# Software Requirements Specification (SRS)

## GoodsEnterprise - Enterprise Resource Planning System

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\*\*Document Information\*\*

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- \*\*Prepared By\*\*: System Analysis Team

- \*\*Approved By\*\*: Project Stakeholders

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## 1. Introduction

### 1.1 Purpose

This Software Requirements Specification (SRS) document describes the functional and non-functional requirements for the GoodsEnterprise Enterprise Resource Planning (ERP) system. This document is intended for:

- Development team members

- Project stakeholders

- Quality assurance team

- System administrators

- End users

### 1.2 Scope

GoodsEnterprise is a comprehensive web-based ERP system designed to manage:

- \*\*Product Management\*\*: Complete product lifecycle management

- \*\*Supplier Management\*\*: Supplier relationships and procurement

- \*\*Customer Management\*\*: Customer data and relationship management

- \*\*Inventory Management\*\*: Stock levels and warehouse operations

- \*\*Cost Management\*\*: Base costs and promotional pricing

- \*\*Import/Export Operations\*\*: Bulk data operations via Excel

- \*\*User Management\*\*: Role-based access control and authentication

### 1.3 Definitions, Acronyms, and Abbreviations

- \*\*ERP\*\*: Enterprise Resource Planning

- \*\*CRUD\*\*: Create, Read, Update, Delete

- \*\*UI\*\*: User Interface

- \*\*API\*\*: Application Programming Interface

- \*\*SKU\*\*: Stock Keeping Unit

- \*\*MOQ\*\*: Minimum Order Quantity

- \*\*UPC\*\*: Universal Product Code

- \*\*EAN\*\*: European Article Number

### 1.4 References

- IEEE Std 830-1998 - IEEE Recommended Practice for Software Requirements Specifications

- ASP.NET Core 3.1 Documentation

- Entity Framework Core Documentation

- Bootstrap Framework Documentation

### 1.5 Overview

This SRS document is organized into eight main sections covering system introduction, overall description, detailed functional requirements, interface requirements, non-functional requirements, constraints, assumptions, and acceptance criteria.

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## 2. Overall Description

### 2.1 Product Perspective

GoodsEnterprise is a standalone web-based ERP system that operates as:

- \*\*Web Application\*\*: Browser-based interface accessible from any device

- \*\*Database-Driven System\*\*: Centralized data storage with SQL Server

- \*\*Multi-User System\*\*: Concurrent user access with role-based permissions

- \*\*Import/Export Platform\*\*: Excel-based bulk data operations

### 2.2 Product Functions

The system shall provide the following major functions:

#### 2.2.1 Core Management Functions

- Product catalog management with comprehensive attributes

- Supplier relationship management with business terms

- Customer profile management with account control

- Brand and category hierarchy management

- Cost management for base and promotional pricing

#### 2.2.2 Data Operations

- Bulk import operations via Excel files

- Data validation and error reporting

- Export capabilities for reporting

- Audit trail maintenance

#### 2.2.3 User Management

- User authentication and authorization

- Role-based access control

- Session management

- Password security enforcement

### 2.3 User Classes and Characteristics

#### 2.3.1 System Administrator

- \*\*Characteristics\*\*: Technical expertise, full system access

- \*\*Responsibilities\*\*: User management, system configuration, data maintenance

- \*\*Frequency of Use\*\*: Daily

#### 2.3.2 Business Manager

- \*\*Characteristics\*\*: Business domain expertise, moderate technical skills

- \*\*Responsibilities\*\*: Product management, supplier management, cost management

- \*\*Frequency of Use\*\*: Daily

#### 2.3.3 Data Entry Operator

- \*\*Characteristics\*\*: Basic computer skills, data entry focused

- \*\*Responsibilities\*\*: Data input, import operations, basic maintenance

- \*\*Frequency of Use\*\*: Daily

#### 2.3.4 Customer

- \*\*Characteristics\*\*: End users, basic computer skills

- \*\*Responsibilities\*\*: Account management, order placement, profile updates

- \*\*Frequency of Use\*\*: Occasional to frequent

### 2.4 Operating Environment

#### 2.4.1 Hardware Platform

- \*\*Server\*\*: Windows Server 2016 or later

- \*\*Client\*\*: Any device with modern web browser

- \*\*Database\*\*: SQL Server 2016 or later

- \*\*Storage\*\*: Minimum 100GB for application and data

#### 2.4.2 Software Platform

- \*\*Web Server\*\*: IIS 10.0 or later

- \*\*Framework\*\*: ASP.NET Core 3.1

- \*\*Database\*\*: SQL Server with Entity Framework Core

- \*\*Browser\*\*: Chrome 90+, Firefox 88+, Safari 14+, Edge 90+

### 2.5 Design and Implementation Constraints

- Must use ASP.NET Core 3.1 framework

- Must support SQL Server database

- Must be responsive for mobile devices

- Must support Excel file formats (.xlsx, .xls)

