

INTRODUCTION TO HTML5

Web-development Course

What is HTML?

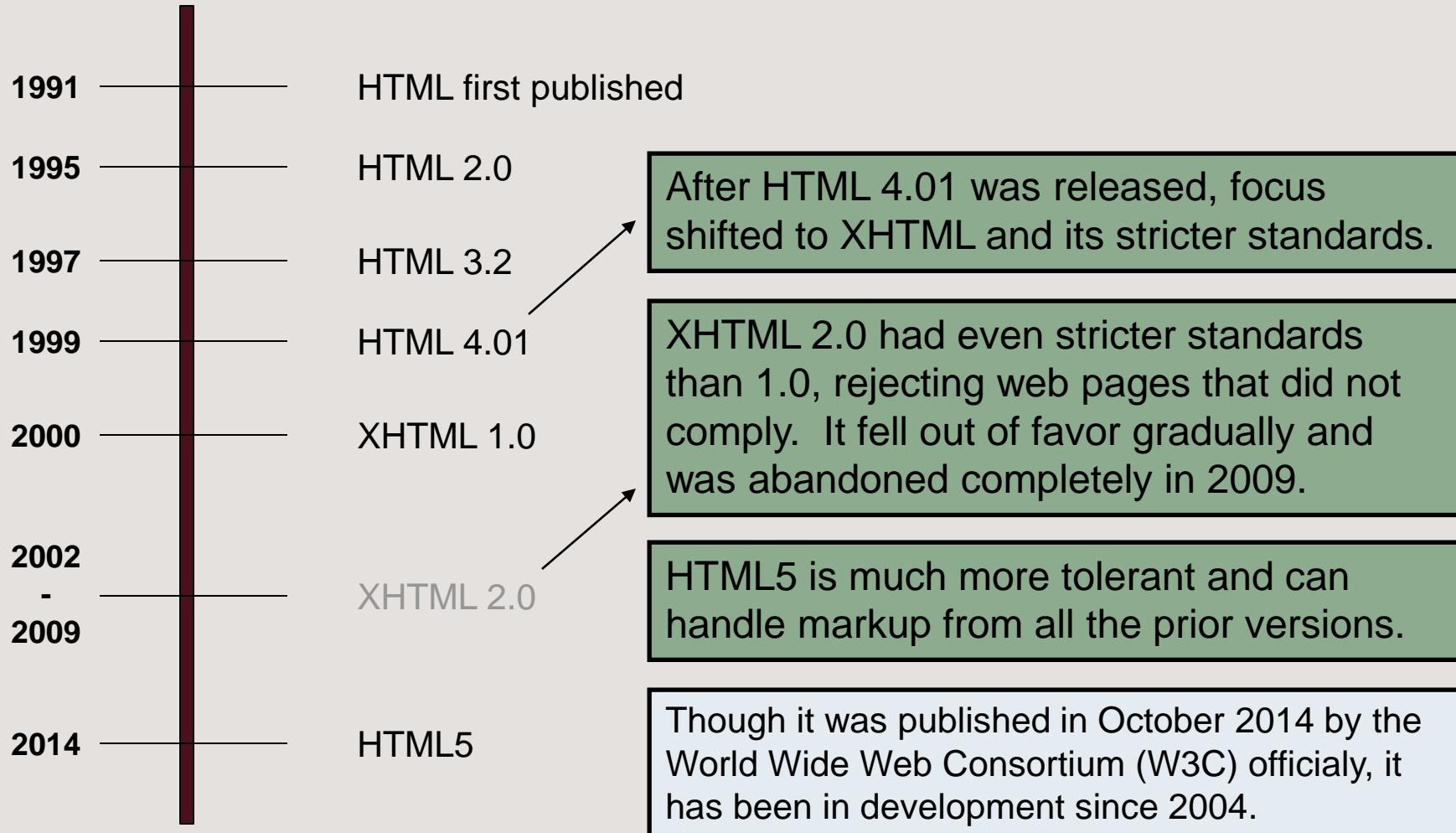
HTML = HyperText Markup Language

```
<html>
  <body>
    <h1>This is the Main Heading</h1>
    <p>This text might be an introduction to the rest of
       the page. And if the page is a long one it might
       be split up into several sub-headings.</p>
    <h2>This is a Sub-Heading</h2>
    <p>Many long articles have sub-headings so to help
       you follow the structure of what is being written.
       There may even be sub-sub-headings (or lower-level
       headings).</p>
    <h2>Another Sub-Heading</h2>
    <p>Here you can see another sub-heading.</p>
  </body>
</html>
```

Benefits of HTML

- It works on all computers
- It describes what documents mean
- It doesn't describe how documents look
- It's easy to write
- It's free.

