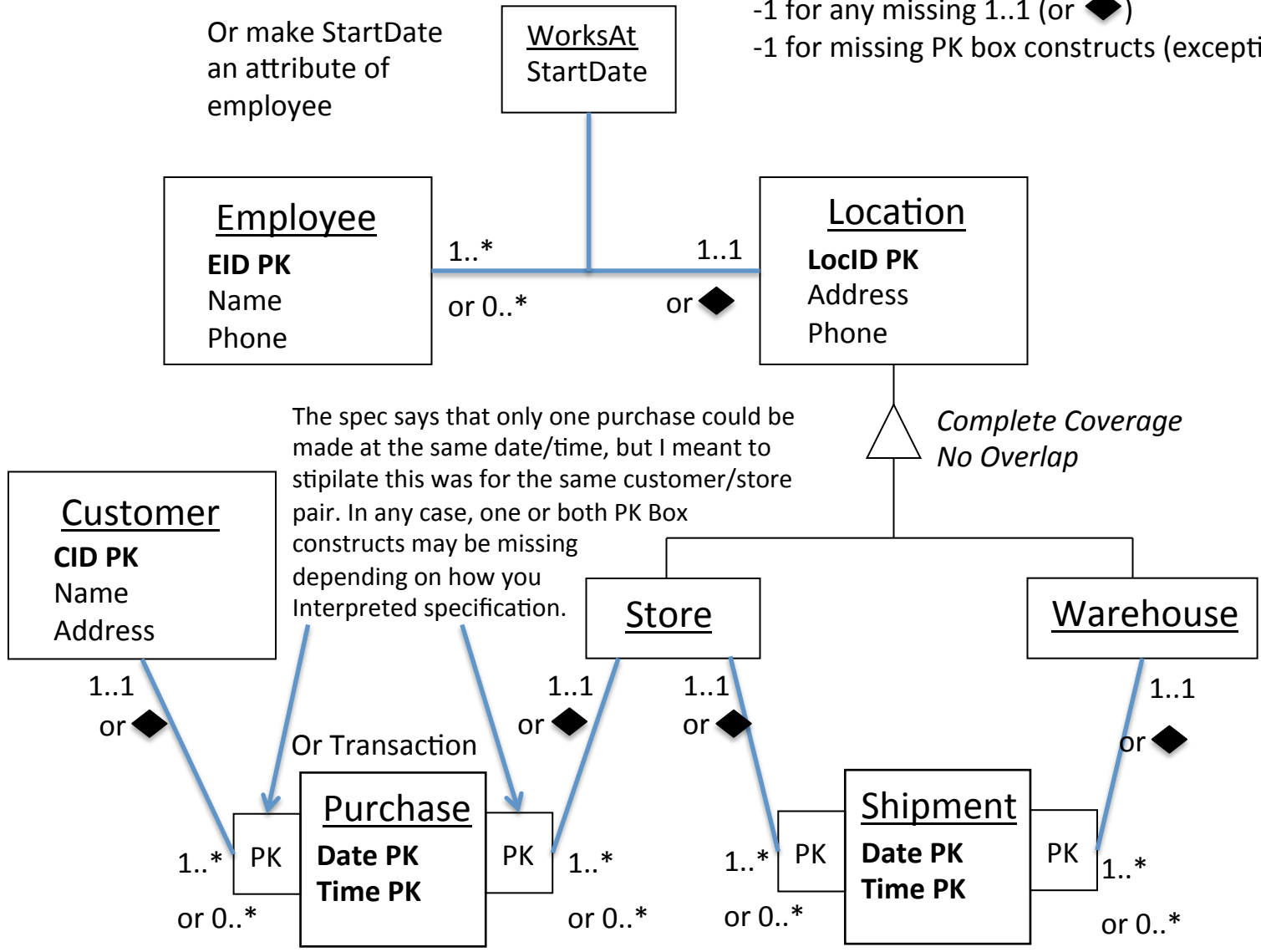


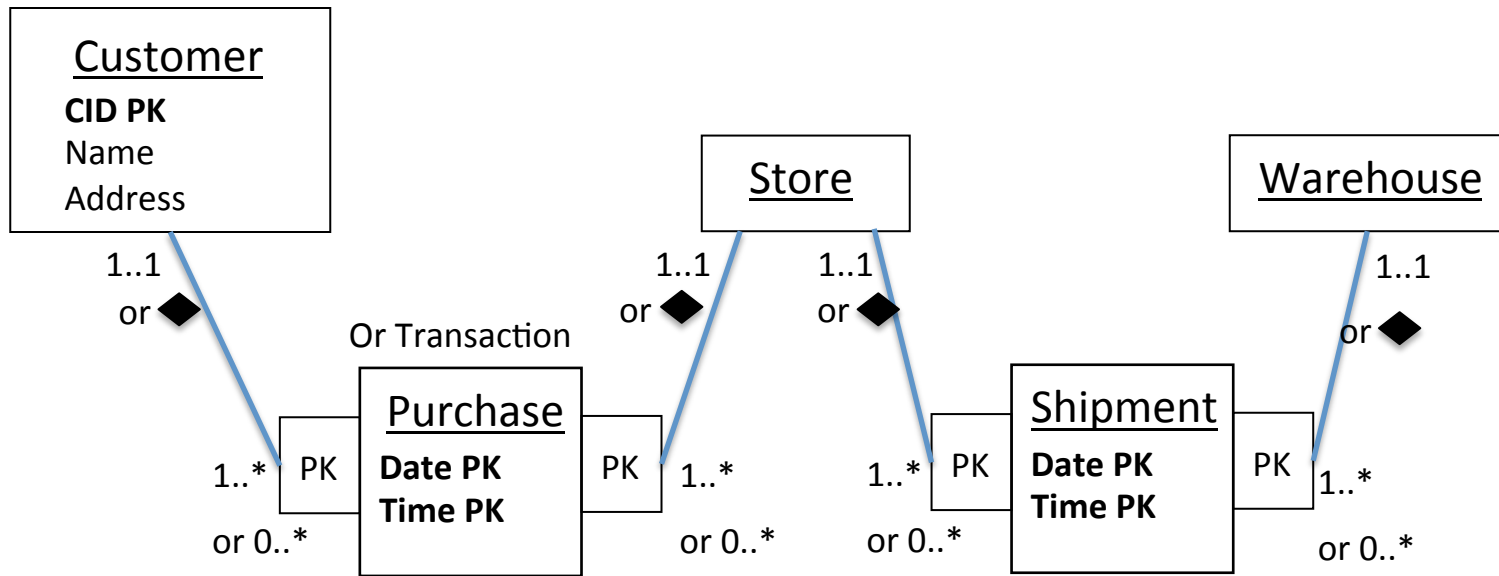
Assignment A-w6 key: this answer meets all constraints

All cardinalities should be specified
 In a legal UML, even if the spec didn't