- Must implement role-based security

- Must maintain audit trails for data changes

### 2.6 Assumptions and Dependencies

- Users have basic computer literacy

- Reliable internet connection available

- SQL Server database is properly configured

- File system access for image uploads

- Email server configuration for notifications

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## 3. System Features

### 3.1 User Authentication and Authorization

#### 3.1.1 Description

The system shall provide secure user authentication and role-based authorization to control access to system features.

#### 3.1.2 Functional Requirements

\*\*REQ-AUTH-001\*\*: User Login

- The system shall authenticate users using email and password

- The system shall maintain user sessions for 30 minutes of inactivity

- The system shall redirect unauthenticated users to login page

\*\*REQ-AUTH-002\*\*: Password Management

- The system shall enforce minimum password length of 6 characters

- The system shall provide password strength validation

- The system shall require password confirmation during registration/updates

- The system shall support password expiry management

\*\*REQ-AUTH-003\*\*: Role-Based Access Control

- The system shall support multiple user roles (Admin, Manager, Operator, Customer)

- The system shall restrict access to features based on user roles

- The system shall maintain role assignments in the database

\*\*REQ-AUTH-004\*\*: Session Management

- The system shall automatically log out users after 30 minutes of inactivity

- The system shall allow manual logout

- The system shall prevent concurrent sessions for the same user

### 3.2 Product Management

#### 3.2.1 Description

The system shall provide comprehensive product management capabilities including product creation, modification, categorization, and lifecycle management.

#### 3.2.2 Functional Requirements

\*\*REQ-PROD-001\*\*: Product CRUD Operations

- The system shall allow authorized users to create new products

- The system shall allow viewing of product details

- The system shall allow updating of existing product information

- The system shall allow soft deletion of products (status change)

\*\*REQ-PROD-002\*\*: Product Attributes

- The system shall store product code (unique identifier)

- The system shall store product name and description

- The system shall store brand and category associations

- The system shall store pricing information (case price, tax details)

- The system shall store physical attributes (dimensions, weight)

- The system shall store inventory codes (UPC, EAN)

- The system shall store shelf life and expiry information

\*\*REQ-PROD-003\*\*: Product Categorization

- The system shall support hierarchical product categorization

- The system shall allow assignment of products to brands

- The system shall allow assignment of products to categories and subcategories

- The system shall maintain category relationships

\*\*REQ-PROD-004\*\*: Product Images

- The system shall support product image uploads

- The system shall validate image file types and sizes

- The system shall provide image preview functionality

- The system shall store images in organized directory structure

\*\*REQ-PROD-005\*\*: Product Search and Filtering

- The system shall provide search functionality across product attributes

- The system shall support filtering by brand, category, status

- The system shall provide pagination for large product lists

- The system shall support sorting by various attributes

### 3.3 Supplier Management

#### 3.3.1 Description

The system shall manage supplier information, business relationships, and procurement terms.

#### 3.3.2 Functional Requirements

\*\*REQ-SUPP-001\*\*: Supplier CRUD Operations

- The system shall allow creation of new supplier records

- The system shall allow viewing of supplier details

- The system shall allow updating of supplier information

- The system shall allow deactivation of suppliers

\*\*REQ-SUPP-002\*\*: Supplier Information

- The system shall store supplier name and SKU code

- The system shall store contact information (email, phone, address)

- The system shall store business terms (lead time, MOQ, incoterms)

- The system shall store pricing information and validity periods

- The system shall maintain supplier status (active/inactive, preferred)

\*\*REQ-SUPP-003\*\*: Supplier Relationships

- The system shall link suppliers to products

- The system shall maintain supplier cost history

- The system shall track supplier performance metrics

- The system shall support multiple suppliers per product

\*\*REQ-SUPP-004\*\*: Supplier Search and Management

- The system shall provide advanced search across supplier fields

- The system shall support filtering by status, location, business terms

- The system shall provide pagination for supplier lists

- The system shall maintain audit trail of supplier changes

### 3.4 Customer Management

#### 3.4.1 Description

The system shall manage customer information, accounts, and relationships.

