

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.

Bay - Entity

Attributes

BayNum - Primary Key - Used to identify each bay

LocationOfBay - Identify physical location of bay

BayH - Height of bay

Bin - Entity

Attributes

BinNum - Composite Key since multiple bays could have the same bin numbers so as well as the bin number being used the bay number must also be mentioned.

BinSize - Size of bin

MaximumLoad - Max weight a bin can take

Fork Lift - Entity

Attributes

EquipmentNumber - Primary Key - Unique identifier for each fork lift

MaximumForkLiftCarry - Maximum weight a fork lift can carry

ForkLiftType - Type of fork lift must be known

BayNum - Since a fork lift is allocated to a specific bay

Item - Entity

ItemNumber - Primary Key: Items given an identifier when they are stored in a bin

DateOfStorage - Used to know date item was stored in warehouse

ItemWeight - Used to identify weight of item

Storage - Entity

DateOfStorage - Date when items were stored in bin

Bin number - Foreign Key - Used to find which bin item is stored in.