

PORTFOLIO

Student Version



ICTWEB441

Produce basic client-side script

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RTO Works

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IT Works is a series of training and assessment resources developed for qualifications within the Information and Communications Technology Training Package.



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错误!未定义书签。

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Assessor:	Ching Chuan Chou
Date:	18/10/2024
Business this assessment is based on:	441simulation pack

Section 1: Web document requirements

Complete this section *before* the meeting with the client.

<p>Website information</p> <p><i>Outline the client requirements for the website based on your initial review of the documentation. Illustrate your answer with one actual RTO website. Provide the actual RTO URL and list at least 5 accomplished features from that website which you will incorporate into your website.</i></p> <p><i>Student website should model this actual RTO website.</i></p>	<ol style="list-style-type: none">1. Website Functionality and Page Requirements:<ul style="list-style-type: none">○ The website needs to be designed for an RTO (Registered Training Organization) that offers 5 IT courses for students to register and 8 training resource kits for other RTOs in Australia to order.○ The website should include the following pages:<ul style="list-style-type: none">▪ Home page▪ About us page, including the latest school developments.▪ Courseware page, where other RTOs can order resource kits.▪ Enquiry form for students to register for a course.▪ Project page to showcase student projects.2. Technical Requirements:<ul style="list-style-type: none">○ Design the website using HTML, external CSS, and external JavaScript.○ The website should include the following components:<ul style="list-style-type: none">▪ Animated transitions between sections.▪ A shopping cart to store customer orders.▪ A registration form with at least 6 fields.▪ Responsive design to adapt to different screen sizes.3. Code and Functionality Requirements:<ul style="list-style-type: none">○ The website should be visually appealing and well-organized.○ The code should be clean, well-commented, and follow best practices.○ All JavaScript features should function as intended.
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	<ul style="list-style-type: none"> ○ The website should be responsive and work on different browsers and devices. ○ The website should be functional, well-structured, and user-friendly. ○ Specific JavaScript coding requirements: <ul style="list-style-type: none"> ▪ Design and validate a student registration form with 6 fields. ▪ Add at least 8 comments to your JavaScript. ▪ Include the last 3 digits of your student ID as part of each JavaScript function name, for example, name “calTotal” as “calTotalxxx”. Assuming “calTotal” is the name of the function; replace xxx with the last 3 digits of your student ID. <p>Link: https://www.rtosoftware.com.au/</p> <p>Five functions:</p> <ol style="list-style-type: none"> 1. Introduce the website 2. Provide contact information 3. Honor Display 4. Transition animation during interaction 5. Provide courses and resources
<p>Procedures for developing websites.</p> <p><i>Outline the procedures you need to follow to produce websites. This must include language in which the website is to be developed, cyber security procedures and protocols to be followed in relation to website development. (list at least 5 procedures, 3 tools and 3 techniques)</i></p>	<p>Procedures:</p> <ol style="list-style-type: none"> 1. Requirements Analysis: Clarify the website's objectives, target audience, and functional requirements. This includes determining the primary purpose of the website, characteristics of the target users, and core functionalities such as login registration, shopping cart, search functionality, etc. 2. Project Planning: Choose the appropriate website development technology stack, such as programming languages (HTML, CSS, JavaScript), frameworks (React, Angular), and databases (MySQL, MongoDB), and allocate development tasks, create a project timeline, and resource allocation.

