

HTML Basics

Website Development 1

Overview

- HTML introduction
- Anatomy of a tag
- Required tags
- Basic formatting tags
- Adding an image
- Linking pages
- HTML Validation
- Structure of practical classes

Hyper Text Markup Language

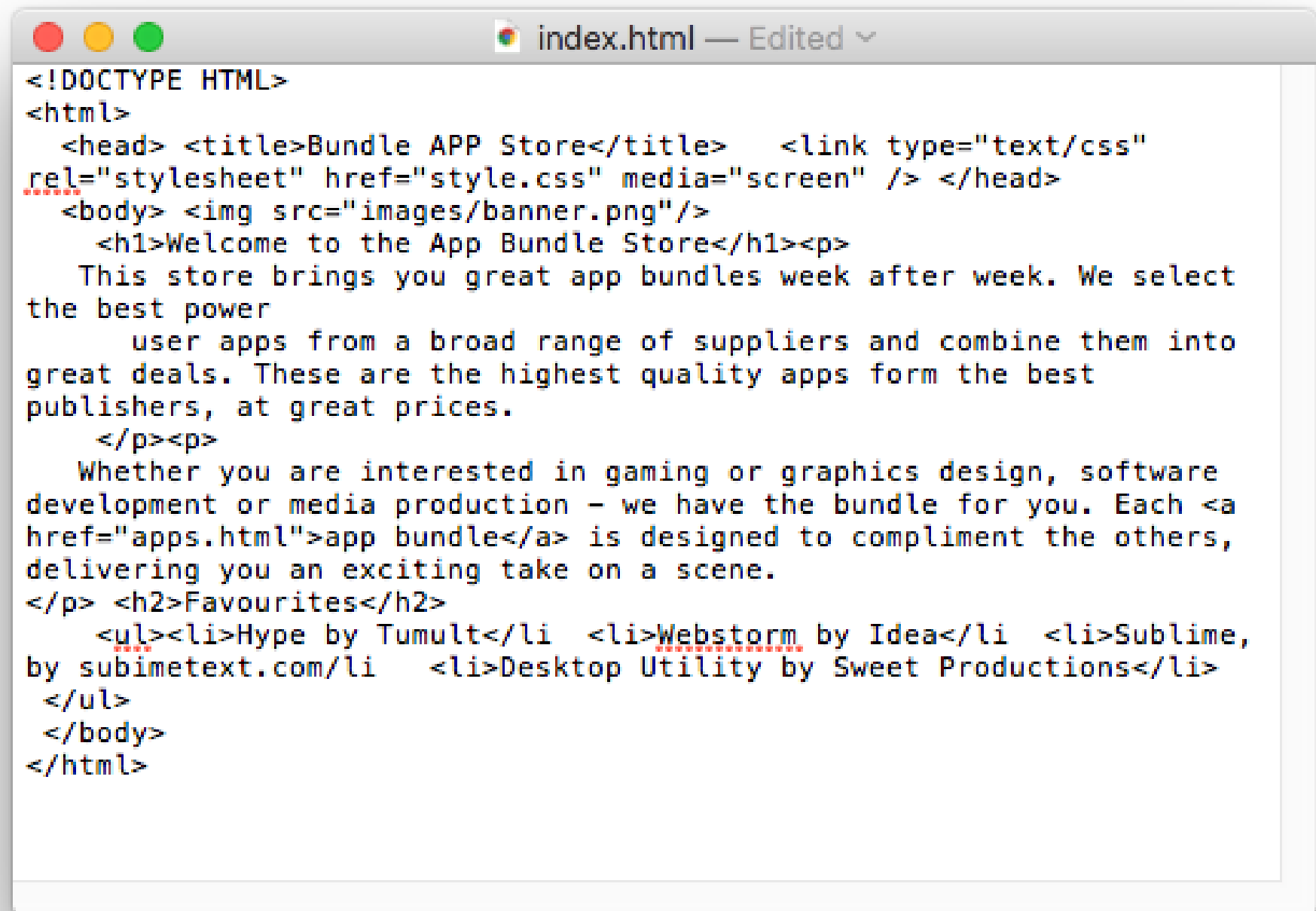
- HTML tells your browser about the structure of your document:
 - where the headings are,
 - where the paragraphs are,
 - what text needs emphasis, etc
 - what text needs to be linked,
 - what images to be displayed.
- Given this information, browsers have built-in default rules for how to display each of these elements.
- This information is conveyed using **tags**, these denote the intention of the author regarding the structure and display of the document.

