

EER → Relational: Specialization

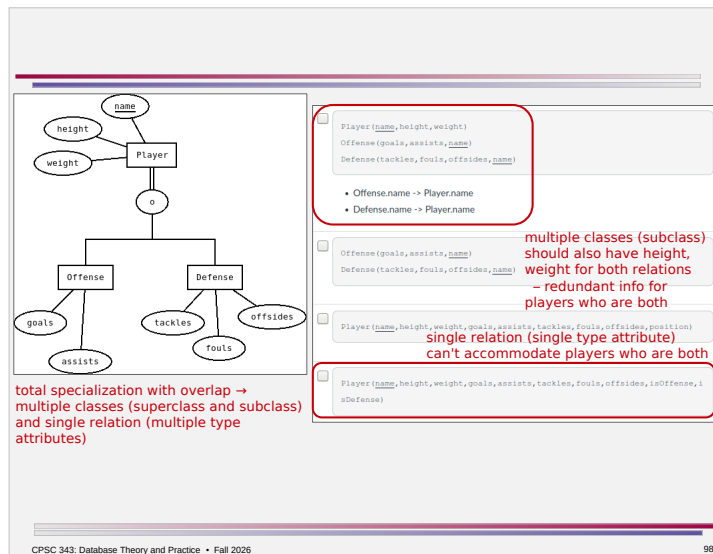
Specialization → one of four options

- *multiple relations*
 - *superclass and subclass* – superclass relation has attributes of its entity type (PK = entity type's key); subclass relations have attributes of their entity types plus PKs of the superclass relation (as FK; PK = superclass PK)
 - *subclass only* – subclass relations have attributes of their entity types and of the superclass entity type (PK = superclass key)
- *single relation* – single relation with attributes from superclass and all subclasses (PK = superclass key)
 - *single type attribute* – plus a single type attribute which identifies which subclass an entity belongs to
 - *multiple type attributes* – plus a boolean type attribute for each subclass

EER → Relational: Specialization

8. specialization → one or more relations

		type of specialization				
		partial	total	disjoint	overlap	
multiple relations	superclass and subclass	y	y	y	y	
	subclass only	x	y	y	entities may be duplicated	
single relation	single type attribute	y	y	y	x	subclass-only attributes result in NULL values
	multiple type attributes	y	y	inconsistency potential	y	



EER → Relational: Category Types

9. category types → relation with any attributes of the category itself plus the surrogate or superclass key (as FKs in the superclasses)
- surrogate/superclass key → primary key
- (surrogate key is added to superclasses as FK if they do not have a common key)

