

we can identify that their attributes, Here is the breaking down:

Entities, Attributes, and Keys

1. Bay

- **Attributes:**
 - Bay Number (Primary Key)
 - Location
 - Height
 - Number of Bins
 - Fork Lift Equipment Number (Foreign Key, optional)
- **Key:**
 - Bay Number (unique identifier for each bay)

2. Bin

- **Attributes:**
 - Bin Number (Primary Key, unique within a Bay)
 - Bay Number (Foreign Key)
 - Size
 - Maximum Loaded Weight
- **Key:**
 - Composite Key: (Bay Number, Bin Number) to uniquely identify each bin in its respective bay

3. Fork Lift

- **Attributes:**
 - Equipment Number (Primary Key)
 - Maximum Carrying Weight
 - Type (Petrol/Electric)
 - Bay Number (Foreign Key)
- **Key:**
 - Equipment Number (unique identifier for each fork lift)

4. Item

- **Attributes:**
 - Item Number (Primary Key)
 - Date Added
 - Weight
- **Key:**
 - Item Number (unique identifier for each item)

5. Item Storage

- **Attributes:**
 - Storage ID (Primary Key)
 - Item Number (Foreign Key)
 - Bin Number (Foreign Key)
 - Bay Number (Foreign Key)
 - Date Stored
- **Key:**
 - Composite Key: (Item Number, Bin Number, Date Stored) to track which item is stored in which bin on what date

Summary of Relationships

- Each **Bay** can have multiple **Bins**.

- Each **Bin** belongs to one **Bay**.
- Each **Fork Lift** is assigned to one **Bay**, but a **Bay** can have at most one **Fork Lift**.
- Each **Item** can be stored in multiple **Bins** over time, and each storage event is tracked.
- The **Item Storage** entity serves as a junction table to handle the many-to-many relationship between **Items** and **Bins**.

This structure provides a comprehensive overview of how to manage the data related to The Angel Warehouse, ensuring that all entities, attributes, and keys are clearly defined.