

***Modern Database Management***  
***7<sup>th</sup> Edition, Chapter 4***

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***Slides edited by Rasmus Pagh***

**Figure 4-1a** Basic notation for supertype/subtype relationships -  
Traditional EER notation

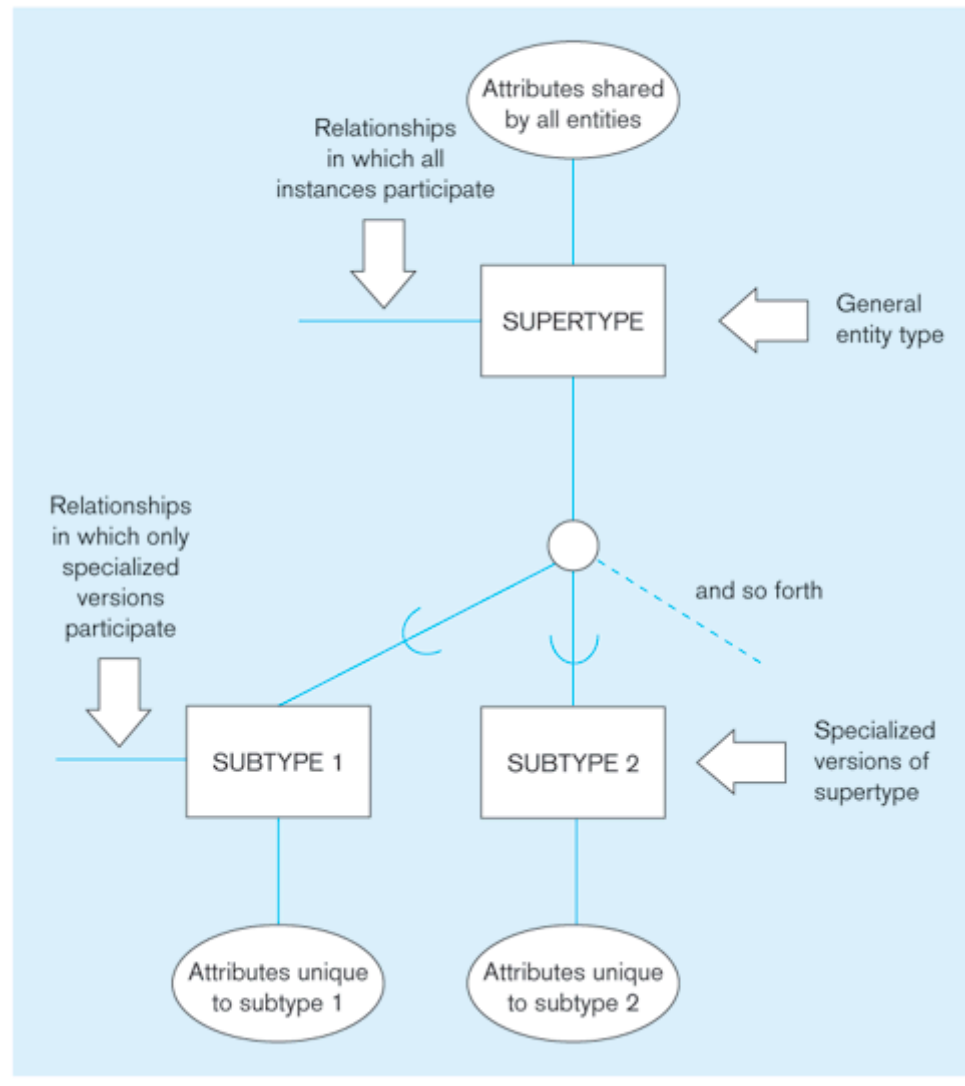


Figure 4-2 – Employee supertype with three subtypes