#### 3.4.2 Functional Requirements

\*\*REQ-CUST-001\*\*: Customer Registration

- The system shall allow customer self-registration

- The system shall validate email uniqueness during registration

- The system shall require email confirmation for new accounts

- The system shall assign default customer role to new registrations

\*\*REQ-CUST-002\*\*: Customer Profile Management

- The system shall store personal information (name, contact details)

- The system shall store company information (company name, business details)

- The system shall store address information with postal codes

- The system shall maintain communication preferences

\*\*REQ-CUST-003\*\*: Customer Account Management

- The system shall provide secure login for customers

- The system shall allow customers to update their profiles

- The system shall allow password changes with validation

- The system shall maintain account status (active/inactive)

\*\*REQ-CUST-004\*\*: Customer Relationships

- The system shall link customers to orders

- The system shall maintain customer purchase history

- The system shall support customer favorites and wishlists

- The system shall track customer communication preferences

### 3.5 Cost Management

#### 3.5.1 Description

The system shall manage product costs including base costs and promotional pricing with validation and audit capabilities.

#### 3.5.2 Functional Requirements

\*\*REQ-COST-001\*\*: Base Cost Management

- The system shall store base costs for products by supplier

- The system shall maintain cost validity periods (start/end dates)

- The system shall validate cost values (must be positive)

- The system shall maintain cost change history

\*\*REQ-COST-002\*\*: Promotional Cost Management

- The system shall store promotional costs with campaign periods

- The system shall validate promotion date ranges (start < end)

- The system shall detect overlapping promotions for same products

- The system shall maintain promotional cost history

\*\*REQ-COST-003\*\*: Cost Validation Rules

- The system shall enforce positive cost values

- The system shall validate date ranges for cost periods

- The system shall check for cost conflicts and overlaps

- The system shall provide warnings for unusual cost changes

\*\*REQ-COST-004\*\*: Cost Reporting

- The system shall provide cost history reports

- The system shall show cost trends and analysis

- The system shall identify cost anomalies and warnings

- The system shall support cost comparison across suppliers

### 3.6 Import/Export Management

#### 3.6.1 Description

The system shall provide bulk data import and export capabilities using Excel files with comprehensive validation and error handling.

#### 3.6.2 Functional Requirements

\*\*REQ-IMPORT-001\*\*: Excel Import Support

- The system shall support Excel file formats (.xlsx, .xls)

- The system shall provide import templates for each entity type

- The system shall validate file format and structure before processing

- The system shall support large file imports (up to 10MB)

\*\*REQ-IMPORT-002\*\*: Data Validation During Import

- The system shall validate required fields based on configuration

- The system shall validate data types and formats

- The system shall check business rules and constraints

- The system shall detect duplicate records within import and database

\*\*REQ-IMPORT-003\*\*: Import Process Management

- The system shall provide import preview with validation results

- The system shall show progress during import operations

- The system shall allow cancellation of long-running imports

- The system shall provide detailed import results and statistics

\*\*REQ-IMPORT-004\*\*: Import Error Handling

- The system shall report validation errors with specific details

- The system shall continue processing valid records when errors occur

- The system shall provide downloadable error reports

- The system shall maintain import audit logs

\*\*REQ-IMPORT-005\*\*: Supported Import Types

- The system shall support supplier data import

- The system shall support product data import

- The system shall support base cost import

- The system shall support promotional cost import

### 3.7 Brand and Category Management

#### 3.7.1 Description

The system shall manage product brands and categories with hierarchical organization and image support.

#### 3.7.2 Functional Requirements

\*\*REQ-BRAND-001\*\*: Brand Management

- The system shall allow creation and management of product brands

- The system shall support brand images with multiple sizes

- The system shall maintain brand descriptions and status

- The system shall link brands to products

\*\*REQ-CAT-001\*\*: Category Management

- The system shall support hierarchical category structure

- The system shall allow creation of categories and subcategories

- The system shall support category images and descriptions

- The system shall maintain category status (active/inactive)

\*\*REQ-CAT-002\*\*: Category Relationships

- The system shall link products to categories and subcategories

- The system shall maintain category hierarchy relationships

- The system shall support category-based product filtering

- The system shall provide category-based reporting

### 3.8 Order Management

#### 3.8.1 Description

The system shall manage customer orders with order tracking and status management.

