# Knowledge Assessment: Short answers

## Criteria

### Unit code, name and release number

ICTWEB414 - Design simple web page layouts (1)

ICTWEB429 - Create a markup language document to specification (1)

ICTWEB431 - Create and style simple markup language documents (1)

### Qualification/Course code, name and release number

ICT40118 - Certificate IV in Information Technology

## Student details

### Student number

804693424

### Student name

Richard Kim

## Assessment Declaration

* This assessment is my original work and no part of it has been copied from any other source except where due acknowledgement is made.
* No part of this assessment has been written for me by any other person except where such collaboration has been authorised by the assessor concerned.
* I understand that plagiarism is the presentation of the work, idea or creation of another person as though it is your own. Plagiarism occurs when the origin of the material used is not appropriately cited. No part of this assessment is plagiarised.

### Student signature and Date

Richard Kim, 13/05/2021

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For queries, please contact:

Technology and Business Services SkillsPoint

Location: Ultimo

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## Assessment instructions

| Assessment details | Instructions |
| --- | --- |
| **Assessment overview** | The objective of this assessment is to assess your knowledge on standards and principles for mark-up languages and CSS, testing procedures and web browsers. |
| **Assessment Event number** | 3 of 3 |
| **Instructions for this assessment** | This is a written assessment and it will be assessing you on your knowledge of the unit.  This assessment is in one part:   1. Short answer questions   The assessment also contains:   * Assessment Feedback. |
| **Submission instructions** | On completion of this assessment, you are required to upload it or hand it to your assessor for marking.  Ensure you have written your name at the bottom of each page of your assessment.  Submit the following documents for each part:   * Part 1: Short answers   + This assessment document.   It is important that you keep a copy of all electronic and hardcopy assessments submitted to TAFE and complete the assessment declaration when submitting the assessment. |
| **What do I need to do to achieve a satisfactory result?** | To achieve a satisfactory result for this assessment all questions must be answered correctly. |
| **What do I need to provide?** | * A pen, if a paper version of assessment is provided * USB drive or other storage method with enough free space to save work to. |
| **What will the assessor provide?** | * Access to the Learning Management System * Computer with internet access. |
| **Due date/time allowed** | Indicative time to complete assessment:   * Two hours. |
| **Assessment location** | This assessment may be completed outside of the classroom. |
| **Supervision** | This is an unsupervised, take-home assessment. Your assessor may ask for additional evidence to verify the authenticity of your submission and confirm that the assessment task was completed by you. |
| **Reasonable adjustment** | If you have a permanent or temporary condition that may prevent you from successfully completing the assessment event(s) in the way described, you should talk to your assessor about ‘reasonable adjustment’. This is the adjustment of the way you are assessed to take into account your condition, this must be approved BEFORE you attempt the assessment. |
| **Assessment feedback, review or appeals** | Appeals are addressed in accordance with [Assessment Guidelines for TAFE NSW](https://staff.tafensw.edu.au/documents/2017/11/assessment-guidelines-v02.pdf/). |

## Part 1: Short answers

Provide answers to the questions below. You can use the internet to answer the questions, however, you should write the answers in your own words. Each answer should be 50-100 words.

1. Describe the following markup languages and explain what they are commonly used for:

|  |  |  |
| --- | --- | --- |
| Markup language | Description | Commonly used for |
| Dynamic hypertext markup language (DHTML) | DHTML is a collection of web-based technologies used to make web pages dynamic and interactive. It is usually a combination of HTML, JavaScript, DOM, and CSS. | DHTML is commonly used for designing animated and interactive components of a web page. |
| Hypertext markup language (HTML) | HTML is the standard markup language used to describe the structure of information on a web page. | HTML is commonly used to tell a web browser what each part of a website is, e.g. they can define headers, paragraphs, links etc. |
| Standard generalised markup language (SGML) | SGML is a language for defining markup languages such as HTML and for specifying the rules for tagging elements in a document. | SGML is commonly used for defining documents or publishing information. |
| Virtual reality modelling language (VRML) | VRML is a modelling language for developing 3D animations, illusions, characters, and most full-scale graphical web application representations. | VRML was an open standard that provided easy adaptability and was thus commonly used for education and experimentation. |
| Extensible hypertext markup language (XHTML) | XHTML is a stricter, more XML-based version of HTML. It was developed to make HTML more extensible and increase interoperability with other data formats. | XHTML can be used in any case where HTML is used, as it is a stricter version with more formatting rules. |
| Extensible markup language (XML) | XML is a markup language that defines a set of rules for encoding documents in a format that is readable by both humans and machines. | XML is commonly used to store and transport data. |

