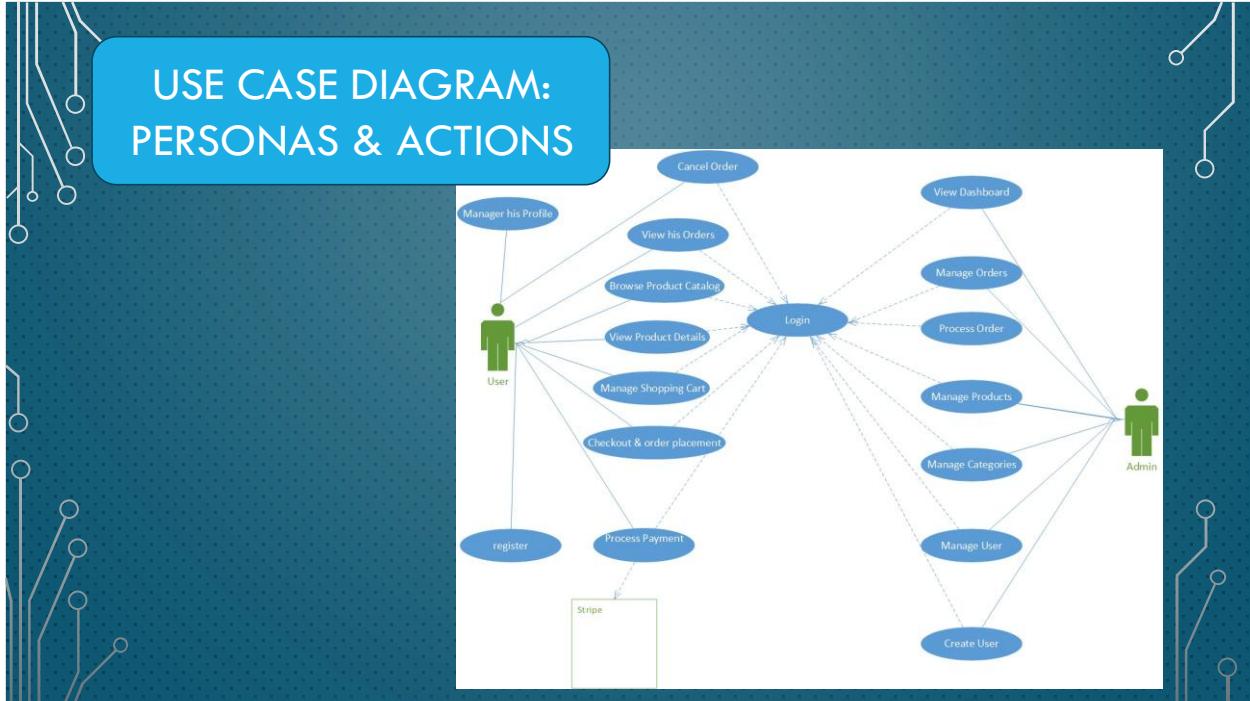


EZ2BUY E-Commerce Web App (ASP.NET Core MVC)

Visit our website: [Ez2Buy](<https://ez2buy.azurewebsites.net>)

