Software Requirements Specification (SRS)

Personal Portfolio Website

Document Information

- **Project Name:** Personal Portfolio Website
- **Developer:** Teddy Oluoch
- **Institution:** The Co-operative University of Kenya
- **Program:** Information Technology
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1. Introduction

1.1 Purpose

This Software Requirements Specification (SRS) document provides a comprehensive description of the requirements for developing a personal portfolio website. The document is intended for the developer (Teddy Oluoch) and serves as a reference throughout the Software Development Life Cycle (SDLC).

1.2 Scope

The portfolio website will serve as a professional online presence showcasing educational background, technical skills, projects, and contact information. The system will be developed using HTML and CSS technologies, focusing on modern web standards and responsive design principles.

1.3 Definitions and Acronyms

- **SRS:** Software Requirements Specification
- **SDLC:** Software Development Life Cycle
- **UI:** User Interface
- **UX:** User Experience
- **CSS:** Cascading Style Sheets
- **HTML:** HyperText Markup Language

- **SEO:** Search Engine Optimization

1.4 References

- W3C HTML5 Specification
- W3C CSS3 Specification
- Web Content Accessibility Guidelines (WCAG) 2.1
- The Co-operative University of Kenya branding guidelines

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2. Overall Description

2.1 Product Perspective

The portfolio website is a standalone web application that will serve as a digital resume and professional showcase. It will be hosted on a web server and accessible through standard web browsers across multiple devices and platforms.

2.2 Product Functions

The website will provide the following core functions:

- Display personal and professional information
- Showcase educational background and achievements
- Present technical skills and competencies
- Exhibit completed projects and work samples
- Provide contact information and communication channels
- Ensure responsive design across all device types

2.3 User Characteristics

Primary Users:

- Potential employers in IT/technology sector
- Recruiters and hiring managers
- Academic supervisors and peers
- Freelance clients
- Professional network contacts

User Expertise Level:

- Varied technical expertise

- Standard web browsing capabilities
- Expectation of professional, modern web experiences

2.4 Constraints

- **Technology Constraints:** Limited to HTML and CSS only (no JavaScript frameworks)
- **Design Constraints:** Must maintain professional appearance suitable for academic and career purposes
- **Performance Constraints:** Must load within 3 seconds on standard internet connections
- **Compatibility Constraints:** Must work on modern browsers (Chrome, Firefox, Safari, Edge)

2.5 Assumptions and Dependencies

- Users have access to modern web browsers
- Standard internet connectivity available
- Professional content and images will be provided
- Web hosting service will be available for deployment

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3. Specific Requirements

3.1 Functional Requirements

3.1.1 Home/Landing Section

- **FR-001:** The system shall display a hero section with name, professional title, and brief tagline
- **FR-002:** The system shall include a professional photograph or avatar
- **FR-003:** The system shall provide clear navigation to other sections
- **FR-004:** The system shall include a call-to-action button directing to contact information

3.1.2 About/Biography Section

- **FR-005:** The system shall display a comprehensive personal and professional biography (2-3 paragraphs)
- **FR-006:** The system shall highlight key personal attributes and career objectives
- **FR-007:** The system shall maintain a professional tone while showing personality

3.1.3 Education Section

- **FR-008:** The system shall display current degree program (Information Technology)
- **FR-009:** The system shall show institution name (The Co-operative University of Kenya)

- **FR-010:** The system shall include expected graduation date
- **FR-011:** The system shall list relevant coursework or academic achievements
- **FR-012:** The system shall display information in chronological order

3.1.4 Skills Section

- **FR-013:** The system shall categorize technical skills by type (programming languages, frameworks, tools)
- **FR-014:** The system shall display proficiency levels or competency indicators
- **FR-015:** The system shall include both technical and soft skills
- **FR-016:** The system shall present skills in a visually organized grid layout

3.1.5 Projects Section

- **FR-017:** The system shall display a minimum of 3-5 completed projects
- **FR-018:** The system shall include project titles, descriptions, and technologies used
- **FR-019:** The system shall show project outcomes or key learnings
- **FR-020:** The system shall provide links to project demos or repositories where available
- **FR-021:** The system shall display projects in a card-based layout

3.1.6 Contact Section

- **FR-022:** The system shall display multiple contact methods (email, phone, professional profiles)
- **FR-023:** The system shall include links to professional social media profiles (LinkedIn, GitHub)
- **FR-024:** The system shall provide a structured contact form (optional enhancement)
- **FR-025:** The system shall ensure contact information is easily accessible and readable

3.1.7 Navigation System

- **FR-026:** The system shall provide a fixed/sticky navigation header
- **FR-027:** The system shall implement smooth scrolling between sections
- **FR-028:** The system shall include a mobile-responsive hamburger menu
- **FR-029:** The system shall highlight the current section in navigation

