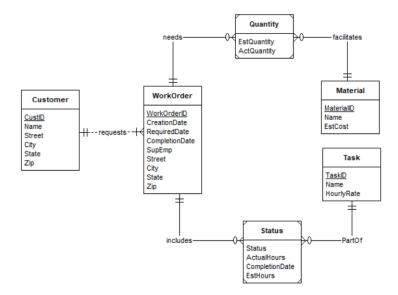


- The Customer, WorkOrder, and Task entity types follow directly from the narrative. The narrative statement clearly indicates attributes and a primary key for each entity type.
- The M side of the 1-M relationship Requests follows from the narrative with each customer has a collection of work orders.
- The one side of the 1-M relationship Requests follows from each Work Order belongs to one customer.
- The minimum cardinalities are not specified in the narrative so additional requirements collection is necessary.
- The problem narrative indicates that tasks are standardized across work orders and each work order may have multiple tasks, so an M-N relationship is necessary.
- An associative entity type Status was created with attributes to indicate the status of individual task under a work order, Actual Hours and Completion Date. The primary key is a combination of WorkOrderID and TaskID.
- The minimum cardinality for number of task in a work order is not specified in the narrative so additional requirements collection is necessary.



- The problem definition indicates the need for the Material entity type. The narrative statement clearly indicates the attributes required.
- An associative entity type Quantity was created with attributes to indicate the estimated quantity needed and actual quantity used. The primary key is a combination of WorkOrderID and MaterialID.
- The minimum cardinality for number of material in a work order and minimum cardinality for number of material appear on a work order is not specified in the narrative so additional requirements collection is necessary
- Attribute EstHours added to the associative entity type Status, and removed from Task entity type