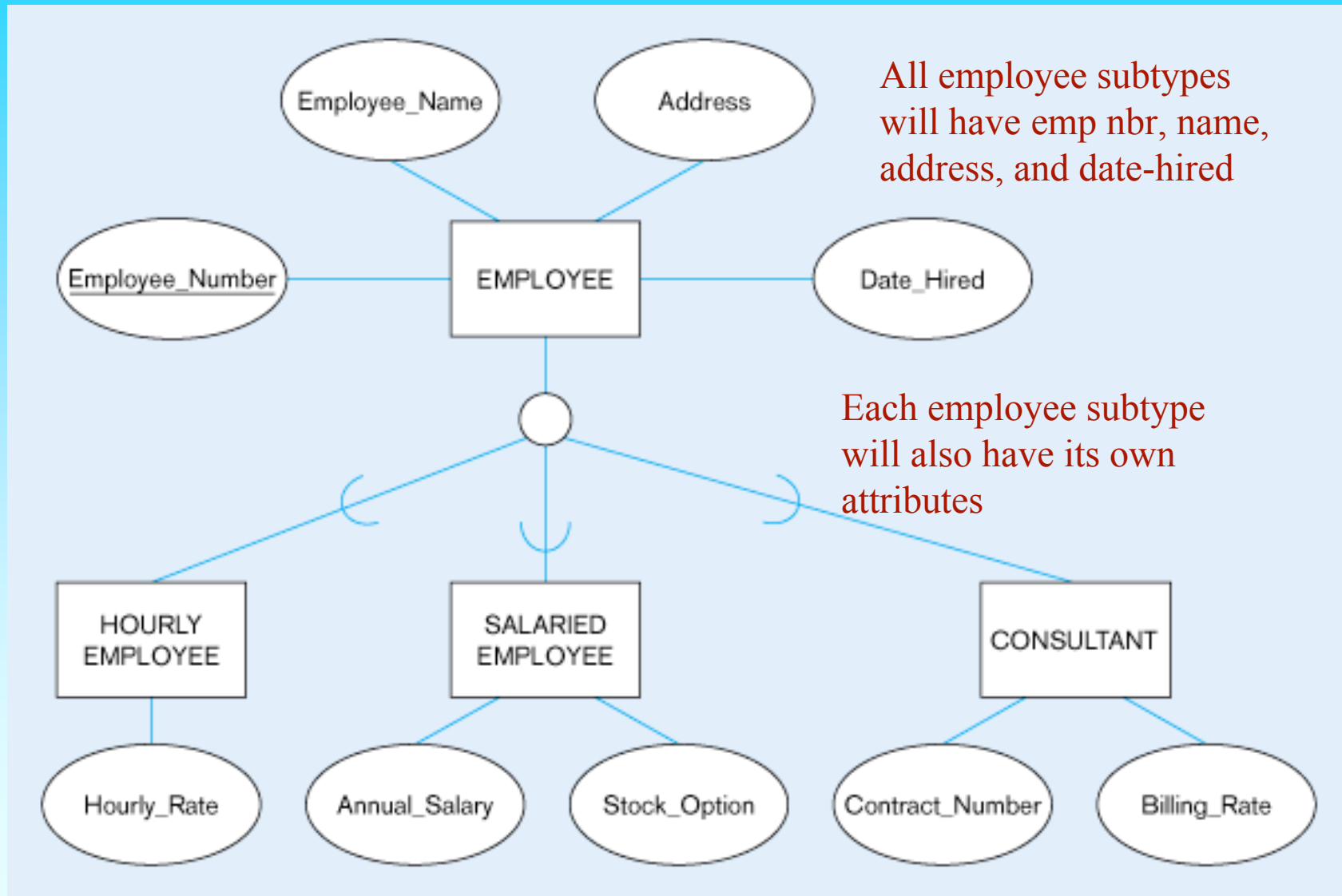


Figure 4-3 – Supertype/subtype relationships in a hospital

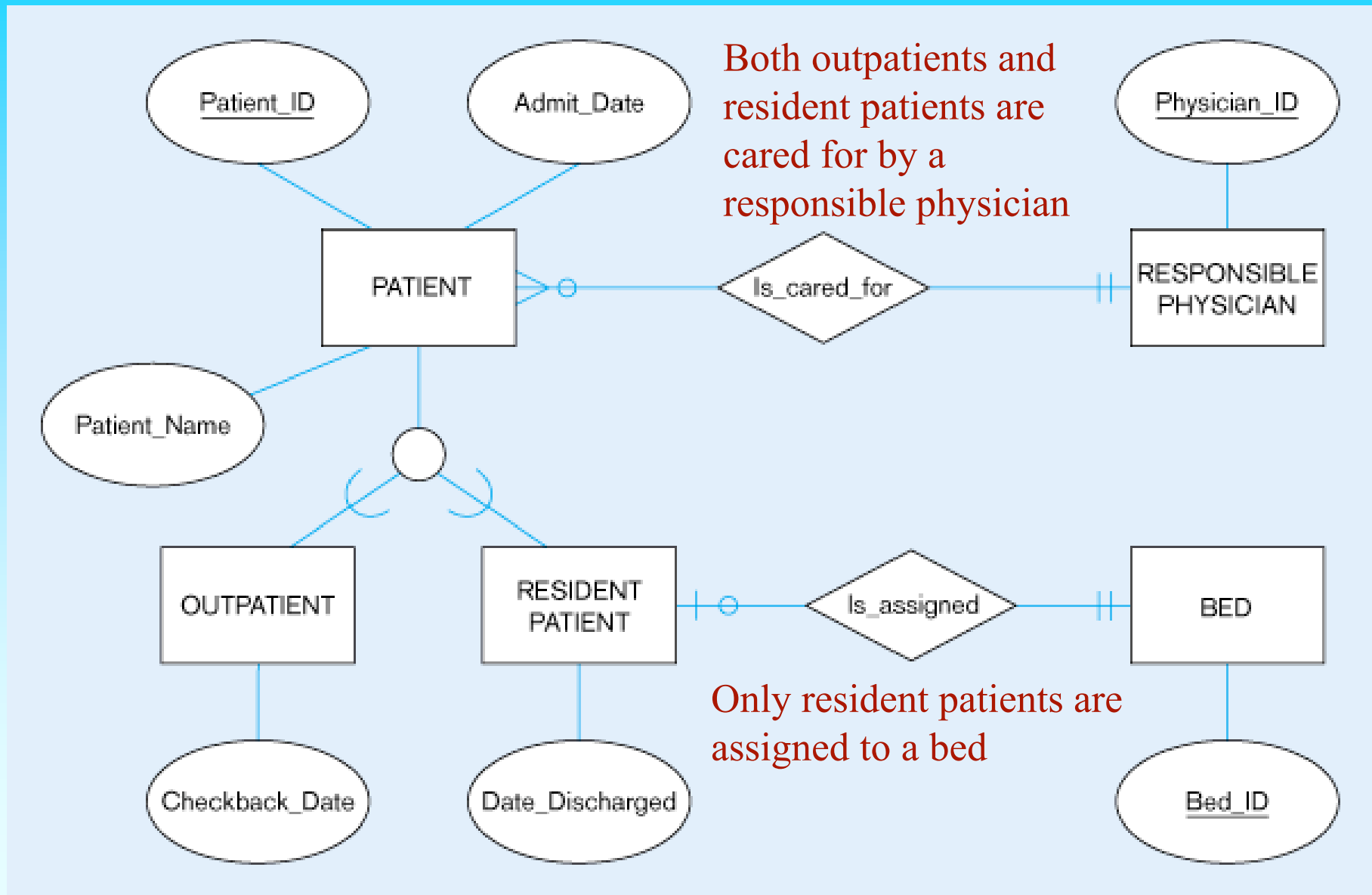