 Explicitly say what they are.

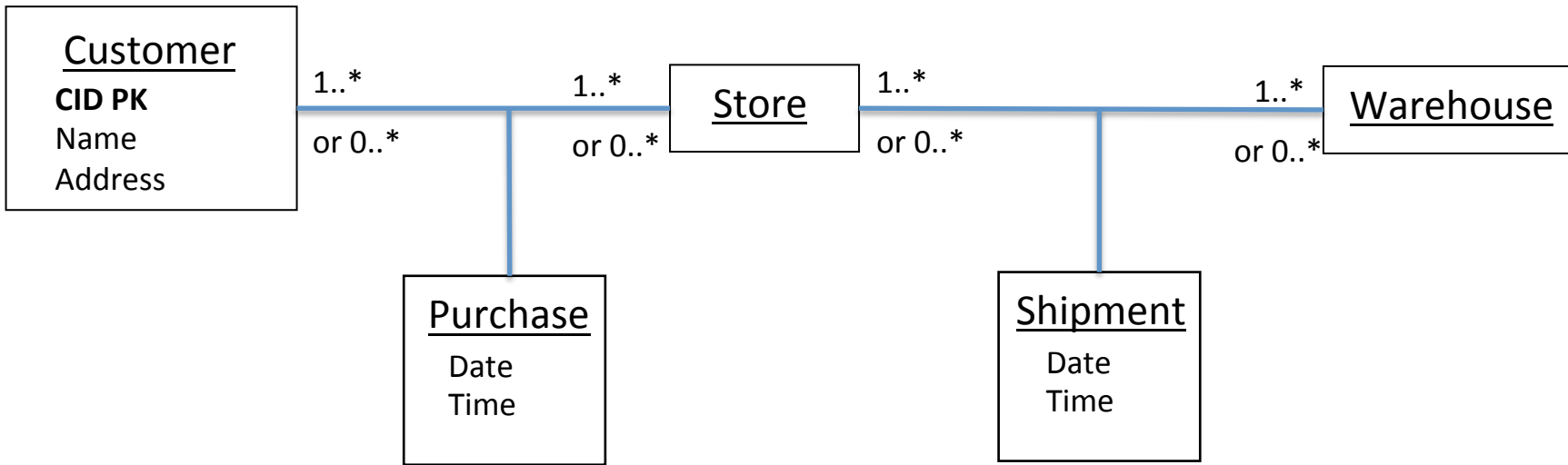
- 1 for any missing 1..* (or 0..*)
- 1 for any missing 1..1 (or ◆)
- 1 for missing PK box constructs (exceptions noted)



Instead of these ...