History of HTML



Goals of HTML5

- Reduce the need for external plugins and scripts to show website content.
- Improve the semantic definition (i.e. meaning and purpose) of page elements.
- Make the rendering of web content universal and independent of the device being used.
- Handle web documents errors in a better and more consistent fashion.

New Features in HTML5

- Built-in audio and video support (without plugins)
- Enhanced form controls and attributes
- The Canvas (a way to draw directly on a web page)
- Drag and Drop functionality
- Support for CSS3 (the newer and more powerful version of CSS)
- More advanced features for web developers, such as data storage and offline applications.

Latest HTML5 specification

HTML

Living Standard — Last Updated 1 March 2023

[One-Page Version](#)

html.spec.whatwg.org

[Multipage Version](#)

/multipage

[Version for Web Devs](#)

/dev

[PDF Version](#)

/print.pdf

[Translations](#)

日本語 • 简体中文

[FAQ](#)

on GitHub

[Chat](#)

on Matrix

[Contribute on GitHub](#)

whatwg/html repository

[Commits](#)

on GitHub

[Snapshot](#)

as of this commit

[Twitter Updates](#)

@htmlstandard

[Open Issues](#)

filed on GitHub

[Open an Issue](#)

whatwg.org/newbug

[Tests](#)

web-platform-tests html/

[Issues for Tests](#)

ongoing work

Table of contents

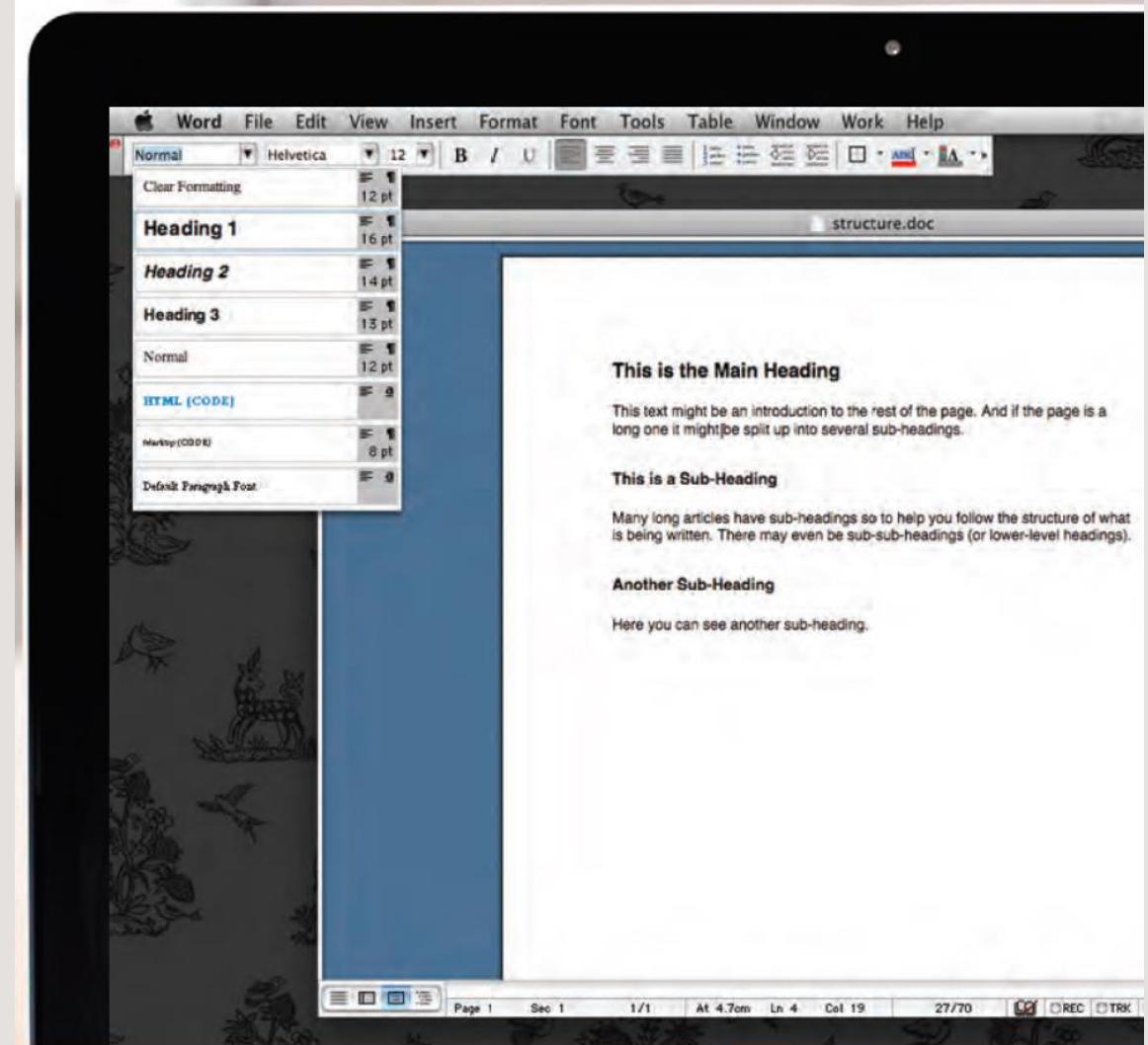
- 1 Introduction
- 2 Common infrastructure
- 3 Semantics, structure, and APIs of HTML documents
- 4 The elements of HTML
- 5 Microdata

