Software Requirements Specification (SRS)

Project Title: Shop Sphere.

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1. Introduction

1.1 Purpose
This document defines the requirements for an Online Shopping Platform, allowing customers to browse products, add to cart, place orders, and write reviews. Admin users can manage categories, products, and orders.

1.2 Scope
The system will provide:
- A web interface for customers to browse and purchase products.
- An admin dashboard to manage inventory and view orders.
- Secure user authentication.

1.3 Intended Audience
- Developers (frontend & backend)
- Testers
- Project Supervisors
- UI/UX Designers

1.4 Definitions
- ERD: Entity Relationship Diagram
- CRUD: Create, Read, Update, Delete.

2. Overall Description

2.1 Product Perspective
This platform is a standalone website. It consists of a user frontend, an admin dashboard, and a backend connected to a relational database as described in the ERD.

2.2 User Classes and Characteristics
- Customer: Can register, log in, browse products, add to cart, place orders, and leave reviews.
- Admin: Can manage products, categories, and view customer orders.

2.3 Operating Environment
- Web browsers (Chrome, Firefox, Edge)
- Backend: ASP.NET Core.
- Database: SQL Server.
- Hosting: Local host.

2.4 Assumptions and Dependencies
- The payment gateway is cash.
- Products have at least one image and belong to a single category.

3. System Features

3.1 User Registration and Login
- Fields: Full Name, Username, Password, Address
- Role assignment (Customer/Admin)
- Secure password hashing

3.2 Product Browsing
- View products by category
- View product details including name, price, discount, image, and description

3.3 Cart Management
- Add/remove products to the cart
- Change quantity
- View total price

3.4 Order Placement
- Customer fills in address and contact info.
- Order saved with associated items.
- Confirmation is shown to the user.

3.5 Reviews
- Users can review products they purchased
- Each review includes rating, date, and comment

3.6 Admin Features
- Add/edit/delete categories and products
- View all orders and customer info

4. Data Requirements

- ApplicationUser: stores user information.
- Product: stores product info (name, price, description, image, etc.).
- Category: stores product categories.
- Order: links user and products with date & address.
- OrderItems: stores the items in each order.
- Cart: temporary storage before ordering (optional in ERD).
- Review: rating and comments from customers.

5. Non-Functional Requirements
- Security: All passwords are hashed, and role-based access control.
- Performance: Fast loading for product browsing and order submission.
- Usability: Clean and simple interface.
- Maintainability: Modular code and proper documentation.
- Scalability: Easy to add new categories and features.