

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 **forklift** to help move items round the warehouse and lift items into bins. Each forklift is allocated to a bay. Each forklift has a **unique equipment number** and the **maximum carrying weight** of the forklift needs to be known. Some forklifts 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)

- Unique Bay number (primary key)
- Location
- Height
- Max number of bins

Bin (Entity)

- Number (primary key)
- Size
- Max loaded weight
- Number of items that can be stored
- Bay (foreign key)

ForkLift (Entity)

- Unique equipment number (primary key)
- Max carrying weight
- Unique bay number (foreign key to bay)

Item (Entity)

- Unique number (primary key)
- Date
- Weight
- Current bin (foreign key to Bin)
- Date when the bin is used

ItemLocationHistory (Entity)

- Item number (Foreign key to item)
- Bin number (Foreign key to bin)

Bay number (foreign key to bay)

Storage date

Primary key(item number, bin number, bay number, bay number, storage date)