



# Project Scope of Work

Product Name: Code Silver

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## Scope of Work (SOW) for CodeSilver eCommerce development

The objective of this project is to redevelop the existing Shopify-based website (<https://www.codesilver.in/>) using the **MERN stack** (MongoDB, Express.js, React.js, Node.js) with **Next.js** for improved performance, flexibility, and SEO capabilities. The website will maintain the existing design with minor changes on the homepage. A comprehensive admin panel will be developed, and additional custom features will be implemented to enhance the overall user experience.

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## Tech Stack:

1. **Frontend:** React.js, Next.js (Server-Side Rendering for SEO)
  2. **Backend:** Node.js, Express.js
  3. **Database:** MongoDB (NoSQL database for scalability)
  4. **Hosting:** Vercel (Frontend), AWS/DigitalOcean (Backend)
  5. **State Management:** Redux or Context API
  6. **API Integration:** RESTful API
  7. **Security:** JWT for authentication, HTTPS for secure communication
  8. **Payment Gateway:** Stripe, Razorpay, PayPal
  9. **Analytics Integration:** Google Analytics, Custom Dashboard Analytics
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## Project Deliverables:

### 1. Frontend Development:

#### Design and UI/UX:

- **Design Replication:** Maintain the current Shopify website's design, with minor updates on the homepage.

- **Responsive Design:** Ensure the website is responsive across all devices (mobile, tablet, desktop).
- **Enhanced Features:**
  - Implement server-side rendering (SSR) using Next.js for better SEO.
  - Set up dynamic routing for product pages, categories, and collections.
  - Include product filters (size, color, price range) for a refined user experience.
  - Add wishlist and persistent cart features.

#### **Additional Features:**

1. **Weight-Wise Shipping:** Implement shipping rates based on product weight.
2. **Preview of Customised Items:** Allow users to preview customised products before adding them to the cart.
3. **Selection of Gift Boxes:** Provide an option to choose different gift box types on the product page.
4. **Gift Wrapping Options:** Offer gift wrapping choices with various wrapping paper selections.
5. **Customised Boxes:** Allow customers to customise boxes with logos, personalised notes, and colour preferences.
6. **Dynamic Product Size and Weight Display:** Display the product size and actual weight in the description on the product page.
7. **Photo Upload for Custom Frames:** Enable customers to upload photos for personalised photo frames.
8. **Name Frames Pricing:** Automatically adjust the price based on the number of letters in the customised name frame.
9. **Luggage Tag Customization:** Provide options for strap and color selection for luggage tags.
10. **Alphabet Keyring Sections:** Add sections for each alphabet in the keyring selection process.
11. **Create Your Own Hamper:** Feature for customers to build their own gift hamper by selecting products.
12. **Multiple Shipping Locations:** Allow customers to ship items to multiple locations in a single order.

## 2. Backend Development:

### API Development:

- **Node.js and Express.js:** Develop a scalable backend using Express.js.
- **MongoDB Integration:** Store product, order, customer, and customization data.
- **User Authentication:** Implement JWT-based authentication for secure user sessions.

### Data Models:

- **Product Model:** Includes title, description, price, stock, images, weight, size, variants, and customization options.
- **Order Model:** Includes order ID, user ID, product details, customization preferences, shipping details, and payment status.
- **Customer Model:** Includes user ID, personal information, order history, and wishlist.
- **Customization Model:** Stores data related to product customizations (e.g., logo, notes, color selection).
- **Admin Model:** Tracks admin roles, permissions, and activity logs.

### Key Backend Features:

- **Role-Based Access Control (RBAC):** Define roles for admin, customers, and guests with varying access levels.
- **Data Migration:** Import existing product and customer data from Shopify to MongoDB.
- **Factory Order Form:** Create an order form for factory-level bulk orders.
- **Material Exit Pass:** Develop a digital exit pass for tracking material usage.
- **Showroom Order Form:** Build a form for direct showroom orders.

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## 3. Admin Panel Development:

### Admin Dashboard Features:

1. **Dashboard:**
  - Overview of total sales, orders, website traffic, and top products.

- Notifications for low stock, pending orders, and customer inquiries.
  - 2. **Orders Management:**
    - View and filter orders by status (pending, shipped, delivered, canceled).
    - Detailed order view with customization details, customer information, and shipping status.
    - Options to update order status, issue refunds, and print invoices.
  - 3. **Product Management:**
    - Add, edit, delete products with customization options.
    - Bulk import/export of product data via CSV.
    - Real-time inventory tracking and automatic updates.
  - 4. **Customer Management:**
    - View customer profiles, order history, and customization preferences.
    - Segment customers based on purchase behavior for targeted marketing.
  - 5. **Discounts and Promotions:**
    - Create discount codes, manage sales, and offer special promotions.
    - Set discount rules based on product categories, order value, or customer type.
  - 6. **Analytics:**
    - Custom analytics dashboard with insights on sales performance, customer demographics, and product popularity.
    - Integration with Google Analytics for traffic insights.
  - 7. **Settings:**
    - Manage store settings, payment gateways, and shipping methods.
    - Configure customization options (gift wrapping, personalized notes).
    - Admin user roles and permissions management.
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## 4. Testing and Quality Assurance:

### Testing Phases:

- **Unit Testing:** Test individual components and API endpoints for functionality.
- **Integration Testing:** Ensure smooth integration between frontend and backend services.

- **User Acceptance Testing (UAT):** Conduct client testing to verify the system meets requirements.
  - **Performance Testing:** Optimize site speed and API response times.
  - **Security Testing:** Perform security checks for vulnerabilities (e.g., XSS, SQL injection).
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## 5. Deployment Strategy:

- **Frontend Deployment:** Host the React and Next.js frontend on Vercel.
  - **Backend Deployment:** Deploy the Node.js backend on AWS or DigitalOcean.
  - **Database:** Use MongoDB Atlas for a scalable and managed database solution.
  - **CI/CD Pipeline:** Implement automated testing and deployment using a CI/CD pipeline.
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## 6. Post-Launch Support:

- **Support Period:** Provide 2 months of support for bug fixes, updates, and performance monitoring.
  - **Maintenance:** Regular updates for security patches and performance enhancements.
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## Project Timeline:

Phase	Duration	Tasks
Project Setup & Planning	-	Tech setup, data model design, project roadmap
Backend Development	3 weeks	API development, MongoDB integration, customization handling
Frontend	3 weeks	UI replication, Next.js integration, responsiveness

Development		
Admin Panel Development	2 weeks	Dashboard, product management, order management
Custom Features	1 week	Implement additional features (weight-wise shipping, customization)
Testing & QA		Unit, integration, UAT, and performance testing
Deployment		Frontend, backend deployment, DNS configuration
Post-Launch Support	2 months	Bug fixes, minor updates, monitoring

**Total Duration:** 2 months (8 weeks)