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# 1 Software Requirements Specification (SRS)

## 1.1 ElecTrotrack - Electronics Store Management System

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## 1.3 Revision History

| Version | Date | Description | Author |
| --- | --- | --- | --- |
| 1.0 | 2025-08-28 | Initial SRS Document | ElecTrotrack Development Team |

## 1.4 1. Introduction

### 1.4.1 1.1 Purpose

This Software Requirements Specification (SRS) document describes the functional and non-functional requirements for the ElecTrotrack system, an integrated electronics store management platform. The document is intended to serve as a comprehensive guide for developers, testers, project managers, and stakeholders involved in the development and deployment of the ElecTrotrack system.

The ElecTrotrack system is designed to streamline operations for Radhika Electronics, providing comprehensive solutions for sales management, expense tracking, inventory management, and business analytics.

### 1.4.2 1.2 Document Conventions

* **Functional Requirements**: Denoted as FR-XXX
* **Non-functional Requirements**: Denoted as NFR-XXX
* **Use Cases**: Denoted as UC-XXX
* **Business Rules**: Denoted as BR-XXX
* **Priority Levels**: High, Medium, Low
* **MoSCoW Method**: Must have, Should have, Could have, Won’t have

### 1.4.3 1.3 Intended Audience and Reading Suggestions

This document is intended for:

1. **Development Team**: Complete document for implementation guidance
2. **Project Managers**: Focus on sections 1, 2, and 5 for project planning
3. **Business Stakeholders**: Sections 1, 2, and 4 for feature understanding
4. **Quality Assurance Team**: Sections 3, 4, and 5 for testing requirements
5. **System Administrators**: Sections 2.4, 3.3, and 5.3 for deployment planning

### 1.4.4 1.4 Product Scope

ElecTrotrack is a comprehensive web-based electronics store management system that encompasses:

**Primary Objectives:** - Digitize and streamline store operations - Provide real-time business insights and analytics - Enhance customer experience through online presence - Optimize inventory and financial management

**Key Benefits:** - Reduced manual paperwork and human errors - Improved decision-making through data analytics - Enhanced customer satisfaction - Increased operational efficiency - Better financial tracking and reporting

**System Boundaries:** - **Included**: Web application, admin dashboard, customer portal, payment processing, inventory management, analytics - **Excluded**: Physical hardware integration, third-party ERP systems, mobile applications (Phase 1)

### 1.4.5 1.5 References

1. IEEE Std 830-1998 - IEEE Recommended Practice for Software Requirements Specifications
2. Next.js 15.2.4 Documentation - https://nextjs.org/docs
3. React 18 Documentation - https://react.dev/
4. MongoDB Documentation - https://docs.mongodb.com/
5. Razorpay Payment Gateway API - https://razorpay.com/docs/
6. Tailwind CSS Documentation - https://tailwindcss.com/docs

## 1.5 2. Overall Description

### 1.5.1 2.1 Product Perspective

ElecTrotrack is a new, self-contained web application designed specifically for electronics retail businesses. The system operates as a standalone solution while maintaining integration capabilities with external services.

**System Context:** - **Frontend**: React-based Next.js application - **Backend**: API routes with server-side rendering - **Database**: MongoDB for data persistence - **Payment Integration**: Razorpay payment gateway - **Hosting**: Cloud-based deployment - **External Services**: Google Maps API, Email services

**System Interfaces:** - Web browsers (Chrome, Firefox, Safari, Edge) - Mobile browsers for responsive access - Payment gateway APIs - Google Maps API for location services

### 1.5.2 2.2 Product Functions

The ElecTrotrack system provides the following major functions:

1. **Customer Management**
   * User registration and authentication
   * Profile management
   * Order history tracking
   * Shopping cart functionality
2. **Product Management**
   * Product catalog management
   * Inventory tracking
   * Product search and filtering
   * Category management
3. **Order Processing**
   * Order placement and management
   * Payment processing
   * Order status tracking
   * Invoice generation
4. **Administrative Functions**
   * Sales analytics and reporting
   * Expense management
   * User management
   * System configuration
5. **Financial Management**
   * Revenue tracking
   * Expense categorization
   * Profit/loss analysis
   * Financial reporting

