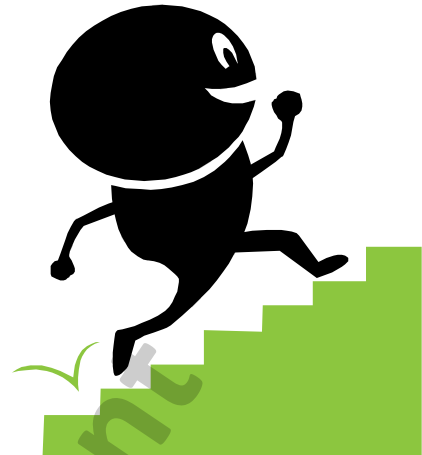


Easy Steps



Unit 25656 (V2)

Create a website using a mark-up language to meet a set brief

- ☒ Easy to follow
- ☒ Step-by-step instructions
- ☒ Covers Unit Standard Criteria

By Cheryl Price

Unit Standard 25656 (Version 2)

Create a website using a mark-up language to meet a set brief

This book covers the course outline for the following New Zealand Qualifications Authority Unit Standard:

Unit Standard 25656 - GENERIC COMPUTING (Level 2, Credit 3)

Create a website using a mark-up language to meet a set brief

All topics in this Unit Standard are included in this book.

Retrievable exercise files are used with this book. These are available for free download from the Products page of our web site at www.cherylprice.co.nz. Instructions for downloading are included on the next page.

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Cheryl Price
T.Dip.WP, T.Dip.T

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Downloading Exercise Files

Exercise files can be downloaded from the Cheryl Price web site as follows:


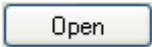



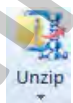
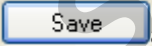
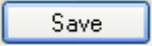
1	In your web browser, type: www.cherylprice.co.nz
2	Press Enter on the keyboard to display the Cheryl Price website.
3	Click in the Product Search box and type the number of this unit standard, as shown at the right. <div data-bbox="1189 459 1484 638" data-label="Form"> <div>Product Search</div> <div>US 25656</div> <div>Search</div> </div>
4	Click on 
5	Click on US 25656
6	Under the Exercise Files heading click on the underlined blue hyperlink, ie Book Exercise Files – V2 NotePad Free Download . The File Download dialog box will display.
7	If you have Winzip use the following instructions otherwise move to step 8.
	a Click on  .
	b Click on the  of the  button.
	c If My Documents folder is not displayed click on Set default unzip folder at the bottom of the list. Ensure My Documents is selected then click on Select Folder.
	d Click on the  of the  button and click on the My Documents folder. The files will be unzipped.
8	Click on  and ensure My Documents folder is displayed. Click on 
9	Click on Open Folder which will display My Documents folder. Right click on the zipped exercise file and select Extract All. Click on Extract. A folder will be created containing the exercise files.

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Sample Document

Unit Standard 25656 Version 2

Title	Create a website using a mark-up language to meet a set brief		
Level	2	Credits	3

Purpose	People credited with this unit standard are able to: plan a website to meet the specifications of a set brief; code the website using a mark-up language; and test and evaluate the website.
----------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Classification	Computing > Generic Computing
-----------------------	-------------------------------

Available grade	Achieved
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Explanatory notes

- 1 **Range**
The website includes but is not limited to – three linked pages, two media, two enhancements, hyperlinks.
- 2 The text and media content for the website may be provided to the candidate or created by the candidate as part of an integrated programme of learning. While this unit standard does not assess the content of the material used to create the website, all content must comply with legislation relevant to this unit standard and be appropriate for the target audience defined in the brief.
- 3 A *plan* outlines how the requirements of the brief will be realised. For this unit standard, the plan may be informal, and it may be more appropriate to produce evidence of it during task completion rather than prior to starting the task or project. Evidence of planning may be oral, written, and/or graphic.
- 4 **Definitions**
Accessibility means the web pages are able to be opened and viewed on a variety of browsers and configured to be viewed by people with disabilities such as visual impairment.
Attributes mean the parameters of the element the script defines.
A brief is defined as a clear description of both the desirable outcomes sought and the constraints to be met by the solution. It contains specifications against which the success or otherwise of the website can be evaluated. The brief for the website will be supplied to the candidate.
Conceptual design is a representation clearly indicative of the final product.
Outcome tags mean the tag used to define an element of the web page and is structured using < >.

Presentation means the website must show consistent application of the principles of layout, which may include but are not limited to – composition of elements, text hierarchy, consistent typography, balance, harmony, proportion, sequence, contrast repetition, alignment, and proximity.

