

# Day 1

## Objective:

General e-commerce

## Defining My Business Goals:

### 1. What problem does my marketplace aiming to solve?

My e-commerce website solves the problem of finding high-quality,stylish, and affordable furniture online by offering a convenient shopping experience, customization options, and fast delivery.

### 2. Who is my target audience?

Our target audience includes homeowners, renters, young professionals, students, interior designers, and small business owners looking for functional and stylish furniture.

### What products or services will offer by me?

Our e-commerce marketplace will offer a wide range of furniture, including:

- **Living Room Furniture:** Sofas, coffee tables, TV stands, recliners.
- **Bedroom Furniture:** Beds, wardrobes, nightstands, dressers.
- **Dining Room Furniture:** Dining tables, chairs, bar stools, cabinets.
- **Office Furniture:** Desks, office chairs, bookshelves, filing cabinets.
- **Outdoor Furniture:** Patio sets, garden chairs, loungers.
- **Storage Solutions:** Shelving units, organizers, shoe racks.

### What will set my marketplace apart?

My marketplace will stand out through:

- **Affordability:** Competitive pricing with frequent discounts and bundle deals.
- **Customization:** Options for selecting materials, colors, and sizes to match customer preferences.
- **Fast & Reliable Delivery:** Efficient shipping with express delivery options.
- **High-Quality & Stylish Designs:** Modern, durable furniture that balances aesthetics and functionality.
- **User-Friendly Shopping Experience:** Easy navigation, detailed product descriptions, and customer reviews for informed decisions.

## Creating a Data Schema:

### Entities and Their Attributes

#### 1. Customers:

- customer\_id (Primary Key)
- name
- email
- phone\_number
- address
- password\_hash
- created\_at

#### 2. Products:

- name (Required)
- slug (Auto-generated from name)
- image (Product image with hotspot option)
- price (Required)
- description (Max 150 characters)
- discountPercentage (Between 0-100)
- isFeaturedProduct (Boolean)
- isOnSale (Boolean)
- stockLevel (Minimum 0)
- category (Required: Chair, Sofa, etc.)

#### 3. Orders:

- order\_id (Primary Key)
- customer\_id (Foreign Key)
- order\_date
- total\_amount
- order\_status (e.g., Pending, Shipped, Delivered)
- payment\_status (e.g., Paid, Unpaid, Refunded)

#### 4. Payments:

- payment\_id (Primary Key)
- order\_id (Foreign Key)
- payment\_method (e.g., Credit Card, PayPal)
- transaction\_id
- payment\_status
- payment\_date

