

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

Primary Key

Foreign Key

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.

Entities, their attributes and examples:

Entity:

Bay

Attributes:

bay-ID -- SE01

bin-ID -- BIN01

location -- Croydon

height -- 10ft

Entity:

Bin

Attributes:

bin-ID -- bin no.1

size -- 10kg

max-load-weight -- 25kg

Entity:

Fork lift

Attributes:

equipment-ID -- FL005

bay-ID -- SW03

max-carry-weight -- 70kg

fuel-type -- petrol

Entity:

Item

Attributes:

item-ID -- TOY758

date – 17/04/2024
weight – 0.5kg
bin-date

Example Queries:

1. How many bins are in bay SE01?
2. What month has the most items taken into the warehouse?
3. What is the max load weight for bin no.2 in bay SW03?
4. What is the most used type of fuel for the fork lifts?
5. How many bay locations does angel warehouse have?