- 5 Legislation relevant to this unit standard includes but is not limited to the: Health and Safety in Employment Act 1992, Copyright Act 1994, Privacy Act 1993, and their subsequent amendments.
- 6 An assessment resource to support computing unit standards (levels 1 to 4) can be found on the NZQA website at <http://www.nzqa.govt.nz/providers/resources/index.html>.

Outcomes and evidence requirements

Outcome 1

Plan a website to meet the specifications of a set brief.

Evidence requirements

- 1.1 The plan identifies the specifications of the brief in terms of their requirements and constraints.

Range may include but is not limited to – milestones, resources, testing procedures.
- 1.2 The plan identifies the purpose, target audience and mark-up language used for the website.
- 1.3 The plan includes a conceptual design.

Range may include but is not limited to – organisational structure of website, page layout, sitemap.

Outcome 2

Code the website using a mark-up language.

Evidence requirements

- 2.1 Text is entered by use of a text editor according to the conventions of the selected language.
- 2.2 Structure tags are added to the text to meet the requirements of the conceptual design.

Range may include but are not limited to – <XHTML>, <HEAD>, <TITLE>, <BODY>.

2.3 Element tags are added and attributes assigned to meet the specifications of the brief in terms of the layout and formatting of the pages and enhancements.

Range element tags may include but are not limited to tags that determine – style of the document, background, text and link colour, font style, image, linked documents, lists, tables, script(s).
Attributes include – any required attributes and further attributes as defined by the specifications of the brief.

2.4 Element tags are added and attributes are assigned to meet the specification of the brief in terms of adding and formatting media.

Range element tags may include but are not limited to – tags that define embedded objects including plug-ins.
Attributes may include but are not limited to – attributes that format the objects, attributes that create events (mouse or keyboard).

2.5 The website is successfully saved to a file by use of the program tools available for the task.

2.6 The web page is opened within a browser, previewed and edited as required to meet the requirements of the conceptual design.

Outcome 3

Test and evaluate the website.

Evidence requirements

3.1 The website is tested to ensure functionality and any errors are corrected and logged according to the testing procedures in the plan.

Range testing may include but is not limited to – validating code, hyperlinks, media, formatting, layout.

3.2 The website is opened in a variety of browsers and is checked for accessibility, readability, legibility and presentation in accordance with the brief.

Range a minimum of two browsers for different platforms.

3.3 The website is evaluated for fitness for purpose in terms of the purpose, target audience and specifications of the given brief.

Exercise Files used in this book

(Instructions are at the front of this book for downloading retrievable files from our web site.)

Names of Files
Javascript – Body
Javascript - Head

Sample Document

Sample Document

Section

1

Refresher – The Internet

Learning Outcomes

At the end of this section you should be able to -

- ☐ Understand the basics of the Internet
- ☐ Understand the use of a web browser
- ☐ Understand hyperlinks
- ☐ Understand browser add-ons
- ☐ Identify positive and negative web page design

Sample Document

The Internet

Websites are a fundamental part of the Internet. This course will teach you how to plan, build, and test a simple website. To put websites in context however, let's start with a quick refresher on the internet and how it works.



What is the Internet?

Definition: The Internet is an international network of millions of computers that allows you to access and transmit information.

The Basics

Web Browsers and HTML

A web browser is a software program that allows you to view HTML files.— HTML is an acronym for **H**yper**T**ext **M**arkup **L**anguage.— HTML files are text files that are written in HTML code.



HTML code is a standard language used to construct web pages, ie it specifies where the text and pictures are displayed, fonts used, data entry fields and hyperlinks to other web pages.— A website can be constructed by a user using specialist software or by a programmer/company dealing in the development of websites.

A web browser translates the HTML code and displays the information on screen.— HTML files are referred to as web pages. A group of web pages linked together under one name is known as a website.

There are different types of web browser software on the market.— The most common are Internet Explorer, Firefox, Google Chrome, and Safari (used on Macs and iPhones).

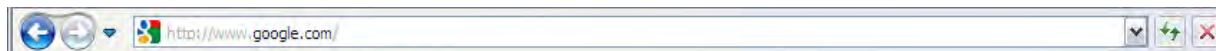
Viewing HTML Files

In order to view HTML files (other than those on your computer) you need to be connected to the internet.— If you have a stand alone computer at home or work you can access the Internet using a broadband or dialup modem and web browser software.— You can also access the internet from a 'smart' mobile phone or tablet device (like an iPhone, iPad, or Android phone).

