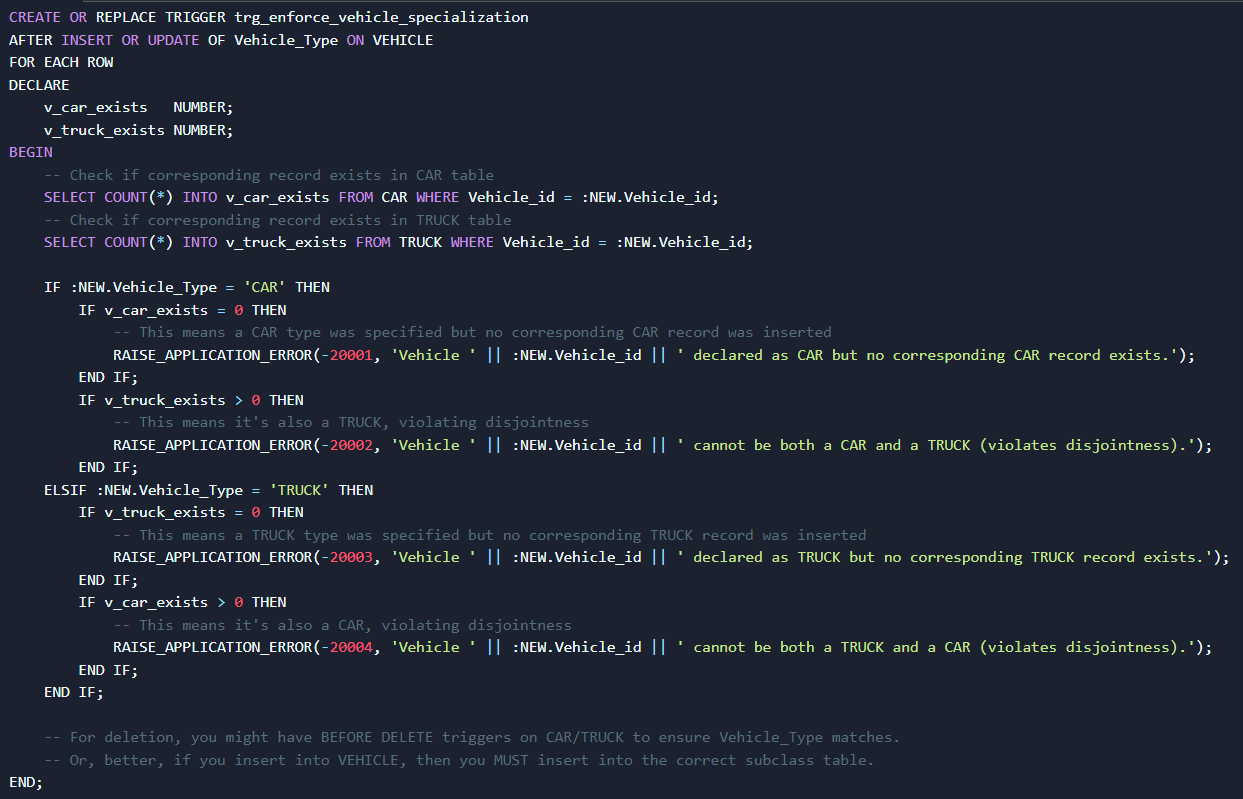
**Totality:** SQL DDL doesn't inherently enforce that "every row in VEHICLE must have a corresponding row in *either* CAR *or* TRUCK". This requires a check across multiple tables, which is beyond standard CHECK constraints (as they operate only on the current row of the table). Triggers are often used here as well.

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To rigorously enforce both **disjoint constraint** and **total completeness** with the "Table per Subclass with Superclass Table" strategy, you typically need to add a **discriminator column** to the **superclass table (VEHICLE)** and use **CHECK constraints** or **triggers**.

**1. A single trigger on Super Class to enforce disjoint constraint (Separate Discriminator columns are required)**



**2. Combination of triggers on Sub Classes to enforce disjoint constraint (Most Common)**

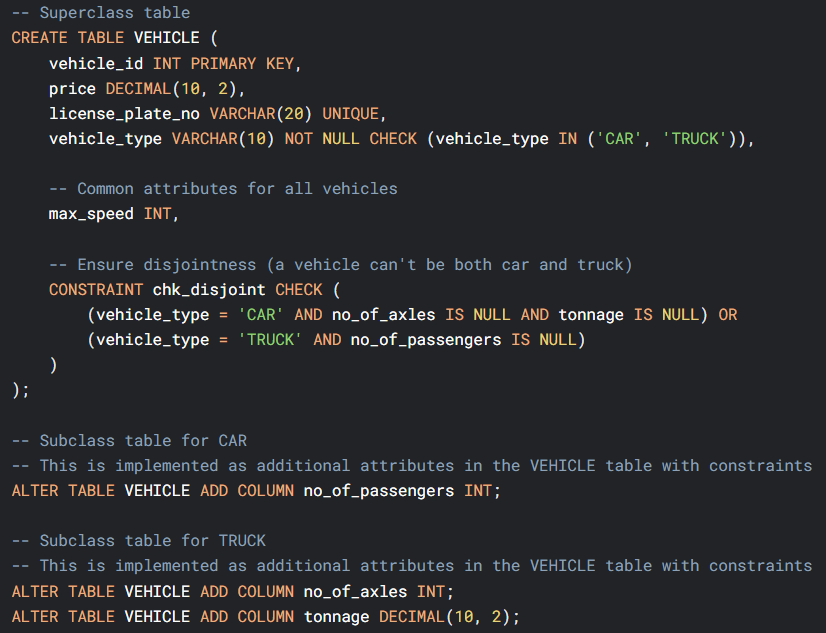
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A screenshot of a computer program

