

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)

Bay ID (primary key)

Location

Height

Fork Lift (Entity)

Equipment ID (primary key)

Maximum Carry Weight

Petrol/Electric

Bin (Entity)

Bin ID (primary key)

Bin No.

Bay ID (foreign key)

Size

Maximum Loaded Weight

Item (Entity)

Item ID (primary key)

Date

Item Weight

Storage (Entity event)

Item ID (foreign key)

Bin ID (foreign key)

Date Entered

Since 'Bin ID' was not mentioned in the specifications, in place of it, Bay ID and Bin No. could be used to create a composite key as an alternative solution.

Red denotes an entity, green denotes an attribute, and underlined green denotes a primary key.