

For the scenario below identify the entities, their attributes and appropriate keys

The Angel Warehouse

The Angel Warehouse stores items for its parent company. The warehouse is organised into bays, which are storage areas, but the items themselves are stored in bins. Each bay contains a number of bins. Each bay is identified by a unique bay number and the bay location and the height of the bay are recorded. Each bin has a different number within the bay, always starting with bin no. 1, and while some bays have only 5 bins some have over 50. The size of each bin is recorded.

Some bays have a parking spot for one fork lift to help move items round the warehouse and lift items into bins. Each fork lift is allocated to a bay. Each fork lift has a unique equipment number and the maximum carrying weight of the fork lift needs to be known. Some fork lifts are petrol driven while some are electric.

For all bins the maximum loaded weight must be known.

When an item is taken into the warehouse it is assigned a unique number and the date is recorded as well as the item weight. Bins can store a number of items and when an item is put in a particular bin this date is also recorded. Items can be moved back and forth between bays and bins to optimise the warehouse storage.

Homework task 1

Bay (entity)

- Bay Number (Unique Primary Key)
- Bay Location
- Bay Height

The primary key is the “Bay Number”

Bin (entity)

- Bin Number (Unique Primary Key)
- Bay Number (to link what bin is part of which bay, Primary Key Composite)
- Bin Size
- Bin's Maximum Loaded Weight

The primary key is the “Bin Number”

Forklift (entity)

- Equipment Number (Unique Primary Key)
- Bay Number (to link what forklift is parked at which bay, Foreign Key Composite)
- Maximum Loaded Weight
- Type of Power (electric or petrol)

The primary key is the “Equipment Number”

Item (entity)

- Item Number (Unique Primary Key)
- Item Date Received
- Item Size
- Bin Number (to link which bin the item is stored in, Foreign Key Composite)
- Date Placed In The Bin
- Bay Number (to link which bay the item is stored, Foreign Key Composite)

The primary key is the “Item Number”