

## *Introducing HTML*

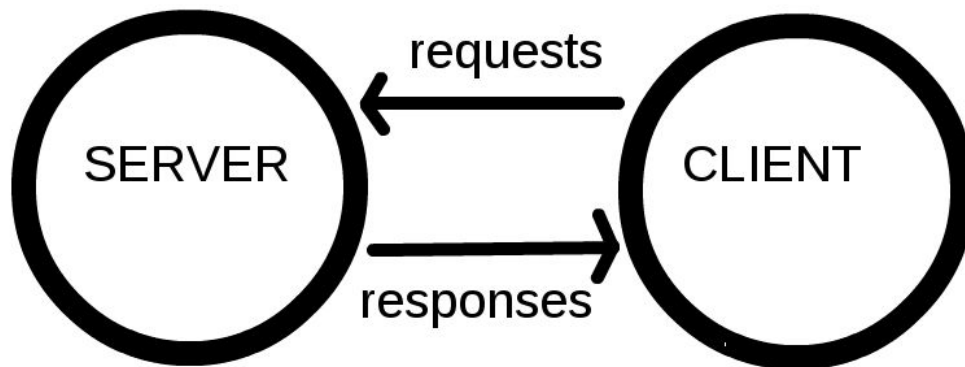
### *How the web works*

What happens when you view a webpage in a web browser on your computer or phone?

This detail is not essential to writing web code in the short term, but before long you'll really start to benefit from understanding what's happening in the background.

#### **Clients and servers**

Computers connected to the web are called clients and servers.



- Clients are the typical web user's internet-connected devices (for example, your computer connected to your Wi-Fi, or your phone connected to your mobile network) and web-accessing software available on those devices (usually a web browser like Firefox or Chrome).
- Servers are computers that store webpages, sites, or apps. When a client device wants to access a webpage, a copy of the webpage is downloaded from the server onto the client machine to be displayed in the user's web browser.

#### **The other parts of the toolbox**

The client and server we've described above don't tell the whole story. There are many other parts involved, and we'll describe them below.

For now, let's imagine that the web is a road. On one end of the road is the client, which is like your house. On the other end of the road is the server, which is like a shop you want to buy something from.

In addition to the client and the server, we need to discuss:

- The internet connection: this allows you to send and receive data on the web. It's basically like the street between your house and the shop.
- TCP/IP: Transmission Control Protocol and Internet Protocol are communication protocols that define how data should travel across the web. This is like the transport mechanisms that let you place an order, go to the shop, and buy your goods.
- DNS: Domain Name Servers are similar to an address book for websites. When you type a web address in your browser, the browser looks at the DNS to find the website's real address before it can retrieve the website. The browser needs to find out which server the website lives on, so it can send HTTP messages to the right place (see below). This is like looking up the address of the shop so you can access it.
- HTTP: Hypertext Transfer Protocol is an application protocol that defines a language for clients and servers to speak to each other. This is the language you use to order your goods.
- Component files: A website is made up of many different files, which are different parts of the goods you buy from the shop. These files come in two main types:
  - Code files: Websites are built primarily from HTML, CSS, and JavaScript.
  - Assets: This is a collective name for all the other items that makes up a website, such as images, music, video, Word documents, and PDFs.

## So what happens?

When you type a web address into your browser (for our analogy that's like walking to the shop):

1. The browser goes to the DNS server, and finds the real address of the server that the website lives on.
2. The browser sends an HTTP request message to the server, asking it to send a copy of the website to the client. This message, and all other data sent between the client and the server, is sent across your internet connection using TCP/IP.
3. If the server approves the client's request, the server sends the client a "200 OK" message, which means "Of course you can look at that website! Here it is", and then starts sending the website's files to the browser as a series of small chunks called data packets.
4. The browser assembles the small chunks into a complete website and displays it (the goods arrive at your door!).

## DNS explained

Real web addresses aren't the memorable strings you type into your address bar to find your favourite websites. They are special numbers that look like this: 63.245.215.20.

This is called an IP address, and it represents a unique location on the web. However, it's not very easy to remember. That's why Domain Name Servers were invented. These are special servers that match up a web address you type into your browser (like "mozilla.org") to the website's real (IP) address. Websites can be reached directly via their IP addresses. You can find the IP address of a website by typing its domain into a tool like an IP Checker.

## Packets

Earlier we used the term "packets" to describe the format in which the data is sent from server to client. Basically, when data is sent across the web, it is sent as thousands of small chunks, so that many different web users can download the same website at the same time. If websites were sent as single big chunks, only one user could download one at a time, which obviously would make the web very inefficient and not much fun to use.

## What is HTML?

HTML is the standard markup language for creating Web pages. It is not a programming language; it is a *markup language* used to tell your browser how to structure the pages you visit. It can be as complicated or as simple as the web developer wishes it to be.



- HTML stands for Hyper Text Markup Language
- HTML describes the structure of web pages using markup
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page.

