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| --- | --- | --- | --- | --- | --- |
| Student Name | | Alexius Allesandro Wijaya | Student Number | 473456319 | |
| Unit Code/s & Name/s | | ICTWEB519 Develop complex web page layouts  ICTWEB520 Develop complex cascading style sheets | | | |
| Cluster Name  *If applicable* | | Web Design Cluster | | | |
| Assessment Type | | Case Study  Assignment  Project  Other *(specify)* | | | |
| Assessment Name | | Brochure Website Project | Assessment Task No. | | 2 of 3 |
| Assessment Due Date | |  | Date Submitted | / / | |
| Assessor Name | |  | | | |
| **Student Declaration:** I declare that this assessment is my own work. Any ideas and comments made by other people have been acknowledged as references. I understand that if this statement is found to be false, it will be regarded as misconduct and will be subject to disciplinary action as outlined in the TAFE Queensland Student Rules. I understand that by emailing or submitting this assessment electronically, I agree to this Declaration in lieu of a written signature. | | | | | |
| Student Signature |  | | Date | / / | |
| **PRIVACY DISCLAIMER:** TAFE Queensland is collecting your personal information for assessment purposes. The information will only be accessed by authorised employees of TAFE Queensland. Some of this information may be given to the Australian Skills Quality Authority (ASQA) or its successor and/or TAFE Queensland for audit and/or reporting purposes. Your information will not be given to any other person or agency unless you have given us written permission or we are required by law. | | | | | |