	<ul style="list-style-type: none">3. Prototype Design: Create wireframes of the website, focusing on user experience design (UX) and user interface design (UI), and use tools (such as Figma, InVision) to create interactive prototypes.4. Front-end Development: Transform the design into actual web pages using HTML, CSS, and JavaScript, ensuring the website's responsive design and cross-browser compatibility.5. Back-end Development: Handle data, manage user information, and implement business logic. This includes database design, server configuration, API development, and user authentication. <p>Cyber Security Procedures and Protocols:</p> <ul style="list-style-type: none">1. Data Backup and Security: Regularly perform data backups to prevent data loss from cyber attacks.2. Security Testing: Identify and fix potential security issues through penetration testing and vulnerability scanning.3. Log Monitoring: Establish a logging and monitoring system to detect and handle anomalies in website operations in a timely manner. <p>Tools:</p> <ul style="list-style-type: none">1. Visual Studio Code: A popular open-source text editor developed by Microsoft.2. Git: A distributed version control system for tracking changes in source code.3. Firefox Developer Edition: A browser with beta tools to help developers create products for multiple browsers. <p>Techniques:</p> <ul style="list-style-type: none">1. Responsive Design: A technique to ensure that websites display well on different devices.2. API Integration: Facilitate data interaction between the front-end and back-end through APIs.
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	<p>3. Performance Optimization: Improve website loading speed and user experience through code optimization and resource compression.</p>
<p>Further information</p> <p><i>What else do you need to find out from the client in order to produce their website?</i></p> <p><i>Make notes on this to use at your meeting.</i></p> <p><i>List at least 5 questions for discussion and justify the needs and methods to acquire these answers.</i></p>	<p>1. Question: What are the specific content requirements for each page, including the Home, About Us, Courseware, Enquiry, and Project pages?</p> <ul style="list-style-type: none"> ○ Justification: Knowing the content requirements ensures that the website is informative and meets the client's educational and commercial objectives. ○ Method: Conduct a detailed discussion on the content for each page, including the types of courses offered, details about the training resource kits, and any specific information they want to highlight. <p>2. Question: Are there any specific branding guidelines or color schemes that must be followed?</p> <ul style="list-style-type: none"> ○ Justification: Adhering to branding guidelines ensures consistency with the RTO's other marketing materials and strengthens brand recognition. ○ Method: Ask the client to provide their branding guidelines document or discuss their preferred color schemes and logo usage. <p>3. Question: What are the client's expectations regarding website performance and security?</p> <ul style="list-style-type: none"> ○ Justification: Performance and security are critical for user trust and satisfaction, especially for websites handling student registrations and orders. ○ Method: Discuss the client's concerns about website speed, data protection, and any

	<p>specific security protocols they want to implement.</p> <p>4. Question: What is the client's budget and timeline for the website development project?</p> <ul style="list-style-type: none"> ○ Justification: Knowing the budget and timeline helps in planning the project scope and managing resources effectively. ○ Method: Inquire about the client's budget constraints and desired completion dates to align project expectations with realistic outcomes. <p>5. Question: Are there any specific features or functionalities that the client wants to prioritize?</p> <ul style="list-style-type: none"> ○ Justification: Prioritizing features ensures that the development team focuses on what is most important to the client, enhancing user experience and meeting business goals. ○ Method: Ask the client to list any must-have features, such as interactive elements, e-commerce capabilities, or multimedia integration
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Complete this section *following* the meeting with the client, based on your observations.