What about these incorrect constructs

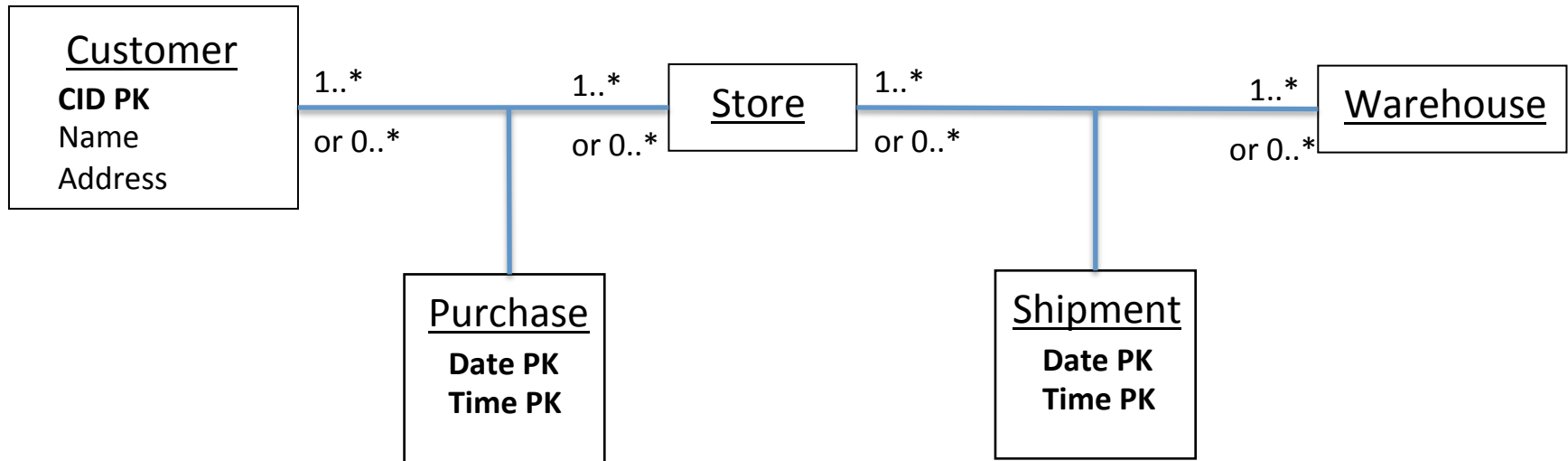


These latter constructs allow only one instance of a customer/store pair in the DB (i.e., of the many possible purchases by an individual at a store, only one can be recorded – that would be incorrect) . Similarly, the constructs on right allow a record of only one store/warehouse pair, but surely a warehouse can make multiple shipments to same store, and we would want a record of each.

-2 total for one or two of the latter constructs

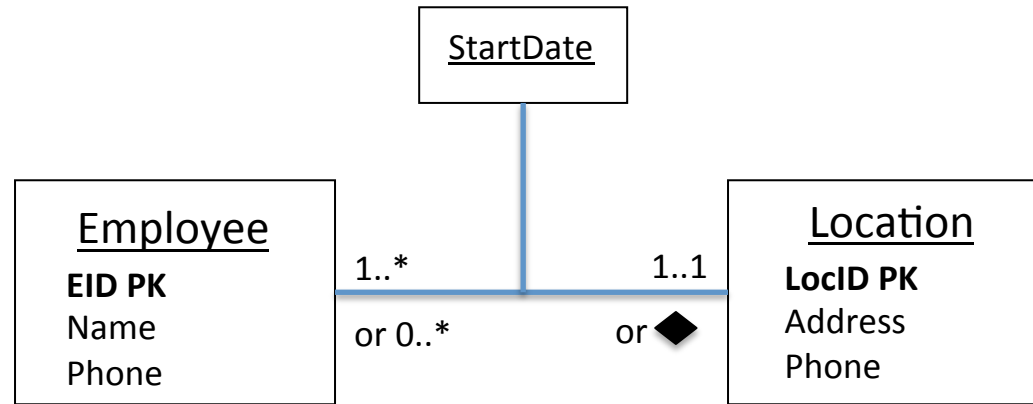
What about these incorrect constructs, which differ from the previous page only by the PK declarations in the Purchase and Shipment association classes? Association classes cannot have PK attributes explicitly given, so these constructs are syntactically wrong using the UML language that we are using.

-2 total for one or two of the latter constructs



However, these constructs suggest an understanding that ternary associations are desirable. In fact, other visual DB languages, ternary associations are allowed (though using a different syntax). It turns out that any ternary association (or N-ary associations generally) can be represented by a set of binary associations (which what the first slide shows).

One reason that I stipulated that “**Employees are recorded as working at exactly one location, with an associated start date**” was to contrast the correct association below with the “associations” between customers and stories, and between warehouses and stores.



But I have stressed the importance of historical databases that record past history, not just the “here and now”. So I can imagine that someone did the following. This is wrong relative to the spec, but only -1