3.2 Non-Functional Requirements

3.2.1 Performance Requirements

- **NFR-001:** Page load time shall not exceed 3 seconds on standard broadband connection

- **NFR-002:** Images shall be optimized for web delivery without quality loss
- **NFR-003:** CSS shall be minified and optimized for fast rendering

3.2.2 Usability Requirements

- **NFR-004:** The interface shall be intuitive and require no training for basic navigation
- **NFR-005:** All interactive elements shall provide visual feedback on hover/focus
- **NFR-006:** The website shall maintain consistent design patterns throughout
- **NFR-007:** Text shall maintain high readability with appropriate contrast ratios

3.2.3 Compatibility Requirements

- **NFR-008:** The system shall function correctly on Chrome, Firefox, Safari, and Edge browsers
- **NFR-009:** The system shall support browser versions released within the last 2 years
- **NFR-010:** The system shall degrade gracefully on older browsers

3.2.4 Responsive Design Requirements

- **NFR-011:** The system shall provide optimal viewing experience on mobile devices (320px-768px)
- **NFR-012:** The system shall adapt layout for tablet devices (768px-1024px)
- **NFR-013:** The system shall utilize full screen real estate on desktop devices (1024px+)
- **NFR-014:** All content shall remain accessible and readable across all screen sizes

3.2.5 Accessibility Requirements

- **NFR-015:** The system shall comply with WCAG 2.1 Level AA accessibility standards
- **NFR-016:** All images shall include appropriate alt text descriptions
- **NFR-017:** The system shall support keyboard navigation
- **NFR-018:** Color combinations shall meet minimum contrast requirements

3.2.6 SEO Requirements

- **NFR-019:** HTML shall include proper semantic markup
- **NFR-020:** Meta tags shall be implemented for search engine optimization
- **NFR-021:** Page structure shall follow SEO best practices

3.2.7 Security Requirements

- **NFR-022:** Contact form shall include basic input validation (if implemented)

- **NFR-023:** No sensitive personal information shall be exposed in source code
- **NFR-024:** External links shall open in new tabs/windows for security

3.3 System Requirements

3.3.1 Technical Architecture

- **SR-001:** The system shall be built using HTML5 semantic markup
- **SR-002:** The system shall use CSS3 for all styling and layout
- **SR-003:** The system shall implement a mobile-first responsive design approach
- **SR-004:** The system shall use CSS Grid and Flexbox for layout management

3.3.2 File Structure

- **SR-005:** HTML files shall be organized in a logical directory structure
- **SR-006:** CSS files shall be modular and organized by function
- **SR-007:** Image assets shall be optimized and organized in dedicated directories
- **SR-008:** Code shall follow consistent naming conventions and formatting

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4. Design Constraints

4.1 Technology Constraints

- Development limited to HTML and CSS only
- No server-side programming or database integration
- No JavaScript frameworks or libraries

4.2 Design Standards

- Must maintain professional appearance suitable for academic and career contexts
- Must align with modern web design principles and trends
- Must ensure accessibility for users with disabilities

4.3 Content Constraints

- All content must be original or properly attributed
- Images must be appropriately licensed for web use
- Professional language and tone required throughout

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5. Quality Attributes

5.1 Maintainability

- Code shall be well-documented with comments
- CSS shall be organized using consistent methodology
- File structure shall be logical and easy to navigate

5.2 Scalability

- Design shall accommodate future content additions
- CSS architecture shall support easy theme modifications
- Structure shall allow for future functionality enhancements

5.3 Reliability

- Website shall function consistently across different environments
- All links and navigation elements shall work as expected
- Images and content shall load reliably

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6. Acceptance Criteria

6.1 Functional Acceptance

- All required sections are present and populated with relevant content
- Navigation functions correctly across all devices
- Contact information is accurate and accessible
- All links work correctly and open appropriate destinations

6.2 Non-Functional Acceptance

- Page loads within 3 seconds on standard internet connection
- Website displays correctly on mobile, tablet, and desktop devices
- All text is readable with appropriate contrast
- Website functions in all specified browsers

6.3 Quality Acceptance

- HTML validates according to W3C standards
- CSS follows best practices and is properly organized
- Images are optimized and load quickly

- Overall design appears professional and polished

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7. Glossary

Portfolio Website: A personal website designed to showcase professional qualifications, skills, and work samples

Responsive Design: Web design approach that ensures optimal viewing experience across different devices and screen sizes

Semantic HTML: HTML markup that conveys meaning about the content structure rather than just presentation

CSS Grid: CSS layout system designed for two-dimensional layout control

Flexbox: CSS layout method for arranging items in a single dimension

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