HTML

- An HTML document is called a 'page'.
- The starting page of a site is called the 'homepage', saved as **index.html**.
- HTML should only be used for the description of the document structure and not to describe the document presentation.
- Every HTML document consists of two parts:
 - Document 'head': contains information about the document.
 - Document 'body': contains the content of the document.

The Code in a Conventional Editor

- An actual document text - but poorly structured (indented)

A screenshot of a text editor window titled 'index.html — Edited'. The window displays HTML code with various indentation levels. The code includes a DOCTYPE declaration, a head section with a title and a link to a stylesheet, and a body section. The body contains an image tag, a heading, and several paragraphs of text. The text is indented to represent structure, but the HTML tags are not properly closed or nested, illustrating a poorly structured document. The code is as follows:

```
<!DOCTYPE HTML>
<html>
  <head> <title>Bundle APP Store</title>    <link type="text/css"
rel="stylesheet" href="style.css" media="screen" /> </head>
  <body> 
    <h1>Welcome to the App Bundle Store</h1><p>
      This store brings you great app bundles week after week. We select
the best power
        user apps from a broad range of suppliers and combine them into
great deals. These are the highest quality apps form the best
publishers, at great prices.
    </p><p>
      Whether you are interested in gaming or graphics design, software
development or media production - we have the bundle for you. Each <a
href="apps.html">app bundle</a> is designed to compliment the others,
delivering you an exciting take on a scene.
    </p> <h2>Favourites</h2>
      <ul><li>Hype by Tumult</li> <li>Webstorm by Idea</li> <li>Sublime,
by subimetext.com/li    <li>Desktop Utility by Sweet Productions</li>
      </ul>
    </body>
</html>
```

The Code in a Programmer's Editor

```
html
1 <html>
2   <head>
3     <title>Bundle APP Store</title>
4   </head>
5   <body>
6     
7     <h3>Freebie</h3>
8     <p>
9       Stacksocial just published its so called Free Ondesoft Mac Tool Bundle, which contains
10      5 apps from Ondesoft. The bundle worth $146 will be probably available only a couple
11      of days so you'd better hurry up to get it.
12    </p>
13    <p>
14      
15    </p>
16    <hr>
17    <h3>Macware Business Bundle</h3>
18    <p>
19      Here comes the next bundle for march. This time its macware who publish a bundle. The
20      so called macware Business Bundle contains 6 apps at a price of only $29.99 instead
21      of $199.94. So you can save around 84%. There is n...
22    </p>
23  </body>
24 </html>
```

- Same document - pleasingly indented and syntax highlighted.

