

A brief description of the changes made to the initial ERD:

### 1. **One Country → Multiple Addresses**

We updated the model to reflect that each Country can be associated with multiple Addresses.

### 2. **ShoppingCart and ShoppingCartItem Typo Fix**

Corrected the spelling of “ShoppingCart” and “ShoppingCartItem” throughout the documentation and ERD references.

Not need a direct relationship between ShoppingCartItem and OrderLine, as they serve different purposes in the e-commerce flow:

- ShoppingCartItem represents items a user is considering purchasing
- OrderLine represents items that have been purchased in an actual order

The typical flow is:

- User adds items to cart (ShoppingCartItem)
- User checks out, creating an order (ShopOrder)
- Cart items are converted to order lines (OrderLine)

Since we are already establishing the relationships:

- ShoppingCartItem → Product (via ProductItemID foreign key)
- OrderLine → Product (via ProductItemID foreign key)

These connections are sufficient for the standard e-commerce process. When a user completes checkout, the application would:

- Read data from ShoppingCartItem
- Create new OrderLine records
- Clear the ShoppingCartItem records

### 3. **Renamed Promotion to Coupon**

- This better reflects the intention of offering item-level discounts (e.g., a coupon code applied to specific products in an order). So Coupons are not based on how the customer pays, discounts are applied when an item is added to the order, regardless of the payment method.
- Coupon now holds details such as CouponID, CouponName, Description, DiscountRate, StartDate, and EndDate.
- Established a direct relationship between Coupon and OrderLine

### 4. **A new foreign key CouponID was added to the OrderLine table.**

### 5. **ShopOrder Attribute Rename**

Changed the ShippingAddressID attribute to AddressID in the ShopOrder entity.

## **6. ERD Diagram Format**

Adjusted the formatting of the ERD to enhance clarity and readability.