#### TEACHER TIP

Tags in HTML are case-insensitive, i.e. they can be written in uppercase or lowercase. For example, a `<title>` tag could be written as `<title>`, `<TITLE>`, `<Title>`, `<TiTIE>`, etc., and it will work fine. Best practice, however, is to write all tags in lowercase for consistency and readability.

## First Web Page

# My First Heading

My first paragraph.

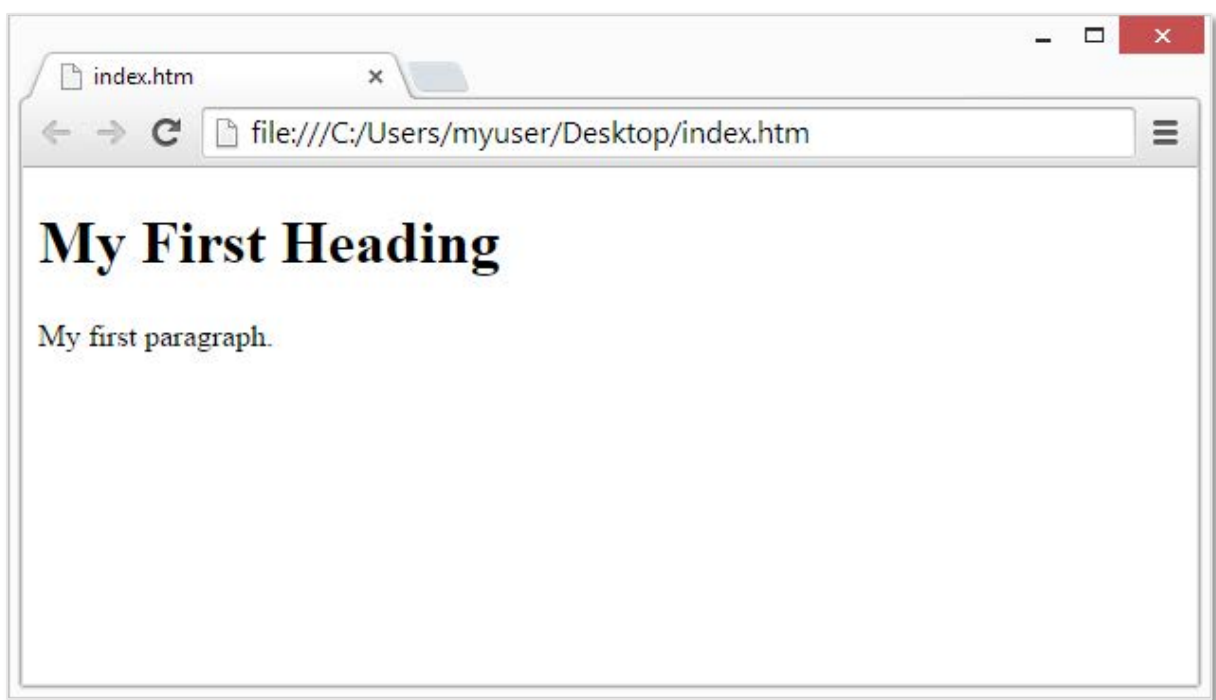
```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <title>Page Title</title>
5 </head>
6 <body>
7
8 <h1>My First Heading</h1>
9 <p>My first paragraph.</p>
10
11 </body>
12 </html>
13
14
15
```

- The `<!DOCTYPE html>` declaration defines this document to be HTML5.
- The `<html>` element is the root element of an HTML page.
- The `<head>` element contains meta information about the document.
- The `<title>` element specifies a title for the document.
- The `<body>` element contains the visible page content.

- The `<h1>` element defines a large heading.
- The `<p>` element defines a paragraph.

## Web Browsers

The purpose of a web browser (Chrome, IE, Firefox, Safari) is to read HTML documents and display them. The browser does not display the HTML tags, but uses them to determine how to display the document:

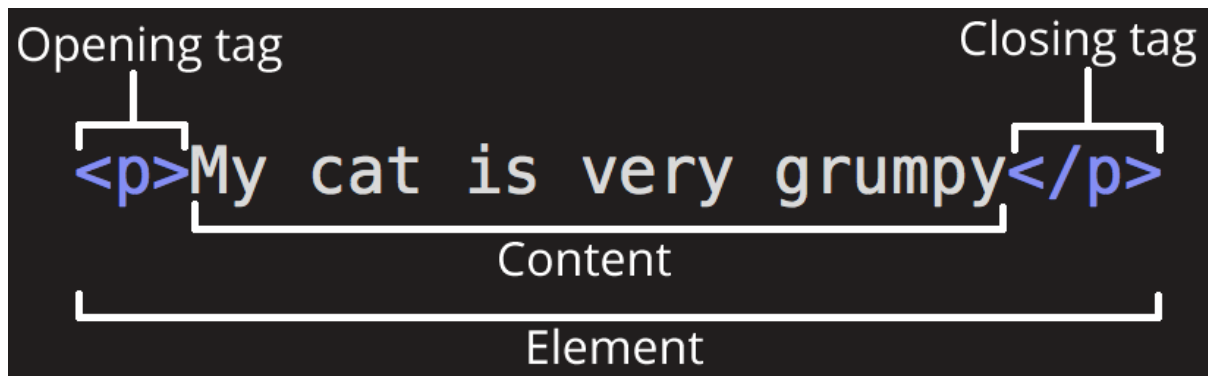


## HTML Tags

HTML tags are element names surrounded by angle brackets:

**`<tagname>` content goes here...`</tagname>`**

- HTML tags normally come in pairs like `<p>` and `</p>`
- The first tag in a pair is the start tag, the second tag is the end tag
- The end tag is written like the start tag, but with a forward slash inserted before the tag name



The main parts of our element are:

1. **The opening tag:** This consists of the name of the element (in this case, p), wrapped in opening and closing angle brackets. This states where the element begins or starts to take effect.
2. **The closing tag:** This is the same as the opening tag, except that it includes a forward slash before the element name. This states where the element ends. Failing to include a closing tag is a common beginner error and can lead to strange results.
3. **The content:** This is the content of the element.
4. **The element:** The opening tag plus the closing tag plus the content equals the element.

## HTML Page Structure

Most structured text consists of headings and paragraphs, whether you are reading a story, a newspaper, a college textbook, a magazine, etc.



- Users looking at a web page tend to scan quickly to find relevant content, often just reading the headings to begin with (we usually spend a very short time on a web page). If they can't see anything useful within a few seconds, they'll likely get frustrated and go somewhere else.
- Search engines indexing your page consider the contents of headings as important keywords for influencing the page's search rankings. Without headings, your page will perform poorly in terms of SEO (Search Engine Optimisation).
- Severely visually impaired people often don't read web pages; they listen to them instead. This is done with software called a screen reader. This software provides ways to get fast access to given text content. Among the various techniques used, they provide an outline of the document by reading out the headings, allowing their



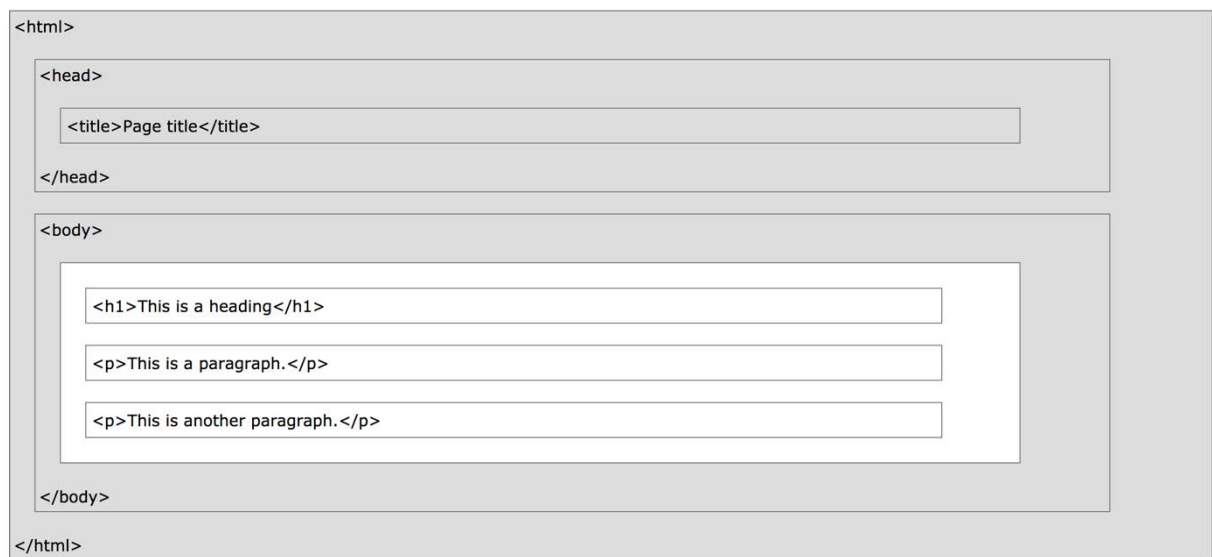
users to find the information they need quickly. If headings are not available, they will have to listen to the whole document read out loud.

- To style content with CSS, or make it do interesting things with JavaScript, you need to have elements wrapping the relevant content, so CSS/JavaScript can effectively target it.

## Visualisation of an HTML page structure

The HTML head is the contents of the `<head>` element - unlike the contents of the `<body>` element (which are displayed on the page when loaded in a browser), the head's content is not displayed on the page. Instead, the head's job is to contain metadata about the document.

Metadata is data that describes data, and HTML has an "official" way of adding metadata to a document - the `<meta>` element. There are a lot of different types of `<meta>` elements that can be included in your page's `<head>`, but we won't try to explain them here.