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HTML Tags

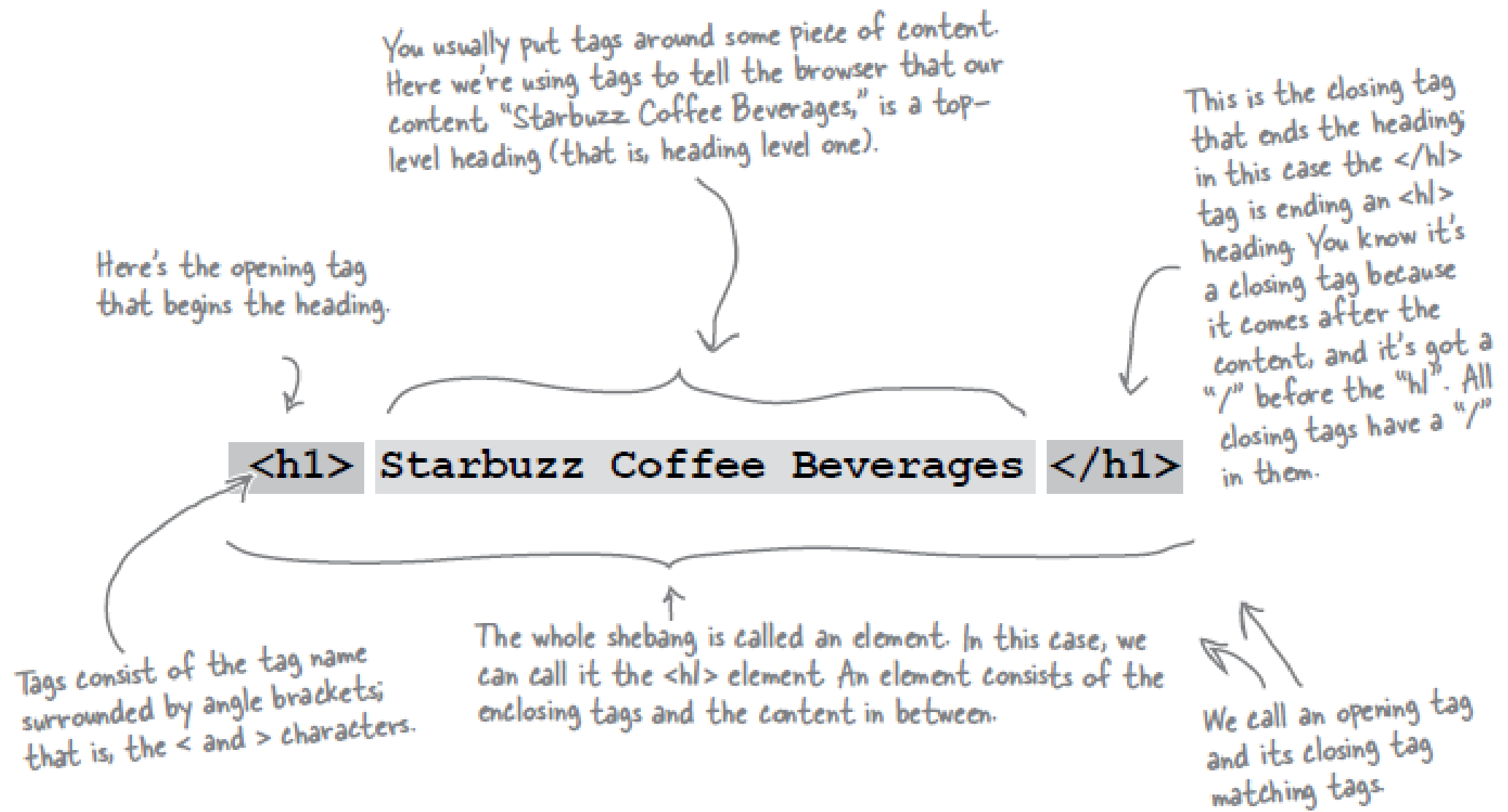
(more correctly called Elements)

*Sample Tags
for this week*

```
<html>
<head>
  <title>
</head>
<body>
  <h1>
  <h2>
  <p>
  <a>
  <img>
```

- Grouped by purpose:
 - Structural
 - <html>, <head>, <title>, <body>
 - Text
 - Heading
 - <h1>, <h2>
 - Text
 - <p>, , <i>
 - Hypertext
 - <a>
 - Image
 -

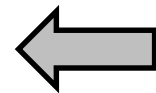
Components of an HTML Element



Components of an HTML Element

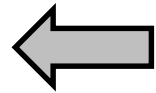
<ElementName >

Content



Start Tag

</ElementName>



End Tag

Example: <title>

<title>My App Store</title>

ElementName: *<title>*
Content: *My App Store*
ElementName: *</title>*

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<html>

- The *html* element is the outer container for everything that appears in an HTML document.
- It can only contain two elements as direct descendants, namely the head element and the body element.
- As it is the outermost element in the document, it's also known as the root element.
- This element will have a place on every single web page you ever create. There's no case in which you would not use this element when crafting a web page.

```
<html>  
  <head>  
    ...  
  </head>  
  <body>  
    ...  
  </body>  
</html>
```

<head>

- The *head* element is the wrapper for all the head elements that:
 - instruct the browser where to find style sheets,
 - define relationships that the document has to others in the web site,
 - provide essential meta information,
 - point to or include scripts that the document will need to apply later on.

```
<html>
  <head>
    <title>
      ...
    </title>
    ...
  </head>
  <body>
    ...
  </body>
</html>
```

<title>

- The title element displays a title in the browser toolbar or in the task bar (on Windows).
- Provides a name for the document that's used by the browser when you add the page as a favourite or bookmark.
- Displays a title of the page when it appears in search engine results.

```
<html>  
  <head>  
    <title>  
      FAQ  
    </title>  
  </head>
```