Figure 4-6a – Examples of completeness constraints  
Total specialization rule

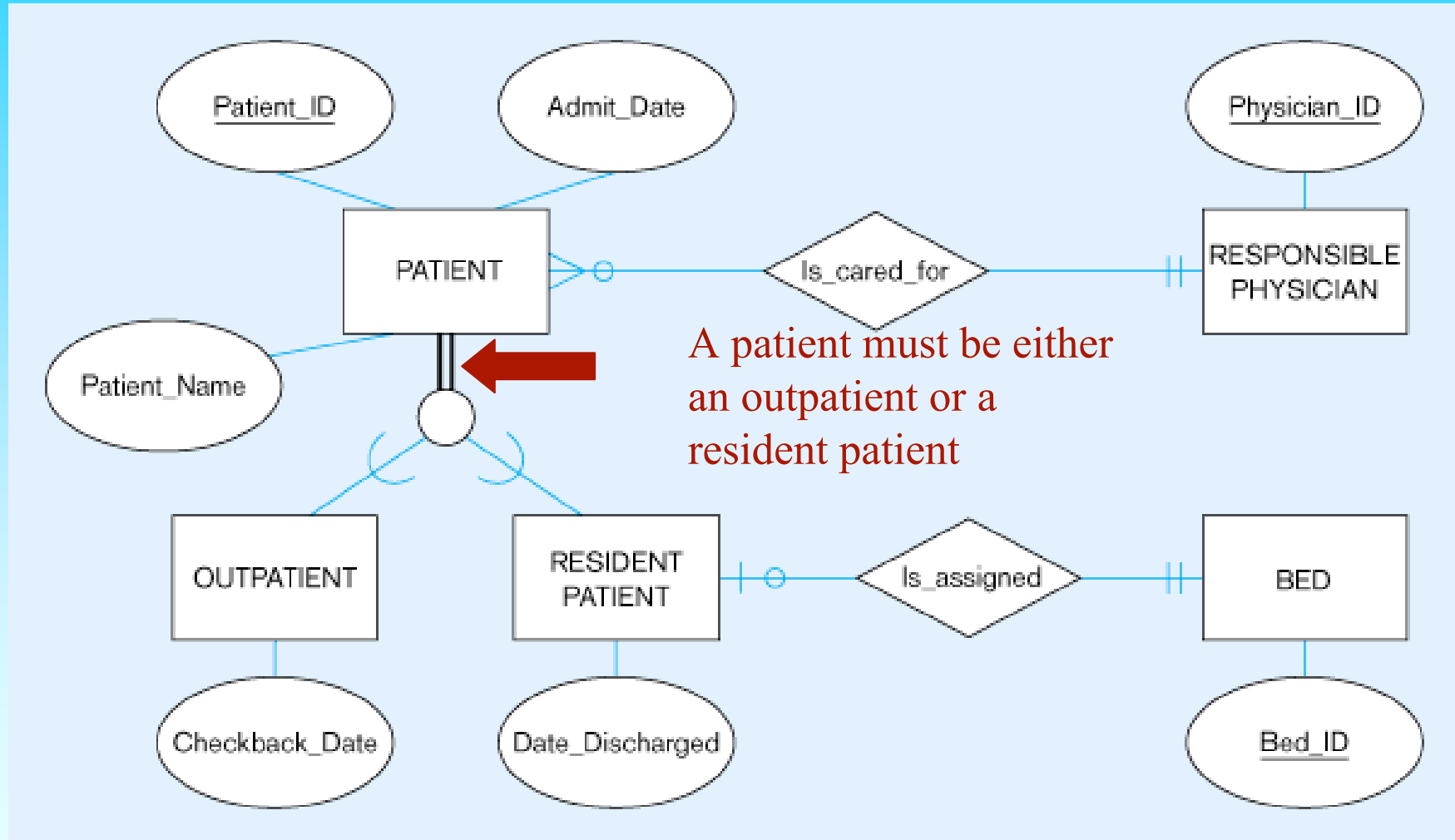
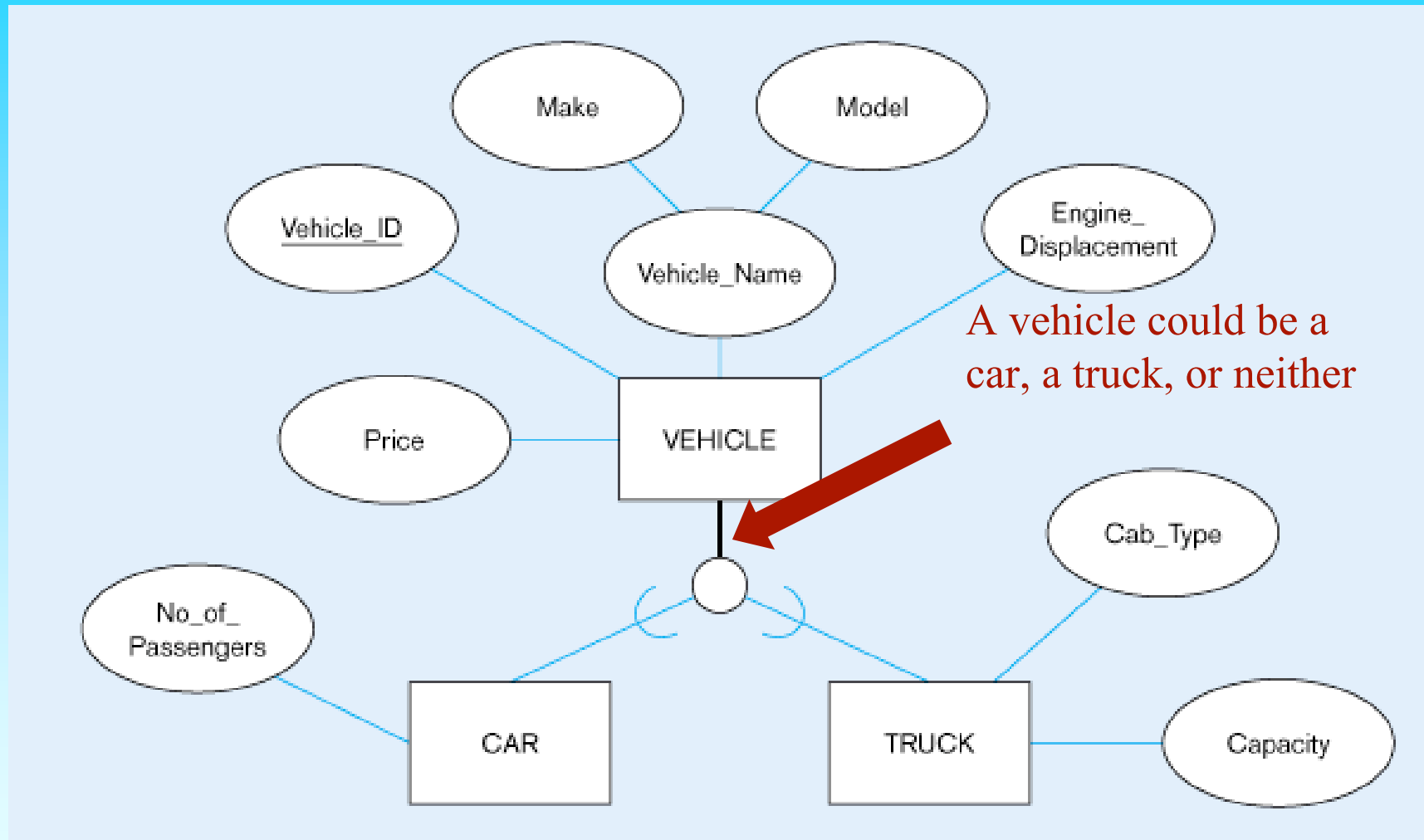


