**ICT807 Web Technologies - Assessment 3**

**Website Portfolio - Written Report**

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**Executive Summary**

This report is a documentation of creation of an online professional portfolio site that presents my academic credentials, work experience, and expertise in the field of my graduate degree in BCA and as a data entry expert. The site consists of ten fully operational pages consisting of a Home, About Me, Resume/CV, Portfolio, Skills, Experience, Education, Blog, Testimonials, and Contact page. The fundamental aim is to have a good web presence that correlates with the modern web development requirements and show attractiveness to HTML5, CSS3, and JavaScript. The design choices were on key design issues like establishing a clean, professional look with blue colour scheme that gives an impression of trust and technological competence. Its implementation is first responsive to design to have the best viewing of any device whether the mobile phone or the desktop computer. The key issues were the need to use effective form validation, establish the smooth movement between different pages, and the full accessibility in the form of semantic HTML and ARIA labels. The resultant product is a clean, professional website that can also be used as an academic evaluation as well as a career developmental aid. It also illustrates the ability to enhance modern web technologies in addition to providing a space to present my own professional brand and technical skills to prospective employers and partners.

**1. Introduction**

The system of digital has changed the way professionals are introduced to a potential employer and partner. A personal site is now a must-have aspect of career advancement, especially in the technology oriented areas. The given assessment is aimed at developing a thorough portfolio site that could be the outcome of the academic task and the practical professional instrument. The main aim of the project is to create and develop a multi-page web site that will represent my professional profile successfully as well as show the sophisticated level of the mastery of web technologies. Digital portfolio provides more versatile content structure, interactive opportunities, and the ability to demonstrate all skills and accomplishments, unlike conventional paper-based resumes which have limited space and are only presented in one way. This format has been selected since this way visitors can get to know various details about my background at their own time when they get to know first hand what I am capable of doing through the functionality and design of my site. Web site format has a number of benefits over traditional professional presentational modalities. It allows the unlimited space to elaborate on academic background, experience and project entries without the limitations of one or two page resume. It also shows technical competency by means of practical application as opposed to just statements on paper. Web technologies are interactive, which makes it possible to create interactive user experiences that create permanent impressions on visitors. The report encompasses the entire progression of development process that starts with planning to the final implementation. It looks at how ten different pages are structured, justifies technical and design choices, evaluates compliance with the professional standards, deliberates upon ethical and accessibility concerns, and muses about the lessons learned in the development process. The report shows an application of the theoretical knowledge acquired through the ICT807 unit into practice to produce a fully operational, standards compliant web presence.

**2. Website Overview and Structure**

The portfolio site has been divided into ten separate pages, each having its own purpose in the provision of the complete profile of the professional. The Home page will be my entry point, with a hero section which contains my name, professional tagline and a call-to-action button that will lead a visitor to the contact page. It gives a summary of the relevant qualifications using three feature cards of education, experience, and skills. The About Me page provides the personal information in more detail such as birth date, family background, location, and professional philosophy, providing a personal touch with the visitors. The Resume/CV page is neatly structured with formal qualifications and personal data indicated in a responsive table, career goals, and academic qualifications, work experience, professional skills, knowledge of languages, and core competencies. This page is similar to the standard resume styles but uses the web technologies to be presented more effectively. On the Portfolio page, six types of work involving data management projects, academic projects, technical documentation, computer training, office administration, and continuing education initiatives are shown that reflect a wide range of experience and dedication to professional development. The Skills page offers elaborate graphical layout of technical abilities in terms of animation of progress bars of proficiency on areas like computer basics, data entry and management, MS office Suite, database management and simple programming. It also brings out soft skills such as teamwork, communication, problem solving and commitment by use of descriptive cards. Experience page is organized in the form of a timeline that shows my position as Data Entry Operator with a description of the main duties and accomplishments done in chronologic order. The Education page also uses such timeline visualization to show academic path since secondary school to BCA degree with institution names, board/university affiliation, percentages and years of completion. Three reflective posts on the experience of creating the website, the need of personal branding in technology, and thoughts about professional experience published on the Blog page demonstrate the skills of writing about technical material and professional experience. The Testimonials page has professional testimonials of colleagues, supervisors and faculty members which provide third-party reinforcement to statements made all over the site. Lastly, the Contact page offers several different forms of communication with the company such as email, phone, physical address, and interactive contact form where the JavaScript validation is activated, so visitors can start professional relationships with ease. The navigation structure uses a sticky header in desktop devices and hamburger menu on mobile devices which makes all pages always accessible no matter the viewport size. The internal linking takes place by use of JavaScript function calls which dynamically reveal and conceal page content avoiding the page reloads hence forming a smooth flow single page application. The semantic HTML5 features such as header, nav, main, section, article, and footer tags are used on all pages and enhance the accessibility and search engines optimization. Vanilla HTML5, CSS3 and JavaScript are the only technical implementation with no external frameworks/libraries and this is a sign of basic knowledge of core web technologies. The HTML coding is based on W3C requirements, CSS uses the latest features of CSS such as CSS Grid, Flexbox, the use of custom properties to manage colors, and animations, the JavaScript component is used to perform form validation, navigation logic, and interactive elements without the use of browser storage APIs.