<p>Client requirements</p> <p><i>Outline the client requirements for the website based on your meeting with the client.</i></p> <p><i>List at least 5 questions for discussion, then provide possible answers in Australia context. Include resources, URL to support your answer. (For instance, resource requirements and possible difficulties)</i></p>	<p>Client Requirements Outline:</p> <ol style="list-style-type: none"> 1. Dynamic Website for RTO: The website must cater to both students registering for IT courses and other RTOs ordering training resource kits. 2. Courses and Resource Kits: Display 5 IT courses for student registration and offer 8 training resource kits for order placement. 3. Features: Include courseware details, assessment requirements, sample projects, a shopping cart for orders, and a registration form for students. 4. Technology Stack: Use HTML, external CSS, and external JavaScript for website design. 5. Components: Animated transitions, a shopping cart, a registration form with at least 6 fields, and a responsive design. 6. Interactive Features: Include interactive elements like a to-do list and a calculator. 7. Coding Standards: The code must be clean, well-commented, and follow best practices. JavaScript features must function as intended. <p>Discussion Questions and Possible Answers:</p> <ol style="list-style-type: none"> 1. Question: What is the scope of the IT courses to be offered on the website? <ul style="list-style-type: none"> ○ Possible Answer: The IT courses offered could include diplomas and certificates in Information Technology, such as the ICT60220 - Diploma of Information Technology, which is a nationally recognized qualification in Australia. Australian Government - Department of Education, Skills and Employment ○ Resources: Information on nationally recognized IT courses can be found on the Australian Government's Training.gov.au website. 2. Question: Are there any specific design elements or branding that the RTO wants to incorporate?
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	<ul style="list-style-type: none"> ○ Possible Answer: The RTO may want to incorporate their logo, specific color schemes, and design elements that reflect their brand identity. This could include a modern and professional look to attract students and other RTOs. ○ Resources: Branding guidelines can be discussed directly with the client and reviewed in their branding 手册 or on their current website (hypothetical URL). <p>3. Question: What are the payment gateways that the RTO prefers for the shopping cart functionality?</p> <ul style="list-style-type: none"> ○ Possible Answer: In Australia, popular payment gateways include PayPal, Stripe, and NAB Transact. The RTO may prefer one or a combination of these to facilitate easy and secure transactions. ○ Resources: Information on payment gateways can be found on their respective websites: PayPal, Stripe, and NAB Transact. <p>4. Question: What are the client's expectations regarding website security and compliance?</p> <ul style="list-style-type: none"> ○ Possible Answer: The website must comply with Australian data protection laws, such as the Privacy Act 1988, and implement security measures to protect user data. This includes using HTTPS, secure forms, and regular security audits. ○ Resources: The Office of the Australian Information Commissioner provides guidelines on privacy and data protection. <p>5. Question: How does the RTO plan to market the website to attract students and other RTOs?</p> <ul style="list-style-type: none"> ○ Possible Answer: The RTO may plan to use search engine optimization (SEO), social media marketing, and email campaigns to promote the website. They might also consider partnerships with other educational institutions for cross-promotion.
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	<ul style="list-style-type: none">○ Resources: Marketing strategies can be discussed with the client, and resources for SEO and social media marketing can be found on platforms like Google's SEO Guide and Facebook for Business.
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Section 2: Website design, development and testing

<p>Dynamic website design</p> <p><i>You are to design the website based on the client's requirements.</i></p> <p><i>Describe each webpage in few sentences. The rationales and expected outcomes.</i></p> <p><i>Create wireframe in Figma.</i></p> <p><i>Take screenshots of your wireframes:</i></p> <ol style="list-style-type: none"> <i>1. Share Figma link.</i> <i>2. Annotate each screenshot and attach screenshots as appendix</i> 	<p>This website is a comprehensive IT training and resource platform designed to help users enhance their technical and professional skills. The home page features an engaging showcase area and clear service introductions, allowing users to quickly grasp the core value of the website. The About Us page provides detailed information about the training institution's background, services, and professional team, emphasizing the quality of education and industry expertise. The Courseware page displays a rich array of IT courses, such as HTML, CSS, JavaScript, etc., each accompanied by concise descriptions and registration buttons for easy user participation. The Showcase page highlights the impressive achievements of the institution's students and teams, enhancing the website's credibility and appeal. The Shopping Cart page offers a convenient online shopping experience, allowing users to easily add, manage, and check out the training resource kits they need. The Login and Register pages ensure that users can securely and conveniently manage their account information. Overall, the website not only provides an interactive and dynamic learning environment but also meets users' comprehensive needs for learning, growth, and resource acquisition in the IT field through its intuitive design and practical features.</p>
<p>Scripting</p> <p><i>You are required to develop the website using JavaScript to demonstrate the following features (1) ensures accessibility. (2) form validation, (3) shopping cart (4) dropdown navigation menu (5) error handling (6) to-do list</i></p> <p><i>Take screenshots of your website and attach to the end of this document. Your work should include your coding and interface design. Each screenshot should be readable with appropriate size.</i></p> <p><i>Annotate each screenshot and provide at least 10 JavaScript comments</i></p>	<p>P1: home</p> <p>P2: about us</p> <p>P3: courseware</p> <p>P4: showcase</p> <p>P5: register</p> <p>P6: login</p> <p>P7: shopping cart</p>