If your computer is connected to a company network the company may have an Intranet.— An intranet allows you to access and view HTML files from within the company network.— These types of files usually relate to the company, eg product information, company policies, etc.— Most companies have access also to the Internet so staff can access websites that are outside the company's intranet on the World Wide Web.

Moving Around the Internet

In both Internet Explorer and Firefox, the Address box is located above the toolbar and displays the address of the web page you are currently viewing.— You can move to a specific web page by typing the web page address in the Address box.



Uniform/Universal Resource Locator (URL)

URL is the name given to a website address. An example of a web address is:

<http://www.cherylprice.co.nz>

http

http is an acronym for **hypertext transfer protocol** which is the protocol that defines how information is transmitted or retrieved.— The use of http:// in a URL informs the browser that the website will be in hypertext format.

www

www is an acronym for **world wide web**.

Domain Name

The place on the Internet where a website is located is identified by the domain name.— It is possible to create or purchase a domain name to describe your website; many organisations use all or part of their company name.

Extension

The domain name extension usually identifies the type of organisation that operates the site, and/or the purpose of the site.— Commonly-used extensions are:

Extension	Type of Organisation
.org	Non-profit organisation
.edu	Educational institution
.com	Commercial entity
.net	Internet Service Provider, or other IT-related site
.gov	Government agency
.mil	Military site

The extensions shown above are usually used for American websites.— However the .com extension is increasingly being used for the web addresses of global companies, regardless of their physical location.

Other countries may use different extensions, followed by a country code, such as .nz (New Zealand), .au (Australia) or .uk (England).

The following table shows some commonly-used examples.

Extension	Type of Organisation
.ac.nz	New Zealand educational institution
.gov.au	Australian government agency
.govt.nz	New Zealand government agency
.com.au	Australian commercial entity
.co.nz	New Zealand commercial entity

Websites and Hyperlinks

Websites

A website is a group of web pages connected together by links (called hyperlinks).— The Internet is made up of millions of websites that contain information.— On a much smaller scale, a comparison could be a bookstore with various magazines.— Each magazine targets a specific audience – each website provides the same information but on screen with links to pages within the website.

Hyperlinks

When you use a web browser to view a website you only see the end product of a web page.— A web page can consist of several pages brought together as one page on screen.— When you click on a hyperlink you move from the current page you are viewing to another web page either within the same website or to another website.

When you move your mouse pointer over a hyperlink, the pointer will change into a hand.— By clicking once on the link you can move to the relevant web page or website.



Hyperlinks on the Cherylprice.co.nz 'Home Page'



[About Us](#)



Picture or Tab.– Links to another web page or website.– Picture hyperlinks can be images or they can contain text (called a ‘button’ or tabs as shown here).

Highlighted text.– Links to another web page or website.– Can be within a paragraph or on their own.– The text is sometimes underlined, to show that it is a link. Some websites choose to only underline the link when you hover the pointer over the link.

cheryl@cherylprice.co.nz

[Price List - click here to download](#)

Email address/Download link.– Opens a new email message for you to write to the recipient or enables you to download a file.

Home Page

“Home Page” is the term given to the first web page that you view when entering the Internet and the first page of a website is often referred to as the home page.

Browsers Add-ons (or Plug-ins)

Add-ons are a way to add extra functionality to a browser, and can be used to perform many special tasks.– An add-on is an additional program that you can add to a web browser.– An add-on allows you to perform functions that a basic web browser cannot perform on its own, eg play a video or audio file.

‘Plug-ins’ was the original term used to describe additional browser features, like Flash player, RealPlayer, or other audio and video tools. These additional features are usually created by third party developers, as a flexible way for browsers to keep up with different media requirements on the web.

‘Plug-ins’ are now known as ‘add-ons’ in both Internet Explorer and Firefox. The range of add-ons available has grown rapidly, and now include browser tools that assist with:

- Search
- Multimedia
- Web development
- Social networking
- Online shopping
- And many others

Web page design

Before creating a web page you need to identify positive and negative aspects of web design. Design can be seen as negative or positive depending on a person's personality, culture, experiences, likes and dislikes, etc.— Some of the positive and negative factors that can enhance or detract a user from viewing a web page are listed below:

Positive

- Text can be clearly read on screen.
- The look and feel of the web page suits the type of communication being conveyed.
- The web page loading time is not lengthy.
- The content is broken down into concise information portions.
- The use of colour within the website does not detract the user from reading and understanding the information being presented.
- Graphics are placed accordingly.— A user's eye is directed toward the information shown using graphics, etc.
- A web page is set up so a user can view the web page on a small or large screen.
- When a web page is printed all the data displayed on screen will print.
- The layout of text and graphics on the web page are arranged so the reader can find information quickly.
- Uppercase wording is used sparingly to enable the user to read the text easily.
- The language used to communicate is clear.
- Sound usage is kept to a minimum.