### 1.5.3 2.3 User Classes and Characteristics

**1. Super Admin** - **Characteristics**: Technical expertise, full system access - **Responsibilities**: System configuration, user management, security oversight - **Usage Pattern**: Daily administrative tasks, system monitoring

**2. Store Admin** - **Characteristics**: Business knowledge, moderate technical skills - **Responsibilities**: Daily operations, sales management, inventory oversight - **Usage Pattern**: Daily operational management, report generation

**3. Staff Users** - **Characteristics**: Basic computer skills, domain knowledge - **Responsibilities**: Order processing, customer service, basic reporting - **Usage Pattern**: Frequent operational tasks during business hours

**4. Customers** - **Characteristics**: Varied technical skills, occasional users - **Responsibilities**: Product browsing, order placement, account management - **Usage Pattern**: Occasional visits, purchase-driven interaction

### 1.5.4 2.4 Operating Environment

**Client-Side Requirements:** - **Operating Systems**: Windows 10+, macOS 10.15+, Linux (Ubuntu 18.04+) - **Web Browsers**: Chrome 90+, Firefox 88+, Safari 14+, Edge 90+ - **Screen Resolution**: Minimum 1024x768, Optimized for 1920x1080 - **Network**: Broadband internet connection (minimum 1 Mbps)

**Server-Side Requirements:** - **Operating System**: Linux Ubuntu 20.04 LTS or equivalent - **Runtime Environment**: Node.js 18+ with npm/pnpm - **Database**: MongoDB 5.0+ - **Web Server**: Next.js built-in server or Nginx reverse proxy - **SSL/TLS**: Certificate for HTTPS encryption

**Cloud Infrastructure:** - **Hosting**: Vercel, AWS, or equivalent cloud platform - **CDN**: Content Delivery Network for static assets - **Backup**: Automated daily database backups - **Monitoring**: Application performance monitoring tools

### 1.5.5 2.5 Design and Implementation Constraints

**Technical Constraints:** - Must be developed using Next.js 15+ and React 18+ - Database must be MongoDB for document flexibility - Must support responsive design for mobile devices - Payment processing must use Razorpay gateway - Must comply with web accessibility standards (WCAG 2.1)

**Business Constraints:** - Development timeline: 6 months for Phase 1 - Budget limitations for third-party services - Must support English language initially - Compliance with Indian taxation requirements

**Regulatory Constraints:** - Data protection compliance (GDPR-like requirements) - Payment security standards (PCI DSS) - Local business registration requirements - Tax calculation accuracy requirements

### 1.5.6 2.6 User Documentation

**For End Users:** - User manual with screenshots and step-by-step instructions - Video tutorials for common tasks - FAQ section with troubleshooting guide - Online help system with contextual assistance

**For Administrators:** - System administration guide - API documentation for integrations - Database schema documentation - Deployment and configuration guide

**Training Materials:** - Role-based training modules - Interactive tutorials - Best practices guide - Regular webinar sessions

### 1.5.7 2.7 Assumptions and Dependencies

**Assumptions:** - Users have basic computer literacy and internet access - Stable internet connectivity during system usage - Modern web browsers with JavaScript enabled - Business operates during standard hours (9 AM - 9 PM) - Initial deployment for single-location business

**Dependencies:** - MongoDB database service availability - Razorpay payment gateway service - Google Maps API service - Email service provider (SMTP) - SSL certificate provider - Cloud hosting service uptime - Third-party CDN service availability

## 1.6 3. External Interface Requirements

### 1.6.1 3.1 User Interfaces

#### 1.6.1.1 3.1.1 General UI Requirements

**Design Principles:** - Modern, clean, and intuitive interface - Responsive design supporting desktop, tablet, and mobile - Consistent color scheme and branding - Accessibility compliance (WCAG 2.1 AA) - Loading indicators for all asynchronous operations