## HTML Versions

Since the early days of the web, there have been many versions of HTML:

Version	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.01	1999
XHTML	2000
HTML5	2014

### HTML5

HTML5 is the new web standard. It follows HTML 4 (which came out in 1997) and XHTML. Since the introduction of HTML4, a lot has happened with the web and something needed to be done to address all the new technologies and latest multimedia. HTML5 is the result of cooperation that began in 2006 between the World Wide Web Consortium (W3C) and the Web Hypertext Application Technology Working Group (WHATWG).

The basic aim of HTML5 is to provide two things (1) to improve the language and (2) to support the latest multimedia. In order to accomplish this, some ground rules were established by the W3C and WHATWG. Among them were to reduce the need for external plug-ins (such as Flash plug-ins), better handling of errors, and more markup elements (tags) to replace scripting. HTML5 should also be device independent (that is, understood by computers and the many devices in existence today) while also keeping it easily readable.

## Exercise 1

Create the following simple web page. Please type out the text.

### About Google

Google is best known for its search engine, although Google now offers a number of other services.

Google's mission is to organize the world's information and make it universally accessible and useful.

Its founders Larry Page and Sergey Brin started Google at Stanford University.

## Reflection

Reflect on what you have learned about HTML so far.



Use the space below to write **five** things about HTML.

1.

2.

3.

4.

5.

## Basic Text Formatting

### How white space is collapsed

Most structured text consists of headings and paragraphs, whether you are reading a story, a newspaper, a college textbook, a magazine, etc.

This paragraph below shows how multiple spaces between words are treated as a single space. This is known as white space collapsing, and the big spaces between some of the words will not appear in the browser. It also demonstrates how the browser will treat multiple carriage returns (new lines) as a single space, too.

```
1 <html>
2 <head>
3   <meta charset="utf-8">
4   <title>White Space Collapsing and Line Wrapping</title>
5 </head>
6
7 <body>
8 <p>This paragraph shows how multiple spaces between words are treated as a single space. This is known as white space collapsing,
9 and the big spaces between some of the words will not appear in the browser.
10
11
12
13 It also demonstrates how the browser will treat multiple carriage returns (new lines) as a single space, too.</p>
14 </body>
15 </html>
16
17
18
```

This paragraph shows how multiple spaces between words are treated as a single space. This is known as white space collapsing, and the big spaces between

## Creating headings using the hn elements

The HTML <h1>–<h6> elements represent six levels of section headings. <h1> is the highest section level and <h6> is the lowest.

```
1 <!doctype html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Six Levels of Headings in XHTML</title>
6 </head>
7 <body>
8   <h1>Heading 1</h1>
9   <h2>Heading 2</h2>
10  <h3>Heading 3</h3>
11  <h4>Heading 4</h4>
12  <h5>Heading 5</h5>
13  <h6>Heading 6</h6>
14 </body>
15 </html>
16
17
```

# Heading 1

## Heading 2

### Heading 3

#### Heading 4

##### Heading 5

###### Heading 6

## Structuring headings and paragraphs

Almost every document you create will contain some form of text.

### White Space and Flow

Before you start to mark up your text, it is best to understand what HTML does when it comes across spaces and how browsers treat long sentences and paragraphs of text.

### Creating Headings

No matter what sort of document you are creating, most documents have headings in some form or other.

```
1
2 <!doctype html>
3 <html>
4 <head>
5   <meta charset="utf-8">
6   <title>Using Headings to Structure Text</title>
7 </head>
8
9 <body>
10 <h1>Basic Text Formatting</h1>
11 <p> This section is going to address the way in which you mark up text. Almost every document you create will contain some form of text, so this
12   will be a very important section. </p>
13
14 <h2>White Space and Flow</h2>
15 <p> Before you start to mark up your text, it is best to understand what HTML does when it comes across spaces and how browsers
16   treat long sentences and paragraphs of text.</p>
17
18 <h2>Creating Headings</h2>
19 <p> No matter what sort of document you are creating, most documents have headings in some form or other...</p>
20 </body>
21 </html>
22
23
```

## Creating paragraphs using the <p> element

The HTML <p> element represents a paragraph. Paragraphs are usually represented in visual media as blocks of text separated from adjacent blocks by blank lines and/or first-line indentation, but HTML paragraphs can be any structural grouping of related content, such as images or form fields.

```

1 <!doctype html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Paragraphs</title>
6 </head>
7
8 <body>
9   <p>Here is a paragraph of text.</p>
10  <p>Here is a second paragraph of text.</p>
11  <p>Here is a third paragraph of text.</p>
12 </body>
13 </html>
14
15

```

## Creating line breaks using the <br> element

When you want to start a new line you can use the line break element. So, the next word will appear on a new line. Without the line break element, new lines are started only when the sentence reaches the end of the screen; this sentence should be long enough to wrap on your screen. Try resizing your browser window and see how the position where the line wraps onto a new line changes.

```

1 <!doctype html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Creating Line Breaks Using the &lt;br /&gt; Element</title>
6 </head>
7
8 <body>
9   <p>When you want to start a new line you can use the line break element. So, the next<br>
10  word will appear on a new line.</p>
11  <p>Without the line break element, new lines are started only when the sentence reaches the end of the screen; this sentence should be long enough
12  to wrap on your screen. Now try resizing your browser window and see how the position where the line wraps onto a new line changes.</p>
13  <p>Some Web designers also use this element to control the layout of the document and add extra white space. You can use
14  multiple line break elements to create gaps of several lines, like I am about to do <br><br><br><br><br>here because this
15  text is still in the same paragraph element. Rather than using the line break element to add white space into your documents, i
16  t is better to use CSS.</p>
17 </body>
18 </html>
19
20