Negative

- Too much colour on the web page.
- A web page not set up correctly for a small and large screens.
- Only half the text appears when the web page is printed.
- Excessive sound when entering a web page.
- Long loading time to display a web page.
- Background colour or picture detracts from the information shown on the page.
- Too much text on the web page.
- Hyperlinks that go nowhere.
- Pictures not appearing on screen - displayed with a red cross.
- Information displayed in a random order.
- Too many flashing gifs or text that detract the user from reading the information displayed on the web page.

Exercise 1

- Go to the following websites and:
- 1 List five positive and negative presentation aspects of each website;
 - 2 Identify the main menu links on each website;
 - 3 Identify at least three images used on each website.

www.travelonline.co.nz	www.westpac.com.au	www.kidscom.com
www.cnn.com	www.aspca.org	www.bestofhawaii.com

Sample Document

The Process of Website Creation

Learning Outcomes

At the end of this section you should be able to -

- ☐ Plan a website effectively
- ☐ Identify the purpose, title, target audience and content to be used for a website
- ☐ Sketch out on paper the structure of a website
- ☐ Identify XML sitemaps
- ☐ Sketch a common layout to be used on every web page of a website
- ☐ Identify the tasks to be performed before creating a website - compiling graphics, text and other media; creating website; testing website, etc

The Process of Website Creation



To create a website that works effectively, you need to find out the answers to a number of key questions about your project. If you're creating the website for yourself, you can simply sketch out these answers on a piece of paper.

Typically however, websites are created for a business, an organisation, or some other type of client, and you may need to develop a more formal project plan. To accomplish this, you can employ the following methods of information gathering:

- Personal interviews or discussions with key stakeholders;
- Collection and analysis of existing materials, such as documents, brochures, or existing websites;
- Focus groups or workshops with key stakeholders;
- Surveys, interviews, or focus groups with members of the potential audience of the website.

This process is known as defining the 'scope' of your project. It is important to define the scope of your project for the following key reasons:

- To clearly define the work that needs to be completed to produce the website;
- To obtain agreement with the client or stakeholder/s about what the end result will actually be;
- To prevent scope 'creep' – where extra features and requests are added to the project later, thereby delaying the project completion (sometimes indefinitely!).

Step 1 – Defining your Scope

The questions below are those you need to ask in order to successfully 'scope' your project. The order in which you assess these question is flexible, but the order below is recommended.

□ *Purpose of the website*

What is the message or purpose you are trying to convey? If you are selling something, what is your point of difference, or 'unique selling point'?

□ *Target audience*

What type of people do you want to visit the website?– Will the website display the information required for this target audience?



Some different ways to analyse your potential audience are by creating:

1. Demographic profiles – may include age, occupation, educational level, gender, ethnicity, political preferences, and where they live.
2. Interests and Experience profiles – look at your audience's potential life values, interests, attitudes, and life goals. How much prior knowledge of your subject do they have? What language do they speak?
3. Audience Needs profiles - What knowledge does your audience seek? What problem are they trying to solve? Why do they care about your website?
What do they want to find when they reach your website?

□ ***Title and domain name of the website***

What title should appear on the title bar at the top of the first web page?— This is not only used to display what the website is about but is also recorded in search engine lists. Is your title going to be exactly the same as the domain name, or something slightly different? When you have thought of some desired domain names, you need to check they are available. To do this, use <http://www.domainz.net.nz>— or <http://www.godaddy.com> .

□ ***Mood or feel the website is to generate***

The mood or feeling will determine whether the website will appeal to your target audience. Is it a formal, serious subject? Or does it have humour or elements of ‘fun’? Different colours can appeal to different target audiences. Lots of bright colours will appeal more to children, and light pastel colours are popular with social networking style sites. Some colours might be offensive to particular cultures or religions, or create a negative response or emotion, so it is very important to tailor your colours, graphics, and style of writing to your audience.

□ ***Type of content to be displayed***

Will the website have many graphics, or is it mainly text based material? Graphics, video, and interactive features are more interesting but can slow down the loading of pages.