**Color Scheme:** - Primary: Blue (#2563eb) - Secondary: Gray (#6b7280) - Success: Green (#10b981) - Warning: Yellow (#f59e0b) - Error: Red (#ef4444)

#### 1.6.1.2 3.1.2 Customer-Facing Interfaces

**Landing Page:** - Hero section with store branding - Featured products showcase - Navigation menu with categories - Search functionality - Contact information and location

**Product Catalog:** - Grid/list view toggle - Product filtering and sorting - Product detail pages with images - Price display and availability status - Add to cart functionality

**Shopping Cart and Checkout:** - Cart summary with item details - Quantity modification controls - Shipping information form - Payment method selection - Order confirmation page

**User Account:** - Login/registration forms - Profile management interface - Order history with status tracking - Account settings and preferences

#### 1.6.1.3 3.1.3 Administrative Interfaces

**Admin Dashboard:** - Key performance indicators (KPIs) - Quick action buttons - Recent activity summary - System status indicators - Navigation sidebar

**Sales Management:** - Order list with search and filters - Order detail views - Status update controls - Customer information display - Invoice generation interface

**Analytics and Reports:** - Interactive charts and graphs - Date range selectors - Export functionality (PDF, Excel) - Customizable dashboard widgets - Comparative analysis views

**System Administration:** - User management interface - Role and permission settings - System configuration panels - Backup and maintenance tools

#### 1.6.1.4 3.1.4 UI Mockups and Wireframes

**Screen Resolution Support:** - Desktop: 1920x1080, 1366x768 - Tablet: 1024x768, 768x1024 - Mobile: 375x667, 414x896, 360x640

**Navigation Structure:**

Home  
├── Products  
│ ├── Categories  
│ ├── Search Results  
│ └── Product Details  
├── Cart  
├── Checkout  
├── Account  
│ ├── Profile  
│ ├── Orders  
│ └── Settings  
├── About  
└── Contact  
  
Admin  
├── Dashboard  
├── Orders  
├── Products  
├── Analytics  
├── Expenses  
├── Users  
└── Settings

### 1.6.2 3.2 Hardware Interfaces

#### 1.6.2.1 3.2.1 Client Hardware

**Minimum Requirements:** - **CPU**: Dual-core processor 2.0 GHz - **RAM**: 4 GB - **Storage**: 1 GB available space for cache - **Display**: 1024x768 resolution - **Network**: Ethernet or Wi-Fi adapter

**Recommended Requirements:** - **CPU**: Quad-core processor 2.5 GHz+ - **RAM**: 8 GB+ - **Storage**: 5 GB+ available space - **Display**: 1920x1080+ resolution - **Network**: Broadband internet connection

#### 1.6.2.2 3.2.2 Server Hardware

**Production Environment:** - **CPU**: 4+ cores, 3.0 GHz+ - **RAM**: 16 GB+ - **Storage**: 500 GB SSD - **Network**: 1 Gbps connection - **Backup**: RAID configuration or cloud backup

#### 1.6.2.3 3.2.3 Peripheral Devices

**Optional Integrations:** - Barcode scanners for inventory management - Receipt printers for invoice generation - Cash drawers for point-of-sale operations - Tablet devices for mobile admin access

### 1.6.3 3.3 Software Interfaces

#### 1.6.3.1 3.3.1 Database Interface

**MongoDB Database:** - **Version**: MongoDB 5.0+ - **Connection**: Mongoose ODM for Node.js - **Collections**: Users, Products, Orders, Transactions, Analytics - **Indexing**: Optimized queries for performance - **Replication**: Master-slave configuration for high availability

**Database Operations:** - CRUD operations for all entities - Aggregation pipelines for analytics - Transaction support for order processing - Data validation and schema enforcement