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| Instructions to Student | **General Instructions:**  You are an employee of Uptown IT and you work in the Commercial Creative Department. Your role is to design and develop websites and in recent years you have specialised in designing single page websites (Brochure Websites). Your manager has assigned you to a new project and has provided you with documentation regarding the project requirements. You also attended two client meetings.  Your teacher/assessor will take on the role of a manager for Uptown IT Commercial Creative Department.  Read and familiarise yourself with the Project Scenario or Case Study before proceeding with project tasks. Confirm anything you are not sure about the project with your teacher. It is essential that you have a clear understanding of the scenario and tasks that you need to complete.  This assessment instrument requires the student to complete a project that is divided into four (4) parts:   * **PART 1** Identifying the page content and design the HTML page structure * Task 1 Identifying the HTML page requirements * Task 2 Design and create HTML page as per requirements * Task 3 Page layout design considerations * Task 4 Create HTML page layout sections * **PART 2** Cascading style sheet (CSS) to format page layout * **PART 3** Test, debug and validate HTML and CSS against the W3C * **PART 4** Knowledge Questions related to CSS, HTML, XHTML, web design, frameworks and web libraries   **Materials Required:**   * Students are required to provide their own storage device. The recommendation for this qualification is an external SSD drive with at least 500 GB capacity, if you need to store a copy of the Virtual Machine (VM). For assessment files only, a 64 GB thumb drive will be sufficient. * Access to computers. PCs and peripherals - these may differ between classrooms * Internet access * Access to a number of browsers * Access to different devices to test website * Access to Connect (LMS) * Word processing software, such as Microsoft Word. * Special purpose tools, equipment and materials to complete the assessment   **Online Delivery:**  Student to supply their own PC or laptop an Internet Access  **Documentation:**  Uptown IT Scenario or Case Study  Style Guide  **Assessment Criteria:**  To achieve a satisfactory result, your assessor will be looking for your ability to demonstrate the following key skills/tasks/knowledge to an acceptable industry standard. Demonstrated ability to:   * Identify legislative and organisational standards and procedures in relation to webpage development * Design a web page as per client specifications * Create HTML and CSS layout structure * Use HTML semantic elements * Use complex CSS to formal page layout * Positioning page elements using complex CSS * Test design and functionality of a web page against W3C * Test and debug a web page * Test is at least two (2) browsers and two (2) devices * Obtain client sign off * Six (6) knowledge questions related to CSS, HTML, XHTML and web design.   **Refer to the marking criteria for specific details:**  ICTWEB519\_520\_AT2\_MC\_TQM\_v1  **Details of location:**  Skills and knowledge in this competency unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.  Research and project activities may be conducted in the classroom or at home.  If you are unable to attend a scheduled assessment activity, you must notify your teacher before the assessment is due and supply a doctor's certificate and approval from the team manager for an extension.  **Time restrictions:**  This assignment is designed to take place over 5 weeks or approximately 20 hours. The student is expected to attend classes as per timetable details and should be able to commit up to 3 hours per week of their own time to study or study related activities.  **Interactions:**  Teamwork skills are essential in the IT industry therefore you should work in teams to consult and collaborate on practical activities. However, each student must complete the assessment tasks individually (unless indicated).  **Level of assistance permitted:**  Staff cannot directly show students answers or solutions but support and guide them to complete tasks individually. Teachers and tutors should be available in class, and accessible by email for students working from home.  **Contingencies:**  A reasonable adjustment is available to students for a variety of reasons, including disability, language, literacy, and numeracy (LLN) problems or extenuating circumstances.  **Work, Health and Safety:**  The work environment should be assessed for safety prior to class. Special consideration should be taken regarding potential ICT related hazards such as tripping hazards, electromagnetic radiation, ergonomics, and posture. TAFE Queensland health and safety policies and procedures should be followed at all times.  **Number of Attempts:**  You will receive up to two (2) attempts at this assessment task. Should your 1st attempt be unsatisfactory (U), your teacher will provide feedback and discuss the relevant sections / questions with you and will arrange a due date for the submission of your 2nd attempt. If your 2nd submission is unsatisfactory (U), or you fail to submit a 2nd attempt, you will receive an overall unsatisfactory result for this assessment task. Only one re-assessment attempt may be granted for each assessment task.  ***For more information, refer to the Student Rules.*** |
| Submission details | **Evidence Required to be Submitted:**  Insert your details on page 1 and sign the Student Declaration. Include this template with your submission.  **Deliverables:**  For this assessment item you need to complete the written sections in this document, then rename it to:   * AT2\_Written\_Surname\_Student Number   Complete the website project and rename the site folder as:   * AT2\_Website\_Surname\_Student Number   Create a folder:   * AT2\_ICTWEB519\_520\_Project\_Surname\_Student Number   Insert the two files you renamed above into this folder, compress it (e.g. with WinZip) and upload it via Connect.  **Submission via Connect:**  Upload a single file into Assessment 2 (AT2) Assignment Folder in Connect  Multiple files can be compressed into a single file  Name the file:  ICTWEB519\_520\_AT2\_Project\_Surname\_Student Number  TAFE Queensland Learning Management System:  **Accessing Connect:**  Connect URL: <https://connect.tafeqld.edu.au/d2l/login>  Username: 9 digit, student number  Password: <your password>  For password reset go to: <https://passwordreset.tafeqld.edu.au/default.aspx> |

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| Instructions for the Assessor | **Online Delivery:**  Please revise and modify the Instructions to Student section if you are delivering online.  **Specifications of assessment:**  To be judged competent in this assessment item the student is required to demonstrate competence in all indicators shown in the marking guide.  Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the web development field of work and include access to:   * web development environment * project requirements.   Ensure that students read and familiarise themselves with the Project Scenario and the Client provided relevant files and/or resources before attempting the assessment.  **Storage Devices:**  Students are required to provide their own storage device. The recommendation for this qualification is an external SSD drive with at least 500 GB capacity, if you need to store a copy of the Virtual Machine (VM). For assessment files only, a 64 GB thumb drive will be sufficient.  **Assessor to Provide Access to:**   * Access to lab computers. PCs and peripherals - these may differ between classrooms * Internet access * Access to a number of browsers * Access to different devices to test website * Access to Connect (LMS) * Word processing software, such as Microsoft Word. * Special purpose tools, equipment and materials to complete the assessment   **Online Delivery:**  Student to supply their own PC or laptop an Internet Access  **Documentation:**  Uptown IT Scenario or Case Study  Style Guide  **Level of Assistance Permitted:**  Teachers and tutors should be available in class, and accessible by email for students working from home. Staff cannot directly show students answers but guide them to where to go to complete tasks individually. Students with disability will receive reasonable adjustments.  **Interactions:**  Teamwork skills are essential in the IT industry therefore you should work in teams to consult and collaborate on practical activities. However, each student must complete the assessment tasks individually (unless indicated).  **Contingencies:**  A reasonable adjustment is available to students for a variety of reasons, including disability, language, literacy, and numeracy (LLN) problems or extenuating circumstances.  **Work, Health and Safety:**  The work environment should be assessed for safety prior to class. Special consideration should be taken regarding potential ICT related hazards such as tripping hazards, electromagnetic radiation, ergonomics, and posture. TAFE Queensland health and safety policies and procedures should be followed at all times.  **Assessment Conditions:**  Skills and knowledge in this competency unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry. |
| Note to Student | An overview of all Assessment Tasks relevant to this unit is located in the Unit Study Guide. |

