Database Structure

1. Users Table
   - `UserID` (Primary Key, INT, Auto Increment)
   - `Username` (VARCHAR)
   - `Password` (VARCHAR)
   - `Email` (VARCHAR)
   - `Role` (ENUM: 'Customer', 'Admin')
   - `CreatedAt` (DATETIME)
   - `UpdatedAt` (DATETIME)

2. ProductCategories Table
   - `CategoryID` (Primary Key, INT, Auto Increment)
   - `CategoryName` (VARCHAR)
   - `Description` (TEXT, optional)
   - `CreatedAt` (DATETIME)
   - `UpdatedAt` (DATETIME)

3. Products Table
   - `ProductID` (Primary Key, INT, Auto Increment)
   - `ProductName` (VARCHAR)
   - `Description` (TEXT)
   - `Price` (DECIMAL)
   - `StockQuantity` (INT)
   - `CategoryID` (Foreign Key to ProductCategories.CategoryID)
   - `ImageURL` (VARCHAR)
   - `CreatedAt` (DATETIME)
   - `UpdatedAt` (DATETIME)

4. Addresses Table
   - `AddressID` (Primary Key, INT, Auto Increment)
   - `UserID` (Foreign Key to Users.UserID)
   - `AddressLine1` (VARCHAR)
   - `AddressLine2` (VARCHAR, optional)
   - `City` (VARCHAR)
   - `State` (VARCHAR)
   - `PostalCode` (VARCHAR)
   - `Country` (VARCHAR)
   - `AddressType` (ENUM: 'Billing', 'Shipping')
   - `CreatedAt` (DATETIME)
   - `UpdatedAt` (DATETIME)

5. Cart Table
   - `CartID` (Primary Key, INT, Auto Increment)

- `UserID` (Foreign Key to Users.UserID)
- `CreatedAt` (DATETIME)
- `UpdatedAt` (DATETIME)

6. CartItems Table
  - `CartItemID` (Primary Key, INT, Auto Increment)
  - `CartID` (Foreign Key to Cart.CartID)
  - `ProductID` (Foreign Key to Products.ProductID)
  - `Quantity` (INT)

7. Orders Table
  - `OrderID` (Primary Key, INT, Auto Increment)
  - `UserID` (Foreign Key to Users.UserID)
  - `ShippingAddressID` (Foreign Key to Addresses.AddressID)
  - `OrderDate` (DATETIME)
  - `TotalAmount` (DECIMAL)
  - `Status` (ENUM: 'Pending', 'Shipped', 'Delivered', 'Cancelled')
  - `CreatedAt` (DATETIME)
  - `UpdatedAt` (DATETIME)

8. OrderItems Table
  - `OrderItemID` (Primary Key, INT, Auto Increment)
  - `OrderID` (Foreign Key to Orders.OrderID)
  - `ProductID` (Foreign Key to Products.ProductID)
  - `Quantity` (INT)
  - `Price` (DECIMAL)

9. Payments Table
  - `PaymentID` (Primary Key, INT, Auto Increment)
  - `OrderID` (Foreign Key to Orders.OrderID)
  - `PaymentDate` (DATETIME)
  - `Amount` (DECIMAL)
  - `PaymentMethod` (ENUM: 'Credit Card', 'Debit Card', 'PayPal', 'Cash on Delivery')
  - `Status` (ENUM: 'Pending', 'Completed', 'Failed')
  - `CreatedAt` (DATETIME)
  - `UpdatedAt` (DATETIME)

 Explanation of Updates

- Addresses Table: This new table stores multiple addresses for each user. The fields include:
  - `AddressID`: Unique identifier for the address.
  - `UserID`: A foreign key is used to link the address to a user.
  - `AddressLine1`, `AddressLine2`: Lines for the address.
  - `City`, `State`, `PostalCode`, `Country`: Standard address fields.

- `AddressType`: Indicates if the address is for billing or shipping.
- `CreatedAt` and `UpdatedAt`: Timestamps for tracking.

- Orders Table: A new field `ShippingAddressID` is added to reference the address where the order will be shipped.

 Relationships

- Each user can have multiple addresses.
- Orders will reference a specific shipping address through `ShippingAddressID`.

This model allows for flexibility in handling multiple addresses per user and facilitates the management of shipping details for orders. If you need any further modifications or details, let me know!