

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)**

- Attributes
  - Bay number
  - Bay location
  - Bay height
  - Forklift parking spot number
- Key
  - Bay number (primary key)

#### **Items (Entity)**

- Attributes
  - Item number
  - Item weight
  - Item date
- Key
  - Item number (primary key)

#### **Bin (Entity)**

- Attributes
  - Bin number
  - Bin size
  - Bin max weight
- Key
  - Bin number (primary key)

**Forklift (Entity)**

- Attributes
  - Forklift bay number
  - Unique equipment number
  - Max carrying weight
  - Fuel type
- Key
  - Equipment number (primary key)