1 Requirements analysis:

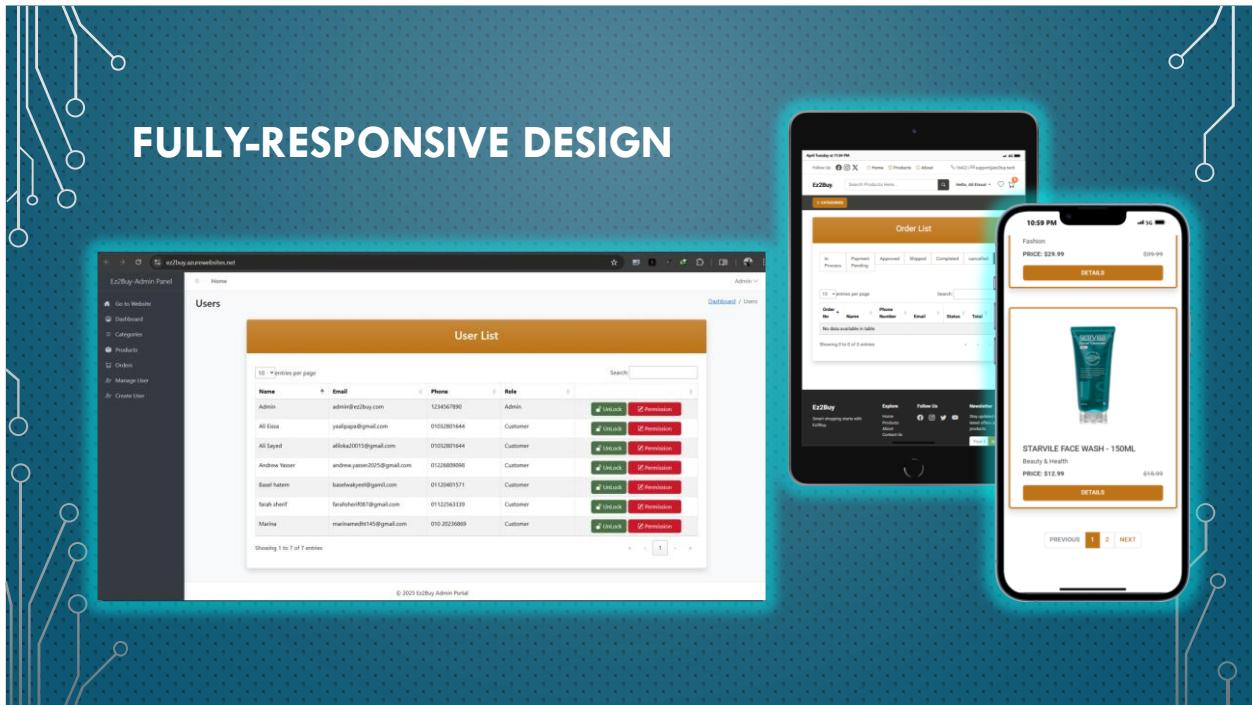


1.1 Non- Functional Requirements:

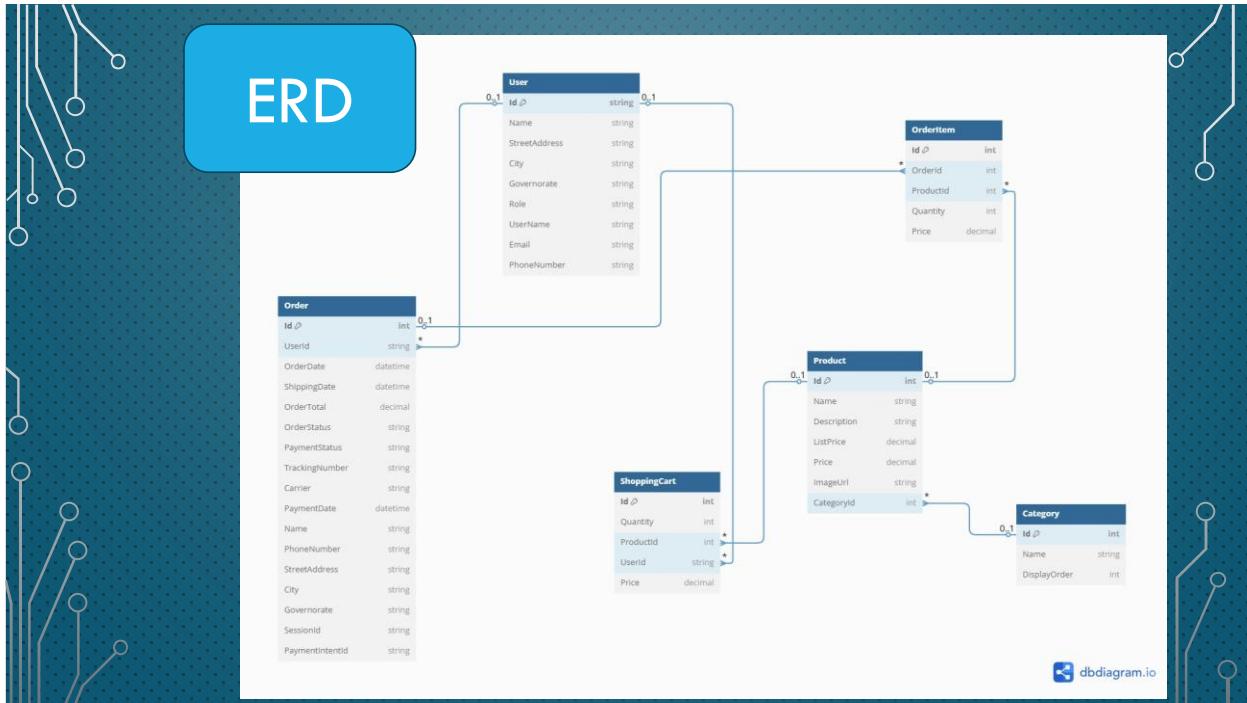
- Administration features
 - User Management: Assign roles and manage user accounts.
 - Order Management: View and update order statuses.
 - Product & Category Management
- User Management:
 - Product Catalog search and filter
 - Order Placement & Shopping Cart
 - Payment gateway integration
 - Email notification for confirmation