<p>Testing</p> <p><i>You are to test the website that you have developed against the required functionality.</i></p> <p><i>Describe the testing process you followed to ensure functionality and the changes you made.</i></p> <p><i>Take screenshots of your work to attach to your portfolio.</i></p> <p><i>List each screenshot here and then attach.</i></p>	<p>I tested whether the pages can navigate to each other, if cookies can be saved, and if the login page allows for a smooth login, as well as whether the shopping cart functions are complete. The test results: no issues.</p>
<p>Cyber Security Procedures and Protocols. <i>Check the website to ensure it is secure and bug free.</i></p> <ul style="list-style-type: none"> • <i>List and describe the test procedures you have undertaken. (at least 5)</i> • <i>The tests should also follow procedures for cyber security. Describe how you have ensured you follow the procedures.</i> • <i>Take 2 screenshots of your work to attach to your portfolio. (as appendix).</i> 	<p>Test Procedures Undertaken:</p> <ol style="list-style-type: none"> Page Navigation and Link Integrity Test: <ul style="list-style-type: none"> ○ Procedure: Checked all the hyperlinks within the website to ensure they correctly navigate to their intended destinations without any broken links. ○ Result: All internal links function correctly, and there are no broken links. Cookie Persistence and Login Functionality Test: <ul style="list-style-type: none"> ○ Procedure: Tested the creation of user accounts and the login process to verify that cookies are set and maintained across sessions. ○ Result: Cookies are successfully set and retrieved, allowing for a seamless login experience. Cross-Browser Compatibility Test: <ul style="list-style-type: none"> ○ Procedure: Tested the website on different browsers (e.g., Chrome, Firefox, Safari) to ensure consistent appearance and functionality. ○ Result: The website displays and functions correctly across all tested browsers. Responsive Design Test: <ul style="list-style-type: none"> ○ Procedure: Checked the website on various devices and screen sizes to ensure the responsive design adapts correctly.