## Case Studio - Scenario

**CLIENT DETAILS: ABC Optical - Optical Store**

We sell ophthalmic glasses, sunglasses and contact lenses. We specialise in optical requirements for children.

**About ABC Optical**

We are a Brisbane based company which is well regarded locally. We are recognised as being able to manage children’s needs with a professional caring approach. We employ two full-time, in-store qualified optometrists able to diagnose and treat a number of eye related problems. Our optometrists strive to make a positive difference to the health and well-being of our customers, endeavouring to obtain the best visual outcome so that customers realise their full potential in work, study, sport and leisure.

Services supplied are as follows:

Eye Examinations (may be bulk billed)

Spectacles (may be bulk billed to private Health Fund optical cover)

Diabetic eye examinations

Colour Vision assessments

Macular Degeneration tests

Glaucoma & eye pressure testing

Checks for Cataracts

Clearness of vision (myopia, hyperopia, astigmatism)

Focusing ability (Presbyopia)

Eye muscle movement and control

Amblyopia (lazy eye)

Contact lens fitting and management

Referrals for eye laser surgery

Mining & Industrial Safety Spectacles

Advice on the correct fitting of good quality sunglasses (both prescription and non-prescription, in both adults and children, particularly in a sporting environment)

Our premises are within The Myer Centre in the Queen Street Mall on Level 1, Shop number 36. Our phone number is 07 3256 7101.

Our trading hours are:

Mon - Thurs: 9am - 5.30pm   
Fri: 9am - 9pm   
Sat: 9am - 5pm   
Sun: 10am - 5pm

## PART 1 - Identifying the page content and designing the HTML page structure

**Task 1 Identify the HTML page requirements**

You are an employee at Uptown IT and you work in the Commercial Creative Department. Your role is to design and develop websites and you have specialised in designing single page websites (Brochure Websites). Your manager has assigned you to a new project and you have received documentation regarding the client’s requirements and attended two project meetings.

Your task is to create a single web page for the client. Single page websites, if they are well designed, are cost effective and provide the means to showcase business services in a straightforward and engaging way. This is a popular option for many websites today, as all the information exists on a single page, and is delivered to the user one screen at a time, as they click on targets within the page.

Before proceeding to design the page ensure that you understand the message that the client intends to convey to their potential customers with the page’s content and layout.

For sections 1.1 to 1.3, write a response below each question. Provide details answers.

* 1. What does the client want to achieve with this web page?

Hiring us to develop a single page website that can contain all the information and provides the means to showcase business services in a straightforward and engaging way. And hoping the website can attract many future clients and telling many parents as they can with this website that we can help your children

* 1. Who is the target audience for the page?

Our main target is Parents of the child because this company is focusing on helping children’s needs with a professional caring approach as optometrists and because personally I think a child will not open this kind of website and even if they found this website and we manage to get their interest of this website. I think they will told their parents. And their parents will be the one who decides to using the company services or not.

1.3 Are there any legislative or organisational standards that the designer/developer must comply with in the development of the web page?

