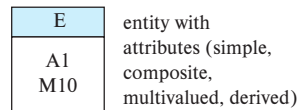
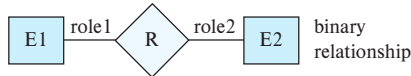


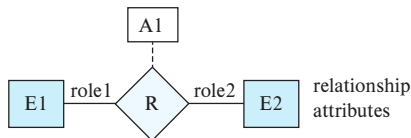
ER Diagram Notation



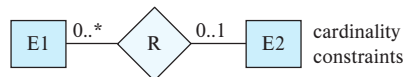
entity with
attributes (simple,
composite,
multivalued, derived)



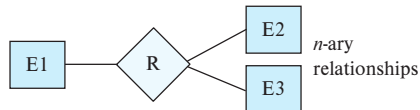
binary
relationship



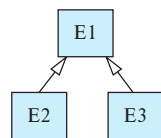
relationship
attributes



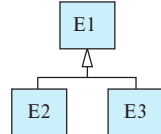
cardinality
constraints



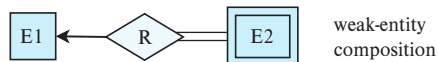
n-ary
relationships



overlapping
generalization

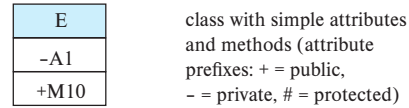


disjoint
generalization

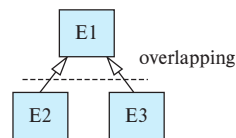
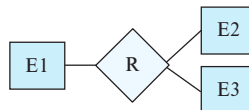
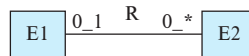
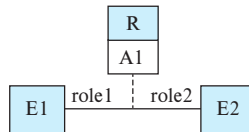
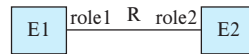


weak-entity
composition

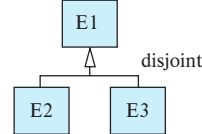
Equivalent in UML



class with simple attributes
and methods (attribute
prefixes: + = public,
- = private, # = protected)



overlapping



disjoint



Figure 6.28 Symbols used in the UML class diagram notation.

Single values such as 1 or * may be written on edges; the single value 1 on an edge is treated as equivalent to 1..1, while * is equivalent to 0..*. UML supports generalization; the notation is basically the same as in our E-R notation, including the representation of disjoint and overlapping generalizations.

UML class diagrams include several other notations that approximately correspond to the E-R notations we have seen. A line between two entity sets with a small shaded diamond at one end in UML specifies “composition” in UML. The composition relationship between *E2* and *E1* in Figure 6.28 indicates that *E2* is existence dependent on *E1*; this is roughly equivalent to denoting *E2* as a weak entity set that is existence