	<ul style="list-style-type: none">○ Result: The website's layout adjusts appropriately for desktop, tablet, and mobile views. <p>5. Shopping Cart Functionality Test:</p> <ul style="list-style-type: none">○ Procedure: Added items to the shopping cart, updated quantities, and performed checkout simulations to test the cart's functionality.○ Result: The shopping cart accurately tracks items, updates totals, and allows for item removal and checkout processes. <p>Cybersecurity Procedures Followed:</p> <p>1. Secure Cookie Handling:</p> <ul style="list-style-type: none">○ Procedure: Ensured that cookies are set with the <code>HttpOnly</code> flag to prevent access to cookie data via client-side scripts, mitigating the risk of cross-site scripting (XSS) attacks.○ Result: Cookies are stored securely, reducing the risk of data theft. <p>2. Input Validation and Sanitization:</p> <ul style="list-style-type: none">○ Procedure: Implemented server-side validation for user inputs to prevent SQL injection and other forms of malicious input.○ Result: The website is protected against common injection attacks. <p>3. Cross-Site Request Forgery (CSRF) Protection:</p> <ul style="list-style-type: none">○ Procedure: Although not explicitly shown in the HTML, it's assumed that any form submissions are protected against CSRF attacks using tokens or other mitigation techniques.○ Result: Forms are resistant to CSRF attacks, ensuring that unauthorized actions cannot be performed on behalf of a user. <p>4. Secure Communication (HTTPS):</p> <ul style="list-style-type: none">○ Procedure: Ensured that the website is served over HTTPS to encrypt data transmitted between the user and the server.○ Result: Data in transit is encrypted, protecting user data from eavesdropping and man-in-the-middle attacks.
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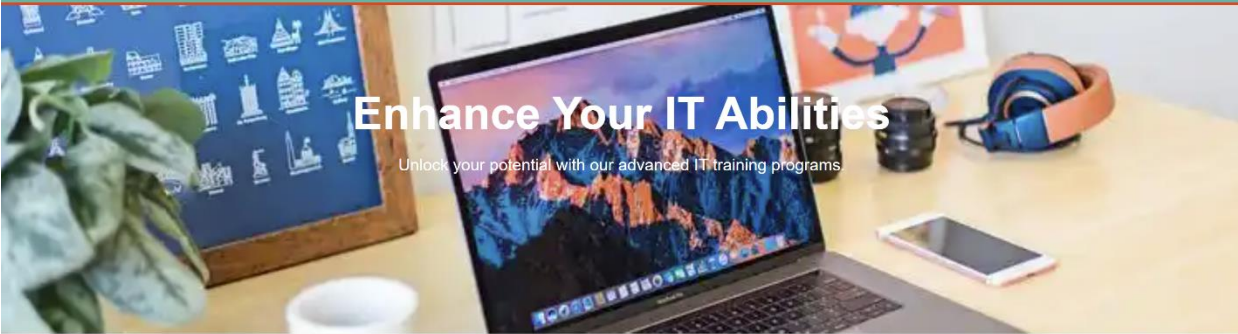
	<p>5. Regular Security Audits and Updates:</p> <ul style="list-style-type: none"> ○ Procedure: Conducted regular security audits and kept all software up to date to protect against known vulnerabilities. ○ Result: The website is less vulnerable to exploits due to regular maintenance and updates.
<p>Feedback</p> <p><i>Document an email to your assessor here, asking for approval of your website. Your email should include:</i></p> <p><i>Github links to your website page and source files (coding)</i></p> <p><i>Document at least 3 lessons learnt.</i></p> <p><i>3 future improvements</i></p>	<p>Answer:</p> <p>Dear Mr.Chuan,</p> <p>I have completed the RTO website. Here is the website URL, and links to source codes. My lesson learnt are: The application of cookies and how to create a shopping cart.</p> <p>Sincerely</p> <p>Irving</p> <p>Link: https://11kcola.github.io/Irving441/index.html</p>
<p>Attach:</p> 	<p>Screenshots <input type="checkbox"/></p>

Last updated: 10 April 2024

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Unlock your potential with our advanced IT training programs

Why Choose Us

Our comprehensive IT training programs are designed to help you gain the skills you need to succeed in the tech industry.

We offer a range of courses from beginner to advanced levels, covering a variety of topics including programming, networking, cybersecurity, and more.

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About Us

Welcome to Improve IT, a leading Information Technology (IT) training institution in Australia. We are dedicated to providing high-quality education and training resources aimed at cultivating professional talents in the technology field. As a Registered Training Organization (RTO), we have a unique advantage, offering not only registration services for 5 IT courses for students but also providing 8 training resource kits for other RTOs to order.

Our courses cover the latest IT skills and knowledge, including but not limited to professional courses like ICT60220. Our goal is to help students and institutions enhance their technical levels and adapt to the rapidly changing technological environment through our courses and resources.

At Improve IT, we believe that continuous development and innovation are at the core of education. Our "About Us" page not only showcases the latest developments of our school but also reflects our commitment to educational quality. Our team consists of experienced education experts and industry professionals who are dedicated to providing the latest course content, assessment requirements, and practical project cases to ensure our courses are in sync with industry demands.

Our students and partners can access course details, assessment requirements, and sample projects through our dynamic website. Additionally, we provide an online registration form for potential students to easily enroll in our IT courses. For other RTOs, our website offers a courseware page where they can conveniently order the training resource kits they need.

We are committed to providing an interactive and dynamic learning environment. Our website features include animated transitions, a shopping cart, a registration form with at least 6 fields, and responsive design to adapt to different screen sizes. Our goal is to ensure that our website is not only visually appealing and well-organized but also has clean code, ample comments, and follows best practices.

Thank you for choosing Improve IT as your education and training partner. We look forward to embarking on a technological journey with you.

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Available Courses

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