<https://www.w3.org/TR/html5/>

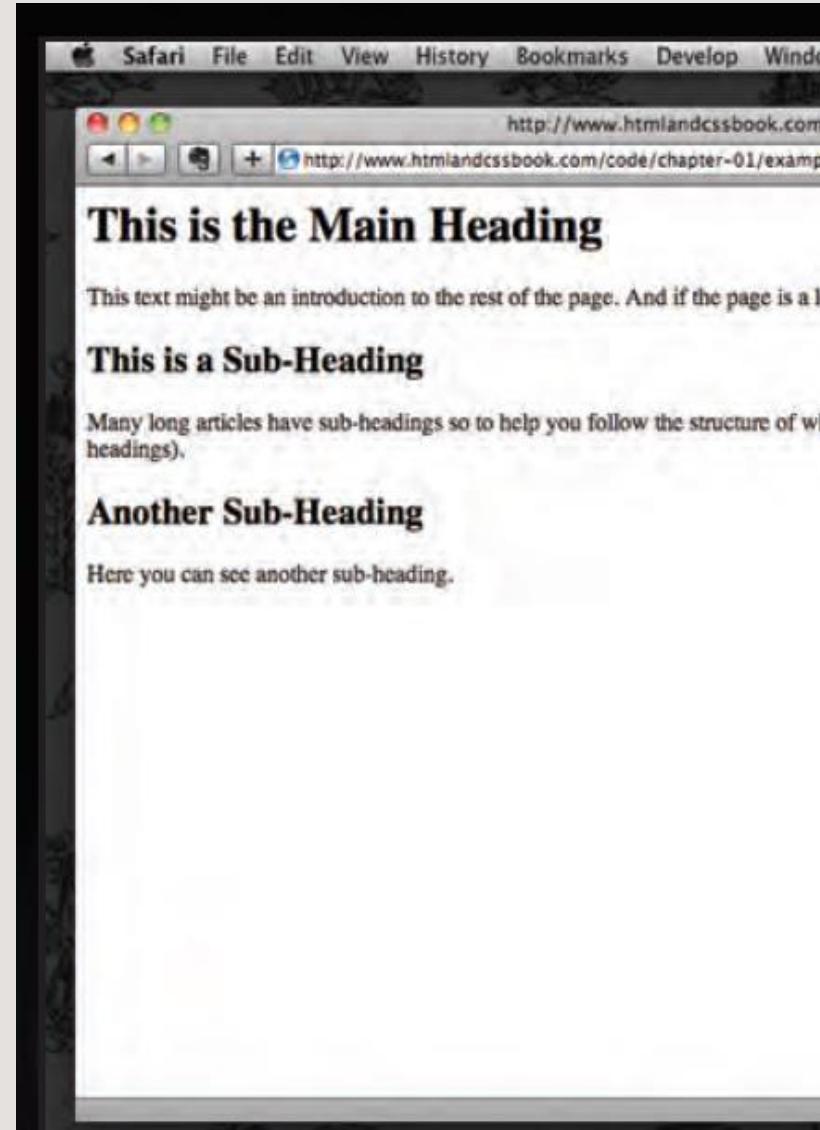
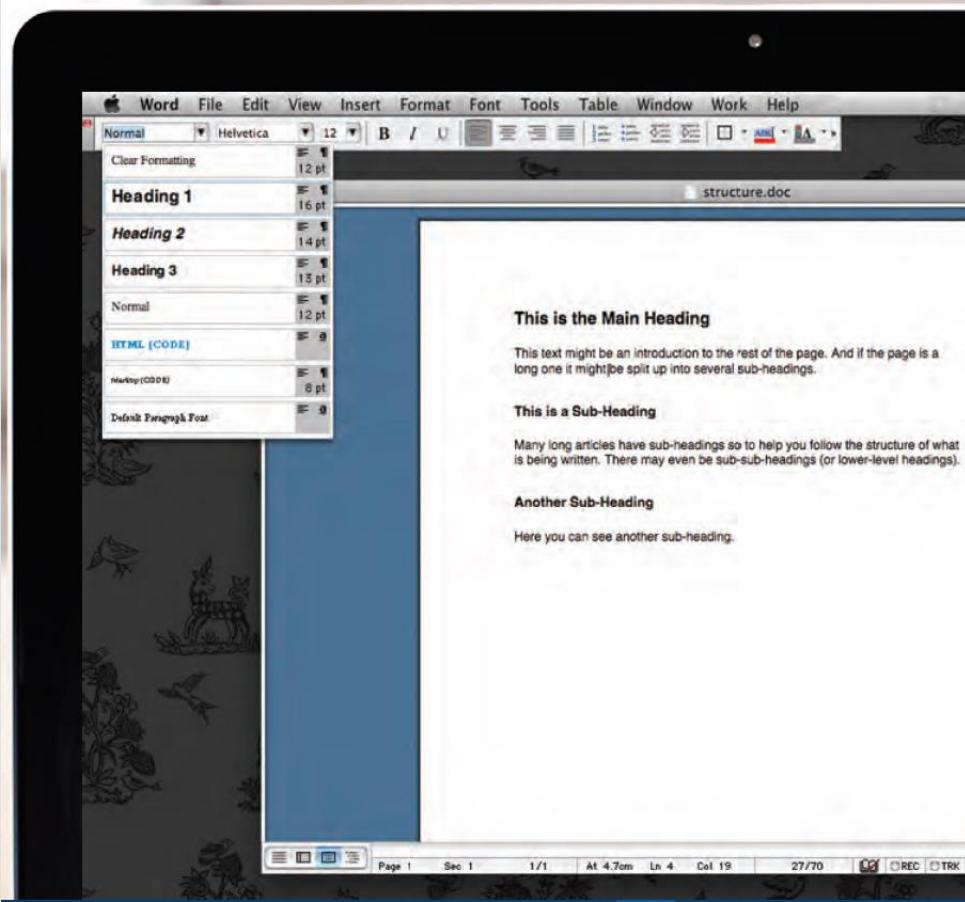
ABOUT THE STRUCTURE

Structure of document

- When using a word processor to create a document, we separate out the text to give it structure.
- The use of headings and subheadings reflects a hierarchy of information.