1.2 Functional Requirements:

- Usability: Responsive design for device types
- Security: role-based Access
- Reliability & Availability: Comprehensive error handling
- Maintainability: Clean code with Comprehensive documentation and Unit tests coverage

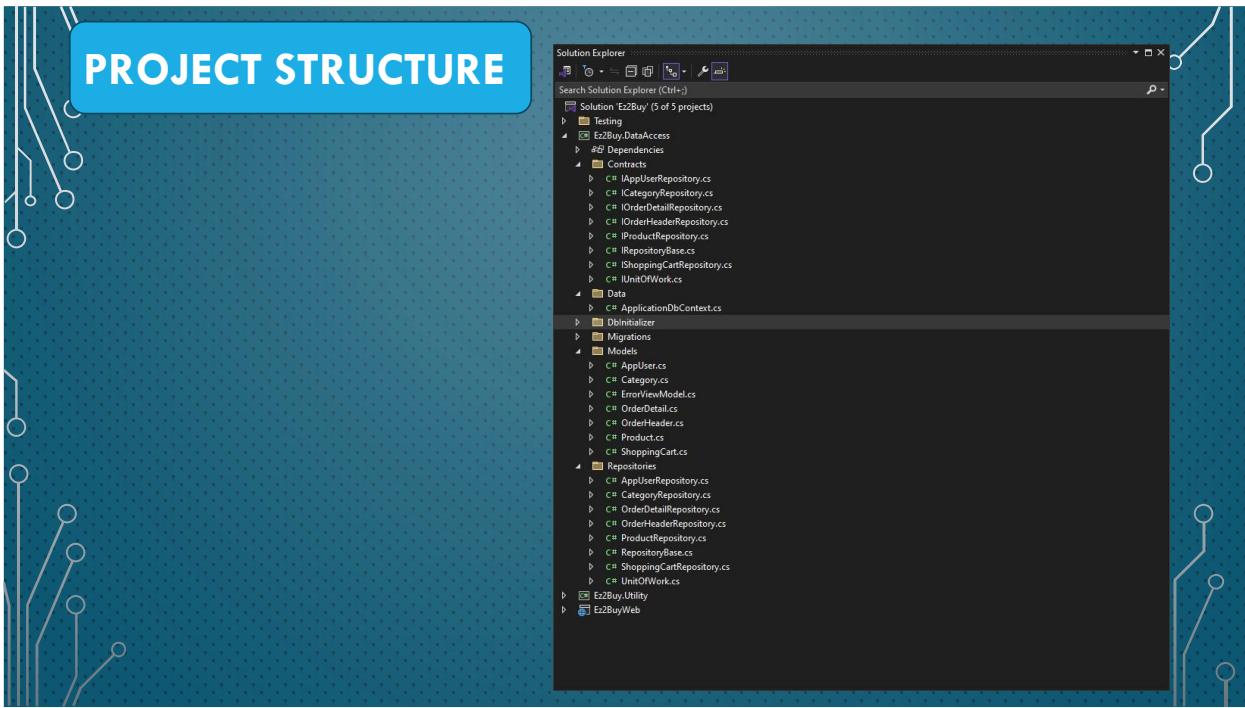
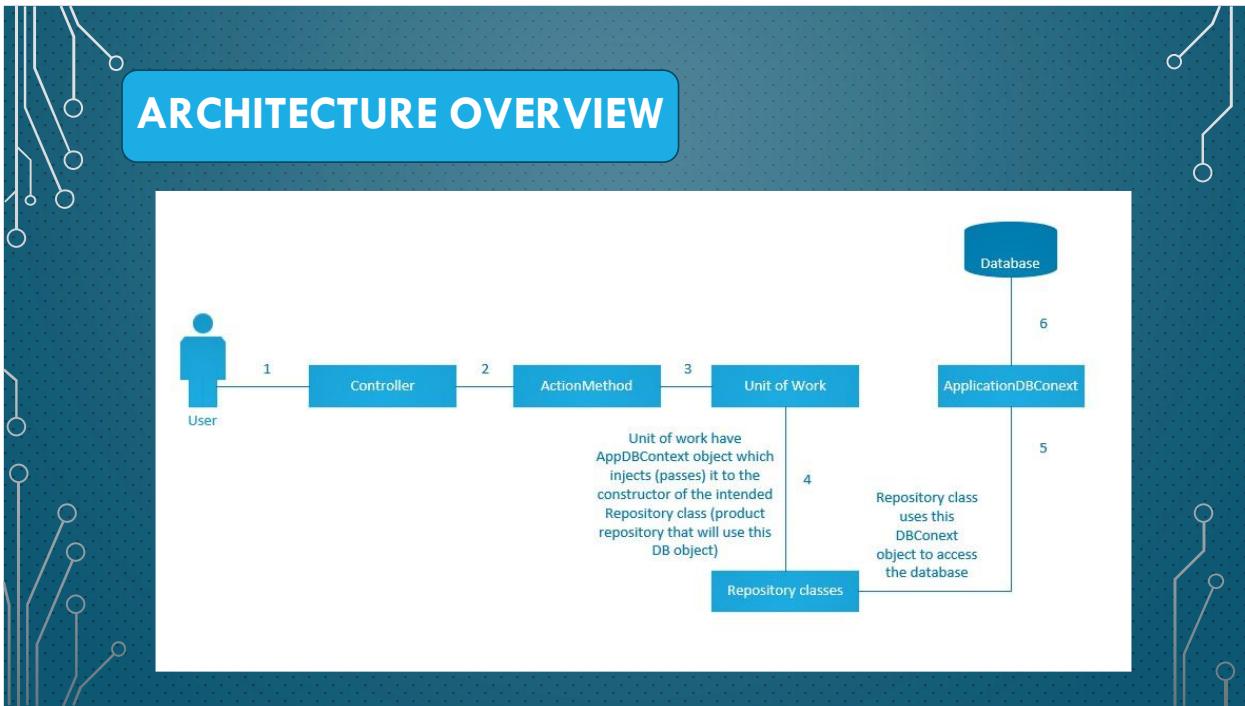


ERD:



Architectural Decisions:

- layered architecture:
 - Presentation Layer: MVC Controllers and Views
 - Data Access Layer: UnitOfWork and Repository implementations
 - Data Layer: Entity Framework Core with SQL Server
- Repository Pattern for data access abstraction
- Unit of Work Pattern for transaction management
- MVC Pattern for separation of concerns
- ViewModel Pattern for UI data shaping
- Using Session data to save data for shopping cart