□ ***Type of features required***

Does the website require social networking style features, or a blog or wiki facility? Do you want members to be able to sign up on your site, join a newsletter, leave comments, or participate in a forum discussion? Perhaps the website needs a shopping cart, or the ability to upload videos?

□ ***What type of security is required?***

Is the site going to be secured to a business or organisation only (eg an intranet), or will it be open to the world, on the internet? Will members have to register for an account, and once they do, will they receive access to everything, or just some things? Will your users get permissions to edit content, or just view content?

□ ***How often will the website change?— Who will update the website?***

If the website is to be changed on a regular basis you need to ensure the person updating it will be able to understand and change it.— The number of times the website is updated should be determined and a regular pattern decided upon, eg every day, week, month, etc.

□ ***What resources and skills will be required?***

How many people need to be involved with this project? What skill sets do they need, and what skills will be required on an ongoing basis? Do you need additional hardware or equipment to complete the website?— How much time will you need from your stakeholders and audience in the process of scoping and testing the website?

□ ***What is the budget for creating and maintaining the website?***

The cost and time required must be taken into consideration before creating a website.— How often the website is updated will also need to be accounted for in the budget.



- ***What timeframe is the website to be completed in? What milestones need to be met along the way?***

It helps to break up the project into achievable chunks, and then schedule delivery dates for each portion. This ensures the project stays on track, and that everything is not left until the last minute.

- ***What testing procedures will be used?***

How will you make sure the website works across all the main web browsers? What processes will occur to make sure the site all functions as it should before launch? Testing is discussed in more detail in Section 4.

- ***What technology framework is the website to be built with?***

The two most common frameworks are:

1. Linux/Apache/MySQL/PHP (known as LAMP)
2. or, Microsoft Windows Internet Information Server, MS SQL and ASP.NET

This decision does not matter for most simple websites, and often depends on what services your web host provides. If you have particular in-house skills however, then it is a good idea to check what sorts of technologies your developers or system administrators currently support.

You also need to decide what version of HTML will be used, or if you want to use associated technologies like Javascript, XML, or another programming language.

In the following example you are provided with a general overview of the company and the type of website to be created.

Scenario

Glentree Kitchens designs and builds kitchens.– They specialise in designing a kitchen to suit a client's budget.– They have a kitchen showroom where a client can see a wide range of designs and kitchen styles.– A design suite enables a client to see their kitchen on the computer then stand in a working model of their kitchen.

Glentree Kitchens would like potential customers to be able to view their website to see some of the services they have to offer and know where they are located (including contact phone numbers and email address).



They would like a web page that displays information on their design suite and a web page on the latest kitchen design styles.

From the scenario above the planning of the website can begin.

Purpose of the website

To generate potential customers and communicate information about Glentree Kitchens.

Target Audience

- Demographic Profile: Home owners or investors, aged 25 to 65, male and female, professionals with disposable income; builders, mostly male aged 25 to 55.
- Interests and Experience profile – People who may like: new things, to cook, the latest appliances, to ‘keep up with the Joneses’; or people who are renovating or building a house.
- Audience Needs profile – People looking for a new kitchen, or ideas and advice on installing a new kitchen. They will want to know what types of kitchens are available, what they cost, and how long they take to install.

Title and domain name of the website

Glentree Kitchens – www.glentreekitchens.co.nz

Mood or feel the website is to generate

A feeling of style, flair, reliability and dependability.

Type of content to be displayed

Text with pictures displaying different types of kitchens, location of the business, design suite, etc. Also some videos of completed kitchens.

Type of features required

A feature to invite visitors to sign up for a monthly newsletter. A contact form.

What type of security is required?

Viewable to everyone on the internet, but with no ability for users to edit or upload content.

How often will the website change?– Who will update the website?

The site will only change every three to six months depending on how many times the latest kitchen design styles will change.

What resources and skills will be required?

Some video creation and photography skills will be required to produce content showing the kitchens. Also professional copywriting skills will be required to create the text for the website. Around three hours of meetings with the owners of Glentree Kitchens will be required for feedback, training, and testing.

What is the budget for creating and maintaining this website?

A moderate to small budget would be acceptable to meet the demands of this site.

What timeframe is the website to be completed in? What milestones need to be met along the way?

The website is required to launch in three months time. The following milestones are scheduled:

1. Delivery of basic mockup.
2. Delivery of basic website, with no content.
3. Delivery of website with content.
4. Launch of final website.

What testing procedures will be used?

HTML validation, cross browser testing, and link checking.

What technology framework is the website to be built with?

The website will be hosted on Linux Apache, and coded in HTML. No MySQL database or PHP programming will be required.