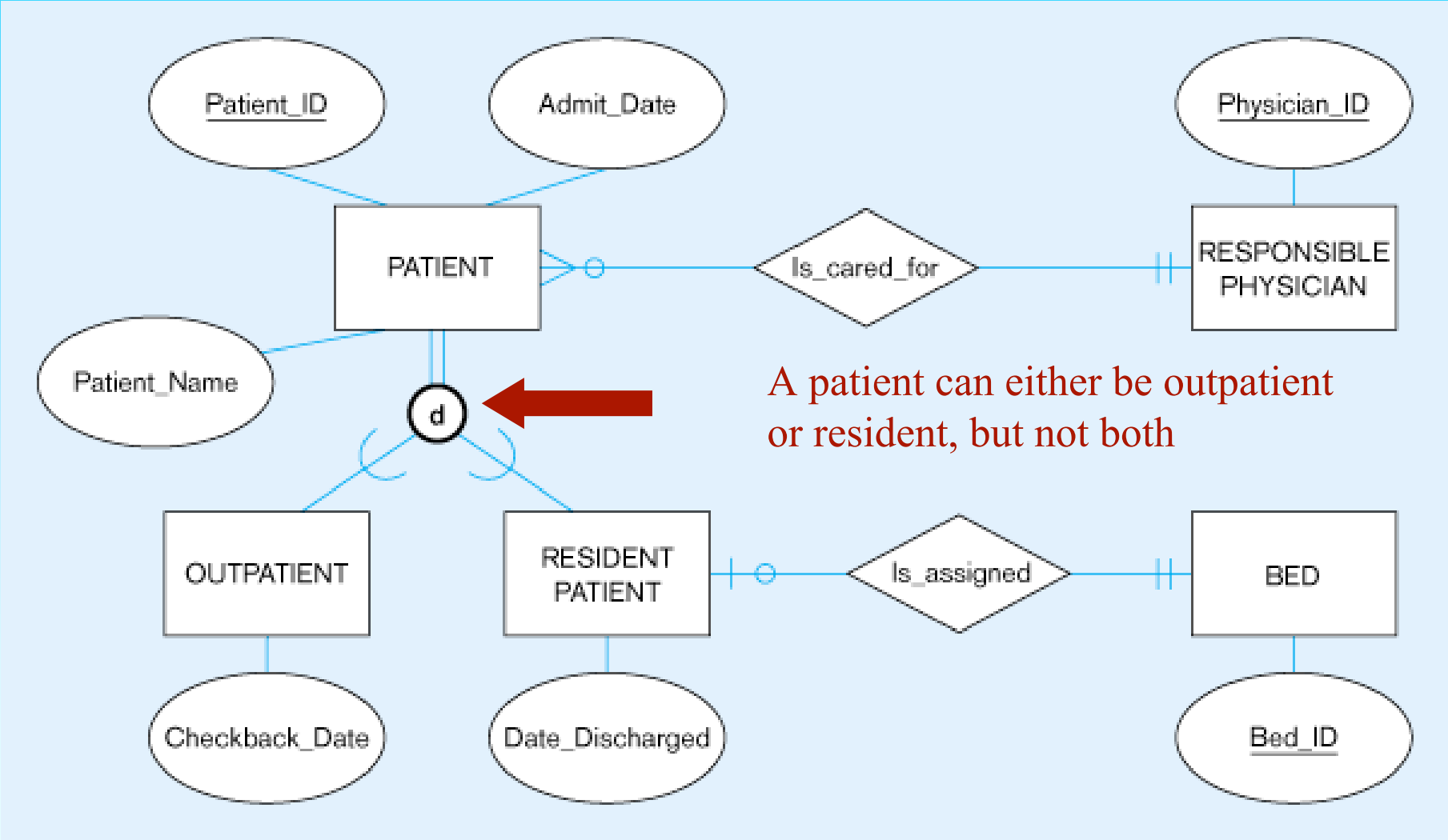
Figure 4-6b – Partial specialization rule