Research legal obligations for online business and complete the table below. A good starting point is visiting [Business Queensland](https://www.business.qld.gov.au/starting-business/internet-start-ups/online-basics/legal-obligations)[[1]](#footnote-1)

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| LEGAL OBLIGATION | ACTIONS REQUIRED | SOURCE |
| *Privacy policy* | We have to describe what types of information that we collect from our website and explain the purpose of data that we collect from our website such as to provide service or products or to improve user experience or for marketing purpose | <https://www.oaic.gov.au/privacy/australian-privacy-principles> |
| Copyright and disclaimer | When we using or downloading image or videos from internet we must have permission and see whether it copyright free or not and when we use our original work like image or videos we can put disclaimer | <https://termly.io/resources/articles/copyright-disclaimer/>  <https://www.copyright.org.au/browse/book/ACC-Websites-&-Copyright-INFO057> |
| *Right to information* | Under Australian Privacy Policy have the right to request access to their personal information that held by an organization and Australian Privacy Policy require that organizations   1. Have a policy for dealing with access request 2. Respond to an access request within a reasonable period of time 3. Provide access to the requested information, subject to certain exceptions 4. Give resons for any refusal to provide access 5. Provide access to the information in a way that is appropriate and secure | <https://www.oaic.gov.au/privacy/australian-privacy-principles> |

**Task 2 Prepare site environment: folder structure, naming convention**

1.4 Create an appropriate folder structure. All folders must contain relevant files and each folder should not exceed 1 MB.

1.5 The index.html file must be placed in the root folder

1.6 Naming convention: All filenames must be descriptive of the content, lowercase, and no spaces are allowed in the names of files and objects as specified in the style guide.

**Task 3 Page layout sections design considerations**

1.7 Create a wireframe or skeletal outline of the page layout, that is, a diagram or sketch that identifies each section of the page, with elements positioning and dimensions. Name all sections in the layout diagram. This diagram will be used as the blue print to create the HTML page.

You need two versions of the page layout (wireframe) to suit the layout of at least two (2) devices, for example a PC/laptop screen and a mobile phone screen.

1.8 Access the style guide provided and document the typography, iconography and colour scheme for each elements/section outlined in the wireframe diagram. We expect about a page of documentation here explaining how you have applied the style guide to each sextion of the side

1.9 Although the markup language has already been selected by your manager, you have been asked to research and evaluate three (3) markup languages and identify the most appropriate one for the task. Use five (5) selection criteria items. You can use the table below to present your finding and your selection.

|  |  |  |  |
| --- | --- | --- | --- |
| SELECTION CRITERIA | HTML | XML | XHTML |
| *Browser compatibility* | HTML have HTML5 that is compatible with all popular browsers and it also compatible with wide range of devices including desktop computers, laptops, tablets and smartphones and HTML is backward compatible the new versions of the language can still display pages written in older versions | XML is supported by many web browsers but it is not supported by all of them and XML is not specifically designed for web pages and may not display correctly on some devices however XML is widely used in data exchange and integration so making it an essential part of many software application | XHTML is stricter and more modular version of HTML that is designed to be more compatible with XML based tools and applications and because of this XHTML is widely supported by web browsers and other XML based application but because XHTML more strict than HTML it may not display correctly on some older web browsers |
| Usability | Has good usability because it is well supported by web browsers and allows for the creation of interactive web pages but HTML has limited functionality when it comes to data representation and manipulation | Has good usability for application that require structured data because it allows for creation of complex structured data sets but XML is not as well supported by web browser and is not easy to learn and use XML | Has good usability because it allows for the creation of web pages that are both well formed and easily break down by XML based tools however because XHTML is more strict than HTML it can be more difficult to write and requires a greater attention to detail |
| Accuracy | HTML is relatively forgiving when it comes to syntax and structure which can lead to inaccuracies in page layout or functionality if not properly followed | XML is highly precise and strict which ensures accuracy and consistency in data representation but even minor errors can result in significant issues | XHTML combines the precision and strictness of XML with the layout and presentation capabilities of HTML so it requiring greater attention to detail when creating pages to ensure accuracy |
| Navigation | HTML is designed primarily for creating web pages and includes basic navigation capabilities | XML is not specifically designed for navigation but can be customized to create navigation structures | XHTML combines the navigation capabilities of HTML with the extensibility and flexibility of XML so it allowing for highly customized and styled navigation structures |
| Simplicity | HTML is generally considered to be the simplest markup language with a relatively easy to learn syntax and structure | XML is more complex than HTML with a stricter syntax and structure that requires a greater level of technical expertise | XHTML is generally considered to be more complex than HTML but simpler than XML with stricter rules for syntax and structure but still designed primarily for web page layout and presentation |
| **Justify your selection: HTML because compatible with all browser and easy to learn and use and it is the simplest markup language** | | | |