1. For HTML and XML, describe an advantage and disadvantage, and two associated standards of each.

* HTML

Pro: HTML is easy to understand due to its simple syntax.

Con: Lacks syntax and structure checking.

Associated standards: CSS, JavaScript

* XML:

Pro: Makes documents transportable across systems and applications.

Con: Requires a processing application to view data.

Associated standards: HTML, XHTML

1. Write a definition of cascading style sheets (CSS).

CSS is the markup language used for describing the presentation of web pages, including colours, layout, and fonts. It allows the user to adapt the presentation to different types of devices, such as phones and tablets. CSS is independent of HTML and can be used with any XML-based markup language.

1. Identify two web design standards developed by the Worldwide Web Consortium (W3C) that you should follow when designing websites. How do they apply to CSS and web development?
2. Graphics

The use of graphics on web sites enhances the experience for users, and W3C has several different and complimentary technologies that work together with HTML and scripting to provide the creators of web pages and web applications with the tools they need to deliver the best possible representation of their content.

1. Audio and Video

Like graphics, the use of video and audio on web sites enhances the experience for users.

* How it applies to CSS And Web Development

Due to the nature of CSS, the Graphics and Audio and Video standards relate to how information is presented to the audience.

1. Explain two CSS design principles and give an example of how you would apply them to your web projects.

* Forward and backward compatibility

Users of previous or future versions of CSS will be able to understand and modify your code.

* Simplicity

CSS is a simple style language which is human readable and writable. The CSS properties are kept independent of each other to the largest extent possible and there is generally only one way to achieve a certain effect.

* How would they apply to my web projects?

These design principles will apply to my web projects by ensuring that scripts are not over-complicated and written according to industry standards.

1. Explain how both HTML and XHTML work with CSS. How can CSS affect HTML/XHTML or vice versa?

* HTML & CSS

In order to make use of CSS, it needs to be linked within the HTML content so that style can be added to the website. CSS will tell the browser how to display the existing HTML without changing any of its content.

* XHTML & CSS

XHTML is used with CSS exactly the same was as HTML, except with its stricter formatting rules. Just like HTML, changing the content of the XHTML will only change what information is being presented through CSS, not the actual style.

1. Outline HTTP and HTTPS and give an example of when you would use each.

HTTP stands for Hypertext Transfer Protocol, and it is a protocol used for transferring data over a network. Most information that is sent over the internet, including website content and API calls, uses the HTTP protocol.

HTTPS is simply HTTP with encryption. HTTPS uses TLS or SSL to encrypt normal HTTP requests and responses.

HTTP would be used if your web page is receiving and sending non-essential data that can’t be used as leverage in a cybersecurity attack. If your web page has any sort of sensitive information, HTTPS should be used.

1. Describe two website testing tools, including an advantage and disadvantage of each.

* Zephyr

Zephyr is a popular web testing tool, providing end-to-end solutions for agile teams.

Pro: Test cases can be exported to word and excel.

Con: Test result imports are difficult and usually require an external add-on.

* Qase

Qase is a modern cloud-based test management tool designed for Q&A and development teams with a clean and intuitive user interface. Free to use without any limits on projects, test cases, or test runs.

Pro: Free to use.

Con: Requires a fast connection to function properly.

1. Describe two methods for testing your website with users, including an advantage and disadvantage of each.

* Moderated usability testing

Moderated usability testing involves administering the test in person or remotely by a trained researcher who introduces the test to participants, answers their queries, and asks follow-up questions.