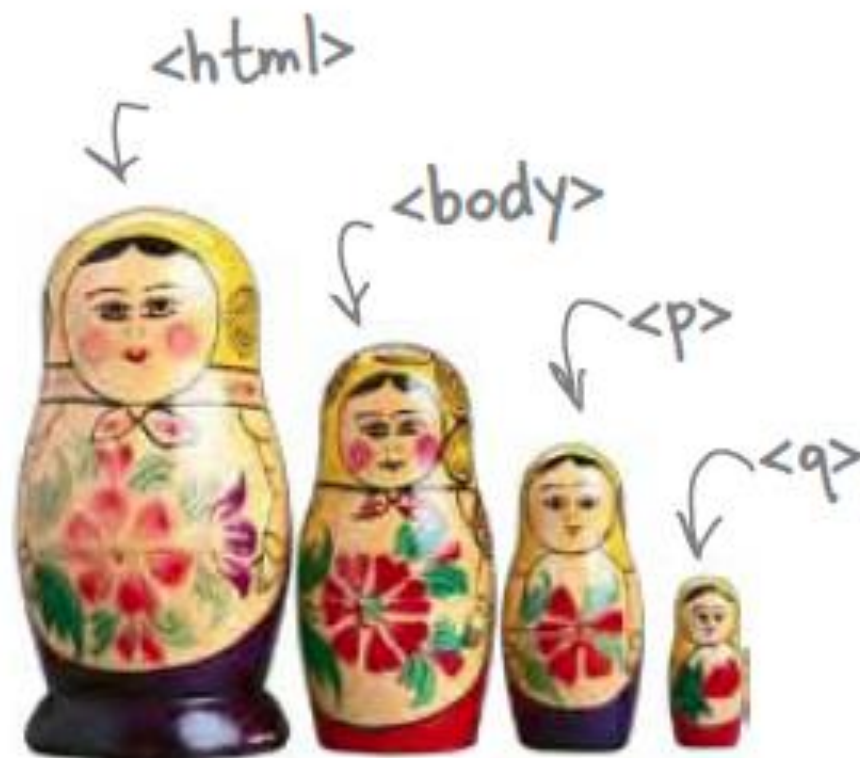
<body>

- The *body* element wraps around all of the content that will be displayed on screen.
- Usually starts with a heading, followed by paragraphs, images, etc..

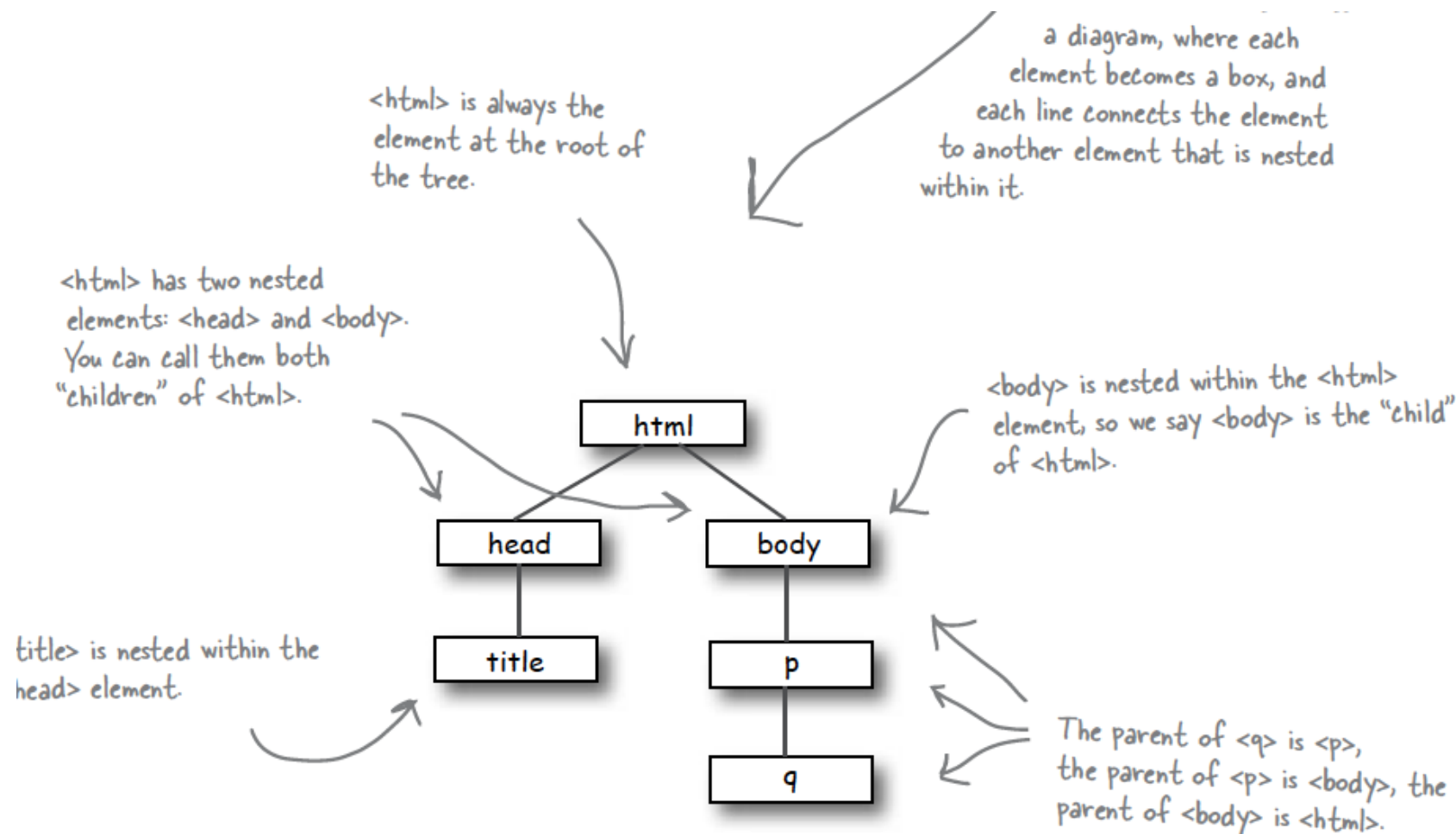
```
<html>
<head>
  <title>Page title goes here</title>
  <link type="text/css" rel="stylesheet" href="style.css" media="screen">
</head>
<body>
  <h1>101 Ways to make a paper aeroplane</h1>
  <p>Let's start with the basics ...</p>
</body>
</html>
```