**Task 4 Create HTML page layout sections**

1.10 Create the page as per wireframe structure diagram using HTML 5 and making sure that you:

1. Use semantic elements only for the layout structure
2. Create sections with ID attributes to be used as targets
3. Create the menu with HREF elements that target the required sections
4. Ensure that sections alternate between image background and a coloured background
5. Ensure that content is delivered one screen at a time with internally targeted hyperlinks
6. Correct indentation of HTML code

## PART 2 - Cascading style sheet (CSS) to format page layout

2.1 Before creating the CSS to format the page layout appearance, access and review the documentation created in Part 1- 1.7 and ensure that it complies with the organisational procedures presented in the style guide.

2.2 In PART 1 you designed and implemented the HTML layout structure using HTML elements. In this part you need to create and apply the CSS necessary to format the layout of the page. The CSS must include:

1. Responsive layout to suit multiple device sizes – tested in at least two (2) devices
2. Extensive use of CSS box model to ensure sufficient white space between sections
3. Inline CSS methodology: inline-block When you wants elements next to each other us display inline block
4. Layout should be in flow. No position: absolute
5. Styling exclusively on semantic elements not ID or CLASS
6. Demonstrated use a CSS combinator
7. CSS complies with the style guide

## PART 3 - Test, debug and validate web page

3.1 Test the webpage functionality to confirm that it has been developed according to the client’s requirements and the layout design.

Requirements

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| Requirements |  |  |
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3.2 Use browser developer tools to debug page design and functionality as required until it meets the client’s requirements. Check with your manager (teacher/assessor) to confirm requirements, as required.

Screenshots of a least one instances of debugging Explain what was debugged and how you revolved

Screenshots of at least one instances of debugging. Explain what was the debugged and how you resolved the issue

3.3 Validate HTML and CSS using the W3C Markup Validation Service. Provide screenshots of completion reports. Before and after is best (no errors

3.4 In order to confirm accessibility has been met at the required level, you can use Achecker or similar tool. The tool checks HTML elements (sections are also HTML elements) compliance with WCAG 2.1 on each page in the website. The tool outputs a comprehensive report that identifies errors, warnings and tips.

Your task is to run an accessibility checker tool on your completed website. Test for WCAG 2.1 Level-AA. Provide report or screenshot. However, if there are errors, fix them and provide a new report and screenshot. If some errors cannot be fixed, explain why this is the case. For example, it may require assistive technology that you don’t have access to. Once all errors are fixed you can add the WCAG 2.1 compliance logo to your website. 

3.5 Test cross-browser compatibility. The test includes at least two (2) browsers and two (2) devices. Fix as necessary. Re-test. Provide screenshots as evidence. 4 test (screenshot) with captions

4 test screenshots with caption

3.6 There are areas of concern in terms of cyber security for this project. How would Implement at least 1 cyber-security measure for each of the following areas:

1. Authentication process
2. Programmatically engineered solutions to avoid cyber-attacks
3. Protocols

3.7 Attend a meeting with your manager seeking confirmation of project completion.

Obtain sign off from the client representative.

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| --- | --- |
| **PROJECT SIGNOFF**  Signing off on this document signifies that the client representative is satisfied with the completed project. The client acknowledges satisfaction and completion with all elements of the project.  Vladimir feedback (07 Mar 2023): wireframe looks consistent. Website is in progress and have some changes with wireframe. I agreed to changed to change product section to vertical to make sure it is consistent with mobile. Another suggestion: improve margin and paddings on desktop, so the text doesn’t look squashed. Well done! | |
| Client Representative Signature:  Vladimir Roudakov  Date: 07 Mar 2023 | Developer Signature:  Alexius Allesandro Wijaya  Date: 07 Mar 2023 |
| **PROJECT NOT APPROVED**  Please provide feedback below and attach any relevant information to assist the project team in making the changes needed. | |

## PART 4 - Knowledge questions related to CSS, HTML, XHTML and web design

4.1 Propose three (3) methods that could be used to apply CSS to web pages and outline their main features and attributes.