#### 3.8.2 Functional Requirements

\*\*REQ-ORDER-001\*\*: Order Creation

- The system shall allow customers to create orders

- The system shall validate product availability during order creation

- The system shall calculate order totals including taxes

- The system shall assign unique order numbers

\*\*REQ-ORDER-002\*\*: Order Management

- The system shall track order status throughout lifecycle

- The system shall maintain order details with product quantities

- The system shall support order modifications before processing

- The system shall provide order history for customers

\*\*REQ-ORDER-003\*\*: Order Processing

- The system shall update inventory levels upon order confirmation

- The system shall generate order confirmations and notifications

- The system shall support order fulfillment tracking

- The system shall maintain order audit trail

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## 4. External Interface Requirements

### 4.1 User Interfaces

#### 4.1.1 General UI Requirements

\*\*REQ-UI-001\*\*: The system shall provide a responsive web interface that works on desktop, tablet, and mobile devices.

\*\*REQ-UI-002\*\*: The system shall use modern UI components with consistent styling across all pages.

\*\*REQ-UI-003\*\*: The system shall provide intuitive navigation with clear menu structure and breadcrumbs.

\*\*REQ-UI-004\*\*: The system shall display loading indicators during long-running operations.

#### 4.1.2 Specific Interface Requirements

\*\*REQ-UI-005\*\*: Login Interface

- Simple login form with email and password fields

- Password visibility toggle

- Remember me option

- Forgot password link

\*\*REQ-UI-006\*\*: Dashboard Interface

- Summary cards showing key metrics

- Quick access to frequently used functions

- Recent activity feed

- Navigation menu with role-based options

\*\*REQ-UI-007\*\*: Data Management Interfaces

- Tabular data display with sorting and filtering

- Pagination controls for large datasets

- Search functionality with multiple criteria

- CRUD operation buttons (Create, Edit, Delete)

\*\*REQ-UI-008\*\*: Import Interface

- Modal-based import dialogs

- File upload with drag-and-drop support

- Template download functionality

- Progress bars for import operations

- Results display with success/error statistics

### 4.2 Hardware Interfaces

\*\*REQ-HW-001\*\*: The system shall run on standard web server hardware with minimum specifications:

- 4GB RAM

- 2-core CPU

- 100GB storage

- Network connectivity

### 4.3 Software Interfaces

#### 4.3.1 Database Interface

\*\*REQ-SW-001\*\*: The system shall interface with SQL Server database using Entity Framework Core.

\*\*REQ-SW-002\*\*: The system shall support database connection pooling for optimal performance.

\*\*REQ-SW-003\*\*: The system shall handle database connection failures gracefully with retry logic.

#### 4.3.2 File System Interface

\*\*REQ-SW-004\*\*: The system shall interface with file system for image storage and retrieval.

\*\*REQ-SW-005\*\*: The system shall organize uploaded files in structured directory hierarchy.

\*\*REQ-SW-006\*\*: The system shall validate file types and sizes before storage.

#### 4.3.3 Email Interface

\*\*REQ-SW-007\*\*: The system shall interface with SMTP servers for email notifications.

\*\*REQ-SW-008\*\*: The system shall support both Gmail SMTP and SendGrid integration.

\*\*REQ-SW-009\*\*: The system shall handle email delivery failures with appropriate error handling.

### 4.4 Communication Interfaces

\*\*REQ-COMM-001\*\*: The system shall communicate over HTTPS protocol for security.

\*\*REQ-COMM-002\*\*: The system shall support RESTful API endpoints for import operations.

\*\*REQ-COMM-003\*\*: The system shall use JSON format for API data exchange.

