

# Assessment Task

## Written

(Project)

ICTWEB519\_520\_AT2\_Written



|   |   |                            |        |
|---|---|----------------------------|--------|
| <b>Student Name</b>   |   | <b>Student Number</b>      |        |
| <b>Unit Code/s &amp; Name/s</b>   | ICTWEB519 Develop complex web page layouts<br>ICTWEB520 Develop complex cascading style sheets  |                            |        |
| <b>Cluster Name</b><br><i>If applicable</i>   | Design Cluster  |                            |        |
| <b>Assessment Type</b>  | <input type="checkbox"/> Case Study <input type="checkbox"/> Assignment <input checked="" type="checkbox"/> Project <input type="checkbox"/> Other ( <i>specify</i> ) |                            |        |
| <b>Assessment Name</b>  | Brochure Website Project  | <b>Assessment Task No.</b> | 2 of 3 |
| <b>Assessment Due Date</b>  | Week 6  | <b>Date Submitted</b>      | / /    |
| <b>Assessor Name</b>  |   |                            |        |
| <p><b>Student Declaration:</b> 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.</p>              |   |                            |        |
| <b>Student Signature</b>  |   | <b>Date</b>                | / /    |
| <p><b>PRIVACY DISCLAIMER:</b> 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.</p> |   |                            |        |

## 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

### 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.

### Online Delivery:

- Student to supply their own PC or laptop with the following:
  - Multiple browsers
  - Visual Studio Code, Adobe Dreamweaver or similar

- Word processing software, such as Microsoft Word
- Spreadsheet software such as Microsoft Excel
- Students will require internet access
- Student will require access to different devices to test website (can be simulated devices)

**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 format 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

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|                                  | <p>your teacher before the assessment is due and supply a doctor's certificate and approval from the team manager for an extension.</p> <p><b>Time restrictions:</b><br/>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.</p> <p><b>Interactions:</b><br/>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).</p> <p><b>Level of assistance permitted:</b><br/>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.</p> <p><b>Contingencies:</b><br/>A reasonable adjustment is available to students for a variety of reasons, including disability, language, literacy, and numeracy (LLN) problems or extenuating circumstances.</p> <p><b>Number of Attempts:</b><br/>You will receive up to two (2) attempts at this assessment task. Should your 1<sup>st</sup> 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 2<sup>nd</sup> attempt. If your 2<sup>nd</sup> submission is unsatisfactory (U), or you fail to submit a 2<sup>nd</sup> attempt, you will receive an overall unsatisfactory result for this assessment task. Only one re-assessment attempt may be granted for each assessment task.</p> <p><b><i>For more information, refer to the Student Rules.</i></b></p> <p><b>Work, Health and Safety:</b><br/>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.</p> |
| <p><b>Submission details</b></p> | <p><b>Evidence Required to be Submitted:</b><br/>Insert your details on page 1 and sign the Student Declaration. Include this template with your submission.</p> <p><b>Deliverables:</b></p>  |

|   |   |
|---|---|
|   | <p>For this assessment item you need to complete the written sections in this document, then rename it to:</p> <ul style="list-style-type: none"> <li>• <b>AT2_Written_Surname_Student Number</b></li> </ul> <p>Complete the website project and rename the site folder as:</p> <ul style="list-style-type: none"> <li>• <b>AT2_Website_Surname_Student Number</b></li> </ul> <p>For this assessment item you also need to complete the testing spreadsheet, then rename it to:</p> <ul style="list-style-type: none"> <li>• <b>AT2_Functionality_Surname_Student Number</b></li> </ul> <p>Create a folder:</p> <ul style="list-style-type: none"> <li>• <b>AT2_ICTWEB519_520_Project_Surname_Student Number</b></li> </ul> <p>Insert the three files you renamed above, <b>and your meeting recording</b>, into this folder, compress it (e.g. with WinZip) and upload it via Connect.</p> <p><b>Submission via Connect:</b></p> <p>Upload a single file into Assessment 2 (AT2) Assignment Folder in Connect</p> <p>Multiple files can be compressed into a single file</p> <p>Name the file:</p> <p style="text-align: center;"><b><i>ICTWEB519_520_AT2_Project_Surname_Student Number</i></b></p> <p>Resubmissions should append an R to the filename:</p> <p style="text-align: center;"><b><i>ICTWEB519_520_AT2_Project_Surname_Student Number_R</i></b></p> <p>TAFE Queensland Learning Management System:</p> <p><b>Accessing Connect:</b></p> <p>Connect URL: <a href="https://connect.tafeqld.edu.au/d2l/login">https://connect.tafeqld.edu.au/d2l/login</a></p> <p>Username: 9 digit, student number</p> <p>Password: &lt;your password&gt;</p> <p>For password reset go to: <a href="https://passwordreset.tafeqld.edu.au/default.aspx">https://passwordreset.tafeqld.edu.au/default.aspx</a></p> |
| <p><b>Instructions for the Assessor</b></p> | <p><b>Specifications of assessment:</b></p> <p>To be judged competent in this assessment item the student is required to demonstrate competence in all indicators shown in the marking guide.</p> <p>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:</p> <ul style="list-style-type: none"> <li>– web development environment</li> <li>– project requirements</li> </ul>  |

