**Database Schema Design**

**1. Users Table**

Stores registered users, including customers and administrators.

| **Column** | **Data Type** | **Description** |
| --- | --- | --- |
| userId | varchar(255) | Primary Key |
| username | varchar(255) | Username |
| email | varchar(255) | User's email |
| password | varchar(255) | Hashed password |
| isAdmin | boolean | Admin flag |

**2. Categories Table**

Stores product categories for organizing the inventory.

| **Column** | **Data Type** | **Description** |
| --- | --- | --- |
| categoryId | varchar(255) | Primary Key |
| name | varchar(255) | Name of the category |

**3. Products Table**

Stores all product-related information.

| **Column** | **Data Type** | **Description** |
| --- | --- | --- |
| productId | varchar(255) | Primary Key |
| name | varchar(255) | Product name |
| image | varchar(255) | Image URL |
| brand | varchar(255) | Brand of product |
| quantity | int | Available quantity |
| description | text | Product description |
| rating | float | Average rating |
| numReviews | int | Number of reviews |
| price | float | Price of product |
| countInStock | int | Stock count |
| categoryId | varchar(255) | Foreign Key → Categories |

**4. Reviews Table**

Holds product review details submitted by users.

| **Column** | **Data Type** | **Description** |
| --- | --- | --- |
| reviewId | varchar(255) | Primary Key |
| productId | varchar(255) | Foreign Key → Products |
| userId | varchar(255) | Foreign Key → Users |
| rating | int | Review rating (1–5) |
| comment | text | Review content |
| createdAt | datetime | Creation timestamp |
| updatedAt | datetime | Last update timestamp |

**5. Orders Table**

Captures all order-related metadata.

| **Column** | **Data Type** | **Description** |
| --- | --- | --- |
| orderId | varchar(255) | Primary Key |
| userId | varchar(255) | Foreign Key → Users |
| paymentMethod | varchar(255) | Payment method (e.g., card, COD) |
| paymentResultId | varchar(255) | External payment result ID |
| paymentStatus | varchar(255) | Payment status (paid/pending) |
| paymentUpdateTime | varchar(255) | Payment time |
| paymentEmail | varchar(255) | Payer's email |
| itemsPrice | float | Total item price |
| taxPrice | float | Tax applied |
| shippingPrice | float | Shipping cost |
| totalPrice | float | Final amount |
| isPaid | boolean | Payment status |
| paidAt | datetime | Payment date |
| isDelivered | boolean | Delivery status |
| deliveredAt | datetime | Delivery timestamp |
| shippingAddressId | varchar(255) | Foreign Key → ShippingAddress |

**6. OrderItems Table**

Holds product details within a specific order.

| **Column** | **Data Type** | **Description** |
| --- | --- | --- |
| itemId | varchar(255) | Primary Key |
| orderId | varchar(255) | Foreign Key → Orders |
| productId | varchar(255) | Foreign Key → Products |
| name | varchar(255) | Product name |
| qty | int | Quantity ordered |
| image | varchar(255) | Image URL |
| price | float | Price per unit |

**7. ShippingAddress Table**

Stores shipping details for orders.

| **Column** | **Data Type** | **Description** |
| --- | --- | --- |
| shippingId | varchar(255) | Primary Key |
| address | varchar(255) | Street address |
| city | varchar(255) | City |
| postalCode | varchar(255) | Postal/ZIP code |
| country | varchar(255) | Country |

**🔗 Relationships (Foreign Keys)**

* products.categoryId → categories.categoryId
* reviews.productId → products.productId
* reviews.userId → users.userId
* orders.userId → users.userId
* orders.shippingAddressId → shippingAddress.shippingId
* orderItems.orderId → orders.orderId
* orderItems.productId → products.productId