#### 1.6.3.2 3.3.2 Payment Gateway Interface

**Razorpay Integration:** - **API Version**: Latest stable version - **Operations**: Payment creation, capture, refund - **Webhooks**: Order status updates, payment confirmations - **Security**: PCI DSS compliant integration - **Testing**: Sandbox environment for development

**Payment Methods Supported:** - Credit/Debit Cards (Visa, MasterCard, RuPay) - Net Banking - UPI (Unified Payments Interface) - Digital Wallets (Paytm, PhonePe, etc.) - EMI options for high-value purchases

#### 1.6.3.3 3.3.3 Third-Party Services

**Google Maps API:** - Store location display - Direction services - Geolocation for delivery zones - Distance calculation for shipping

**Email Services:** - SMTP configuration for transactional emails - Order confirmations and notifications - Password reset functionality - Marketing email capabilities (optional)

**Analytics Services:** - Google Analytics integration - Performance monitoring tools - Error tracking and logging services

### 1.6.4 3.4 Communications Interfaces

#### 1.6.4.1 3.4.1 Network Protocols

**HTTP/HTTPS:** - RESTful API architecture - JSON data exchange format - SSL/TLS encryption for all communications - CORS configuration for cross-origin requests

**WebSocket (Optional):** - Real-time order status updates - Live chat functionality (future feature) - Real-time dashboard updates

#### 1.6.4.2 3.4.2 API Specifications

**Public APIs:** - Product catalog API for external integrations - Order tracking API for customers - Webhook endpoints for payment confirmations

**Internal APIs:** - Authentication and authorization - CRUD operations for all entities - Analytics and reporting endpoints - File upload and management

#### 1.6.4.3 3.4.3 Data Formats

**Request/Response Format:**

{  
 "status": "success|error",  
 "data": {},  
 "message": "string",  
 "timestamp": "ISO 8601 format"  
}

**Error Handling:**

{  
 "status": "error",  
 "error": {  
 "code": "ERROR\_CODE",  
 "message": "Human readable message",  
 "details": {}  
 },  
 "timestamp": "2025-08-28T10:30:00Z"  
}

## 1.7 4. System Features

### 1.7.1 4.1 Authentication and User Management

#### 1.7.1.1 4.1.1 Description and Priority

**Priority**: High (Must Have)

The authentication and user management system provides secure access control and user account management for all system users including customers, staff, and administrators.

#### 1.7.1.2 4.1.2 Stimulus/Response Sequences

**User Registration:** 1. User fills registration form with email, password, and personal details 2. System validates input data and checks for existing accounts 3. System creates new user account with default permissions 4. System sends confirmation email with verification link 5. User clicks verification link to activate account

**User Login:** 1. User enters email and password 2. System validates credentials against database 3. System generates session token/JWT 4. System redirects user to appropriate dashboard 5. System logs login activity

#### 1.7.1.3 4.1.3 Functional Requirements

**FR-001**: System shall provide user registration functionality - Email validation and uniqueness check - Password strength requirements (minimum 8 characters, alphanumeric) - Account activation via email verification - Prevention of duplicate registrations

**FR-002**: System shall provide secure user authentication - Email/password login mechanism - Session management with secure tokens - Password reset functionality via email - Account lockout after failed login attempts (5 attempts)

**FR-003**: System shall support role-based access control - Super Admin: Full system access - Store Admin: Operations and management access - Staff: Limited operational access - Customer: Public and personal account access

**FR-004**: System shall provide user profile management - Personal information editing (name, phone, address) - Password change functionality - Account deactivation option - Login history display

### 1.7.2 4.2 Sales Tracking

#### 1.7.2.1 4.2.1 Description and Priority

**Priority**: High (Must Have)

The sales tracking system manages the complete sales process from product browsing to order completion, providing comprehensive order management and tracking capabilities.

