# 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

806166588

### Student name

Anish Pisavadia

## 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

28/5/22

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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 (Dynamic HyperText Markup Language) is a set of Web development technologies for creating dynamically changing websites. | Animation, dynamic menus, and text effects may be used on web pages. HTML, JavaScript or VB Script, CSS, and the document object model are among the technologies employed (DOM) |
| Hypertext markup language (HTML) | The Hypertext Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser. It can be assisted by technologies such as Cascading Style Sheets and scripting languages such as JavaScript. | HTML has numerous applications, including:  Website development. HTML code is used by developers to define how web page elements like text, hyperlinks, and media files are displayed by browsers.  Using the internet. Because HTML is widely used to embed hyperlinks, users may simply navigate and insert links between similar pages and websites. Web-based documentation HTML, like Microsoft Word, allows you to organise and format your texts. |
| Standard generalised markup language (SGML) | The Standard Generalized Markup Language (SGML) is a specification for document generalised markup languages. | The Standard Generalized Markup Language (SGML) is a text markup language that is a superset of commonly used markup languages such as HTML and XML (extensible markup language). SGML is a markup language for documents that does not require the usage of a specific application. |
| Virtual reality modelling language (VRML) | VRML is a standard file format for displaying three-dimensional interactive vector graphics that was created specifically for the World Wide Web. X3D has since taken its place. | VRML is comparable to Hypertext Markup Language and is used to illustrate 3-D objects, buildings, landscapes, and other items that require 3-D structure (HTML). Textual representation is also used by VRML to create 3-D illusion presentation methods. Virtual Reality Markup Language is another name for VRML. |
| Extensible hypertext markup language (XHTML) | Extensible hypertext markup language (XHTML) is a hybrid language that combines XML and HTML. It is also a widely accepted coding standard. It's similar to HTML 4.01 and is regarded as HTML defined as an XML application. | "Extensible Hypertext Markup Language" is an acronym. The markup language XHTML is used to generate webpages. It's comparable to HTML, but with a stricter XML syntax. In the year 2000, the first version of XHTML (1.0) was standardised. |
| Extensible markup language (XML) | The Extensible Markup Language (XML) is a file format and markup language for storing, transmitting, and recreating arbitrary data. It establishes a set of guidelines for encoding documents in a human- and machine-readable manner. | Data is described using XML (Extensible Markup Language). The XML standard is a versatile technique to construct information formats and share structured data electronically through the internet and corporate networks. |

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

Advantages of HTML

1. HTML is simple to learn and use. It is also free. HTML is supported by all major browsers.

2. HTML is the most user-friendly search engine.... HTML is easy to edit.... HTML can easily integrate with other languages.

Disadvantages of HTML:

1. Because it is a static language, it cannot produce dynamic output on its own.

2. The structure of HTML documents becomes difficult to comprehend.

Advantages of XML

1. Human language, not computer language, is used in XML. Even novices can read and understand XML, and it's no more difficult to code than HTML.

2. XML is 100 percent portable and fully compatible with JavaTM. Your data can be used by any application that can parse XML, regardless of platform.

3. XML can be extended.

Disadvantages of XML

1. When compared to binary representations of similar data, especially tabular data, XML syntax is redundant or excessive.

2. Higher storage, transport, and processing costs may have an impact on application efficiency.

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

Cascading Style Sheets (CSS) is a language for describing the appearance of a document written in a markup language like HTML. Along with HTML and JavaScript, CSS is a key component of the World Wide Web.

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?

The World Wide Web Consortium (W3C) is a non-profit organisation that creates international Web standards such as HTML and CSS. W3C Recommendations are W3C's Web standards. The Accessible Platform Architectures (APA) Working Group examines all W3C standards for accessibility support. The following W3C standards and Working Group Notes are especially relevant to accessibility. I have listed below what you should follow when designing a website

HTML, CSS, and JavaScript.

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

There are three techniques to include CSS in HTML documents: Inline - inside HTML elements, using the style property.

Internally, a style> element in the head> section is used.

External - by linking to an external CSS file using the link> element.

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

There are three ways to apply CSS to HTML or XHTML: linked, embedded, and inline. The CSS is stored in a separate file rather than directly in the HTML page in the linked manner. CSS is stored as part of the HTML page's header section in the embedded technique. CSS is stored directly in the style properties of HTML tags in the inline technique, as as <div style="font-weight: bold">Bold Font</div>. The connected method is perhaps the most elegant, but the others are useful and speedy during the prototype stages of a web page. A separate file is not required for the embedded and inline methods. The inline technique eliminates the need to think about the CSS classes your content should contain.

