

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)

Bay\_Location

Bay\_Height

#### Bin (Entity)

Bay\_ID (Foreign Key)

Bin\_Number ( Composite Key)

Bin\_Size

Maximum\_Loaded\_Weight

#### Forklift (Entity)

Bay\_ID (Foreign Key)

ForkLift\_ID (Primary Key)

Maximum\_Carrying\_Weight

Forklift\_Type

#### Item (Entity)

Item\_ID (Primary Key)

Date

Item\_Weight

Bin\_ID (Foreign Key)

Bay\_ID (Foreign Key)