

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 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.

### Entity

Primary Key (PK) – (example)  
Attribute – (example)  
Foreign key (if present) - example

### Bay

Bay\_ID - 67462  
Location - A  
Height – 10m  
ForkLift\_ID – 2372

### Bin

Bin\_ID – (could be composite key of Bay\_ID and Bin\_Number e.g. 67462 and 11)  
Bin\_Number – 11  
Size – 4m<sup>2</sup>  
Max\_Loaded\_Weight – 34kg  
Bay\_ID – 67462

### Forklift

Forklift\_ID – 2372  
Max\_Carrying\_Weight: 100kg  
Type – Petrol

### Item

Item\_ID – 92929  
Date\_Recieved – 11/02/2022  
Weight – 2.6kg

### Item Location

Item\_Location\_ID – composite of Item ID and Bin ID  
Date\_Stored – 22/05/2023  
Item\_ID – 92929  
Bin\_ID - 67462 and 11