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**Single Table Approach (Less common):**



**Composite Attribute**

A diagram of a company

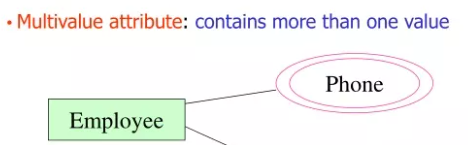
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When converting a **composite attribute** from ERD to SQL, its components always become separate columns in the table. Meaning, we don’t represent composite columns in SQL.

A screen shot of a computer

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**Multivalued Attribute**



When converting a multivalued attribute in an ERD to SQL, you *must* create a **separate table** for that multivalued attribute.

A screen shot of a computer program

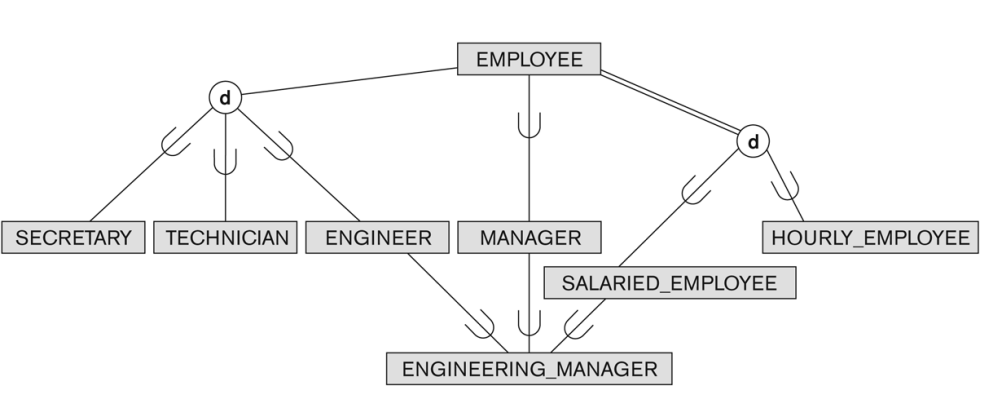
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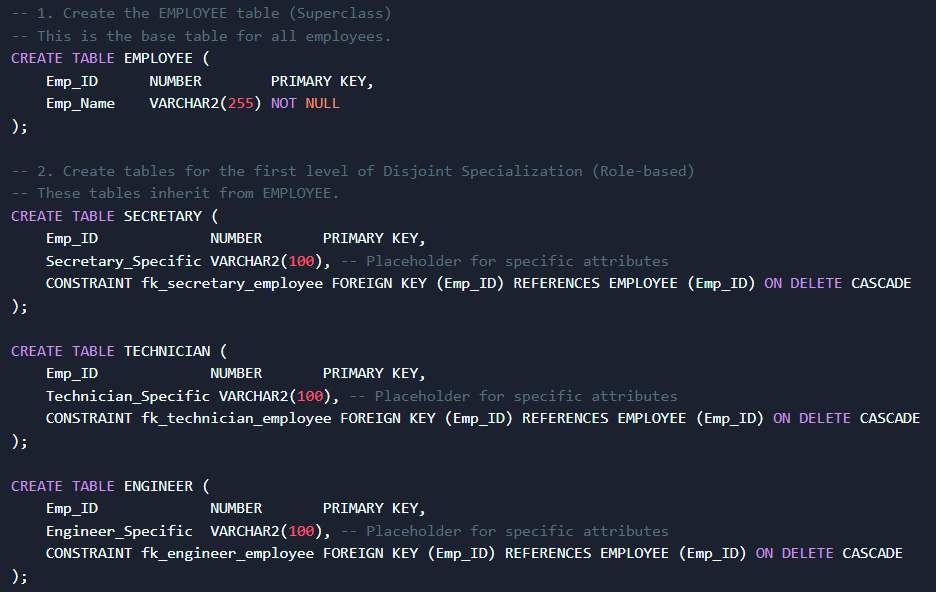
A computer screen shot of a program

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**Multiple Inheritance**

A subclass can be subclass of more than one superclass (called multiple inheritance).