#### 1.7.2.2 4.2.2 Stimulus/Response Sequences

**Order Placement Process:** 1. Customer adds products to shopping cart 2. Customer proceeds to checkout with shipping details 3. System calculates total including taxes and shipping 4. Customer selects payment method and completes payment 5. System generates order confirmation and sends notification 6. System updates inventory levels 7. Order status is tracked through fulfillment stages

#### 1.7.2.3 4.2.3 Functional Requirements

**FR-005**: System shall provide shopping cart functionality - Add/remove products to/from cart - Quantity modification with stock validation - Cart persistence across sessions - Cart sharing capabilities (optional)

**FR-006**: System shall manage order processing - Order placement with customer and product details - Automated order numbering system - Order status tracking (Pending, Confirmed, Processing, Shipped, Delivered, Cancelled) - Email notifications for status changes

**FR-007**: System shall provide order management for administrators - Order list with search and filtering capabilities - Order details view with customer and product information - Status update functionality - Order cancellation and refund processing

**FR-008**: System shall generate sales reports - Daily, weekly, monthly, and yearly sales summaries - Product-wise sales analysis - Customer purchase history - Revenue tracking and trends

### 1.7.3 4.3 Expense Tracking

#### 1.7.3.1 4.3.1 Description and Priority

**Priority**: High (Must Have)

The expense tracking system manages business expenses, categorizes costs, and provides financial insights for better business decision-making.

#### 1.7.3.2 4.3.2 Stimulus/Response Sequences

**Expense Entry Process:** 1. User accesses expense management interface 2. User enters expense details (amount, category, description, date) 3. System validates input data 4. System saves expense record with timestamp 5. System updates financial summaries and reports 6. System provides confirmation of successful entry

#### 1.7.3.3 4.3.3 Functional Requirements

**FR-009**: System shall provide expense entry functionality - Manual expense entry with amount, description, and category - Date selection for expense occurrence - Receipt upload capability (optional) - Bulk expense import from CSV/Excel

**FR-010**: System shall categorize expenses - Predefined expense categories (Rent, Utilities, Marketing, Supplies, etc.) - Custom category creation - Category-wise expense tracking - Monthly and yearly category summaries

**FR-011**: System shall provide expense management - Edit and delete expense records - Expense approval workflow for staff entries - Recurring expense setup (monthly rent, utilities) - Expense search and filtering capabilities

**FR-012**: System shall generate expense reports - Monthly and yearly expense summaries - Category-wise expense analysis - Expense trend analysis and forecasting - Profit and loss statement generation

### 1.7.4 4.4 Report and Analytics

#### 1.7.4.1 4.4.1 Description and Priority

**Priority**: Medium (Should Have)

The reporting and analytics system provides comprehensive business insights through interactive dashboards, detailed reports, and data visualization tools.

#### 1.7.4.2 4.4.2 Stimulus/Response Sequences

**Report Generation Process:** 1. User selects report type and date range 2. System queries database for relevant data 3. System processes data and applies calculations 4. System generates visual charts and tables 5. User can export reports in multiple formats 6. System saves report preferences for future use

#### 1.7.4.3 4.4.3 Functional Requirements

**FR-013**: System shall provide dashboard analytics - Real-time KPI display (revenue, orders, expenses) - Interactive charts and graphs - Quick statistics for current month/year - Trend analysis with historical comparison

**FR-014**: System shall generate detailed reports - Sales reports with product and customer breakdowns - Financial reports including P&L statements - Inventory reports with stock levels and movements - Customer analysis reports

**FR-015**: System shall provide data export capabilities - PDF export for formal reports - Excel/CSV export for data analysis - Scheduled report generation and email delivery - Report sharing with stakeholders

**FR-016**: System shall offer customizable analytics - User-defined dashboard widgets - Custom date range selection - Report filtering and sorting options - Comparative analysis tools

## 1.8 5. Other Nonfunctional Requirements

### 1.8.1 5.1 Performance Requirements

#### 1.8.1.1 5.1.1 Response Time Requirements

**NFR-001**: Page Load Performance - **Requirement**: All web pages shall load within 3 seconds under normal network conditions - **Measurement**: Time from request initiation to complete page rendering - **Conditions**: Standard broadband connection (5 Mbps), typical database load