```

## Creating preformatted text using the `<pre>` element

The HTML `<pre>` element represents preformatted text which is to be presented exactly as written in the HTML file. The text is typically rendered using a non-proportional ("monospace") font. Whitespace inside this element is displayed as written. The following text is written inside a `<pre>` element.

```
1 <!doctype html>
2 <html>
3 <head>
4 <meta charset="utf-8">
5 <title>Creating Prefromatted Text Using the <pre> Element</title>
6 </head>
7
8 <body>
9 <p>The following text is written inside a <pre> element. Multiple spaces should be preserved and the line breaks should appear where
10 they do in the source document.</p>
11
12 <pre>
13 function testFunction(strText){
14     console.log(strText)
15 }
16 </pre>
17
18 <p>The content of the <pre> element is most likely displayed in a monospaced font.</p>
19
20 </body>
21 </html>
22
23
24
```



## Exercise 2 - Example Café

Create the following simple web page for a Café. Use the text file provided to avoid typing it out.

### EXAMPLE CAFE

Welcome to example cafe. We will be developing this site throughout the book.

#### **A community cafe serving home cooked, locally sourced, organic food**

With stunning views of the ocean, Example Cafe offers the perfect environment to unwind and recharge the batteries.

Our menu offers a wide range of breakfasts, brunches and lunches, including a range of vegetarian options.

Whether you sip on a fresh, hot coffee or a cooling smoothie, you never need to feel rushed - relax with friends or just watch the world go by.

#### **This weekend's special brunch**

This weekend, our season of special brunches continues with scrambled egg on an English muffin. Not for the faint-hearted, the secret to these eggs is that the

## Reflection

Reflect on what you have learned about formatting text in HTML.



Use the space below to write three different tags for formatting text.

1.

2.

3.

## Working with Lists

Now let's turn our attention to lists. Lists are everywhere in life - from your shopping list to the list of directions you subconsciously follow to get to your house every day. Lists are everywhere on the Web too, and we've got three different types to worry about.

### Unordered lists using the `<ul>` and `<li>` elements

An unordered list starts with the `<ul>` tag. Each list item starts with the `<li>` tag.

The list items will be marked with bullets (small black circles) by default.

Here is an unordered list, which is just a bulleted list:

- Bullet point number one
- Bullet point number two
- Bullet point number three

```
1  <!doctype html>
2  <html>
3  <head>
4      <meta charset="utf-8">
5      <title>Unordered Lists</title>
6  </head>
7
8  <body>
9
10 <p>Here is an unordered list, which is just a bulleted list:</p>
11
12 <ul>
13     <li>Bullet point number one</li>
14     <li>Bullet point number two</li>
15     <li>Bullet point number three</li>
16 </ul>
17
18 </body>
19 </html>
20
21
```

## Ordered lists using the <ol> and <li> elements

The HTML <ol> element represents an ordered list of items, typically rendered as a numbered list.

Here is an ordered list:

1. Point number one
2. Point number two
3. Point number three

```
1 <!doctype html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Ordered Lists</title>
6 </head>
7
8 <body>
9
10 <p>Here is an ordered list:</p>
11
12 <ol>
13   <li>Point number one</li>
14   <li>Point number two</li>
15   <li>Point number three</li>
16 </ol>
17
18 </body>
19 </html>
20
21
```

## Using the start attribute to change the starting number in ordered lists

The start attribute specifies the start value of the first list item in an ordered list.

Here is an ordered list:

4. Point number one
5. Point number two
6. Point number three

```
1 <!doctype html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Ordered Lists</title>
6 </head>
7
8 <body>
9
10 <p>Here is an ordered list:</p>
11
12 <ol start="4">
13   <li>Point number one</li>
14   <li>Point number two</li>
15   <li>Point number three</li>
16 </ol>
17
18 </body>
19 </html>
20
21
```

## Definitions lists with the <dl>, <dt> and <dd> attributes

The <dd> tag is used to describe a term/name in a description list. The <dd> tag is used in conjunction with <dl> (defines a description list) and <dt> (defines terms/names). Inside a <dd> tag you can put paragraphs, line breaks, images, links, lists, etc.

Here is a definition list:

### Unordered List

A list of bullet points.

### Ordered List

An ordered list of points, such as a numbered set of steps.

