Supertype and Subtype Entities

- What if Employee table contains some employees with unique attributes that other employee do not have?

FIGURE 5.1 NULLS CREATED BY UNIQUE ATTRIBUTES

Database name: Ch05_AirCo

EMP_NUM	EMP_LNAME	EMP_FNAME	EMP_INITIAL	EMP_LICENSE	EMP_RATINGS	EMP_MED_TYPE	EMP_HIRE_DATE
100	Kolmycz	Xavier	T				15-Mar-88
101	Lewis	Marcos		ATP	SEL/MEL/Instr/CFII	1	25-Apr-89
102	Vandam	Jean					20-Dec-93
103	Jones	Victoria	R				28-Aug-03
104	Lange	Edith		ATP	SEL/MEL/Instr	1	20-Oct-97
105	Williams	Gabriel	U	COM	SEL/MEL/Instr/CFI	2	08-Nov-97
106	Duzak	Mario		COM	SEL/MEL/Instr	2	05-Jan-04
107	Diante	Venite	L				02-Jul-97
108	Wiesenbach	Joni					18-Nov-95
109	Travis	Brett	T	COM	SEL/MEL/SES/Instr/CFII	1	14-Apr-01
110	Genkazi	Stan					01-Dec-03

- Employee attracts NULL for those employees who do not have those attributes!

Entity Supertypes and Subtypes
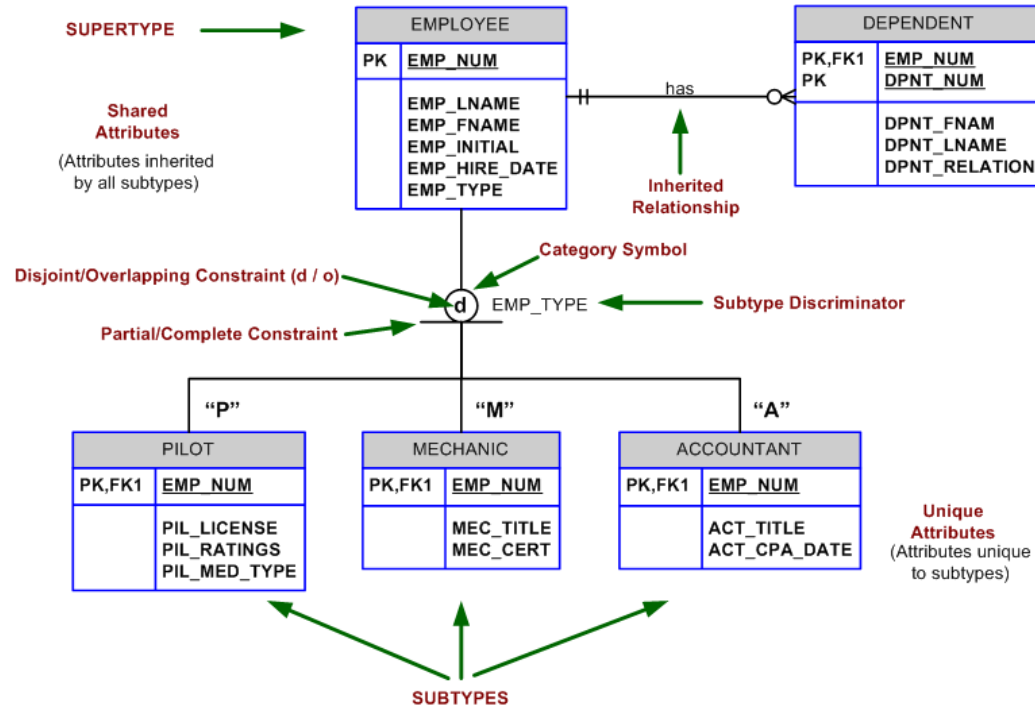
- **Specialisation hierarchy**

    Depicts a relationship between a higher-level entity supertypes (parent entities) and lower-level entity subtypes (child entities)

    - **Supertype entity:** Contains shared attributes
    - **Subtype entity:** Contains unique attributes

- **Subtype discriminator:** It is the attribute in supertype entity that determines to which subtype entity a supertype record is related to.
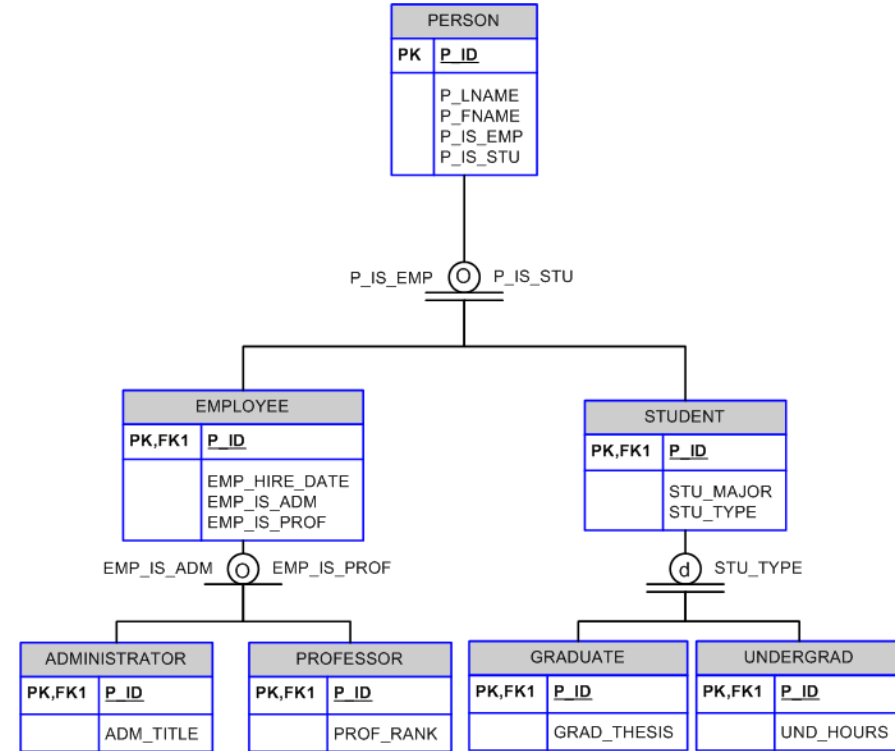
- **Disjoint (d) subtypes**
    - Also known as non-overlapping subtypes
    - Subtypes that contain unique subset of supertype entity set

- **Overlapping (o) subtypes**
  - Subtypes that contain non-unique subsets of supertype entity set

- **Partial (___) constraint**
  - Some records in supertype entity are not members of any subtype entities

- **Complete (====) constraint**
  - Each record in supertype entity must be a member at least one sybtype entity

Thank you