A vehicle could be a car, a truck, or neither

# Figure 4-7a – Examples of disjointness constraints

## Disjoint rule



# Figure 4-7b Overlap rule

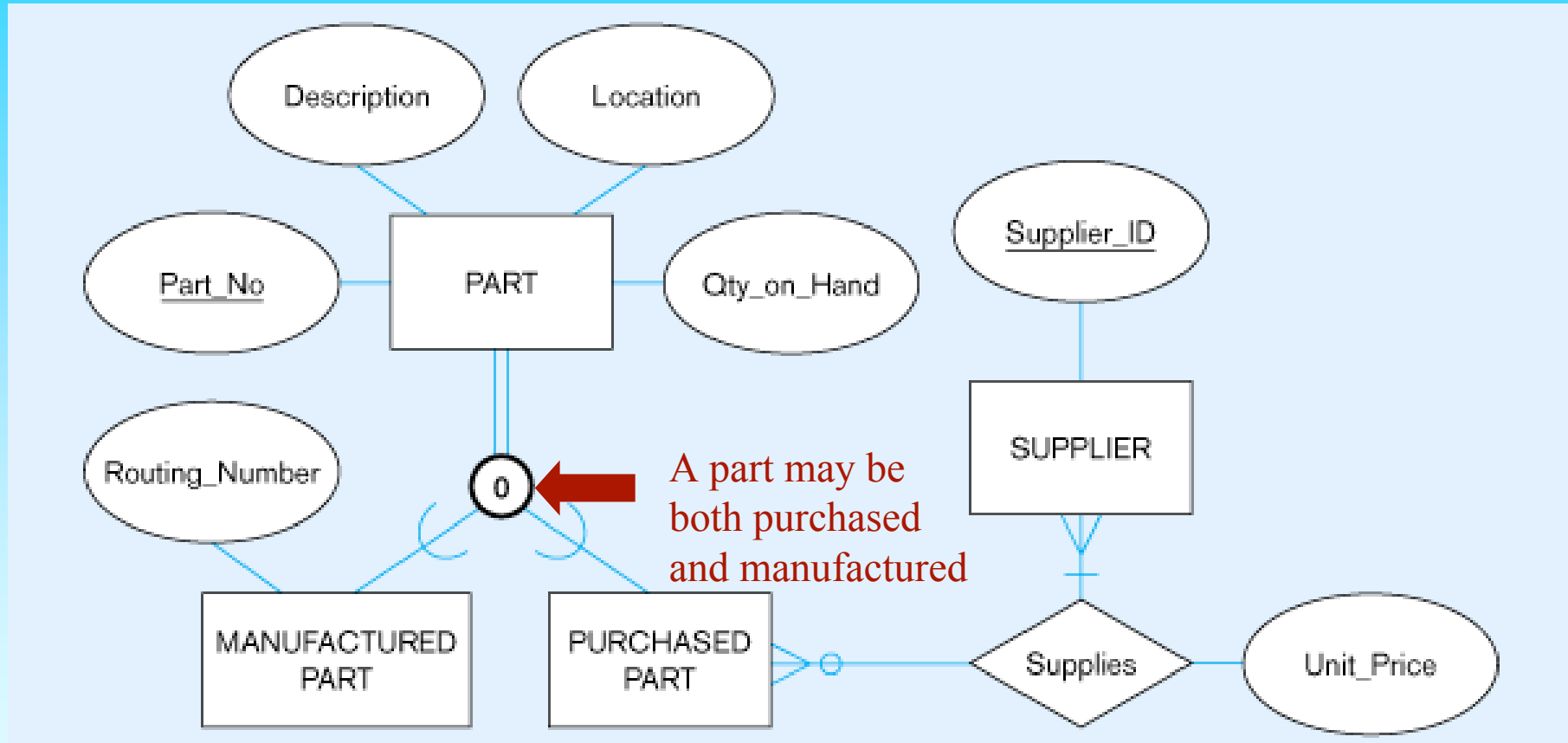




Figure 4-8 – Introducing a subtype discriminator (*disjoint* rule)