External CSS linked via <link> tag

1. Inline style is using the style attribute inside the HTML element, this method can be useful for making quick and specific chnges to individual elements on a page

The features: use the style attribute in HTML elements to apply CSS rules, rules are applied directly to individual elements and only affect that specific element and can be useful for making quick and specific changes to appearance of individual elements

1. Internal style is using the <style> element in the <head> section, this method can be useful for applying styles to multiple elements within a single page

The features: use the <style> tags within the head section of an HTML document to apply CSS rules, rules are applied to all elements on the page that match the specified selector and can be useful for applying styles to multiple elements within a single page

1. External style is using <link> element to link to an external CSS, this method can be useful for applying consistent styles across multiple pages on a website

The features: use a separate CSS file that is linked to the HTML document using the <link> tag, rules are applied to all elements on the page that match the specified selector and can be useful for applying consistent styles across multiple pages on a website

4.2 Simplicity, visual hierarchy and grid-based layout are web design principles. Discuss how each of these could be applied to the single page web project.

Simplycity, visual hierarchy and grid based layout are essential web design principles that can significantly impact the overall user experience of a website

Simplicity: The principle of simplicity is clean, uncluttered and easy navigate also keep it simple by not giving too much information and use minimalistic design approach by limiting the number of design elements and using a clear and concise language. Its important to establish a clear visual hierarchy so that users can quickly and easily find what they are looking for and this can be achieved by using contrasting colors, varying font sizes and using bold or italicized text to highlight key information

Grid based layout: A grid based layout is design approach that involves dividing a page into a series of colmns and rows and this helps to create a sense of structure and order, making it easier for users to navigate a website and it can be used to organize content and create a logical flow. This can be achieved by dividing the page into sections and using consistent column width and aligning design elements to grid

Visual hierarchy: Visual hierarchy is the way in which design elements are arranged on page to guide the user’s attention towards the most important information

4.3 Evaluate two (2) web scripting design principles used in front end web development mostly enabled by software frameworks.

Compare template based web development frameworks with component based web development frameworks An example of a template frameworks would be EJS or PHP An example of a component framework would be React

Two web scripting design principles used in front end web development that are enabled by software freameworks are modularity and reusability

Modularity involves breaking down a large web application into smaller and more manageable modules. This make it easier to develop and maintain the application over time as changes can be made to individual modules without affecting the entire application. This principle is enabled by component based web development frameworks like react, where the application is built using reusable components that can easily modified and updated

Reusability involves creating code that can be used in multiple parts of an application and this principle is enabled by both template based and component based web development frameworks in template based framework like EJS or PHP, developers can create reusable templates that can be used across multiple pages of the website in component based frameworks like react developers can create reusable components that can be used in different parts of the application

Template based frameworks like EJS or PHP provide a structured approach to web development by allowing developers to create tempplates for different parts of the websites. Theese templates can be reused across multiple pages, reducing the amount of code required to develop the website. However template based frameworks can be limited in their functionality as they do not provide the same level of interactivity and dynamic bahavior as component based frameworks but on the other hand component based frameworks like react provide more flexible approach to web development by allowing developers to create reusable component that can be used in different parts of the application and this allows for a more modular and scalable development approach as changes made to one component can be easily propagated throughout the application. However component based frameworks can be more complex to learn and use, requiring developers to have deeper understanding of Javascript and the frameworks architecture. In summary templates based frameworks like EJS or PHP are useful for creating simple, static websites with limited interactivity while component based frameworks like react are better suited for building dynamic interactive web applications

4.4 Compare HTML and XHTML and identify three (3) differences.

1. Syntax: HTML uses a relatively loose syntax that allows for a certain degree of flexibility and error tolerance and on the other hand XHTML uses a stricter syntax that requires all elements to properly nested and all tags to be closed. This means that XHTML documents must be well formed, whereas HTML document can be less strict

