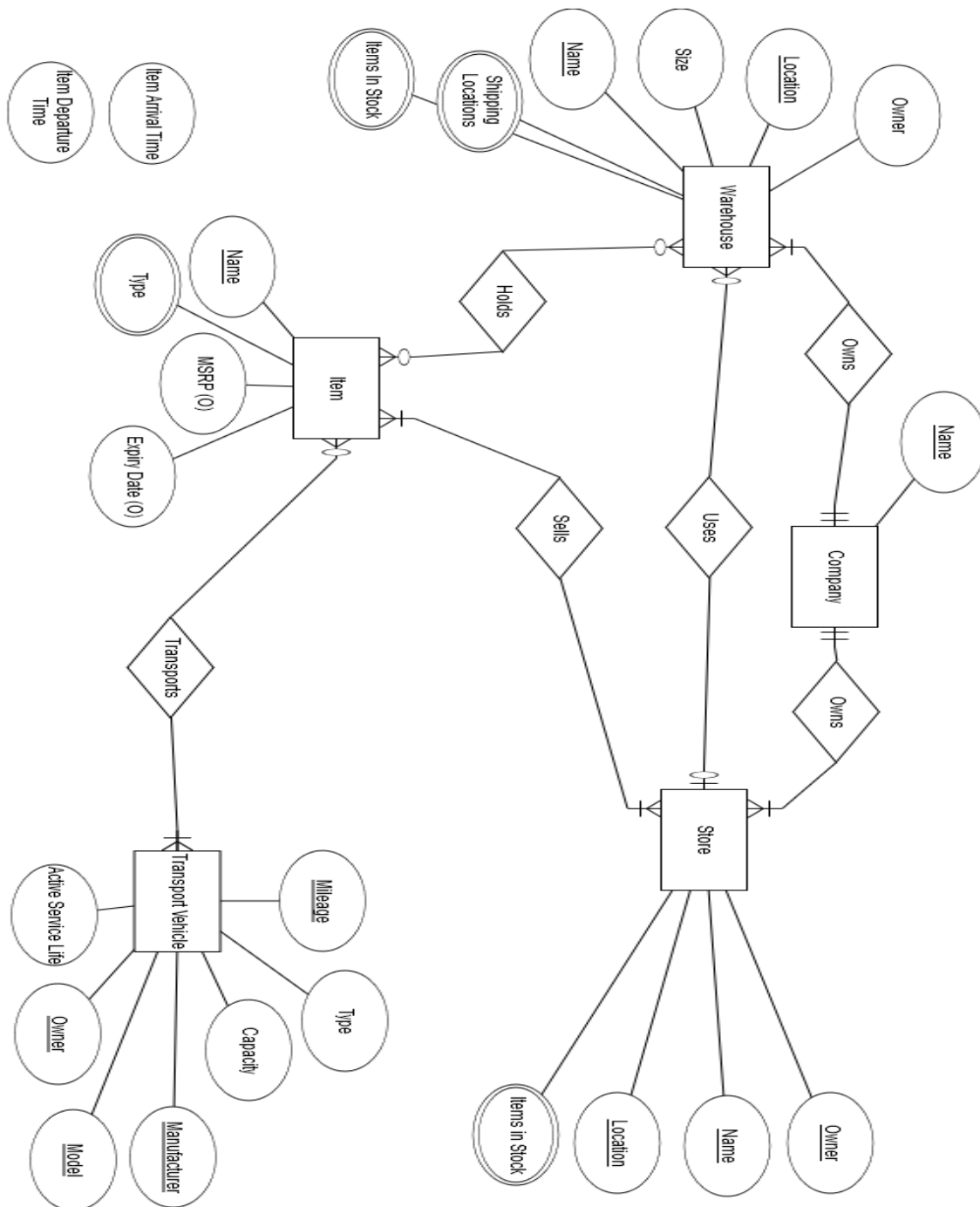


COE848 Lab 2: ER Diagram Design

Entity-Relationship Diagram



Entities

- Warehouse: Where the items are being stored
- Company: The owner of warehouses and stores
- Store: Where the items are sold to consumers
- Item: The product being distributed to public
- Transport Vehicle: The method of transferring items between warehouses and stores

Attributes

Warehouse

- Owner: Name of the company that owns the warehouse
- Location: Physical location of the warehouse
- Size: Physical size of warehouse (in m² or square feet)
- Name: Name of the warehouse
- Shipping Locations: List of stores that the warehouse supplies
- Items in stock: List of items stored in the warehouse

Company

- Name: Name of the company

Store

- Owner: Name of the company that owns the store
- Name: Name of the store
- Location: Physical location of the store
- Items in stock: List of items the store sells

Item

- Name: Name/brand of item
- Type: Classification of item (i.e. sports, fashion, furniture, technology, etc.)
- Expiry Date: Optional. Date of expiry for items with a shelf life
- MSRP: Optional. The Manufacturer's retail price item is expected to be sold at

Transport Vehicle

- Owner: the company or person who owns the vehicle
- Type: The type of vehicle (i.e. truck, van, train, boat etc.)
- Capacity: Space available to carry items
- Manufacturer: Brand of the vehicle

- Model: Make/model of the vehicle
- Mileage: Current travel distance of the vehicle
- Active Service Life: Time that the vehicle has been in use.

Relationships

- 1..1 Company owns 1..many Warehouses
 - o A warehouse must be owned by a company. A company can own more than one warehouse.
- 0..many Warehouses holds 0..many Items
 - o A warehouse can hold no items, or many items. An item does not have to be in a warehouse.
- 1..1 Company owns 1..many Stores
 - o A store must be owned by only one company. A company can own more than one store.
- 1..many Stores uses 0..many Warehouses
 - o A warehouse must be used by at least one store. A store does not have to use a warehouse but can use many if required.
- 1..many Stores sells 1..many Items
 - o Items must be sold in at least one store. Many stores can sell the same item.
- 1..many Transport Vehicles transports 0..many Items
 - o Items must be transported by a vehicle. A vehicle can transport none to many items.