Structure of document



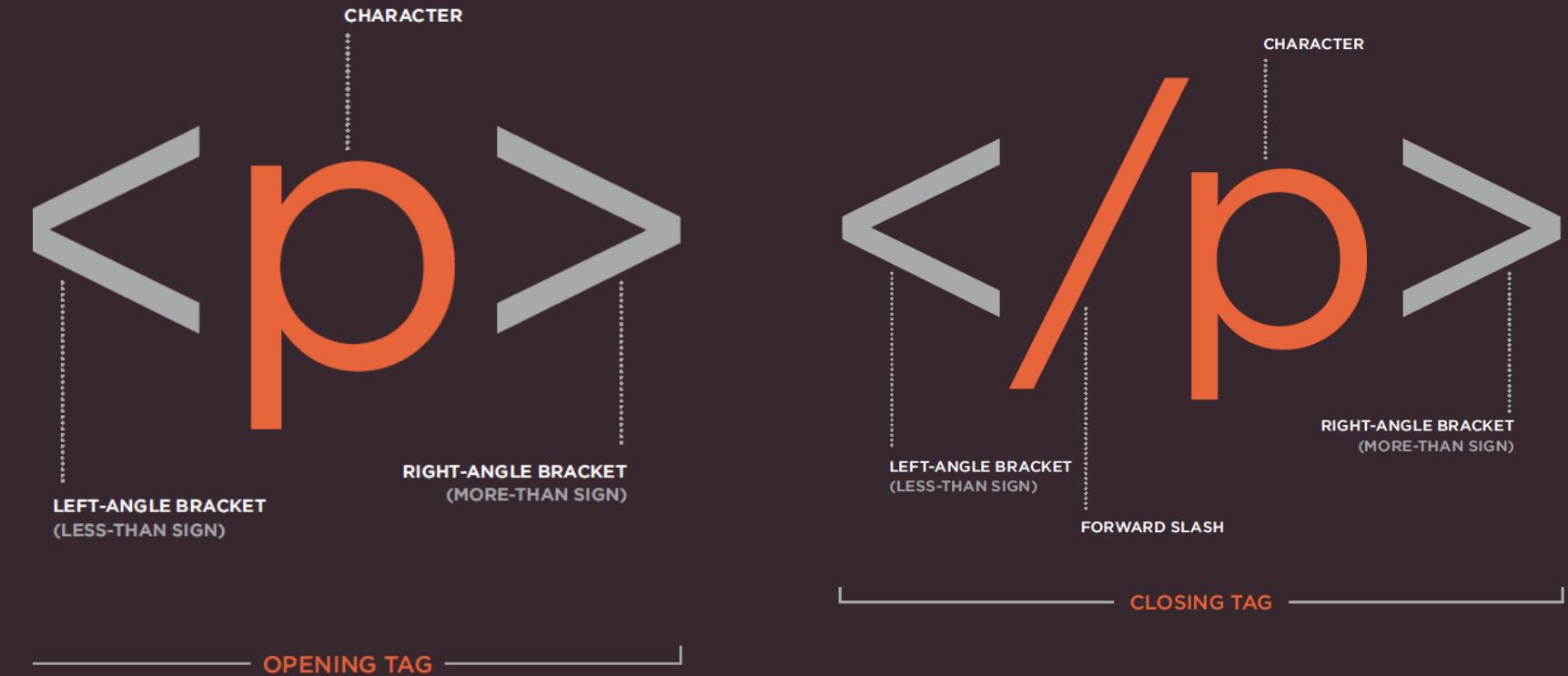
We use structure in the same way when writing web pages.

Explanation

```
<html>
  <body>
    Heading 1      <h1>This is the Main Heading</h1>
    Paragraph      <p>This text might be an introduction to the rest of
                    the page. And if the page is a long one it might
                    be split up into several sub-headings.</p>
    Heading 2      <h2>This is a Sub-Heading</h2>
    Paragraph      <p>Many long articles have sub-headings so to help
                    you follow the structure of what is being written.
                    There may even be sub-sub-headings (or lower-level
                    headings).</p>
    Heading 2      <h2>Another Sub-Heading</h2>
    Paragraph      <p>Here you can see another sub-heading.</p>
  </body>
</html>
```

Tags

An HTML element usually consists of a **start tag** and **end tag**,



The characters in the brackets indicate the tag's purpose.

For example, in the tags above the `p` stands for paragraph.

The closing tag has a forward slash after the the `<` symbol.

Empty HTML Elements

- HTML elements with no content are called empty elements. In this case there is no closing tag.
-
: defines a line break
- <hr>: represents a thematic break between paragraph-level elements
- element embeds an image into the document.
- <meta> element represents metadata

Attributes

- All HTML elements can have **attributes**
- Attributes provide **additional information** about an element
- Attributes are always specified in **the start tag**
- Attributes usually come in name/value pairs like: `name="value"`



The value is the information or setting for the attribute.