**3. Design Rationale and Technical Implementation**

The choice of technologies for this project was guided by assessment requirements and learning objectives emphasizing fundamental web technologies rather than frameworks or libraries. HTML5 provides the structural foundation with semantic elements that improve accessibility and SEO while clearly defining content purpose. CSS3 handles all visual presentation through external stylesheets, maintaining separation of concerns and enabling efficient style updates. JavaScript adds interactivity for navigation, form validation, and dynamic content display without requiring page reloads.

The decision to create a single HTML file containing all pages represents a pragmatic approach to the assessment requirements. Rather than creating ten separate HTML files with repeated navigation code, this implementation uses JavaScript to dynamically show and hide content sections based on user navigation choices. This approach reduces code redundancy, simplifies maintenance, and creates a seamless user experience similar to modern single-page applications while remaining accessible to users with JavaScript disabled through progressive enhancement principles.

Visual design choices were carefully considered to create a professional appearance appropriate for a technology professional's portfolio. The color palette centers on shades of blue, specifically using CSS custom properties for primary color (#2563eb) and secondary color (#1e40af). Blue was selected because it conveys trust, stability, and technological expertise, qualities essential for professional branding in IT fields. The gradient applications using linear-gradient functions add visual interest and depth while maintaining professional aesthetics. White backgrounds with subtle shadows create clean, readable content areas that focus attention on information rather than decorative elements.

Typography employs the system font stack 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif, ensuring consistent, readable text across different operating systems without requiring web font downloads that could impact performance. Font sizes are carefully scaled with headings at 2-3rem and body text at 1rem, maintaining clear visual hierarchy. Line height of 1.6 improves readability, particularly for longer content sections.

The responsive design strategy employs a mobile-first approach with a base layout optimized for small screens and media queries adding complexity for larger viewports. At viewport widths below 768px, the navigation transforms from horizontal menu to vertical hamburger menu, grid layouts switch from multi-column to single-column, and font sizes adjust for optimal mobile reading. CSS Grid with auto-fit and minmax functions creates flexible layouts that adapt naturally to available space without requiring numerous breakpoints.

Specific design challenges included creating consistent spacing and alignment across diverse content types, implementing smooth page transitions without page reloads, designing a form validation system that provides clear user feedback, and ensuring color contrast ratios meet WCAG accessibility standards. Solutions involved establishing a consistent spacing system using rem units, implementing CSS animations for fade-in effects on page transitions, creating comprehensive JavaScript validation with both real-time and submit-time checks, and testing color combinations against accessibility guidelines.

The form validation implementation represents significant technical achievement within the project. JavaScript functions validateEmail and validateForm check input completeness and format correctness, providing immediate feedback through error messages and visual styling changes. Real-time validation triggers on blur events, checking individual fields as users complete them, while submit-time validation performs comprehensive checks before allowing form submission. This dual-layer approach balances user experience with robust validation, preventing frustration from premature error messages while ensuring data quality.

Accessibility was prioritized throughout development through semantic HTML5 elements that convey document structure to assistive technologies, ARIA labels on interactive elements like the mobile menu button, proper heading hierarchy starting with h1 and progressing logically through content levels, keyboard navigation support ensuring all interactive elements are accessible without a mouse, and sufficient color contrast ratios between text and backgrounds meeting WCAG AA standards. These implementations ensure the website is usable by individuals with various disabilities, expanding potential audience reach.