### Definition List

A list of terms and definitions.

```
1  <!doctype html>
2  <html>
3  <head>
4    <meta charset="utf-8">
5    <title>Definition Lists</title>
6  </head>
7
8  <body>
9
10 <p>Here is a definition list:</p>
11
12 <dl>
13   <dt>Unordered List</dt>
14   <dd>A list of bullet points.</dd>
15   <dt>Ordered List</dt>
16   <dd>An ordered list of points, such as a numbered set of steps.</dd>
17   <dt>Definition List</dt>
18   <dd>A list of terms and definitions.</dd>
19 </dl>
20
21 </body>
22 </html>
23
24
25
```

## Nesting lists

A nested list is a list within a list. If you've ever created a bulleted outline in a word processing document you probably used a variety of indentations and bullet point types to denote items that were subpoints of another item in the outline. This is the effect we're going for when we create nested lists.

Here is a nested ordered list:

- I. Item one
- II. Item two
- III. Item three
- IV. Item four
  - i. Item 4.1
  - ii. Item 4.2
  - iii. Item 4.3
- V. Item Five

```
1  <!doctype html>
2  <html>
3  <head>
4    <meta charset="utf-8">
5    <title>Nested ordered lists</title>
6  </head>
7
8  <body>
9
10 <p>Here is a nested ordered list:</p>
11
12 <ol type="I">
13   <li>Item one</li>
14   <li>Item two</li>
15   <li>Item three</li>
16   <li>Item four
17     <ol type="i">
18       <li>Item 4.1</li>
19       <li>Item 4.2</li>
20       <li>Item 4.3</li>
21     </ol>
22   </li>
23   <li>Item Five</li>
24 </ol>
25
26 </body>
27 </html>
28
```

## Fine-tuning Your Text

### The `<strong>` element

The HTML Strong Importance Element (`<strong>`) indicates that its contents have strong importance, seriousness, or urgency.

In the following sentence, the words can cause blindness are contained inside the `<strong>` element.

```
1 <!doctype html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Creating Emphasis Using the <em> and <strong> Elements</title>
6 </head>
7 <body>
8 <p>In the following sentence the words <strong>can cause blindness</strong> are contained inside the <strong> element.</p>
9
10 </body>
11 </html>
```

### The `<cite>` element

The `<cite>` tag defines the title of a work (e.g. a book, a song, a movie, a TV show, a painting, a sculpture, etc.). It is used for quoting text from another source.

```
1 <html>
2 <head>
3   <meta charset="utf-8">
4   <title>Citations</title>
5 </head>
6
7 <body>
8
9 <h2>The <cite> Element for Quoting Text From Another Source</h2>
10 <p>This chapter is taken from <cite>Beginning Web Programming</cite>.</p>
11
12 </body>
13 </html>
```

## The <q> element

If your quotation is going to appear only within a sentence, you should use the <q> element. The following sentence uses the <q> element to form a quote:

```
1
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Quotes</title>
6 </head>
7
8 <body>
9   <h1>The &lt;q> Element for Small Quotations</h1>
10  <p>If your quotation is going to appear only within a sentence, you should use the &lt;q> element. The following sentence u
11 ses the &lt;q> element to form a quote:</p>
12  <p>As Dylan Thomas said, <q>Somebody's boring me. I think it's me</q>.</p>
13
14 </body>
15 </html>
16
17
```

## The <blockquote> element

The blockquote element defines "a section [within a document] that is quoted from another source". The blockquote element is used to indicate the quotation of a large section of text from another source.

Using the default HTML styling of most web browsers, it will indent the right and left margins both on the display and in printed form, but this may be overridden by Cascading Style Sheets (CSS).

```
1 <!doctype html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Quotes</title>
6 </head>
7
8 <body>
9   <h1>The &lt;blockquote> Element</h1>
10  <p>The following description of the blockquote element is taken from the WHATWG site:</p>
11  <blockquote> The blockquote element represents a section that is quoted from another source. Content inside a blockquote
12 must be quoted from another source, whose address, if it has one, may be cited in the cite attribute.</blockquote>
13
14 </body>
15 </html>
16
17
```



## The <dfn> element

The HTML Definition element (<dfn>) is used to indicate the term being defined within the context of a definition phrase or sentence. The following sentence uses a <dfn> element for the important term HTML.

```
1  <!doctype html>
2  <html>
3  <head>
4    <meta charset="utf-8">
5    <title>Definitions</title>
6  </head>
7
8  <body>
9    <p>The following sentence uses a &lt;dfn> element for the important term <b>HTML</b>.</p>
10   <p>This book teaches you how mark up your documents for the web using <dfn>HTML</dfn>.</p>
11   <br>
12
13  </body>
14  </html>
15
16
```

## The <code> element

The <code> Element For Adding Code to Your Web Pages

```
1  <!doctype html>
2  <html>
3  <head>
4    <meta charset="utf-8">
5    <title>Representing Code</title>
6  </head>
7
8  <body>
9    <h2>The &lt;code> Element For Adding Code to Your Web Pages</h2>
10   <p>The following line appears inside a &lt;code> element.</p>
11   <p><code>&lt;h1>This is a primary heading</h1></code></p>
12
13  </body>
14  </html>
15
16
```