Nesting

- When we put one element inside another element, we call that nesting.
- We say, the `<p>` element is nested inside the `<body>` element.
- We put a `<body>` element inside an `<html>` element, a `<p>` element inside a `<body>` element etc.



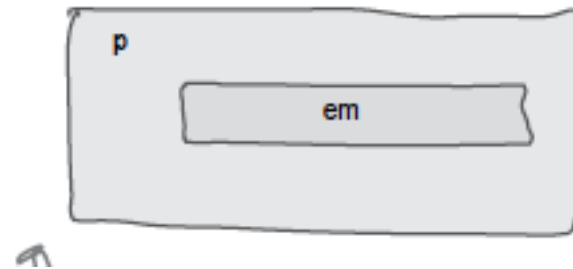
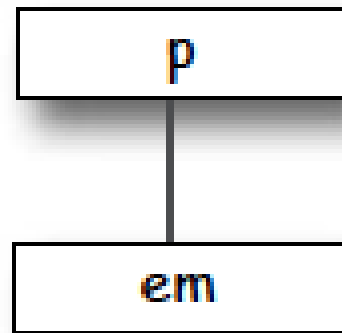
Nesting - Tree Structure



```
<html>
  <head>
    <title>Musings</title>
  </head>
  <body>
    <p>
      To quote Buckaroo,
      <q>The only reason
        for time is so
        that everything
        doesn't happen
        at once.</q>
    </p>
  </body>
</html>
```

Nesting can be Incorrect!

```
<p>I'm so going to blog <em>this</em></p>
```



Good

```
<p>I'm so going to blog <em>this</p></em>
```

?



Bad

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<p>

- One of the most commonly used building blocks of HTML.
- When you use the *p* element to begin a new paragraph in HTML, it automatically creates some space above and below the content.

<p>

We endeavour to give you your most wanted DVD and/or Game from your rental queue depending on our stock situation. All DVDs and Games are posted out at noon FIRST CLASS, and should be at your doorstep by the next morning.

When we dispatch your DVD/Game we'll send you an e-mail to advise you on which DVD/Game was dispatched to you. There are no late fees so you can watch or play at your leisure

</p>

We endeavour to give you your most wanted DVD and/or Game from your rental queue depending on our stock situation. All DVDs and Games are posted out at noon FIRST CLASS, and should be at your doorstep by the next morning. When we dispatch your DVD/Game we'll send you an e-mail to advise you on which DVD/Game was dispatched to you. There are no late fees so you can watch or play at your leisure

<h1-h6>

- The ***h1*** element is used to indicate the most important (or highest-level) heading on the page.
- There are six heading levels ***h1*** to ***h6***—to add structure to the web page.
- A document's first heading should be an ***h1***, followed by one or more ***h2*** headings; each of these ***h2*** headings can then have a further series of ***h3*** headings below them, and so on.