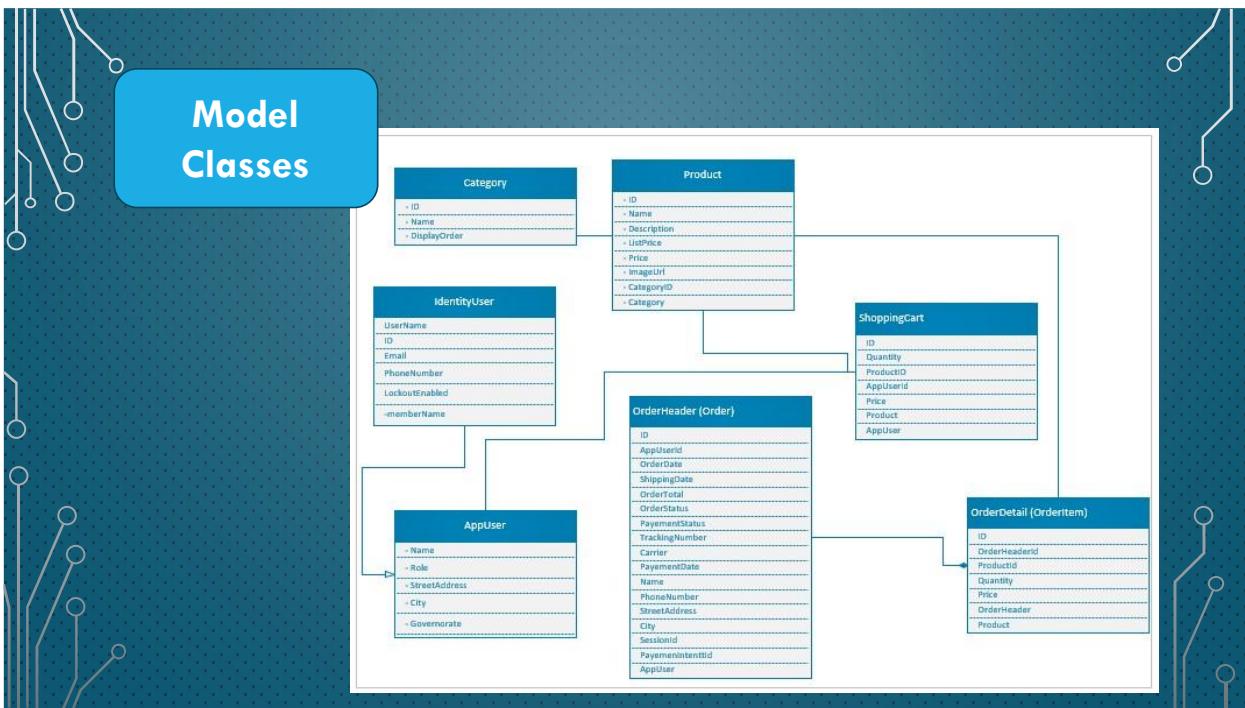
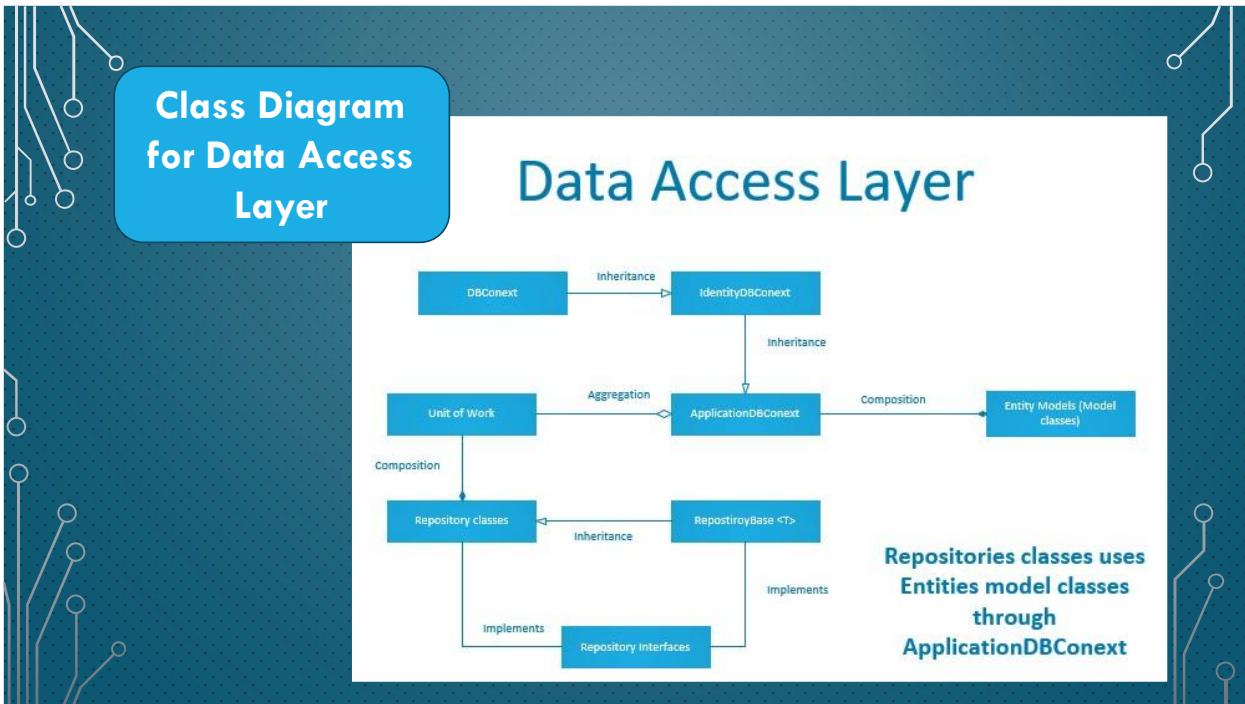
Technology Stack Selection:

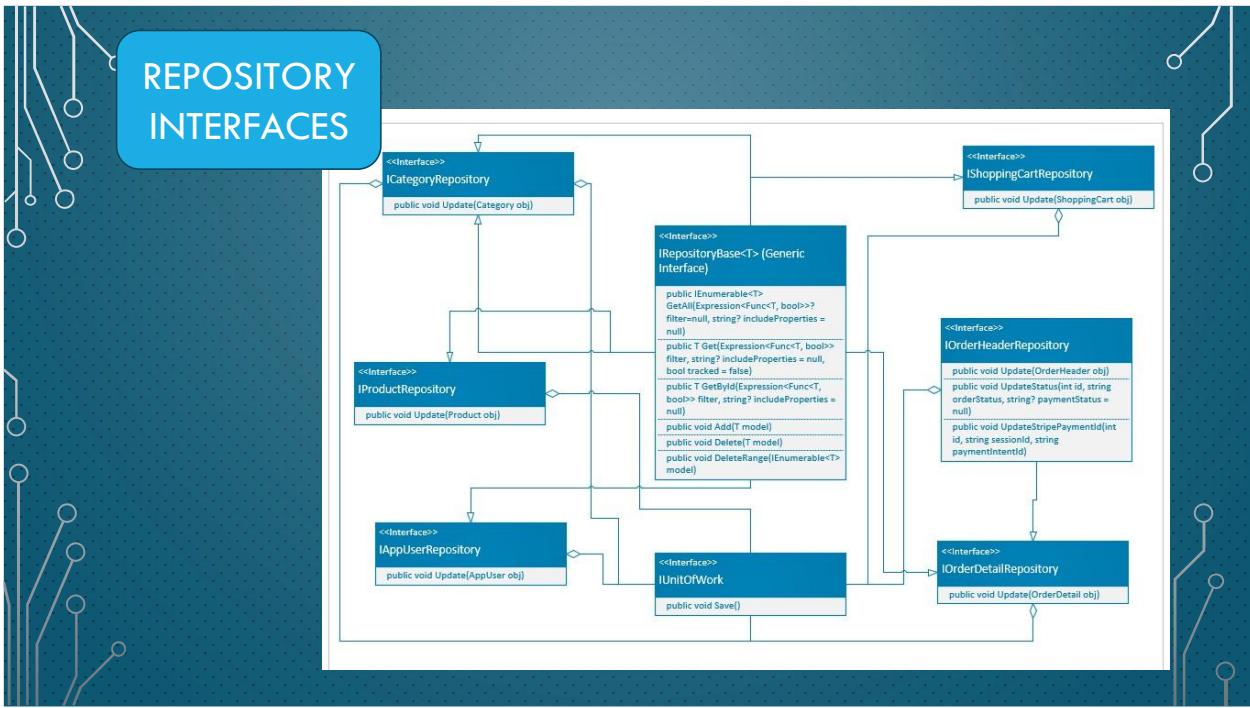
- ASP.NET 8.0 Core MVC web framework
- Entity Framework Core
- ASP.NET Core Identity