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

HTTP: Hypertext Transfer Protocol (HTTP) stands for Hypertext Transfer Protocol. It enables for communication across multiple systems at the most fundamental level. It's most typically used to send information from a web server to a browser, allowing users to view web pages. It's the protocol that almost all early websites followed.

HTTPS: Hypertext Transfer Protocol Secure is what HTTPS stands for. The problem with the standard HTTP protocol is that the data sent from the server to the browser is not secured, making it vulnerable to theft. HTTPS protocols address this by employing an SSL (secure sockets layer) certificate, which aids in the establishment of a secure encrypted connection between the server and the browser, preventing potentially sensitive data from being stolen during transmission.

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

Ranorex Studio

Advantages: 1. Multi-Platform Evaluation. Ranorex allows you to test programmes on a variety of platforms, including web, desktop, and mobile...

2. Test without coding.

3. User-friendly interface.

Disadvantages

1. License is paid. Unlike many of its open-source competitors, such as Selenium, Katalon Studio, Watir, and others...

2. Limited Language Support...

3. There is no support for macOS.

SAHI

Advantages

1. It runs regression testing for the web application.

2. SAHI scripts are fast to create and easy to maintain.

3. SAHI play back fast and reliably.

Disadvantages

1. Support for different languages: SAHI's base language is Javascript. SAHI currently does not allow you to write test cases in any other language.

2. SAHI does not have the same level of visibility as Selenium, thus it takes a little longer to persuade clients and management.

1. Describe two methods for testing your website with users, including an advantage and disadvantage of each.
2. A/B testing: is a method of comparing different versions of a webpage to find which is the most effective.
3. A downside to A/B testing is: This type of testing is appropriate if you only have one problem to solve, such as which product page produces the best results. Pure A/B testing, on the other hand, will not yield answers if your aims are more difficult to measure.

Local hosting

1. Locally host website so that you can see the function and the UI of the website. This can address doubts and understand how everything will function as a collective before it hosts on the internet.
2. The downside is that the creator will not get feedback and this method is purely for assessing the website from the creator’s point of view.
3. What troubleshooting processes would you follow to eliminate the following problems in your website?
   * Syntax errors in the CSS

To troubleshoot syntax errors in CSS I would first locate the CSS file and read the syntax error code then proceed to identify the red underlined code. From here I would analyse the code for any typos, missed closing tags and so on. I would find the error and rectify it and proceed to run the code.

* + Displaying incorrectly in different browsers

If your website uses submit buttons, radio buttons, check boxes and edit fields, all of them will be visualized depending on the visitor's OS. On a PC, default submit buttons are square and pretty flat looking, on a Mac the default submit button is shaded ovals with a gradient.

Display resolution affects the way a website is displayed. If you create pages at 1024×768 they will not fit into the screen of a visitor with a 800x600 screen. To fix this, you should not use static dimensions for your website but can use width = 100%.

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

**Firefox**

Firefox lets you create entire desktop programmes using browser components. Other browsers let you develop plug-ins in JavaScript, CSS, and HTML, but Firefox takes it a step farther. Because Firefox was one of the first browsers to support extensions, this is essentially a historical accident.

**Google chrome**

Chrome tab splitting has been pioneered by Google. The operating system is used to isolate crashes in this method. In other words, if a single plug-in or Web page fails, the operating system isolates the problem. This usually implies that the other tabs go unnoticed.

**Microsoft Edge**

It presents you with a customised selection of news headlines, information snippets, and videos based on your preferences. When you're looking for anything to watch or read, this website provides a quick access motherlode of relevant content.

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.

It is important for the developers to be documenting the test process as this is what you would be required to be showing to the client for approval instead of creating a whole website for the client to reject . furthermore it is important to document tests because in websites are usually created within teams and it’s important to effectively communicate with one another, as then another developer can pick up directly after the pervious developer or if a developer wants to backtrack to review a earlier stage of the website.

Finally, it is important for developers to keep their files located in a singular location so that it is easily assessable to all developers working on that project.

1. Describe three accessibility issues that can influence web design, and what effect they may have.
2. **Colour contrast**- The use of colour contrast is critical for web accessibility. Contrast is defined by WCAG 2 as the difference in brightness between two colours. People with limited contrast sensitivity, such as the elderly or those who are colorblind, may have trouble distinguishing between text and background.
3. **vision impairments,** using a mouse to explore a website can be difficult or impossible. Instead, they navigate using commands and shortcuts on the keyboard. To offer keyboard access to all content and functionality, websites must be well-structured and coded.
4. **Expiration and time outs -** Many forms have security features that make the page or form expire after a set period of time. The process may take longer for persons who use assistive technology to fill out paperwork, and they may not realise there is a time limit. The fact that the form is time-limited should be made clear to users.

## 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

Anish 28/5/22

***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.***