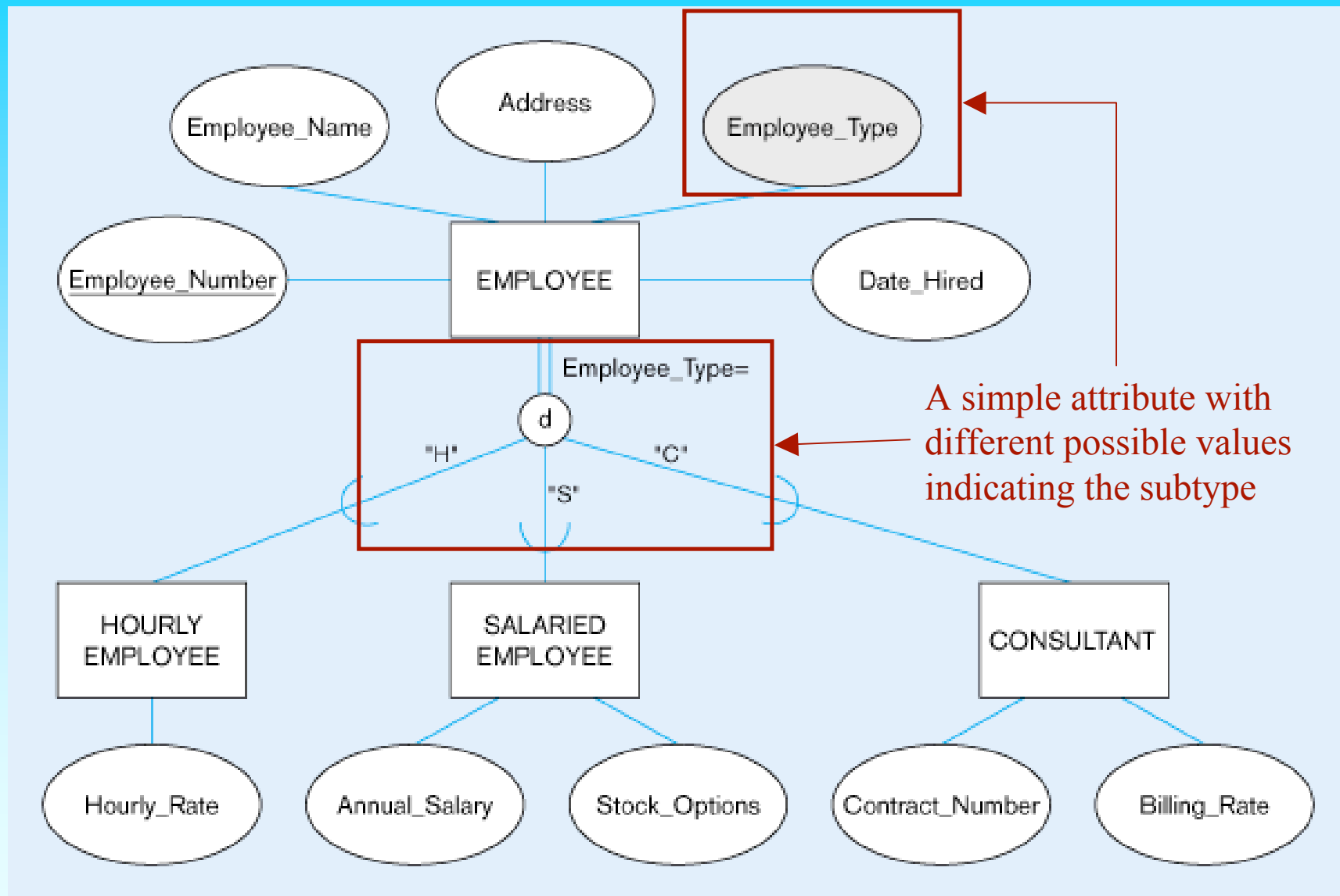
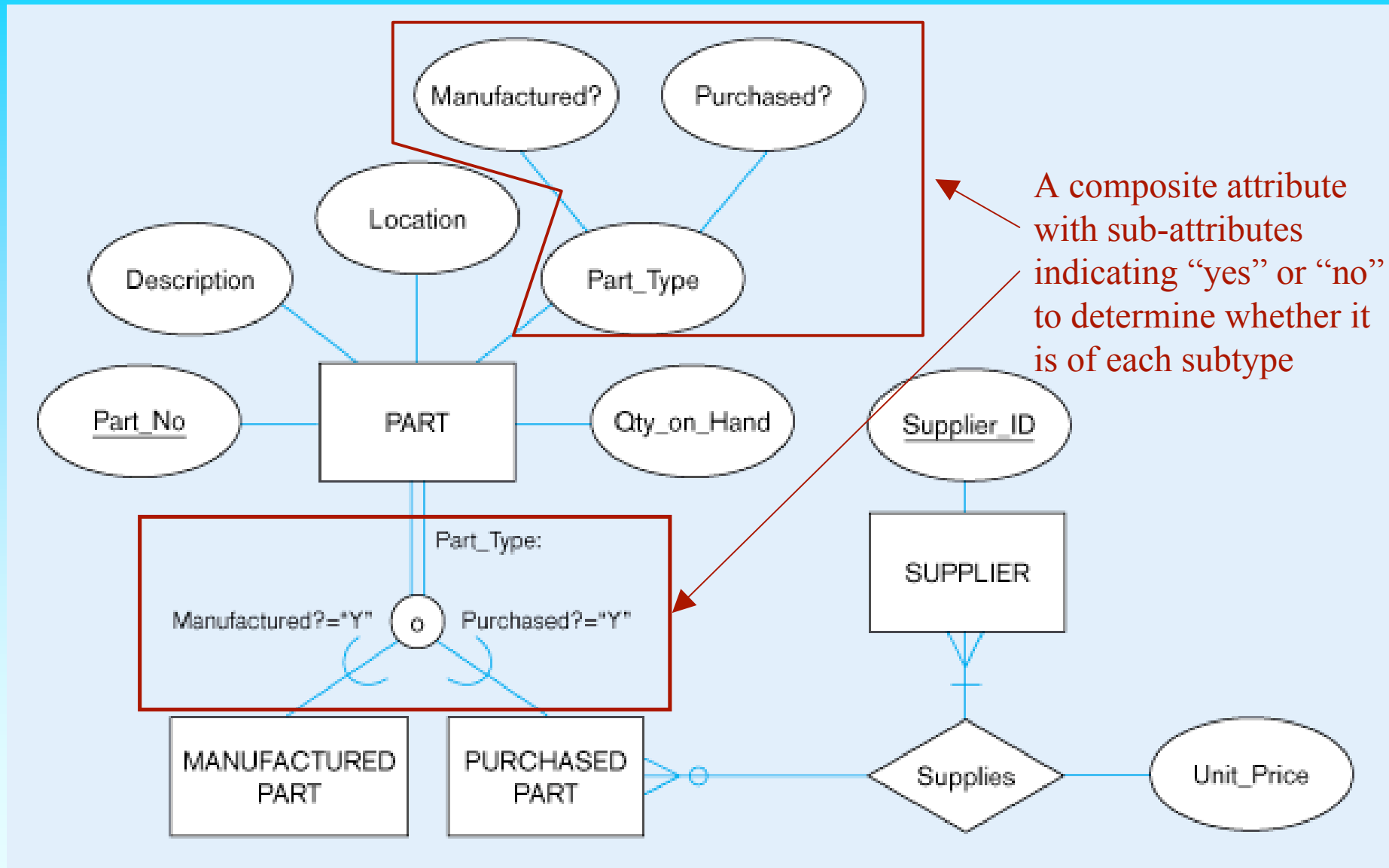