## The <var> element

The HTML Variable element (<var>) represents the name of a variable in a mathematical expression or a programming context. It's typically presented using an italicized version of the current typeface.

```
1 <html>
2 <head>
3   <meta charset="utf-8">
4   <title>Representing Programming Variables</title>
5 </head>
6
7 <body>
8 <h1>The <code><var></code> Element for Programming Variables</h1>
9 <p>The following line is written inside a <code><code></code> element, while <b>user-name</b> is written inside a <code><var></code> element.</p>
10 <p><code>console.log( "<var>user-name</var>" )</code></p>
11 <p>As you can see, the content of the <code><var></code> element is italicized.</p>
12 </body>
13 </html>
14
15
```

## The <samp> element

The <samp> element is used to display output from a process, such as an error message from a computer script. It was originally designed for technical documentation, and renders the content of the element in a monospace font.

```
1 <html>
2 <head>
3   <meta charset="utf-8">
4   <title>Representing Programming Variables</title>
5 </head>
6
7 <body>
8 <h1>The <code><samp></code> Element for Sample Program Output</h1>
9 <p>The following line uses the <code><samp></code> element to indicate the output from a script or program.</p>
10 <p><samp>This is the output from our test script.</samp></p>
11
12 </body>
13 </html>
14
15
```

### TEACHER TIP!

Develop pages in small steps.

Save and test your new page every time you add or change tags.

## Exercise 3 - Example Café Recipes

Create the following simple web page for the Example Café. The text will be provided to avoid typing.

### Example Cafe Recipes - World's Best Scrambled Eggs

I adapted this recipe from a book called [Sydney Food](#) by Bill Grainger. Ever since tasting these eggs on my 1<sup>st</sup> visit to Bill's restaurant in Kings Cross, eggs I have ever tasted.

This recipe is what I call a "very special breakfast"; just look at the ingredients to see why. It has to be tasted to be believed.

#### Ingredients

The following ingredients make one serving:

- 2 eggs
- 1 tablespoon of butter (10g)
- 1/3 cup of cream (2 3/4 fl ounces)
- A pinch of salt
- Freshly milled black pepper
- 3 fresh chives (chopped)

#### Instructions

1. Whisk eggs, cream, and salt in a bowl.
2. Melt the butter in a non-stick pan over a high heat (*taking care not to burn the butter*).
3. Pour egg mixture into pan and wait until it starts setting around the edge of the pan (around 20 seconds).
4. Using a wooden spatula, bring the mixture into the center as if it were an omelet, and let it cook for another 20 seconds.
5. Fold contents in again, leave for 20 seconds, and repeat until the eggs are only just done.
6. Grind a light sprinkling of freshly milled pepper over the eggs and blend in some chopped fresh chives.

You should only make a **maximum** of two servings per frying pan.

## Reflection

Reflect on what you have learned about fine-tuning your text in HTML.



Use the space below to write three different tags for fine-tuning your text.

## Links & Navigation

### Creating a basic link to a page in the same folder using the `<a>` element

- HTML links are hyperlinks.
- You can click on a link and jump to another document.
- When you move the mouse over a link, the mouse arrow will turn into a little hand.

In HTML, links are defined with the `<a>` tag:

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4    <meta charset="utf-8">
5    <title>A basic link to another page</title>
6  </head>
7
8  <body>
9    <p>Return to the <a href="index.html">home page</a>.</p>
10 </body>
11
12 </html>
13
14
```

### Creating a link to an external Web site

The href attribute specifies the destination address (<https://www.rte.ie>) of the link. The link text is the visible part (RTE Website).

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>A basic link to an external web site</title>
6 </head>
7
8 <body>
9   <p>Why not visit the <a href="http://www.rte.ie/">RTE Web site</a>?</p>
10 </body>
11 </html>
12
13
```

Why not visit the [RTE Web site](http://www.rte.ie/)?

## Link Colours

By default, a link will appear like this (in all browsers):

- An unvisited link is underlined and blue
- A visited link is underlined and purple
- An active link is underlined and red

You can change the default colours, by using CSS.

## A link to send an email

Using the *mailto* link it will allow you to send you an e-mail

`<A HREF="mailto:name@mydomain.com"> Click Here To Email Me </A>`

The *mailto* link is written in the same format as a hyperlink except you use *mailto:* in place of the *http://* and your e-mail address in place of the page address or URL. You must include the `</A>` code at the end of the line in order for the [mailto link to work](#). There is NO space between the *mailto:* and the e-mail address.

```

1
2 <!DOCTYPE html>
3 <html>
4 <head>
5   <meta charset="utf-8">
6   <title>A link to send an email</title>
7 </head>
8
9 <body>
10 <p><a href="mailto:name@example.com">name@example.com</a></p>
11 </body>
12 </html>
13
14

```

[name@example.com](mailto:name@example.com)

## Create a Bookmark

- HTML bookmarks are used to allow readers to jump to specific parts of a Web page.
- Bookmarks can be useful if your webpage is very long.
- To make a bookmark, you must first create the bookmark, and then add a link to it.
- When the link is clicked, the page will scroll to the location with the bookmark.