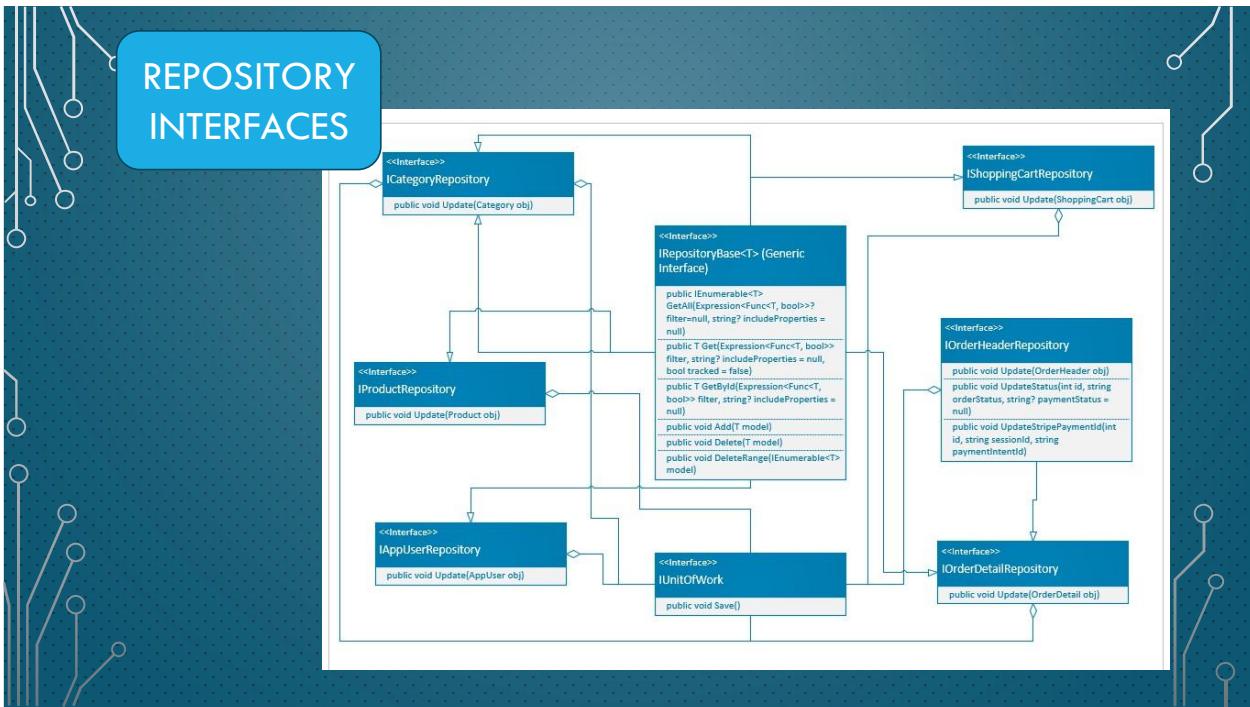
	jQuery	Bootstrap	DataTables	Toastr.js
	<ul style="list-style-type: none"> • JavaScript library for DOM manipulation, AJAX, and event handling 	<ul style="list-style-type: none"> • Frontend framework for responsive design and UI components 	<ul style="list-style-type: none"> • plugin for advanced HTML table interactions. 	<ul style="list-style-type: none"> • Notification library for elegant toast messages.
	SweetAlert	TinyMCE	SendGrid	Stripe
	<ul style="list-style-type: none"> • Stylish alert dialog replacement (popup). 	<ul style="list-style-type: none"> • rich text editor for user content input. 	<ul style="list-style-type: none"> • Email API for sending transactional and marketing emails. 	<ul style="list-style-type: none"> • Secure online payment gateway for handling transactions and subscriptions.

Middleware:

1. app.UseHttpsRedirection()
2. app.UseRouting()
3. app.UseAuthentication()
4. app.UseAuthorization()
5. app.UseSession()







Next steps: Advanced User Experience

- completing API versions
- AI-powered product recommendations based on browsing and purchase history
- Live chat support or chatbot for instant customer help
- Voice search integration for accessibility and convenience
- adding Wishlist's and Products Reviews
- Enhanced Security & Trust: Fraud detection mechanisms
- Supplier/vendor registration and approval workflow
- Supplier dashboard with analytics, product status, and earnings