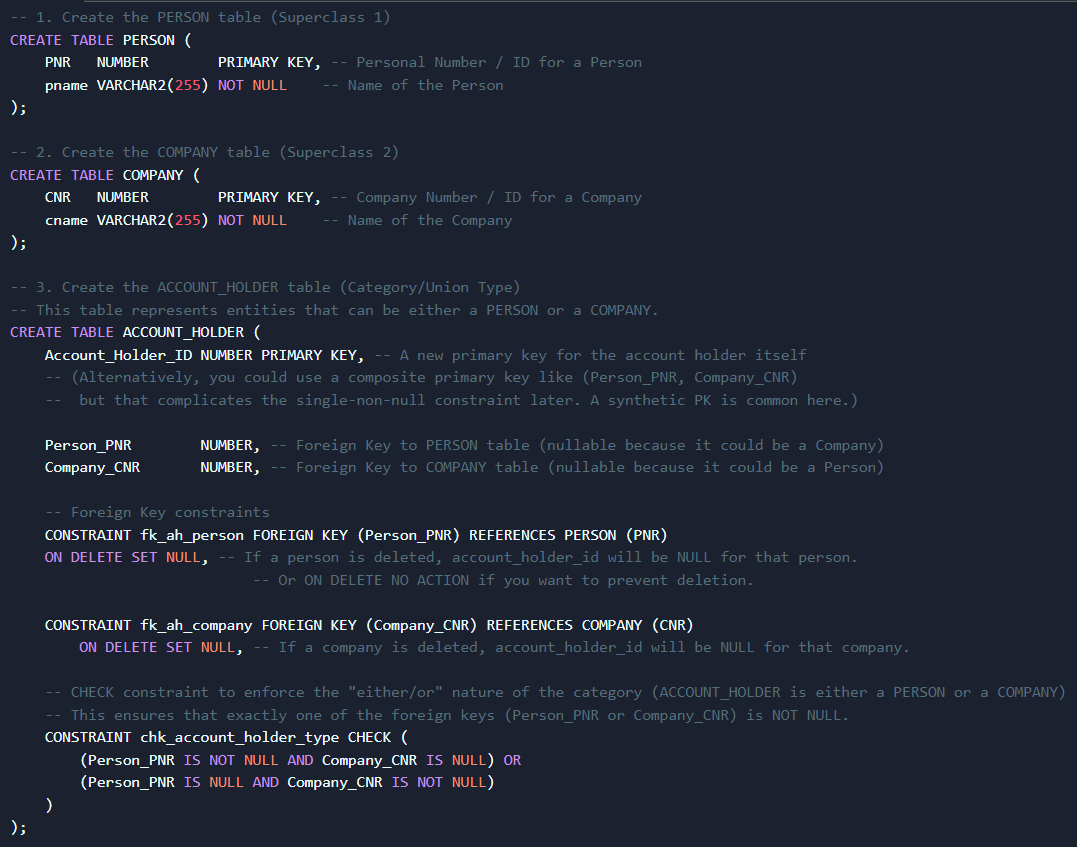
A screenshot of a computer program

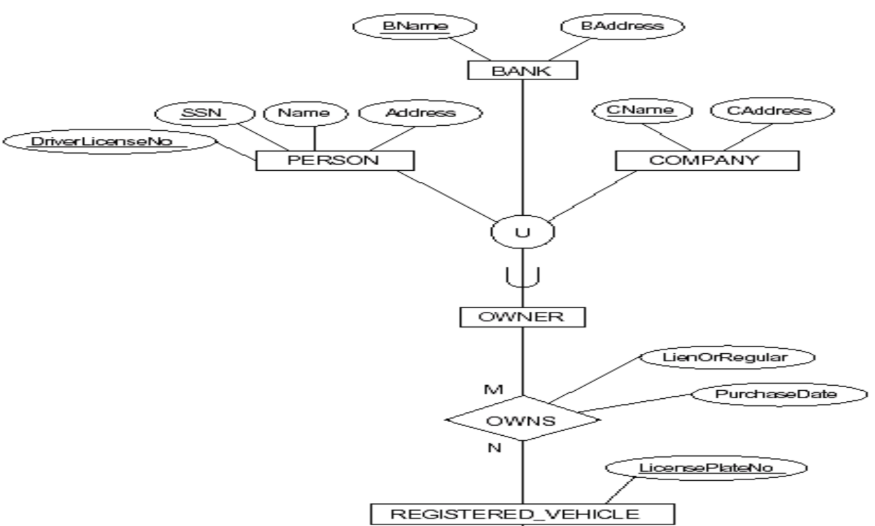
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**Categorization (Union)**

A diagram of a company

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Multiple entities (PERSON, BANK, COMPANY) own different vehicles, so a showroom wants to compile all of them into one OWNER entity class.

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A screenshot of a computer screen

AI-generated content may be incorrect.

A computer screen shot of a computer program

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