First, create a bookmark with the id attribute:

```
<h2 id="C4">Chapter 4</h2>
```

Then, add a link to the bookmark ("Jump to Chapter 4"), from within the same page:

```
<a href="#C4">Jump to Chapter 4</a>
```

## Example 4 Cafe - Adding links between pages

Open the following web page for a Café and make edits or changes to it. Use the file provided.

### EXAMPLE CAFE

HOME [MENU](#) [RECIPES](#) [CONTACT](#)

#### A community cafe serving home cooked, locally sourced, organic food

With stunning views of the ocean, Example Cafe offers the perfect environment to unwind and recharge the batteries.

Our menu offers a wide range of breakfasts, brunches and lunches, including a range of vegetarian options.

Whether you sip on a fresh, hot coffee or a cooling smoothie, you never need to feel rushed - relax with friends or just watch the world go by.

#### This weekend's special brunch

This weekend, our season of special brunches continues with scrambled egg on an English muffin. Not for the faint hearted, the secret to these eggs is that they are made v



Use the space below for rough work.

## Tables

An HTML table is defined with the `<table>` tag. Each table row is defined with the `<tr>` tag. A table header is defined with the `<th>` tag. By default, table headings are bold and centred. A table data/cell is defined with the `<td>` tag.

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>A basic table</title>
6 </head>
7
8 <body>
9
10 <table border="1">
11   <tr>
12     <td>Row 1, Column 1</td>
13     <td>Row 1, Column 2</td>
14   </tr>
15   <tr>
16     <td>Row 2, Column 1</td>
17     <td>Row 2, Column 2</td>
18   </tr>
19 </table>
20
21 </body>
22 </html>
23
24
25
```

Row 1, Column 1	Row 1, Column 2
Row 2, Column 1	Row 2, Column 2

- Use the HTML `<table>` element to define a table
- Use the HTML `<tr>` element to define a table row
- Use the HTML `<td>` element to define a table data
- Use the HTML `<th>` element to define a table heading
- Use the HTML `<caption>` element to define a table caption



## Example 5 - Adding a table

Create the following web page for the Café. A text file will be provided.

example  
cafe

[HOME](#)
[MENU](#)
[RECIPES](#)
[CONTACT](#)

### Contact

12 Sea View, Newquay, Cornwall, UK

[Find us on Google Maps](#)

[Email Example Cafe](#)

Opening hours for the Example Cafe in Newquay

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
<b>Breakfast</b>	7:00am - 10:00am	7:00am - 10:00am	7:00am - 10:00am	7:00am - 10:00am	7:00am - 11:00am	8:00am - 11:30pm	8:00am - 11:30pm
<b>Lunch</b>	11:30am - 2:30pm	11:30am - 2:30pm	11:30am - 2:30pm	11:30am - 2:30pm	11:30am - 2:30pm	11:30am - 3:30pm	11:30am - 3:30pm



Use the space below for rough work.

## Image & Video

### Adding an image using the <img> element

- In HTML, images are defined with the <img> tag.
- The <img> tag is empty, it contains attributes only, and does not have a closing tag.
- The src attribute specifies the URL (web address) of the image.

```
1
2 <!DOCTYPE html>
3 <html>
4 <head>
5   <meta charset="utf-8">
6   <title>Image</title>
7 </head>
8
9 <body>
10
11 
12
13 </body>
14
15 </html>
16
17
```

### The height and width attributes

- You can use the width and height attributes.
- The width and height attributes are in pixels.

```

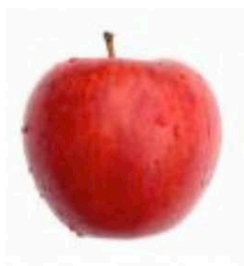
1
2 <!DOCTYPE html>
3 <html>
4 <head>
5   <meta charset="utf-8">
6   <title>Fruit Pictures</title>
7 </head>
8 <body>
9   <p>Fixed size: width 130 height 130</p>
10  
11  <p>Enlarged: width 160 (no height specified)</p>
12  
13  <p>Stretched: width 80 height 150</p>
14  
15 </body>
16 </html>
17
18

```

Fixed size: width 130 height 130



Enlarged: width 160 (no height specified)



Stretched: width 80 height 150



## Using images as links

To use an image as a link, put the `<img>` tag inside the `<a>` tag.

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta charset="utf-8">
5   <title>Image as a link</title>
6 </head>
7
8 <body>
9
10 <a href="http://www.wrox.com"></a>
11
12 </body>
13
14 </html>
15
16
```

## Images in Another Folder

If not specified, the browser expects to find the image in the same folder as the web page.

However, it is common to store images in a sub-folder. You must then include the folder name in the `src` attribute:

```
` element in your web page
- Let the `src` attribute point to the video URL
- Use the `width` and `height` attributes to specify the dimension of the player
- Add any other parameters to the URL (see below)