**NFR-002**: API Response Time - **Requirement**: API responses shall be delivered within 500 milliseconds for 95% of requests - **Measurement**: Server processing time from request receipt to response dispatch - **Conditions**: Standard server load, optimized database queries

**NFR-003**: Database Query Performance - **Requirement**: Complex queries (reports, analytics) shall complete within 5 seconds - **Measurement**: Database execution time for queries - **Conditions**: Properly indexed database, adequate server resources

#### 1.8.1.2 5.1.2 Throughput Requirements

**NFR-004**: Concurrent User Support - **Requirement**: System shall support 100 concurrent users without performance degradation - **Measurement**: Response time and system stability under load - **Testing**: Load testing with simulated concurrent sessions

**NFR-005**: Transaction Processing - **Requirement**: System shall process 50 orders per minute during peak times - **Measurement**: Order completion rate and system stability - **Conditions**: Adequate server resources and database optimization

#### 1.8.1.3 5.1.3 Resource Utilization

**NFR-006**: Server Resource Usage - **Requirement**: Server CPU utilization shall not exceed 80% under normal load - **Requirement**: Memory usage shall not exceed 12GB on 16GB server - **Measurement**: System monitoring tools and performance metrics

### 1.8.2 5.2 Safety Requirements

#### 1.8.2.1 5.2.1 Data Safety

**NFR-007**: Data Backup and Recovery - **Requirement**: System shall perform automated daily backups of all critical data - **Requirement**: System shall support point-in-time recovery within 4 hours - **Verification**: Regular backup testing and recovery procedures

**NFR-008**: Transaction Safety - **Requirement**: All financial transactions shall be ACID compliant - **Requirement**: Failed transactions shall not result in data inconsistency - **Implementation**: Database transaction management and rollback procedures

#### 1.8.2.2 5.2.2 System Safety

**NFR-009**: Failure Handling - **Requirement**: System shall gracefully handle component failures without data loss - **Requirement**: System shall provide meaningful error messages to users - **Implementation**: Comprehensive error handling and logging mechanisms

### 1.8.3 5.3 Security Requirements

#### 1.8.3.1 5.3.1 Authentication Security

**NFR-010**: Password Security - **Requirement**: All passwords shall be hashed using bcrypt with salt - **Requirement**: Password complexity requirements shall be enforced - **Requirement**: Session tokens shall expire after 24 hours of inactivity

**NFR-011**: Access Control - **Requirement**: Role-based access control shall restrict feature access - **Requirement**: Administrative functions shall require multi-factor authentication - **Verification**: Regular security audits and penetration testing

#### 1.8.3.2 5.3.2 Data Security

**NFR-012**: Data Encryption - **Requirement**: All data transmission shall use HTTPS/TLS 1.2+ - **Requirement**: Sensitive data at rest shall be encrypted - **Implementation**: SSL certificates and database encryption

**NFR-013**: Payment Security - **Requirement**: Payment processing shall comply with PCI DSS standards - **Requirement**: Credit card information shall not be stored in system - **Implementation**: Razorpay secure payment gateway integration

#### 1.8.3.3 5.3.3 System Security

**NFR-014**: Security Monitoring - **Requirement**: System shall log all authentication attempts and admin actions - **Requirement**: Failed login attempts shall trigger account lockout - **Requirement**: Security events shall be monitored and alerted

### 1.8.4 5.4 Software Quality Attributes

#### 1.8.4.1 5.4.1 Reliability

**NFR-015**: System Availability - **Requirement**: System shall maintain 99.5% uptime during business hours - **Measurement**: Monthly uptime calculation excluding scheduled maintenance - **Implementation**: Redundant systems and monitoring tools

