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NETHWINLK - TEAM MODULES DOCUMENTATION

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Project: E-commerce & Print Services Platform
Date: 23rd September 2025
Status: 75% Complete (Members 2-5), 100% Complete (Member 1)

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TEAM MEMBER ROLES & RESPONSIBILITIES

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MEMBER 1 - USER HANDLING MODULE (100% COMPLETE)

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Developer: P.L. Rathnayaka
Functionality: User Registration, Authentication, Profile Management

DATABASE MODELS:
- username: String
- email: String
- password: String (hashed)
- fullName: String
- phoneNumber: String
- address: String
- province: String
- district: String
- city: String
- zipCode: String
- role: String (customer/admin)
- customerType: String (online/instore)
- status: String (active/inactive)
- createdAt: Date
- updatedAt: Date

BACKEND API ROUTES:

POST /api/auth/register

POST /api/auth/login

GET /api/me

PUT /api/me

GET /api/users

POST /api/users

PUT /api/users/:id

DELETE /api/users/:id

FRONTEND COMPONENTS:

- Signup Page (signup.html) - Complete registration form with validation
- Login Page (login.html) - User authentication
- Profile Page (profile.html) - User profile management with modern UI
- Admin Users (admin-users.html) - User management for admins

KEY FEATURES IMPLEMENTED:

- User Registration with validation
- User Authentication (JWT tokens)
- Profile Management with phone validation
- Admin User Management (CRUD operations)
- Sri Lankan phone number validation
- Role-based access control
- Password security (bcrypt hashing)
- Mobile-responsive design

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MEMBER 2 - BOOK LISTING & SEARCH MODULE (75% COMPLETE)

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Developer: T.D. Hewage
Functionality: Product Catalog, Search & Filtering, Book Management

DATABASE MODELS:
- name: String
- description: String
- price: Number
- category: String
- author: String
- isbn: String
- stock: Number
- imageUrl: String
- status: String (active/inactive)
- createdAt: Date
- updatedAt: Date

BACKEND API ROUTES:
GET /api/products
POST /api/products
PUT /api/products/:id
DELETE /api/products/:id
GET /api/products/search
GET /api/products/category/:category

FRONTEND COMPONENTS:
- Bookshop Page (bookshop.html) - Product catalog display
- Search Page (search.html) - Product search functionality
- Admin Products (admin-products.html) - Product management

COMPLETED FEATURES:
- Product catalog display
- Basic search functionality
- Product CRUD operations
- Image upload system

- Category management
- Stock management

REMAINING 25% - TO IMPLEMENT:
- Advanced search filters (price range, author, category)
- Product pagination (load more/next page)
- Product reviews system
- Wishlist/favorites functionality
- Product comparison feature
- Advanced product image galleries
- Product recommendations

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MEMBER 3 - CART & CHECKOUT MODULE (75% COMPLETE)
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Developer: K.W.T. Geethanjaya
Functionality: Shopping Cart, Order Processing, Payment Integration

DATABASE MODELS:
- userId: ObjectId
- items: [productId, quantity, price]
- totalAmount: Number
- status: String (pending/processing/completed/cancelled)
- shippingAddress: Object
- paymentMethod: String
- createdAt: Date
- updatedAt: Date

BACKEND API ROUTES:
GET /api/cart
POST /api/cart/add
PUT /api/cart/update
DELETE /api/cart/remove
POST /api/orders
GET /api/my-orders
PUT /api/orders/:id/status

FRONTEND COMPONENTS:
- Cart Page (cart.html) - Shopping cart management
- Checkout Page (checkout.html) - Order processing
- Cart Utils (cart-utils.js) - Cart functionality

COMPLETED FEATURES:
- Add/remove items from cart
- Cart quantity management
- Order creation and history
- Order status tracking
- Cart persistence (localStorage)

REMAINING 25% - TO IMPLEMENT:
- Payment integration (Stripe/PayPal)
- Real-time order status updates
- Shipping cost calculator
- Coupon/discount system
- Guest checkout option
- Order modification before processing
- Inventory management during checkout

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MEMBER 4 - PRINT ON DEMAND MODULE (75% COMPLETE)

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Developer: P.P.S.N.T. Perera
Functionality: Custom Printing Services, Print Job Management, File Upload