**4. Professional and Personal Alignment**

The website design deliberately reflects my identity as an emerging technology professional through several conscious choices. The clean, organized layout mirrors the attention to detail and systematic approach I developed through data entry work where precision and organization are paramount. The blue color scheme projects professionalism and technological expertise, qualities I aim to embody in my career. The comprehensive nature of the content, covering education, experience, skills, and ongoing learning, demonstrates commitment to continuous professional development.

The voice and tone throughout the website balance professionalism with approachability. Content is written in first person to create personal connection while maintaining formal language appropriate for professional contexts. The About Me section shares personal details like family background and location without oversharing inappropriate information, striking balance between human connection and professional boundaries. The blog posts demonstrate ability to reflect critically on experiences and articulate technical concepts in accessible language, showcasing communication skills valued in professional environments.

Current industry expectations for web portfolios emphasize several key elements, all incorporated into this site. Responsive design ensuring functionality across devices is non-negotiable in modern web development, reflected in the mobile-first approach employed here. Clear navigation allowing visitors to quickly find relevant information addresses the short attention spans common in digital browsing. Visual presentation that is professional but not overly flashy demonstrates understanding that content should take precedence over decoration. Contact information accessibility makes it easy for opportunities to materialize from website visits.

The portfolio aligns with contemporary practices in professional web presence by including traditional resume information while extending beyond it to showcase personality, work samples, and technical capabilities. The blog section demonstrates thought leadership and ability to communicate complex ideas, increasingly important in technology fields where collaboration and knowledge sharing are valued. Testimonials provide social proof of professional capabilities, addressing the trust-building challenge inherent in digital communication.

This website supports several career and academic goals. Immediately, it serves as a submission for ICT807 assessment, demonstrating mastery of unit learning outcomes related to web technology standards, data-driven application development, and security/privacy considerations. Beyond the academic context, it functions as a professional marketing tool when applying for positions in data entry, database management, web development, or related IT fields. The URL can be included on traditional resumes, LinkedIn profiles, and email signatures, directing interested parties to comprehensive information about my qualifications.

Long-term, this portfolio establishes foundation for ongoing professional branding. As skills develop and experience accumulates, the website can be updated to reflect growth, serving as a living document of professional evolution. The blog section provides platform for establishing thought leadership through regular posts about technology trends, project experiences, and professional insights. This positions me not just as a job seeker but as an engaged member of the technology community.

The website also addresses a specific challenge faced by BCA graduates and entry-level technology professionals: distinguishing oneself in competitive job markets. While many candidates have similar academic qualifications, having a professional portfolio website demonstrates initiative, practical skill application, and genuine interest in the field beyond academic requirements. It provides concrete evidence of capabilities that resume bullet points can only claim.

**5. Ethical, Privacy, and Accessibility Considerations**

Accessibility implementation was central to the development process, guided by WCAG guidelines and modern best practices. All images, where applicable, include descriptive alt text enabling screen reader users to understand visual content. While this portfolio is primarily text-based, the practice was established for future image additions. The semantic HTML5 structure uses appropriate elements like header, nav, main, article, and footer, providing clear document outline for assistive technologies. This structure allows screen readers to navigate efficiently between sections and understand content relationships.

Keyboard navigation received particular attention with all interactive elements including navigation links, form inputs, and buttons accessible via keyboard alone without requiring mouse interaction. The tab order follows logical content flow, and focus states are clearly visible through CSS styling changes. The contact form includes proper label associations with input fields using for attributes and id values, ensuring screen readers can identify field purposes. Required fields are marked both visually with asterisks and programmatically with required attributes and aria-required="true", providing redundant indicators for different user needs.

Color contrast ratios were verified using accessibility checking tools to ensure text remains readable for users with visual impairments including color blindness. The primary blue (#2563eb) on white backgrounds and white text on blue backgrounds both exceed WCAG AA standard 4.5:1 ratio for normal text. Heading hierarchy follows proper structure starting with single h1 element per page and progressing logically through h2, h3, and h4 without skipping levels, enabling users to navigate by headings using assistive technologies.

Privacy considerations shaped decisions about what personal information to include and how to handle user data. The contact form collects only necessary information: name, email, subject, and message. No sensitive data like financial information, identification numbers, or detailed personal history is requested. Form submission uses frontend validation only without actual backend submission in this prototype, meaning no user data is stored or transmitted. This approach protects both my privacy and visitor privacy during the assessment phase.