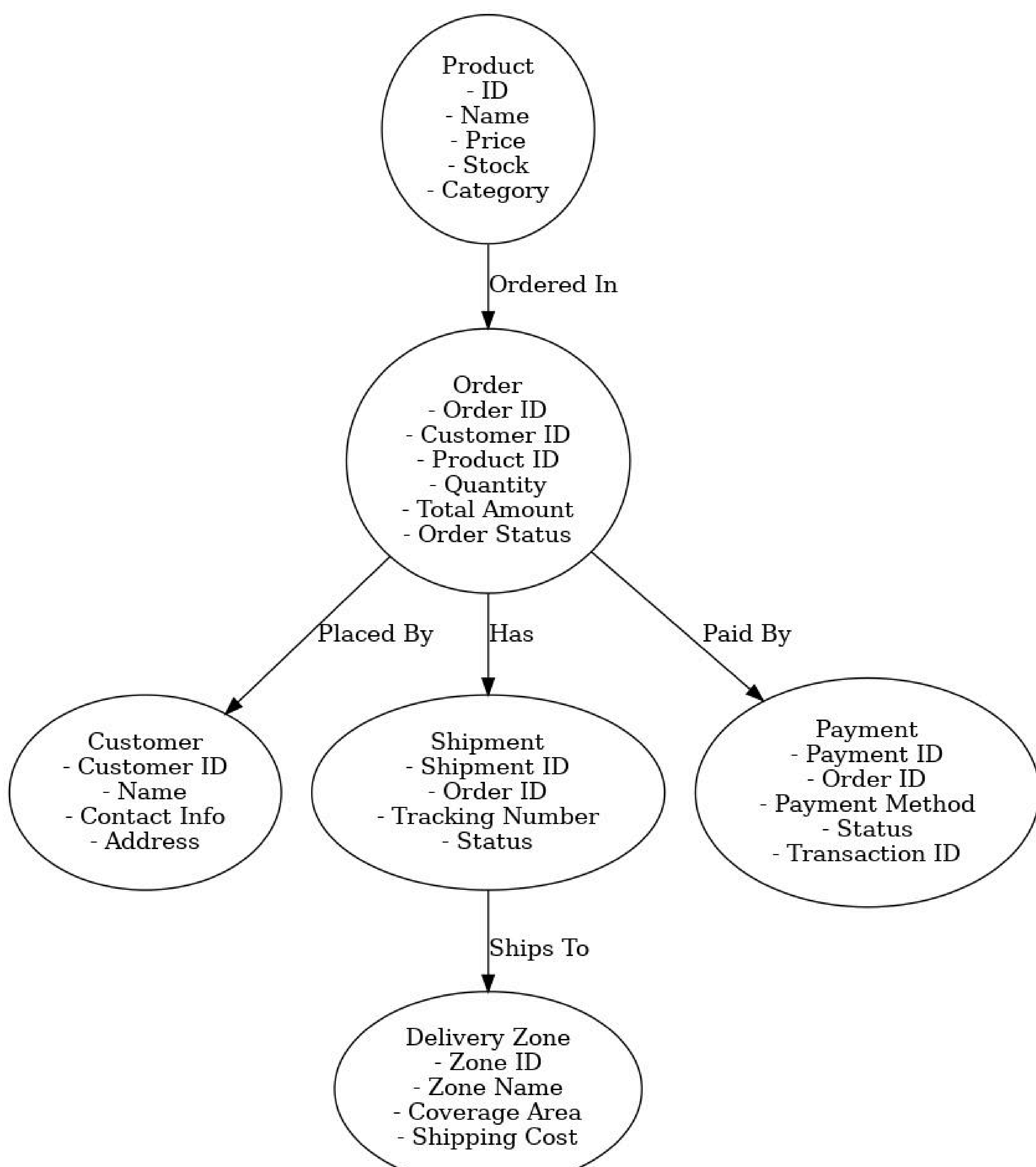
#### 5. Shipments:

- shipment\_id (Primary Key)
- order\_id (Foreign Key)
- tracking\_number
- carrier (e.g., FedEx, DHL)
- estimated\_delivery\_date
- delivery\_status (e.g., In Transit, Delivered)

#### 6. Delivery Zones:

- zone\_id (Primary Key)
- zone\_name (e.g., City, Region)
- shipping\_cost
- estimated\_delivery\_time

This schema keeps things simple while ensuring efficient tracking of customers, products, orders, and deliveries.



### Focusing on Key Fields for Each Entity:

#### Products:

- **ID:** Unique identifier for each product
- **Name:** Name of the product
- **Price:** Cost per unit
- **Stock:** Quantity available
- **Category:** Classification (e.g., Chair, Sofa)
- **Tags:** Keywords for search (e.g., "New Arrival")

#### Orders:

- **Order ID:** Unique identifier for each order
- **Customer Info:** Name, contact details, and address
- **Product Details:** List of products, quantities, and prices
- **Status:** Order status (e.g., Pending, Shipped, Delivered)
- **Timestamp:** Date and time of order placement

#### Customers:

- **Customer ID:** Unique identifier
- **Name:** Full name of the customer
- **Contact Info:** Phone number and email address
- **Address:** Delivery address
- **Order History:** Past orders placed by the customer

#### Delivery Zones:

- **Zone Name:** Name or identifier of the delivery zone
- **Coverage Area:** List of postal codes or cities served
- **Assigned Drivers:** Details of drivers or couriers

#### Shipment:

- **Shipment ID:** Unique identifier for tracking
- **Order ID:** Linked order
- **Status:** Current status (e.g., In Transit, Delivered)
- **Delivery Date:** Expected or actual delivery date

### Testing and Validating:

"I will test the Products entity by creating a sample product and checking if the stock level is correctly updated when an order is placed. I will simulate placing an order through the Orders entity and check if all relevant product and customer information is correctly captured. For order tracking, I will test if the Shipment entity can be updated with delivery statuses. Finally, I will ensure that the Payments entity correctly reflects the payment process, and customer data in the Customers entity is linked to past orders and updated appropriately."