<h1-h6>

```
<body>
  <h1>BubbleUnder.com</h1>
  <p>Diving club for the south-west UK - let's make a splash!</p>

  <h2>Welcome to our super-doooper Scuba site</h2>
  <p>Glad you could drop in and share some air with us! You've passed
    your underwater navigation skills and successfully found your way to
    the start point - or in this case, our home page.</p>
</body>
```

BubbleUnder.com

Diving club for the south-west UK - let's make a splash!

Welcome to our super-doooper Scuba site

Glad you could drop in and share some air with us! You've passed your underwater navigation skills and successfully found your way to the start point - or in this case, our home page.

<blockquote>

- The *blockquote* element is a mechanism for marking up a block of text quoted from a person or another document or source.
- It may be just a few lines, or it may contain several headings, paragraphs, etc- which must be marked up using nested elements).

```
<p>Not such a good one from film.com:</p>
```

```
<blockquote>
```

The film is pretty, and there are a few solid moments every hour.

But considered as a work of cinema, with paid professionals involved,
it's an extremely lackluster story.

```
</blockquote>
```

```
<p>Might be worth watching.</p>
```

Not so good one from film.com:

The film is pretty, and there are a few solid moments every hour. But considered as a work of cinema, with paid professionals involved, it's an extremely lackluster story.

Might be worth watching.

- The *br* element creates a line break within a block of text, leaving no padding or margins between the two blocks of text created by the line break.

```
<p>  
There was an old man from Swindon,<br>  
A place that rhymed only with 'pinned on,'<br>  
Okay, well that's fine,<br>  
Until the fifth line,<br>  
At which point ... well, I'm totally out of luck.  
</p>
```

```
There was an old man from Swindon,  
A place that rhymed only with 'pinned on,'  
Okay, well that's fine,  
Until the fifth line,  
At which point ... well, I'm totally out of luck.
```

<i> and

- The *i* element is used to *italicise* text content, and displays in italics in all current browsers.
- The **b** element works in the same way, but displays **bold** text.

```
<p>  
  This week we recommend <em>the Crazies</em>.  
</p>
```

This week we recommend *the Crazies*.

<q>

- The *q* element is used for inline quotations (instead of blockquote, which sets the quotation in its own block).
- It is intended that the browser should insert the necessary quotation marks, the style of which should depend on the language of the document or that section of the document, rather than the author adding quotation marks.

<p>

Not so good one from film.com: <q>The film is pretty, and there are a few solid moments every hour. But considered as a work of cinema, with paid professionals involved, it's an extremely lackluster story.</q>

</p>

Not so good one from film.com: "The film is pretty, and there are a few solid moments every hour. But considered as a work of cinema, with paid professionals involved, it's an extremely lackluster story."

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Image & Media Elements -

- The *img* element provides a means for embedding an image in the document.
- Has a total of 12 attributes
 - **src** provide a link to the image to be displayed,
 - **alt** provides text to be displayed if the image cannot be retrieved,
 - **height** & **width** provide (optional) dimensions. Used to help the browser lay out images properly, and should coincide with the actual image dimensions.

```

```



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<a>

- The *a* element is referred to as a link or hyperlink.
- Has 7 possible attributes in total, of which we start with just one: **href**, which defines the document to which the link leads. This may be:
 - a web page in the same directory,
 - a page somewhere else on the same server,
 - a location within the current page,
 - a web page—or any another kind of document—stored on another server.

```
<a href="newreleases.html">new releases</a>
```

```
<a href="http://www.w3schools.com/html/html5_intro.asp">HTML5 Introduction</a>
```

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W3C Validator

- The World Wide Web Consortium (W3C) is an international community that develops open standards to ensure the long-term growth of the Web.
- The W3C provide online validation tools that you allow to check whether your HTML code complies with the standard they have set.
- You will try out this tool in your practical classes this week.

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On Moodle: lecture slides

Module Overview



OVERVIEW

An overview of the content in this module.