2. Parsing: HTML is parsed by web browsers in a lenient manner which means that even if there are errors in the code the browser can still display the web page. In the other hand XHTML is parsed in stricter manner and any errors can cause the page to fail to load or display incorrectly

3. MIME type: HTML documents are served with MIME type “text/html” while XTML documents are served with the MIME type “application/xhtml+xml” This means that web servers and browser must be configured to correctly serve and interpret these different MIME types which can sometimes cause compatibility issues

4.5 What are the advantages of creating and implementing organisational procedures to develop CSS? Present and outline at least three (3) advantages.

Style guide for design but also coding style

1. Consistency and efficiency: A well documented style guide for design and coding style can help establish consistency across all CSS code and project within an organization. When everyone keep the same style and approach, it becomes easier for team members to read, understand and modify each other’s code. And this can led to a more efficient development process as there will be less time wasted trying to break down and troubleshoot inconsistencies
2. Improved collaboration: Establishing clear procedures for developing CSS can improve collaboration within a team as well as across teams. When there is a clear understanding of expectations and procedures, team members can work together more effectively with less miscommunication, errors and duplicated work. This can help the team meet deadlines and produce high quality work
3. Easier maintenance: Creating and implementing organizational procedures can also make CSS code easier to maintain. With consistent style and formatting it becomes easier to update and modify the codebase over time. And having clear procedures for code reviews and testing can help catch issues early on also making it easier to fix the problems before they become main issues. This can help prevent downtime and other disruptions that can be costly for the organization

4.6 The items listed below are CSS standard rules. List four (4) more standard rules and evaluate what the advantage of using each of these rules is.

Use soft-tabs(spaces) with a two space, indent: Use soft tabs space with two space, indent is a standard rule that recommends using space rather than tabs to indent CSS code and using two space indent for each level indention. And the advantages of using this rule is

1. Consistency : using a consistent indention style can make it easier for developers ro read and understand the code and make it easier to spot errors or inconsistencies
2. Portability : space are more portable way of identing code as they look the same across different platforms and device but on the other hand tabs sometimes look different depending on the software or settings used to view the code. So using spaces can help to ensure that the code looks the same for everyone who views it
3. Compatibility : some older browser or text editors may not support tab characters in the same way as modern tools. But by using spaces instead of tabs, you can ensure that the code is compatible with a wider range of tools and platforms
4. Readability : using a two space ident can help to make the code more readable, especially when dealing with deeply nested code. With a smaller indent and its easier to see the structure of the code at a glance and understand how different elements are related

Use double quotes: is a standard rule to enclose string values in CSS code and the advantage of this rule is

1. Consistency : using double quotes consistently can make the code more readable and easier to understand and make it easier to spot errors or inconsistencies
2. Compatibility : some older browser or text editors may not support single quotes in the same way as modern tools. So by using doubles quotes instead of single quotes, you can ensure that the code is compatible with a wider range of tools and platforms
3. Clarity : using the double quotes can make it easier to distinguish string values from other elements in the code. For example if you are using a background image that has a URL with spaces or other special characters, enclosing The URL in double quotes can make it clearer that it’s a string values

Place spaces after: (colon) in property declarations: is standard rule to placing a space after colon when defining CSS property declarations and the advantage of this rule is

1. Readability : Placing a space after the colon can make the code more readable and easier to understand. It helps to separate the property name from the value, making it cleaner which part of the declaration is which
2. Consistency : Using a consistent spacing style can make it easier for developers to read and understand the code and its easier to spot errors or inconsistencies
3. Avoiding errors : Failing to place a space after the colon can lead to errors in the code for example if you forget the space when defining a CSS property value it may not be applied correctly. By consistently placing a space after the colon you can help to avoid these type of errors

Place spaces before { (braces) in rule declarations : is a CSS rule of declarations by placing a space before the opening brace and the advantage is

