

INFS 4790 / 5790

Design Scenario

The warehouse manager of “Lots Of Books” needs a system to track the placement of inventory items in the warehouse. The warehouse receives shipments of items from vendors. The items received in a shipment will be stored in various warehouse locations. Draw the data model described below, and properly place all necessary foreign keys to implement the relationships described.

Entities required:

- Location
- Vendor
- Item
- Shipment

For the Location entity class, the following attributes will be needed:

- Location Number
- Location Capacity
- Location Count

For the Vendor entity class, the following attributes will be needed:

- Vendor Number
- Vendor Name
- Vendor Contact Person
- Vendor Phone

For the Item entity class, the following attributes will be needed:

- Item Number
- Item Description
- Item Size

For the Shipment entity class, the following attributes will be needed:

- Shipment Number
- Tracking Number
- Shipment Date
- Shipment Weight

The following relationships must be defined:

- Location is related to Item.
- Item is related to Shipment
- Shipment is related to Vendor.

Connectivities and Participation are defined as follows:

- An Item may have many Locations.
- A Location has only one Item.
- A Location may or may not have an Item.
- An Item may or may not have a Location.

- An Item may have many Shipments.
- A Shipment may have many Items.
- An Item may or may not have a Shipment.
- A Shipment must have an Item.
- The quantity of each Item in a shipment must be tracked.

- A Shipment has only one Vendor.
- A Vendor may have one or more Shipments.
- A Shipment must have a Vendor.
- A Vendor may or may not have a Shipment.

Warehouse ERD