It should be placed in double quotes.

Different attributes can have different values.

Here an attribute called `lang` is used to indicate the language used in this element. The value of this attribute on this page specifies it is in US English.

Global attributes

The global attributes can be used on any HTML element. Most used global attributes:

- **title**
Contains a text representing advisory information related to the element it belongs to. Such information can typically, but not necessarily, be presented to the user as a tooltip.
- **class**
Is a space-separated list of the classes of the element. Classes allows CSS and JavaScript to select and access specific elements
- **id**
Defines a unique identifier (ID) which must be unique in the whole document. Its purpose is to identify the element when linking (using a fragment identifier), scripting, or styling (with CSS).

WHITE SPACES

WHITE SPACE

In order to make code easier to read, web page authors often add extra spaces or start some elements on new lines.

When the browser comes across two or more spaces next to each other, it only displays one space. Similarly if it comes across a line break, it treats that as a single space too. This is known as **white space collapsing**.

You will often see that web page authors take advantage of white space collapsing to indent their code in order to make it easier to follow.

chapter-02/white-space.html

HTML

```
<p>The moon is drifting away from Earth.</p>
<p>The moon      is drifting away from Earth.</p>
<p>The moon is drifting away from
                           Earth.</p>
```

RESULT

The moon is drifting away from Earth.

The moon is drifting away from Earth.

The moon is drifting away from Earth.

BLOCK LEVEL ELEMENTS VS. INLINE ELEMENTS

BLOCK ELEMENTS

Some elements will always appear to start on a new line in the browser window. These are known as **block level** elements.



Examples of block elements are `<h1>`, `<p>`, ``, and ``.

chapter-08/block-elements.html

HTML

```
<h1>Hiroshi Sugimoto</h1>
<p>The dates for the ORIGIN OF ART exhibition are as follows:</p>
<ul>
  <li>Science: 21 Nov - 20 Feb 2010/11</li>
  <li>Architecture: 6 Mar - 15 May 2011</li>
  <li>History: 29 May - 21 Aug 2011</li>
  <li>Religion: 28 Aug - 6 Nov 2011</li>
</ul>
```

RESULT

Hiroshi Sugimoto

The dates for the ORIGIN OF ART exhibition are as follows:

- Science: 21 Nov - 20 Feb 2010/11
- Architecture: 6 Mar - 15 May 2011
- History: 29 May - 21 Aug 2011
- Religion: 28 Aug - 6 Nov 2011

INLINE ELEMENTS

HTML

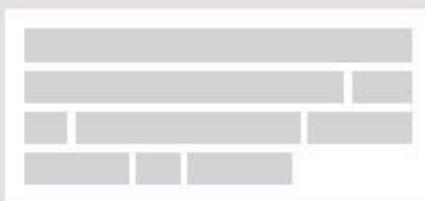
chapter-08/inline-elements.html

Timed to a single revolution of the planet around the sun at a 23.4 degrees tilt that plays out the rhythm of the seasons, this *Origins of Art* cycle is organized around four themes: **science**, architecture, history and **religion**.

RESULT

Timed to a single revolution of the planet around the sun at a 23.4 degrees tilt that plays out the rhythm of the seasons, this *Origins of Art* cycle is organized around four themes: **science, architecture, history and religion**.

Some elements will always appear to continue on the same line as their neighbouring elements. These are known as **inline** elements.



Examples of inline elements are `<a>`, ``, ``, and ``.

PAGE STRUCTURE OF HTML 5

Two sections in a web page

- The **<head>** section contains information about your page.
- The **<body>** section contains the visible content of your page.



Basic HTML5 page structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Title of the document</title>
  </head>
  <body>
    Content of the document...
  </body>
</html>
```

Basic HTML5 page structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Title of the document</title>
  </head>
  <body>
    Content of the document...
  </body>
</html>
```

This special tag is used to inform the browser that the document type is HTML5.

DOCTYPES are required for legacy reasons. When omitted, browsers tend to use a different rendering mode that is incompatible with some specifications. Including the DOCTYPE in a document ensures that the browser makes a best-effort attempt at following the relevant specifications.