DATABASE MODELS:
- userId: ObjectId
- fileName: String
- filePath: String
- specifications: {paperSize, paperType, colorMode, quantity, binding}
- totalPrice: Number
- status: String (pending/processing/completed/cancelled)
- createdAt: Date
- updatedAt: Date

BACKEND API ROUTES:
POST /api/print-orders
GET /api/print-orders
GET /api/users/:userId/print-orders
PUT /api/print-orders/:id/status
DELETE /api/print-orders/:id
POST /api/print-orders/upload

FRONTEND COMPONENTS:
- Print Page (print.html) - Print service interface
- Admin Print Orders (admin-print-orders.html) - Print job management

COMPLETED FEATURES:
- File upload system
- Print specifications form
- Print order creation
- Order status tracking
- Admin print job management

REMAINING 25% - TO IMPLEMENT:
- File preview system

- Dynamic pricing calculator
- Print job queue management
- Multiple file format support
- Print quality options
- Bulk print orders
- Real-time progress tracking

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MEMBER 5 - ADMIN DASHBOARD MODULE (75% COMPLETE)

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Developer: S.G.N. Oneka
Functionality: Administrative Interface, Analytics, System Management

DATABASE MODELS:
- userCount: Number
- productCount: Number
- orderCount: Number
- revenue: Number
- systemLogs: Array
- settings: Object

BACKEND API ROUTES:
GET /api/admin/dashboard
GET /api/admin/analytics
GET /api/admin/logs
PUT /api/admin/settings
GET /api/admin/reports
POST /api/admin/backup

FRONTEND COMPONENTS:
- Admin Dashboard (admin-dashboard.html) - Main admin interface
- Admin Settings (admin-settings.html) - System configuration
- Admin Messages (admin-messages.html) - Contact message management

COMPLETED FEATURES:
- User management interface
- Basic system statistics
- Settings configuration
- Message management
- Hero image management

REMAINING 25% - TO IMPLEMENT:
- Analytics dashboard with charts
- Advanced system settings

- Email notification system
- Database backup/restore
- System logs viewer
- Bulk operations interface
- Report generation (PDF/Excel)
- Advanced user activity tracking

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PRIORITY ORDER FOR COMPLETION
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Phase 1 - Critical Features (Week 1-2):
1. Member 3 - Payment integration (Stripe/PayPal)
2. Member 5 - Analytics dashboard
3. Member 2 - Advanced search filters

Phase 2 - Enhanced Features (Week 3-4):
4. Member 4 - Print job queue management
5. Member 2 - Product reviews system
6. Member 3 - Order tracking improvements

Phase 3 - Advanced Features (Week 5-6):
7. Member 5 - Report generation
8. Member 4 - File preview system
9. Member 2 - Wishlist functionality

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CURRENT PROJECT STATUS
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Module	Completion	Status	Priority
User Handling	100%	Complete	-
Book Listing & Search	75%	In Progress	High
Cart & Checkout	75%	In Progress	Critical
Print On Demand	75%	In Progress	Medium
Admin Dashboard	75%	In Progress	High

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TECHNICAL STACK
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Backend:
- Node.js + Express.js
- MongoDB + Mongoose
- JWT Authentication
- Multer (file uploads)
- Cloudinary (image storage)
- bcrypt (password hashing)

Frontend:
- HTML5 + CSS3
- JavaScript (Vanilla)
- Tailwind CSS
- Responsive Design
- Local Storage

Key Features:
- RESTful API Architecture
- JWT-based Authentication
- File Upload System
- Real-time Updates
- Mobile Responsive Design
- Sri Lankan Phone Validation

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DEVELOPMENT NOTES
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Completed Recently:
- User profile form redesigned with modern UI
- Phone number validation for Sri Lankan numbers
- Admin user creation with role-based fields
- MongoDB Atlas connection established
- Hero image upload system with local fallback

Next Steps:
1. Implement payment integration for checkout
2. Add analytics dashboard with charts
3. Enhance search functionality with filters
4. Improve print job management system
5. Add comprehensive admin reporting

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CONTACT & SUPPORT
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For questions about specific modules or technical implementation, refer to the respective team member or check the codebase documentation in each module's folder.

Last Updated: September 2025
Document Version: 1.0