In a production deployment, several additional privacy measures would be implemented including HTTPS encryption ensuring data transmission security, privacy policy page explaining data collection, usage, and retention practices, cookie consent mechanism if analytics or other tracking were implemented, and secure backend processing with proper data encryption and access controls. For this academic prototype, these considerations were noted in documentation and planned for future implementation.

Ethical concerns in publishing a public-facing website were carefully addressed. All content is original work without plagiarism or unauthorized use of others' materials. Testimonials, while realistic in format, represent generalized professional feedback patterns rather than actual quotes from identifiable individuals, avoiding privacy concerns around publishing others' statements without permission. The blog posts reflect genuine learning experiences and insights from the development process rather than fabricated content. Professional networking links to LinkedIn and GitHub are included as placeholders, demonstrating understanding of professional social media integration without requiring actual accounts for assessment purposes.

Security considerations, while limited in a static HTML prototype, informed development decisions. Form validation prevents common injection attacks by checking input formats and lengths. No inline JavaScript or eval functions were used, reducing XSS vulnerability risks. In production deployment, additional security measures would include Content Security Policy headers restricting resource loading sources, server-side input validation and sanitization, rate limiting on form submissions to prevent spam, and regular security audits of dependencies if frameworks were later introduced.

The website respects user autonomy through clear navigation, lack of intrusive elements like auto-playing videos or animated advertisements, and transparent presentation of information without manipulation or deceptive practices. The single-page architecture without actual page reloads could confuse users expecting traditional navigation, addressed through clear visual feedback, URL fragment updates reflecting current page, and consistent navigation state highlighting.

**6. Reflection and Lessons Learned**

The website development process significantly expanded both technical and non-technical skills. On the technical side, practical experience with HTML5 semantic elements moved beyond theoretical knowledge to understanding how proper structure improves accessibility and maintainability. CSS Grid and Flexbox, previously abstract concepts, became powerful tools for creating flexible layouts that adapt naturally to different screen sizes. JavaScript validation logic required thinking through edge cases and user experience implications, developing problem-solving abilities applicable beyond this specific project.

Responsive design principles transformed from checkbox requirements to intuitive understanding of mobile-first design philosophy. Testing the website across different viewport sizes revealed how design decisions impact user experience on various devices, reinforcing the importance of considering diverse user contexts. The mobile hamburger menu implementation required learning state management in vanilla JavaScript, handling user interactions, and updating UI dynamically.

Major insights emerged throughout the project. First, planning before coding proved invaluable. Initial time spent sketching page layouts, planning content organization, and establishing color schemes saved significant revision time later. Second, accessibility is not an afterthought but must be integrated from the beginning. Attempting to retrofit semantic structure or keyboard navigation after visual design completion would have been significantly more challenging.

Third, validation logic requires balancing user experience with data integrity. Overly aggressive validation that displays errors before users complete fields creates frustration, while insufficient validation allows invalid data submission. The implemented approach using blur events for real-time feedback and comprehensive submit validation achieved reasonable balance. Fourth, consistent design patterns across pages create coherent user experience. Repeating card layouts, color schemes, and spacing patterns makes the website feel unified rather than disjointed.

This project prepared me for professional practice in several ways. It demonstrated that web development involves more than writing code—it requires considering user needs, accessibility requirements, design aesthetics, and business objectives simultaneously. The experience of seeing a project through from concept to completion built confidence in ability to tackle complex technical challenges. Documentation practices developed for this report mirror professional standards where code must be explained and justified to stakeholders.

Time management skills improved through balancing website development with report writing and other academic commitments. The iterative development approach, starting with basic structure and progressively enhancing functionality, proved more effective than attempting to build everything perfectly from the start. This agile-inspired methodology will transfer to professional projects where requirements evolve and early user feedback shapes final products.

The project also highlighted areas for continued learning. While vanilla JavaScript was sufficient for this portfolio, understanding of modern frameworks like React or Vue.js would enable more complex interactive applications. Backend development skills would allow for actual form submissions, user authentication, and dynamic content management. Advanced CSS techniques like CSS Grid subgrid and container queries would provide even more layout flexibility.

Most significantly, this project reinforced that technology serves human needs. The most elegant code is worthless if users cannot access it or understand it. Every technical decision ultimately serves the goal of communicating professional capabilities to potential employers and collaborators. This human-centered perspective will guide future development work as technology continues evolving.

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