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## 5. Non-Functional Requirements

### 5.1 Performance Requirements

#### 5.1.1 Response Time Requirements

\*\*REQ-PERF-001\*\*: Page Load Performance

- Initial page load shall complete within 3 seconds under normal load

- Subsequent page navigation shall complete within 2 seconds

- Search operations shall return results within 2 seconds

\*\*REQ-PERF-002\*\*: Import Performance

- Excel import preview shall complete within 30 seconds for files up to 10MB

- Import operations shall process at least 1000 records per minute

- Progress updates shall be provided every 5 seconds during import

\*\*REQ-PERF-003\*\*: Database Performance

- Database queries shall execute within 1 second for standard operations

- Bulk operations shall complete within 5 minutes for 10,000 records

- Concurrent user operations shall not degrade performance significantly

#### 5.1.2 Throughput Requirements

\*\*REQ-PERF-004\*\*: The system shall support at least 50 concurrent users without performance degradation.

\*\*REQ-PERF-005\*\*: The system shall handle at least 1000 page requests per minute.

\*\*REQ-PERF-006\*\*: The system shall process at least 10 concurrent import operations.

### 5.2 Security Requirements

#### 5.2.1 Authentication Security

\*\*REQ-SEC-001\*\*: The system shall use secure password hashing (bcrypt or similar).

\*\*REQ-SEC-002\*\*: The system shall implement session timeout after 30 minutes of inactivity.

\*\*REQ-SEC-003\*\*: The system shall prevent brute force attacks with account lockout after 5 failed attempts.

#### 5.2.2 Data Security

\*\*REQ-SEC-004\*\*: The system shall use HTTPS for all communications.

\*\*REQ-SEC-005\*\*: The system shall validate and sanitize all user inputs to prevent injection attacks.

\*\*REQ-SEC-006\*\*: The system shall implement role-based access control for all features.

\*\*REQ-SEC-007\*\*: The system shall maintain audit logs for all data modifications.

#### 5.2.3 File Security

\*\*REQ-SEC-008\*\*: The system shall validate uploaded file types and sizes.

\*\*REQ-SEC-009\*\*: The system shall scan uploaded files for malicious content.

\*\*REQ-SEC-010\*\*: The system shall store uploaded files outside web root directory.

### 5.3 Reliability Requirements

#### 5.3.1 Availability

\*\*REQ-REL-001\*\*: The system shall maintain 99% uptime during business hours (8 AM - 6 PM).

\*\*REQ-REL-002\*\*: The system shall recover from failures within 15 minutes.

\*\*REQ-REL-003\*\*: The system shall provide graceful degradation when external services are unavailable.

#### 5.3.2 Error Handling

\*\*REQ-REL-004\*\*: The system shall handle all exceptions gracefully without exposing system details.

\*\*REQ-REL-005\*\*: The system shall log all errors with sufficient detail for troubleshooting.

\*\*REQ-REL-006\*\*: The system shall provide user-friendly error messages.

### 5.4 Usability Requirements

#### 5.4.1 Ease of Use

\*\*REQ-USE-001\*\*: New users shall be able to complete basic tasks within 30 minutes of training.

\*\*REQ-USE-002\*\*: The system shall provide contextual help and tooltips for complex features.

\*\*REQ-USE-003\*\*: The system shall use consistent UI patterns across all pages.

#### 5.4.2 Accessibility

\*\*REQ-USE-004\*\*: The system shall comply with WCAG 2.1 Level AA accessibility guidelines.

\*\*REQ-USE-005\*\*: The system shall support keyboard navigation for all functions.

\*\*REQ-USE-006\*\*: The system shall provide appropriate ARIA labels for screen readers.

### 5.5 Scalability Requirements

#### 5.5.1 Data Scalability

\*\*REQ-SCALE-001\*\*: The system shall support databases with up to 1 million product records.

\*\*REQ-SCALE-002\*\*: The system shall support up to 100,000 supplier records.

\*\*REQ-SCALE-003\*\*: The system shall support up to 500,000 customer records.

#### 5.5.2 User Scalability

\*\*REQ-SCALE-004\*\*: The system shall support up to 200 concurrent users.

\*\*REQ-SCALE-005\*\*: The system shall support horizontal scaling with load balancers.

### 5.6 Maintainability Requirements

#### 5.6.1 Code Maintainability

\*\*REQ-MAINT-001\*\*: The system shall follow established coding standards and best practices.

\*\*REQ-MAINT-002\*\*: The system shall maintain comprehensive logging for troubleshooting.

\*\*REQ-MAINT-003\*\*: The system shall use configuration files for environment-specific settings.