Basic HTML5 page structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Title of the document</title>
  </head>
  <body>
    Content of the document
  </body>
</html>
```

Represents the root (top-level element) of an HTML document, so it is also referred to as the root element. All other elements must be descendants of this element.

Basic HTML5 page structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Title of the document</title>
  </head>
  <body>
    Content of the doc
  </body>
</html>
```

Provides general information (metadata) about the document, including its title and links to its scripts and style sheets

Basic HTML5 page structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Title of the document</title>
  </head>
  <body>
    Content of the doc
  </body>
</html>
```

The meta tag is used to provide a little more information to the browser, telling it which character set to use.

Basic HTML5 page structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Title of the document</title>
  </head>
  <body>
    Content of the do
  </body>
</html>
```

This tag is used to determine the page's title.
Any browsers put the title text in the browser's title bar.

Basic HTML5 page structure

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Title of the document</title>
  </head>
  <b><body></b>
    Content of the document...
  </b></body>
</html>
```

The page's main content is contained within these tags.

CREATING A WEB PAGE ON THE PC

Choosing Your HTML Editor

- A good HTML editor will keep your code clean and organized.
- It will also detect when you open a new tag and automatically close it to avoid you having buggy code and as a result reducing how much typing you have to do.
- There are many free and paid HTML editors.
- We will use the Visual Studio Code editor.

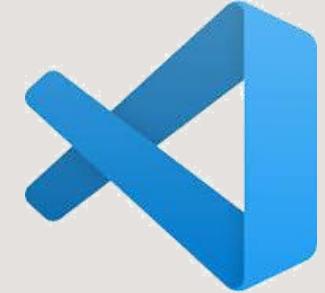
<https://code.visualstudio.com/>



Emmet abbreviations in Visual Studio Code

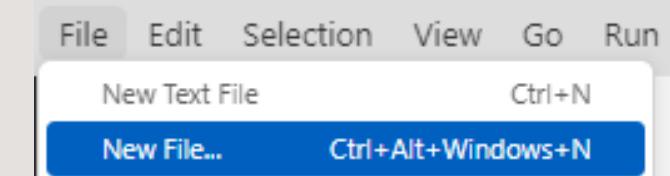
- Emmet is a plugin for many popular text editors which greatly improves HTML & CSS workflow
- Emmet abbreviation and snippet expansions are enabled by default in html files.
- <https://code.visualstudio.com/docs/editor/emmet>

Task



- Launch the Visual Studio Code software.

- Create a new file with this name:
demo.html



- Insert the basic html5 structure!

emmet: html:5

Task

- Let the title be: Demo homepage

