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)

The spec says that only one purchase could be
made at the same date/time, but I meant to
stipulate this was for the same customer/store pair. In any case, one or both PK Box
constructs may be missing depending on how you
Interpreted specification.

Or make StartDate
an attribute of
employee

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made at the same date/time, but I meant to
stipulate this was for the same customer/store pair. In any case, one or both PK Box
constructs may be missing depending on how you
Interpreted specification.
Instead of these ...

```
Customer
CID PK
Name
Address
```

```
Store

PK

Or Transaction

PK
```

```
Purchase

Date PK
Time PK

1..1 or 0..*
```

```
Shipment

Date PK
Time PK

1..1 or 0..*
```

```
Warehouse
```

What about these incorrect constructs

```
Customer
CID PK
Name
Address
```

```
Store

PK
```

```
Purchase

Date
Time

1..* PK
or 0..*
```

```
Shipment

Date
Time

1..* PK
or 0..*
```

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
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).

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
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