#### 5.6.2 Data Maintainability

\*\*REQ-MAINT-004\*\*: The system shall support database backup and restore operations.

\*\*REQ-MAINT-005\*\*: The system shall support data migration between environments.

\*\*REQ-MAINT-006\*\*: The system shall maintain referential integrity in the database.

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## 6. System Constraints

### 6.1 Technology Constraints

\*\*CONST-TECH-001\*\*: The system must be built using ASP.NET Core 3.1 framework.

\*\*CONST-TECH-002\*\*: The system must use SQL Server as the primary database.

\*\*CONST-TECH-003\*\*: The system must support modern web browsers (Chrome 90+, Firefox 88+, Safari 14+, Edge 90+).

\*\*CONST-TECH-004\*\*: The system must be deployable on Windows Server 2016 or later.

### 6.2 Business Constraints

\*\*CONST-BUS-001\*\*: The system must comply with data protection regulations (GDPR, local privacy laws).

\*\*CONST-BUS-002\*\*: The system must maintain audit trails for compliance purposes.

\*\*CONST-BUS-003\*\*: The system must support multi-currency operations (future requirement).

### 6.3 Resource Constraints

\*\*CONST-RES-001\*\*: Development must be completed within allocated budget and timeline.

\*\*CONST-RES-002\*\*: The system must run on existing hardware infrastructure.

\*\*CONST-RES-003\*\*: Training and documentation must be provided within project scope.

### 6.4 Operational Constraints

\*\*CONST-OP-001\*\*: The system must integrate with existing business processes.

\*\*CONST-OP-002\*\*: Data migration from legacy systems must be supported.

\*\*CONST-OP-003\*\*: The system must support backup and disaster recovery procedures.

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## 7. Assumptions and Dependencies

### 7.1 Assumptions

\*\*ASSUME-001\*\*: Users have basic computer literacy and web browser experience.

\*\*ASSUME-002\*\*: Reliable internet connectivity is available for all users.

\*\*ASSUME-003\*\*: SQL Server database is properly licensed and configured.

\*\*ASSUME-004\*\*: Email server configuration is available for notifications.

\*\*ASSUME-005\*\*: File system storage is available for image and document uploads.

\*\*ASSUME-006\*\*: Business processes are well-defined and documented.

### 7.2 Dependencies

\*\*DEP-001\*\*: SQL Server database availability and performance.

\*\*DEP-002\*\*: Web server (IIS) configuration and maintenance.

\*\*DEP-003\*\*: Network infrastructure and security configuration.

\*\*DEP-004\*\*: Third-party libraries and frameworks (Entity Framework, Bootstrap, jQuery).

\*\*DEP-005\*\*: Email service provider (Gmail SMTP or SendGrid) availability.

\*\*DEP-006\*\*: SSL certificate for HTTPS communication.

\*\*DEP-007\*\*: Backup and monitoring systems for production environment.

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## 8. Acceptance Criteria

### 8.1 Functional Acceptance Criteria

#### 8.1.1 User Management

\*\*AC-USER-001\*\*: System administrators can create, modify, and deactivate user accounts.

\*\*AC-USER-002\*\*: Users can log in with valid credentials and are redirected appropriately.

\*\*AC-USER-003\*\*: Role-based access control prevents unauthorized access to features.

\*\*AC-USER-004\*\*: Password validation enforces security requirements.

#### 8.1.2 Product Management

\*\*AC-PROD-001\*\*: Authorized users can create products with all required attributes.

\*\*AC-PROD-002\*\*: Product search and filtering return accurate results within 2 seconds.

\*\*AC-PROD-003\*\*: Product images can be uploaded and displayed correctly.

\*\*AC-PROD-004\*\*: Product categorization works correctly with brands and categories.

#### 8.1.3 Import Operations

\*\*AC-IMPORT-001\*\*: Excel import templates can be downloaded for all entity types.

\*\*AC-IMPORT-002\*\*: Import preview shows validation results before processing.

\*\*AC-IMPORT-003\*\*: Import operations complete successfully with progress tracking.

\*\*AC-IMPORT-004\*\*: Import errors are reported with specific details and line numbers.

\*\*AC-IMPORT-005\*\*: Large imports (5000+ records) complete within acceptable time limits.