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|  | <p>Ensure that students read and familiarise themselves with the Project Scenario and the Client provided relevant files and/or resources before attempting the assessment.</p> <p><b>Storage Devices:</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul> <p><b>Online Delivery:</b></p> <ul style="list-style-type: none"> <li>Student to supply their own PC or laptop with the following: <ul style="list-style-type: none"> <li>Multiple browsers</li> <li>Visual Studio Code, Adobe Dreamweaver or similar</li> <li>Word processing software, such as Microsoft Word</li> <li>Spreadsheet software such as Microsoft Excel</li> </ul> </li> <li>Students will require internet access</li> <li>Student will require access to different devices to test website (can be simulated devices)</li> </ul> <p><b>Documentation:</b></p> <ul style="list-style-type: none"> <li>Uptown IT Scenario or Case Study</li> <li>Style Guide</li> </ul> <p><b>Level of Assistance Permitted:</b></p> <p>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.</p> <p><b>Interactions:</b></p> <p>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).</p> <p><b>Contingencies:</b></p> <p>A reasonable adjustment is available to students for a variety of reasons, including disability, language, literacy, and numeracy (LLN) problems or extenuating circumstances.</p> <p><b>Work, Health and Safety:</b></p> <p>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.</p> |
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|                        | <p>TAFE Queensland health and safety policies and procedures should be followed at all times.</p> <p><b>Assessment Conditions:</b></p> <p>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.</p> |
| <b>Note to Student</b> | An overview of all Assessment Tasks relevant to this unit is located in the Unit Study Guide.  |



## Case study / 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, endeavoring to obtain the best visual outcome so that customers realise their full potential in work, study, sport and leisure.

### Services

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)

### Contact

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

*The site footer should contain copyright information, your name and student number, as a minimum*



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



### Important

You should use the **UptownIT Assessment Report** to complete this assessment. You should include all screenshots and images within this document.

Ensure you have followed the file naming convention given in the Submission Details section above before submitting your final assessment

### 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 detailed answers.

1.1 What does the client want to achieve with this web page?

1.2 Who is the target audience for the page?

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](#). You should also consider web and accessibility standards in your research.

| LEGAL OBLIGATION      | ACTIONS REQUIRED | SOURCE |
|-----------------------|------------------|--------|
| E.g. Privacy          |                  |        |
|                       |                  |        |
| Add rows as necessary |                  |        |

## 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:



### Note

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 (*based on the content given in the scenario*), 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 of your website outlined in the wireframe diagram. *You can use the style guide given as an example of how to document this information.*



### Note

This information will form the basis for the styling of your site so you should refer to this as you are developing your website

- 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         | MARKUP LANGUAGE 1 | MARKUP LANGUAGE 2 | MARKUP LANGUAGE 3 |
|----------------------------|-------------------|-------------------|-------------------|
| E.g. Browser compatibility |                   |                   |                   |
|                            |                   |                   |                   |
|                            |                   |                   |                   |
|                            |                   |                   |                   |
|                            |                   |                   |                   |