Pro: Produces in-depth results due to the interaction.

Con: Expensive to organise and run.

* Unmoderated usability testing

Unmoderated usability testing involves running a test without any supervision. Participants may be in a lab, but it’s more likely that they are in their own homes/using their own devices to run the website test.

Pro: Cheap to run.

Con: Participant answers may be superficial due to no supervision.

1. What troubleshooting processes would you follow to eliminate the following problems in your website?
   * Syntax errors in the CSS

Troubleshooting syntax errors in the CSS would require debugging through a browser’s DevTools. Through DevTools, you will be able to inspect and check the CSS properties and values applied to certain elements. If something on the web page is not being presented in the way its supposed to, you will be able to find and correct the relevant code.

* + Displaying incorrectly in different browsers

Browser compatibility issues can happen and be solved in a multitude of ways:

* Ensure DOCTYPE has been defined at the start of your code
* Use HTML/CSS validation tools
* Use separate stylesheets for different browsers
* Add vendor specific functions for each browser
* Use cross-browser friendly libraries and frameworks
* Utilise CSS reset style sheets
* Cross-check feature support between browsers

1. Summarise the features and limitations, including accessibility, of the web browsers Google Chrome, Microsoft Edge and one other common browser.

|  |  |  |  |
| --- | --- | --- | --- |
| Browser | Google Chrome | Microsoft Edge | Mozilla Firefox |
| Features | * Sleek design * Fast speeds * Cross-platform compatible * Ability to sync across devices * Huge library of extensions * Integration with other Google apps * Powerful Dev console | * Fast speeds * Reading mode * Improved security features * You can draw on and annotate web pages * Clutter free options | * Fast speeds * Advanced security features * Variety of extensions * Multi-tab feature * High customisation |
| Limitations | * Can be confused with Chromium * Privacy concerns due to google tracking * High memory and CPU usage * Limited customisability | * No extension support * No interface customisability * No address bar * No visual indicator for internet protocol | * Browser compatibility issues * Website display issues * Downloads can’t be resumed if interrupted * Uses more memory than other browsers |

1. Why would an organisation need to follow procedures for documenting test results? Describe three items that an organisation should include when documenting test results.

Documentation for an organisation saves them time and money, as well as making testing easier by making it systematic. It is also important for the client due to documentation usually defining a software product’s effectiveness. If the documentation is poor, deficient, or defective, it may affect the end-product of a project.

When documenting test results, it should include as a minimum:

* Expected result

The ideal result when running the software.

* Actual result

The actual results of the test when it was run.

* Testing process

The process/method used to test the software.

1. Describe three accessibility issues that can influence web design, and what effect they may have.
2. Low contrast on text

Low colour contrast on text is one of the most common accessibility issues. This can result in users with low vision or colour blindness to be unable to read the text on the website.

1. Missing alt text on images

Alt text is important for those who use screen-readers to view websites. If an image that is contextually important to the information on the website has no alt text, users on screen-readers will not know the image is there.

1. Missing link text

Links are important for navigating a website. If there is no text to represent a hyperlink, users with vision problems who use screen-readers will not be able to interpret it as a link.

## Assessment Feedback

*NOTE: This section* ***must*** *have the assessor signature and student signature to complete the feedback.*

### Assessment outcome

Satisfactory

Unsatisfactory

### Assessor Feedback

Has the Assessment Declaration been signed and dated by the student?

Are you assured that the evidence presented for assessment is the student’s own work?

Was the assessment event successfully completed?

If no, was the resubmission/re-assessment successfully completed?

Was reasonable adjustment in place for this assessment event?  
*If yes, ensure it is detailed on the assessment document.*

Comments:

### Assessor name, signature and date

### Student acknowledgement of assessment outcome

Would you like to make any comments about this assessment?

### Student name, signature and date

Richard Kim, 13/05/2021

***NOTE: Make sure you have written your name at the bottom of each page of your submission before attaching the cover sheet and submitting to your assessor for marking.***