Software Requirements Specification

for

photography portfolio website

Version 1.0 approved

Prepared by

1) S Tejas (22mic0092)

<Vellore institute of technology , vellore >

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1. Introduction

1.1 Purpose

The purpose of this photography website is to provide a visually appealing and functional platform for professional photographers to showcase their portfolios, interact with potential clients, and manage photography-related services. The website will support features like photo galleries, a blog, a contact form, a client area, and an admin panel for content management.

1.2 Document Conventions

- Headings & Numbering: Sections are structured numerically for easy reference.
- Requirement Keywords:
  - "Shall" indicates a mandatory requirement.
  - "Should" indicates a recommended feature but not mandatory.
  - "May" refers to optional elements.
- Formatting: Code snippets, UI elements, and keywords will be presented in bold or *italic* for readability.

1.3 Intended Audience and Reading Suggestions

This document is intended for:

- Developers: For implementing features based on technical specifications.
- UI/UX Designers: For designing intuitive interfaces.
- Project Managers: For tracking milestones and features.
- Photographers: To understand website functionality.
- Testers: To ensure feature compliance with requirements.

1.4 Project Scope

The photography website will provide:

- Portfolio Gallery for showcasing high-quality images.
- About Me section for personal branding.
- Client Area for private albums and file delivery.
- Blog Module for sharing photography insights.

- Contact Form for customer inquiries.
- Admin Panel for website management.

It will be fully responsive, ensuring accessibility on desktops, tablets, and mobile devices.

1.5 References

- Web Standards: W3C (HTML5, CSS3, JavaScript ES6)
- Security: OWASP Security Guidelines
- Database: MongoDB, MySQL documentation
- Hosting: AWS, Vercel, or DigitalOcean documentation

2. Overall Description

2.1 Product Perspective

The photography website will function as a self-hosted portfolio and business tool. Unlike third-party platforms like Instagram or Flickr, it provides full control over branding, pricing, and client interactions. It will integrate with cloud storage services, payment gateways, and email notifications.

2.2 Product Features

- Gallery with Lightbox & Categorization
- Blog Module for content marketing
- Contact Form with Auto-Response
- Secure Client Area for Private Photos
- Admin Dashboard for photo & blog management
- E-commerce Integration (Optional) for selling prints

2.3 User Classes and Characteristics

- Visitors (General Users): Browse public galleries and contact the photographer.
- Clients: Access private galleries, download photos, and request services.
- Photographer/Admin: Upload/manage content, handle orders, and interact with clients.

2.4 Operating Environment

- Frontend: React.js / Vue.js
- Backend: Node.js (Express) / Django
- Database: MySQL / MongoDB
- Hosting: AWS, Firebase, or DigitalOcean
- Compatible Devices: Web browsers (Chrome, Firefox, Safari, Edge) & mobile devices

2.5 Design and Implementation Constraints

- Image Optimization: Auto-resize high-resolution images for performance.
- Security: Use SSL/TLS for data encryption.
- Storage: Cloud integration (AWS S3, Google Drive) for high-resolution photos.
- Payment Gateway: PayPal/Stripe for selling photos or booking shoots.

2.6 User Documentation

- Step-by-step user manual for managing galleries and blogs.
- Admin guide for configuring backend settings.
- FAQs for common issues and solutions.

2.7 Assumptions and Dependencies

- Users have an internet connection and a modern web browser.
- Third-party services (email, payment, storage) are available.
- The photographer has digital photos in web-friendly formats (JPEG, PNG, WEBP).

3. System Features

3.1 User Authentication

- Users shall be able to register, log in, and reset passwords securely.
- Authentication shall be handled using JWT (JSON Web Tokens) or OAuth.
- Admins shall have role-based access control (RBAC) for security.

3.2 Order Management (Optional E-Commerce)

- Clients shall be able to purchase digital prints or book photoshoots.
- Orders shall be stored in a database and accessible via the admin panel.
- Payments shall be processed using Stripe/PayPal integration.

4. External Interface Requirements

4.1 User Interfaces

- Homepage: Clean, minimalistic design with featured works.
- Gallery: Grid or masonry layout with lightbox functionality.
- Client Dashboard: Secure login for private galleries.
- Admin Panel: Manage content and analytics.

4.2 Hardware Interfaces

- Server shall support high-resolution image hosting (AWS, Google Cloud).
- Users shall be able to upload/download large files.

4.3 Software Interfaces

- Database: MySQL/MongoDB for storing metadata.
- APIs: RESTful API endpoints for frontend-backend communication.
- CDN (Content Delivery Network): For faster image loading.

4.4 Communications Interfaces

- Email (SMTP, SendGrid): For contact form notifications.

- WebSockets: For real-time updates (e.g., order status, client messages).
- Social Media Integration: Auto-sharing to Instagram/Facebook.

5. Nonfunctional Requirements

5.1 Performance Requirements

- Page load time shall be under 3 seconds.
- System shall handle up to 500 concurrent users without degradation.

5.2 Safety Requirements

- Regular database backups shall be scheduled.
- Error handling mechanisms shall prevent crashes.

5.3 Security Requirements

- Data transmission shall be encrypted using SSL/TLS.
- User accounts shall have 2FA (Two-Factor Authentication) support.
- IP-based access control shall be implemented for the admin panel.

5.4 Software Quality Attributes

- Usability: Clean UI, accessible design.
- Scalability: Supports future growth in traffic and storage.
- Maintainability: Modular architecture for easy updates.

6. Other Requirements

This section includes any additional requirements that do not fit into the previous categories but are essential for the proper functioning of the photography website.

6.1 Legal and Compliance Requirements

- The system shall comply with GDPR (General Data Protection Regulation) for user data protection.
- The website shall have a Terms of Service and Privacy Policy page explaining data collection and usage.

- Users shall have an option to delete their accounts and request data removal as per GDPR guidelines.
- If an e-commerce feature is included, the system shall follow PCI-DSS (Payment Card Industry Data Security Standard) compliance.

6.2 Backup and Disaster Recovery

- Automated daily database backups shall be performed and stored securely.
- In case of failure, the system shall have a disaster recovery plan to restore the latest backup.
- Image files shall be stored in a redundant cloud storage service (AWS S3, Google Cloud Storage) for recovery in case of server failure.

Appendix A: Glossary

Term	Definition
Frontend	The visual part of the website that users interact with (HTML, CSS, JavaScript).
Backend	The server-side application that handles data storage, authentication, and logic.
Gallery	A collection of images displayed on the website.
Lightbox	A pop-up feature that allows users to view images in an enlarged format.
Client Area	A private section where clients can access and download their photos.
Authentication	The process of verifying user identity through login credentials.

Appendix B: Analysis Models

- **Photographer (Admin)**: Uploads images, manages content, handles client requests.
- **Clients (Registered Users)**: Logs in, accesses private albums, downloads images.
- **Visitors (Unregistered Users)**: Browses the public portfolio and contacts the photographer.

Appendix C: Issues List

Issue	Description	Priority	Status
Image Upload	Large file sizes may slow down performance.	High	Pending
Private Gallery Security	Ensure private albums are protected from unauthorized access.	Critical	In Progress
Mobile Responsiveness	The gallery should be fully optimized for mobile devices.	High	Pending
Contact Form Spam	Implement CAPTCHA to prevent spam submissions.	Medium	Pending
Payment Gateway Integration	Ensure secure transactions if online sales are included.	Medium	Pending