

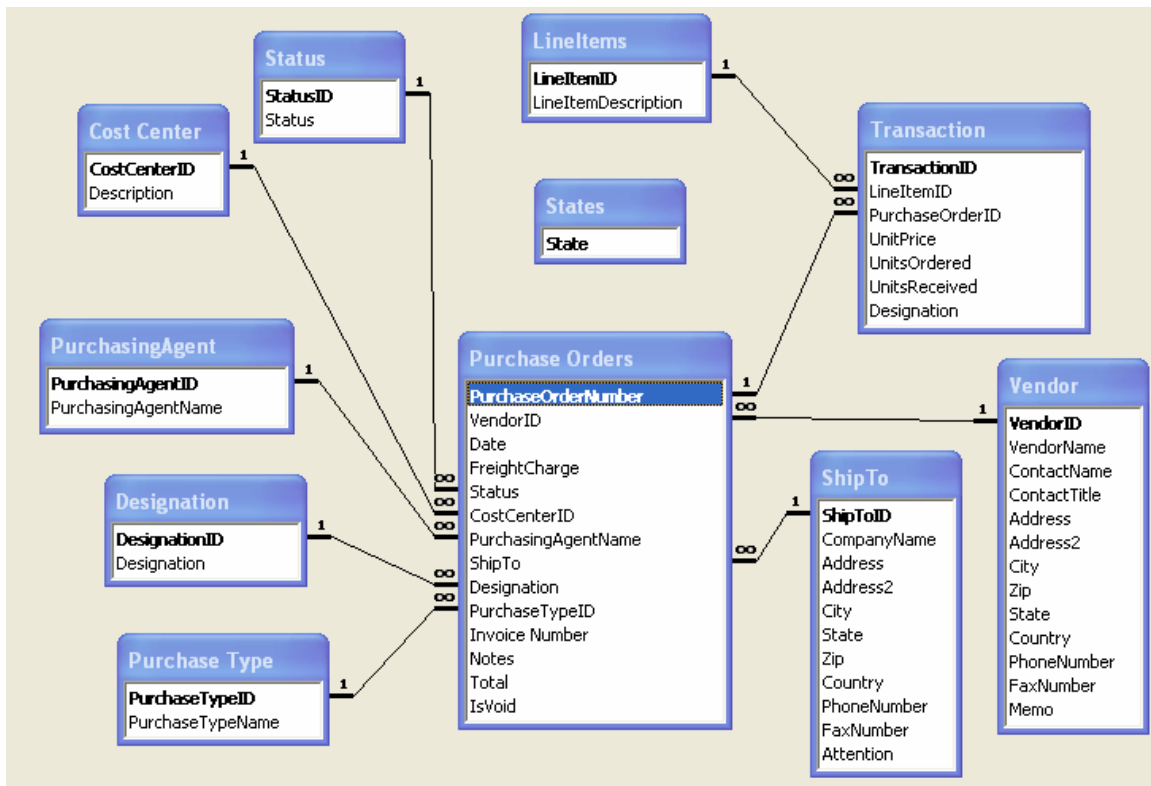
Supplemental Material for Milestone 4
4/7/2003

Milestone Updates:

Because we are in the midst of rapid iteration of UI design and database schema design, we have chosen to postpone updates to previous Milestones for the current time. In terms of releases, we are nearing the first full release as stated in the Software Requirements Specification. At that point, we will regress through the Milestones back to the SRS and update it as well as the ER Data Model, DFD's, and process models to accurately reflect the changes that we have made during application development. We still plan on accomplishing all three scheduled releases by final deployment and application turnover.

Normalization:

We chose to design with third normal form in mind so that we would not have to perform a significant amount of updates to the ER Data Model. The primary form (Purchase Order) acts as a container for data from many other tables which are bound by relationships. The relationships can be seen in the figure below.



The reader should note that PurchasingAgentName is a multi-value attribute and was left this way intentionally. This was decided because the table is used to supply a single name to each purchase order and will be displayed as a combo box. It will not be indexed therefore it was decided that a multi-value attribute was a tradeoff that we could allow rather than string parsing and concatenation each time the user initiated the drop down combo box.

Outstanding Issues:

One of the major outstanding issues that we face at this point in design relates to the behavior of the purchase order. A purchase order should be a static record of a single point in time and should not change as vendors, cost centers, or any number of other attributes change in the database in the future. Thus, we face the issue of data migration of old records so that deletes can be performed. For instance, we do not want to be able to delete a vendor if one or more purchase orders are connected to it, however, we may wish to delete a vendor at some point in time and migrate the purchase order data to an archived location.