### 8.2 Performance Acceptance Criteria

#### 8.2.1 Response Time

\*\*AC-PERF-001\*\*: Page loads complete within 3 seconds under normal load.

\*\*AC-PERF-002\*\*: Search operations return results within 2 seconds.

\*\*AC-PERF-003\*\*: Import preview completes within 30 seconds for 10MB files.

#### 8.2.2 Concurrent Users

\*\*AC-PERF-004\*\*: System supports 50 concurrent users without performance degradation.

\*\*AC-PERF-005\*\*: Database operations complete within acceptable time limits under load.

### 8.3 Security Acceptance Criteria

#### 8.3.1 Authentication

\*\*AC-SEC-001\*\*: Unauthorized users cannot access protected pages.

\*\*AC-SEC-002\*\*: Sessions expire after 30 minutes of inactivity.

\*\*AC-SEC-003\*\*: Password requirements are enforced during registration and updates.

#### 8.3.2 Data Protection

\*\*AC-SEC-004\*\*: All communications use HTTPS encryption.

\*\*AC-SEC-005\*\*: User inputs are validated and sanitized to prevent injection attacks.

\*\*AC-SEC-006\*\*: Audit logs capture all data modifications with user identification.

### 8.4 Usability Acceptance Criteria

#### 8.4.1 User Interface

\*\*AC-UI-001\*\*: Interface is responsive and works on desktop, tablet, and mobile devices.

\*\*AC-UI-002\*\*: Navigation is intuitive and consistent across all pages.

\*\*AC-UI-003\*\*: Error messages are clear and actionable.

\*\*AC-UI-004\*\*: Loading indicators are displayed during long operations.

#### 8.4.2 User Experience

\*\*AC-UX-001\*\*: New users can complete basic tasks within 30 minutes of training.

\*\*AC-UX-002\*\*: Common workflows can be completed efficiently without confusion.

\*\*AC-UX-003\*\*: Help documentation is accessible and comprehensive.

### 8.5 Integration Acceptance Criteria

#### 8.5.1 Database Integration

\*\*AC-INT-001\*\*: All CRUD operations work correctly with the database.

\*\*AC-INT-002\*\*: Data integrity is maintained across all operations.

\*\*AC-INT-003\*\*: Database performance meets specified requirements.

#### 8.5.2 File System Integration

\*\*AC-INT-004\*\*: File uploads work correctly with proper validation.

\*\*AC-INT-005\*\*: Images are stored and retrieved correctly.

\*\*AC-INT-006\*\*: File system errors are handled gracefully.

### 8.6 Deployment Acceptance Criteria

#### 8.6.1 Installation

\*\*AC-DEPLOY-001\*\*: System can be deployed on target server environment.

\*\*AC-DEPLOY-002\*\*: Database schema is created correctly during deployment.

\*\*AC-DEPLOY-003\*\*: Configuration files are properly set up for production environment.

#### 8.6.2 Operations

\*\*AC-DEPLOY-004\*\*: System starts up correctly after deployment.

\*\*AC-DEPLOY-005\*\*: Logging and monitoring work as expected.

\*\*AC-DEPLOY-006\*\*: Backup and recovery procedures are functional.

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## Appendices

### Appendix A: Glossary

- \*\*ERP\*\*: Enterprise Resource Planning - integrated management of main business processes

- \*\*CRUD\*\*: Create, Read, Update, Delete - basic database operations

- \*\*SKU\*\*: Stock Keeping Unit - unique identifier for products

- \*\*MOQ\*\*: Minimum Order Quantity - smallest quantity that can be ordered

- \*\*UPC\*\*: Universal Product Code - barcode standard

- \*\*EAN\*\*: European Article Number - barcode standard

- \*\*HTTPS\*\*: Hypertext Transfer Protocol Secure - encrypted HTTP

- \*\*API\*\*: Application Programming Interface - set of protocols for building software

- \*\*UI\*\*: User Interface - means by which user interacts with system

- \*\*WCAG\*\*: Web Content Accessibility Guidelines - accessibility standards

### Appendix B: Revision History

| Version | Date | Author | Description |

|---------|------|--------|-------------|

| 1.0 | September 27, 2025 | System Analysis Team | Initial SRS document creation |

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\*This document represents the complete Software Requirements Specification for the GoodsEnterprise ERP system. All requirements are subject to stakeholder approval and may be updated based on business needs and technical constraints.\*