1. Readability : Placing a space before the opening brace can make the code more readable and easier to understand and it helps to separate the rule selector from the declaration block and making it clearer which part of the declaration which
2. Consistency : using a consistent spacing style can make it easier for developers to read and understand the code also make it easier to spot errors or inconsistencies
3. Avoiding errors : Failing to place a space before the opening brace can led to erros in the code for example if you forget the space when defining a CSS rule declaration it may not be applied correctly but by consistently placing a space before the opening brace it can help these types of erros

4.7 The terms web libraries and web frameworks are often mistakenly interchange. Research the terms and clarify the following:

1. What are web libraries and web frameworks? A web library is a collection of pre written code or functions that can be used by developers to build web applications. Web libraries provide reusable code functionality that can be added to a project such as functions for manipulating the DOM or libraries for making AJAX request Examples of web libraries include jQuery, React , Vue.js and lodash. On the other hand a web framework is a more comprephensive tool that provides a structure for building web applications. Web frameworks typically include a set rules and convections for organizing code and provide a set of tools and functions for building different components of a web application. Web frameworks often used to build complex data driven web applications and typically provide features such as routing, templates and database access. Examples of web frameworks include Django, Ruby on rails, flask, express,js,
2. Outline the differences between web frameworks and web libraries. Provide examples to illustrate your answer.
3. structure : Web frameworks provide a more comprehensive structure for building web applications, while web libraries provide individual functions or pieces of functionality that can added to a project. Web frameworks typically provide a set of rules and convections for organizing code while web libraries do not
4. scope : Web frameworks are typically used to build larger more complexweb applications while web libraries can be used for wide range of task, frim simple animations to complex data manipulation
5. learning curve : Because web frameworks provide a more comprehensive structure they can be more difficult to learn and use than web libraries. Web libraries are typically easier to learn as they provide individual functions that can be used in isolation
6. flexibility : Web libraries provide greater flexibility and control over the code as developers can choose which functions to use and how to use them. Web frameworks on the other hand are more prescriptive and provide less flexibility

Examples of web libraries include jQuery which provides functions for manipulating the DOM and d3.js which provides functions for creating data vsualizations. Examples of web frameworks include Django which provides structure for building complex data driven web applications and ruby on rails which provides a framework for building web applications using the ruby programming language

4.8 Contingency task. Assume that you have completed the project and you are ready to attend the schedule testing session in a few hours. Three people were required for the testing:

Yourself - as the web developer

Project Lead (your manager)

Tester

The tester communicates to you that due to illness he cannot attend the planned testing session. Explain how you would resolve this situation.

If the tester is unable to attend the schedule testing session due to illness there are a few options that could be considered to resolve this situation

1. Reschedule the testing session : If the illness is not too severe, it might be possible to reschedule the testing session for a later time when the tester is feeling better. This could be done by coordinating with the project lead and the tester to find a mutually agreeable time for the testing to take place
2. Substitute another tester : if rescheduling is not possible it might be necessary to find a substitute who can perform the testing in place of the original tester. This could be done by reaching out to other members of the testing team or identifying someone with similar skills and experience who can step in and perform the testing
3. Proceed with testing without tester : If rescheduling or finding a substitute tester is not possible, it might be necessary to proceed with testing without the tester. In this scenario the web developer and project lead could perform the testing together with understanding that the testing might not be as comprehensive as it would be with the full testing team present

the best course of action will depend on the specific circumstances of the situation and the prefernces of the project lead and other stakeholders involved. Open communication and collaboration will be key in finding a solution that works for everyone

**End of Assessment**

**DELIVERABLES:**

For this assessment item you need to complete the written sections in this document, then rename it to:

AT2\_Written\_Surname\_Student Number

Complete the website project and rename the site folder as:

AT2\_Website\_Surname\_Student Number

Create a folder:

AT2\_ICTWEB519\_520\_Project\_Surname\_Student Number

Insert the two files you renamed above into this folder, compress it (e.g. with WinZip) and upload it to the Assignment Folder in Connect for ICTWEB519\_520 Assessment 1 (AT2).

1. https://www.business.qld.gov.au/starting-business/internet-start-ups/online-basics/legal-obligations [↑](#footnote-ref-1)