HTML Basics

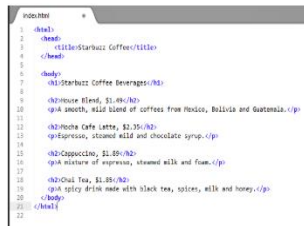


We can now explore the basics of HTML and we will try to get to grips with the fundamentals of the HTML language. As you will see, its structure and format is relatively straightforward, and you will be able to understand the basics very quickly. We will be focusing on a small number of 'tags' to get started, and also on the ways in which different html files can be linked together to form a site.

- Each topic has lecture(s) and labs.
- This week's lectures: Module Overview and HTML Basics.
- Each week there will be a new topic.

On Moodle: labs

Create your first HTML page



This lab will firstly introduce you to the tools we will use during the web development module and secondly introduce you to creating, editing, saving and displaying a web page.

Formatting text



This lab will introduce you to the HTML elements that allow you to format how text appears on your web pages.

Adding an image



This lab will explain how to add an image to your web page. We'll do much more with images in the coming weeks but, for now, the basics.

Linking pages



In this lab, you will learn how web pages are linked together.

Validating HTML



In this lab, you will use an online tool to validate your HTML code and check that it is correctly structured.

- These are the labs this week.

Lab contents

HTML Basics	Formatting text	01	02	03	04	05	06	Exercises
Objectives								
This lab will introduce you to the HTML elements that allow you to format how text appears on your web pages.								
Contents								
Paragraphs and Headings - Paragraph break - Headings								
Bold and Italic text - Bold Text - Italicised Text								
Other types of text formatting - Blockquote - Citation - Quotation - Abbreviation - Pre - Address								
Comments - HTML Comments								
Symbols - Symbols/Special Characters								
Line breaks and Horizontal rules - Line breaks - Horizontal rules								

- In each lab, you will see a list of the contents.
- Use the links to jump to a particular piece of information if you wish.

Lab contents

Formatting

This section will introduce tags used to format text on a web page. First up: paragraphs and headings.

Paragraph Break

A paragraph break adds a carriage return and leaves a blank line.

HTML Code

```
<p>This is an example of a paragraph break. </p> <p>As you can see the text continues at the beginning of the next line with a blank line in between.</p>
```

[Paragraph Break Example](#)

Header Tags

Headers are usually used for headings. They range in size from 1-6, with one being largest and 6 being smallest. The header tag automatically issues an invisible paragraph tag. Therefore, you cannot have two different header sizes on one line.

<h#> TEXT </h#> where # is a number (1-6)

HTML Code

```
<h1> Welcome </h1>
<h2> Welcome </h2>
<h3> Welcome </h3>
<h4> Welcome </h4>
<h5> Welcome </h5>
<h6> Welcome </h6>
```

[Header Tags Example](#)

- Go through the numbered steps at the top.
- Read through the information in each step to refresh your memory from the lecture.
- Try out the examples.

Lab contents

HTML Basics	Formatting text	01	02	03	04	05	06	Exercises
-------------	-----------------	----	----	----	----	----	----	-----------

Formatting text: Exercise

Create a folder called 'Lab01' in your WebsiteDevelopment1/Week01 folder.

Next, copy the code below into your text editor. Save the file as index.html.

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Exercise One</title>
</head>
<body>
Formatting Exercise
We can format words using the &lt;b> tag for bold or the &lt;i> tag for italic.
We can even nest the tags like so &lt;b>&lt;i>...&lt;/i>&lt;/b> - now do you see? But
be careful always close the inner tag first.

The original context of the saying O tempora, o mores is the following:

O tempora, o mores!
Senatus haec intellegit. consul videt; hic tamen vivit.
Vivit? immo vero etiam in senatum venit, fit publici consilii particeps,
notat et designat oculis ad caedem unum quemque nostrum.

</body>
</html>
```

Now, carry out the following formatting instructions. Add HTML tags in the correct places throughout the code.

- Mark up Formatting Exercise as an h3 heading.
- Mark up the first two paragraphs using the p tag.
- In the first paragraph, boldface the word bold, and italicise the word italic.
- Also, in the first paragraph, boldface and italicise the words – now do you see?
- In the second paragraph boldface the words O tempora, o mores.
- The third paragraph (i.e. the latin sentence O tempora, o mores! Senatus ...) needs to be marked up as a blockquote.
- Save and Preview.

- Complete the exercises.
- Each week, you should upload your completed exercises to Moodle