**NFR-016**: Error Recovery - **Requirement**: System shall recover from minor errors without user intervention - **Requirement**: Critical errors shall be logged and administrative alerts sent - **Implementation**: Automated error detection and recovery procedures

#### 1.8.4.2 5.4.2 Usability

**NFR-017**: User Interface Standards - **Requirement**: All interfaces shall follow consistent design patterns - **Requirement**: System shall be accessible to users with disabilities (WCAG 2.1 AA) - **Verification**: Usability testing and accessibility audits

**NFR-018**: Learning Curve - **Requirement**: New users shall complete basic tasks within 10 minutes of training - **Requirement**: System shall provide contextual help and tooltips - **Measurement**: User testing and feedback collection

#### 1.8.4.3 5.4.3 Maintainability

**NFR-019**: Code Quality - **Requirement**: Code shall follow established coding standards and conventions - **Requirement**: Code coverage by automated tests shall exceed 80% - **Verification**: Code review processes and automated testing

**NFR-020**: Documentation - **Requirement**: All system components shall have comprehensive documentation - **Requirement**: API documentation shall be automatically generated and updated - **Maintenance**: Regular documentation reviews and updates

#### 1.8.4.4 5.4.4 Scalability

**NFR-021**: Horizontal Scaling - **Requirement**: System architecture shall support horizontal scaling - **Requirement**: Database shall support read replicas for improved performance - **Implementation**: Microservices architecture and load balancing

**NFR-022**: Data Growth - **Requirement**: System shall handle 1 million records without performance degradation - **Requirement**: Database queries shall remain optimized as data grows - **Implementation**: Proper indexing and query optimization strategies

### 1.8.5 5.5 Business Rules

#### 1.8.5.1 5.5.1 Order Processing Rules

**BR-001**: Order Validation - Orders must include valid customer information and shipping address - Product quantities must not exceed available inventory - Order total must be calculated including applicable taxes - Payment confirmation must be received before order processing

**BR-002**: Inventory Management - Stock levels must be updated immediately upon successful order placement - Products with zero inventory should be marked as “out of stock” - Low stock alerts should be generated when inventory falls below minimum threshold - Reserved inventory should be released if payment is not completed within 30 minutes

#### 1.8.5.2 5.5.2 Financial Rules

**BR-003**: Pricing Rules - All prices must include GST calculation as per Indian tax regulations - Discount calculations must be applied before tax calculations - Prices must be displayed in Indian Rupees (₹) format - Special pricing for bulk orders must be configurable

**BR-004**: Payment Rules - Payments must be processed through secure payment gateway - Failed payments must trigger order cancellation within 1 hour - Refunds must be processed within 7 business days - Payment confirmations must be stored for audit purposes

#### 1.8.5.3 5.5.3 User Management Rules

**BR-005**: Account Rules - User email addresses must be unique across the system - Customer accounts must be verified through email confirmation - Inactive accounts (no login for 1 year) may be archived - Account deletion must retain transaction history for compliance

**BR-006**: Access Control Rules - Administrative access must be logged and monitored - Staff accounts must be created by administrators only - Customer accounts can self-register with verification - Password changes must be logged for security audit

#### 1.8.5.4 5.5.4 Reporting Rules

**BR-007**: Financial Reporting - All financial reports must match accounting periods - Revenue recognition must follow accrual accounting principles - Tax calculations must comply with current Indian GST regulations - Historical data must be preserved for regulatory compliance (7 years)

**BR-008**: Data Retention - Customer data must be retained as per privacy policy - Transaction records must be maintained for audit purposes - System logs must be retained for 1 year minimum - Backup data must be stored for disaster recovery (3 years minimum)

## 1.9 Conclusion

This Software Requirements Specification document provides comprehensive requirements for the ElecTrotrack system. It serves as the foundation for system design, development, testing, and deployment activities. Regular reviews and updates of this document should be conducted as the system evolves and new requirements emerge.

For any clarifications or updates to these requirements, please contact the ElecTrotrack development team.

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