# Database Design & ERD

The Entity Relationship Diagram (ERD) below illustrates the structure of the database for the E-Commerce system, defining the relationships between different entities.

A computer screen shot of a computer flow chart

AI-generated content may be incorrect.

## Tables & Descriptions

### 🔐 Authentication & Authorization Tables (ASP.NET Identity)

### AspNetUsers Stores all user account information including usernames, emails, password hashes, and custom fields like Name, City, etc.

### AspNetRoles Stores user roles (e.g., Admin, Customer). Each role can be assigned to multiple users.

### AspNetUserRoles A junction table linking users to roles (many-to-many relationship between users and roles).

### AspNetUserClaims Stores claims associated with a user (claims are key-value pairs used for identity-related data).

### AspNetRoleClaims Stores claims associated with roles.

### AspNetUserLogins Stores external login providers (e.g., Google, Facebook) linked to user accounts.

### AspNetUserTokens Stores authentication tokens related to a user (e.g., for 2FA or refresh tokens).

### 🛒 E-commerce Specific Tables

### Products Contains information about products (e.g., Title, Description, Price, ImageUrl, CategoryId, CompanyId).

### Categories Defines product categories (e.g., Books, Electronics). Linked to Products via CategoryId.

### Companies Stores supplier or company information. Linked to Products via CompanyId.

### ShoppingCarts Stores items currently in a user's cart. Links AspNetUsers (via ApplicationUserId) to Products.

### OrderHeaders Stores summary info about orders (e.g., order date, total, shipping address, payment status).

### OrderDetails Stores details of each item in an order (product, quantity, price). Linked to OrderHeaders.