

# APPLIED DATABASE MANAGEMENT

## GROUP PROJECT

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## ENTITIES AND DEFINITIONS

1. **Customer:** Customer has separate and distinct existence of things, such as unique account number, and billing address.
2. **Order:** Order is said to be an entity as all the data is collected for each order that is placed.
3. **Furniture:** Furniture is a single unique object having furniture Type, Quantity, and Price as attribute.
4. **Truck:** Trucks is an entity because it stores the information about the truck's attributes such as Vehicle Number, License Plate Number etc.
5. **Driver:** Driver is an entity because it stores information about driver's license plate number, license expiration date and all the employees who are drivers.
6. **Employee:** Employee keeps the data related to all type of Employee, their SSN, Name, Phone number and address.
7. **Sale Representative:** Sales representative is an entity, who takes orders, also are a type of employee and earn commission.
8. **Shipment:** Shipment is an entity, composed of one or more orders and vice versa, having a Delivery address, Truck Id, etc.

## RELATIONSHIP MATRIX

	<i>Customer</i>	<i>Order</i>	<i>Furniture</i>	<i>Truck</i>	<i>Drivers</i>	<i>Employee</i>	<i>Sales Representative</i>	<i>Shipment</i>
Customer		Places an						
Order	Placed by		contains				Is taken by	Is composed of
Furniture		appears						
Truck					Is driven by			Contains
Driver				drives		Is kind of		
Employee					Can be a		Can be a	
Sales Representative		Takes				Is kind of		
Shipment		Is a part of		Contained by				

## **BUSINESS RULES**

- Each Customer sometimes places one or more Orders  
Each Order is always placed by one Customer
- Each Order always contains one or more Furniture  
Each Furniture sometimes appear in one or more Orders
- Each Truck is always driven by one Driver  
Each Driver always drives one Truck
- Each Truck always contains one or more Shipments  
Each Shipment is always contained by one Truck
- Each Driver is always a kind of employee  
Each Employee is sometimes a Driver
- Each Sales representative is always an Employee  
Each Employee can sometimes be a Sales representative
- Each Sales representative always takes one or more orders  
Each order is always taken by one sales representative
- Each shipment is always a part of one order  
Each order is composed of one or more shipments

## **SUPERTYPE-SUBTYPES RELATIONSHIPS**

- Sales Representative is a kind of Employee.  
An Employee can be sales representatives.
- Driver is a kind of Employee.  
An Employee can be a Driver.
- Order is kind of Shipment.  
Shipment can be an Order.