**Justify your selection** (*minimum 30 words*):

#### Task 4. Create HTML page layout sections

1.10 Create the page as per your wireframe structure diagram using HTML5 (*you should include images within your content as appropriate*) and making sure that you:

- a) Use **semantic elements only** for the layout structure
- b) Create sections with ID attributes to be used as targets
- c) Create the menu with *HREF* elements that target the required page sections
- d) Ensure that the content sections alternate between an image background and a coloured background
- e) Ensure that content is delivered one screen at a time with internally targeted hyperlinks
- f) 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:
  - a) Responsive layout to suit multiple device sizes – tested in at least two (2) devices
  - b) Extensive use of CSS box model to ensure sufficient white space between sections
  - c) Inline CSS methodology: inline-block
  - d) Layout should be in flow. No position: absolute (*position: fixed for menu permitted*)
  - e) Styling should predominantly be on semantic elements. The use of *ID* or *CLASS* styles should be kept to an absolute minimum.
  - f) Demonstrated use a CSS combinator
  - g) Ensure the CSS complies with your 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. You should add the relevant client and design requirements (including your styling requirements from Task 1.8) to the ***UptownIT Functionality Test Report Template*** (*available for download in the Course Hub*) and complete this document.



### Tip

For Task 3.1 you should review the client/site requirements:

design requirements, wireframe layouts, styling requirements (refer to your style guide), page layout etc

and add these to the test report and use these as the basis for your testing to ensure you have met the requirements.

- 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. You should add the relevant functionality tests to the ***UptownIT Functionality Test Report Template*** and complete this document.




### Tip

For Task 3.2 you should review the functional requirements for the site:

section links, page display, validation, browser/device and accessibility

and add these to the test report and use these as the basis for your testing.

- 3.3 Validate both the **HTML** and **CSS** using the **appropriate** W3C Markup Validation services. Provide screenshots of your validation. You should correct any errors in your code and revalidate until the code is error free and provide updated screenshots.
- 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 should include at least two (2) browsers and two (2) devices. Fix as necessary. Re-test. Provide suitably labelled screenshots as evidence.
- 3.6 There are areas of concern in terms of cyber security for this project. Recommend and outline at least 1 cyber-security measure that the client could adopt to avoid or reduce cyber security attacks for each of the following areas:
- Authentication process
  - Programmatically engineered solutions to avoid cyber-attacks

## c) Protocols

3.7 Attend a meeting with your manager seeking confirmation of project completion. *For this component you can conduct the meeting with a family member, friend, another student or work colleague.* To complete this you should:

- Create a video recording of the meeting. This can be a screen capture of the site demonstration with your audio presentation.
- You should give a brief overview of the project requirements
- You should describe how you have met the project requirements and gather confirmation that the requirements have been met from your participant/s asking appropriate questions
- The recording should be between 5 - 10 minutes in length
- You should include the recording in your submission.
- Obtain sign off from the client representative.

|  |                      |
|--|----------------------|
| <b>PROJECT SIGNOFF</b>   |                      |
| 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. |                      |
| Client Representative Signature:   | Developer Signature: |
| Date:  | Date:                |
| <b>PROJECT NOT APPROVED</b>  |                      |
| 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.
- 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.
- 4.3 Evaluate two (2) web design principles used in front end web development mostly enabled by the use of software frameworks.
- 4.4 **Compare** HTML and XHTML. **Identify** three (3) differences between HTML and XHTML.
- 4.5 What are the advantages of creating and implementing organisational procedures to develop CSS? **Present** and **outline** at least three (3) advantages.
- 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 double quotes
  - Place spaces after: (colon) in property declarations
  - Place spaces before { (braces) in rule declarations

- 4.7 The terms web libraries and web frameworks are often mistakenly interchange. Research the terms and clarify the following:
- What are web libraries and web frameworks?
  - Outline the differences between web frameworks and web libraries. Provide examples to illustrate your answer.

- 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.

### 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**

For this assessment item you also need to complete the testing spreadsheet, then rename it to:

- **AT2\_Functionality\_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 three files you renamed above **and your meeting recording** into this folder, compress it (e.g. with WinZip) and upload it to the Assignment Folder in Connect for ICTWEB519\_520 Assessment 1 (AT2).