Figure 4-9 – Subtype discriminator (**overlap** rule)



**Figure 4-10** Example of supertype/subtype hierarchy

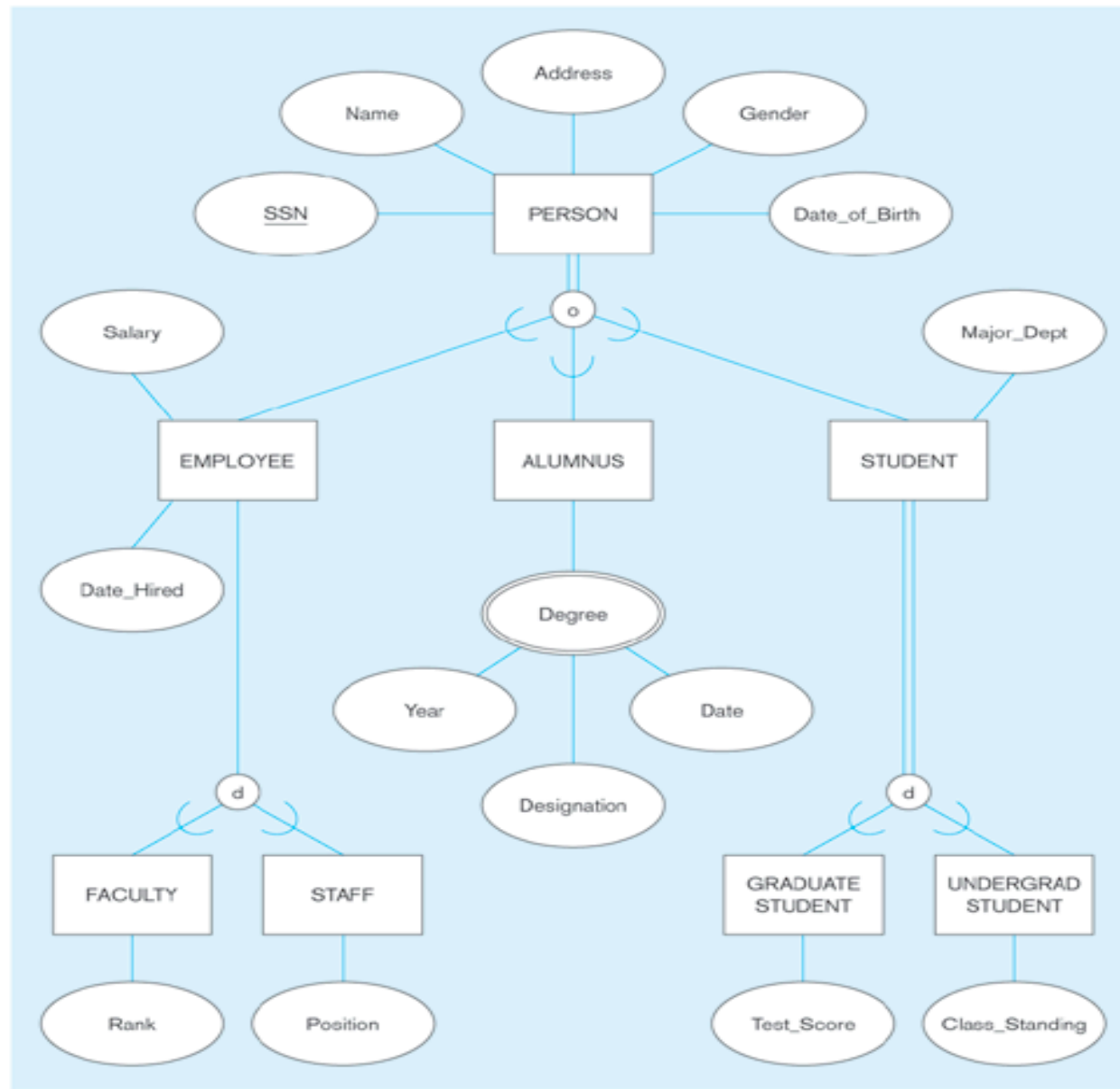


Figure 4-13a – Possible entity clusters for Pine Valley Furniture

Related groups of entities could become clusters

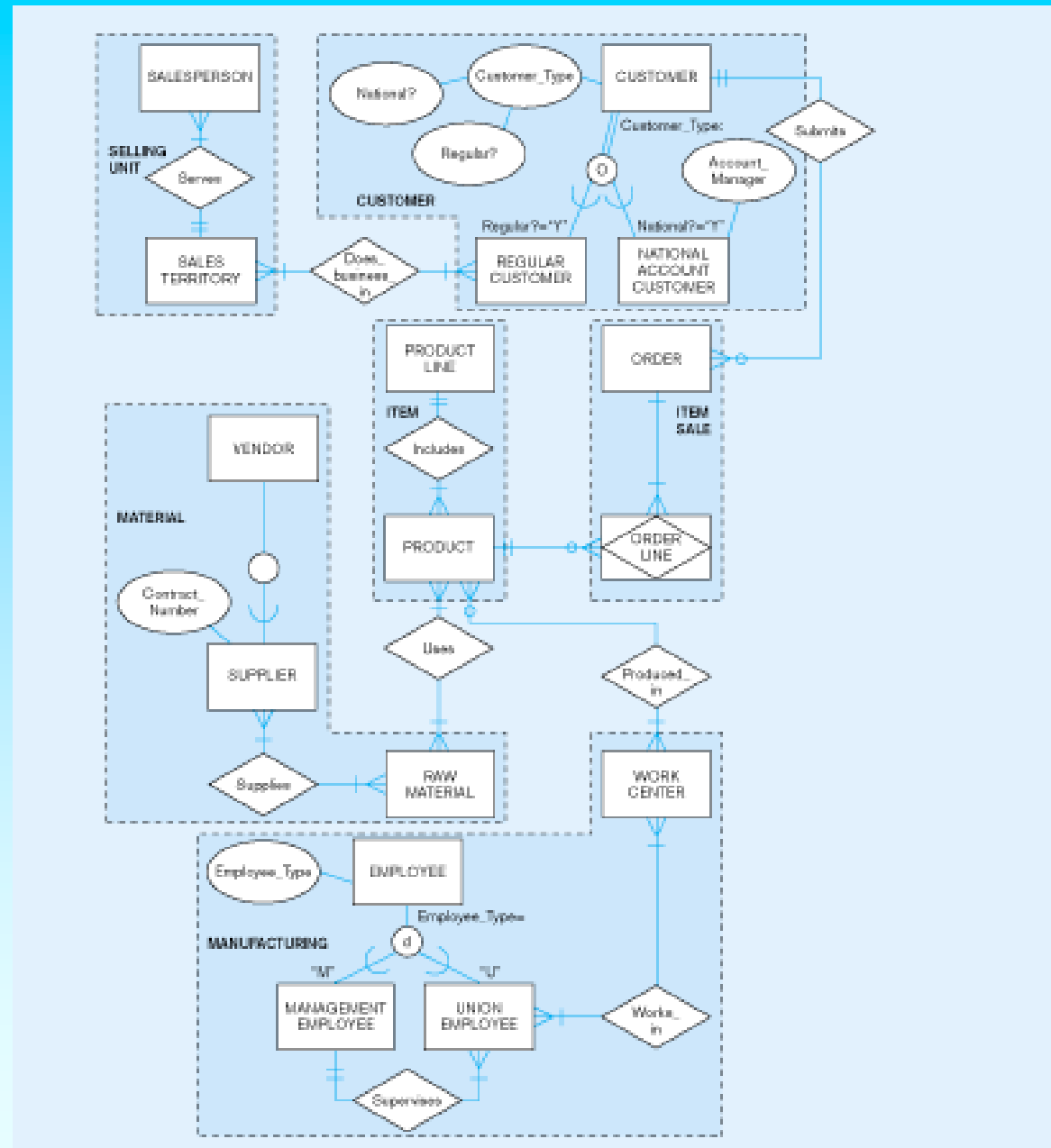


Figure 4-13b – EER diagram of PVF entity clusters