```
<title>Demo homepage</title>
```

- Insert a heading 1 with „Demo project” text

emmet:
h1{Demo project}

- Insert two paragraphs with lorem ipsum text

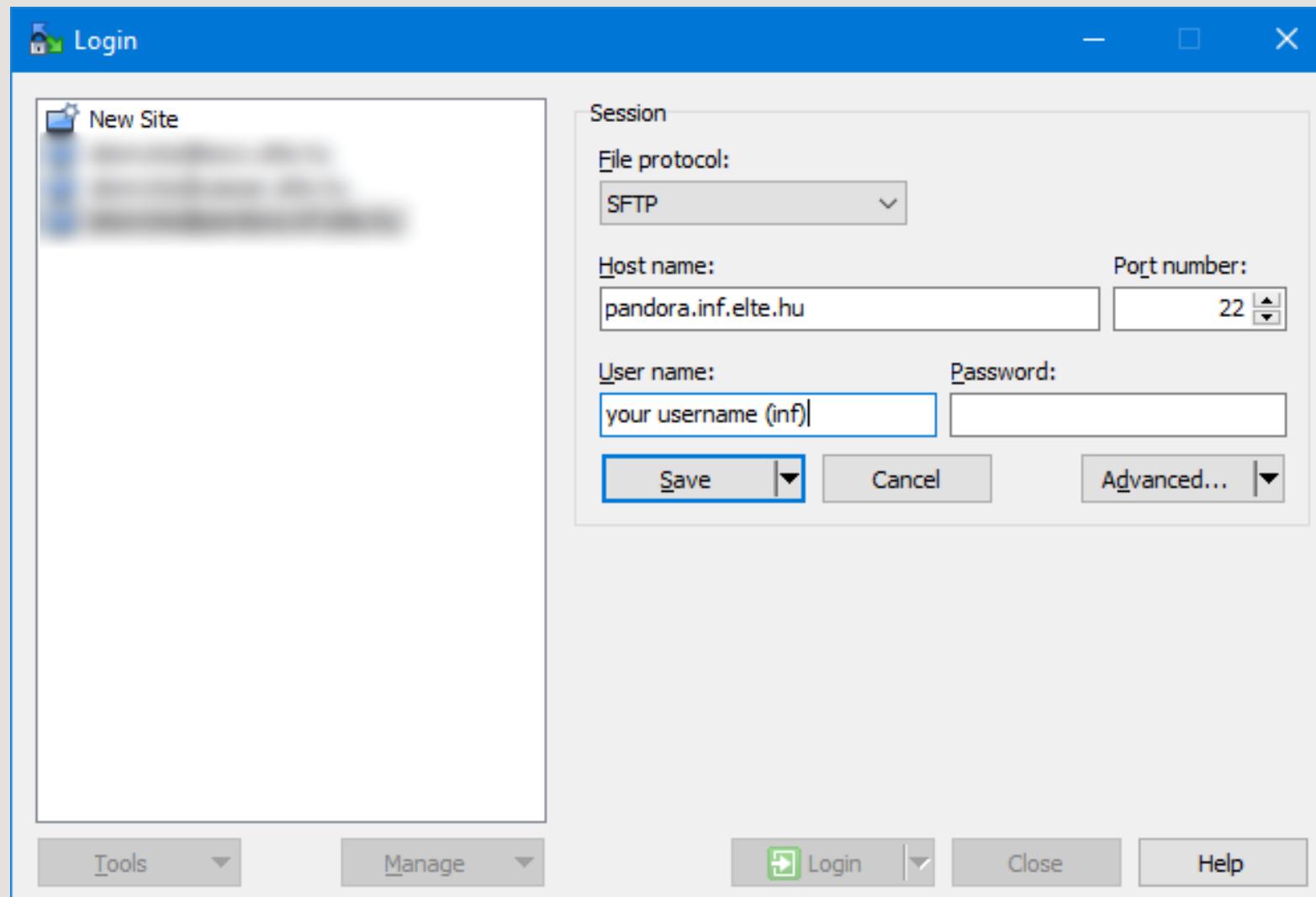
emmet:
(p>lorem)*2

Solution

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Demo homepage</title>
</head>
<body>
  <h1>Demo project</h1>
  <p>Lorem, ipsum dolor sit amet consectetur adipisicing elit. Aperiam nobis
  quos voluptatem quas. Non eos itaque sapiente! Ab totam, harum, aspernatur magni
  assumenda optio voluptas ducimus nesciunt eligendi deserunt aperiam!</p>
  <p>Veniam omnis, temporibus natus dolor ipsa asperiores reprehenderit
  inventore voluptatum cum rem qui sint, nostrum at magni ab numquam dolorem
  architecto assumenda, libero hic? At porro est debitis odit dolorum.</p>
</body>
</html>
```

HOW CAN WE PUBLISH OUR WEBPAGE?

Publication to pandora.inf.elte.hu



Publication to pandora.inf.elte.hu

- Once you are connected, make sure you are in the remote directory dedicated to store a web pages.
(public/public_html)
- All files you upload to this directory will be visible on the Internet. So for example if you upload your page demo.html into your web directory public/public_html and your site domain is people.inf.elte.hu/youraccount, anyone will be able to see your page at address <http://people.inf.elte.hu/youraccount/demo.html>

Publication to pandora.inf.elte.hu

File Names

- Before you start uploading/creating pages, make sure you use reasonable file names. It is strongly recommended not to use punctuation characters, spaces and some special characters in filenames to be published on Internet.
- Also URL (web addresses) are case sensitive, which is different to how Windows treat filenames. So if you first test your pages locally on Windows and links stops working once you upload the pages, it is probably for inconsistencies in letter cases.
- For example you may have a link to myphotos.html, but the file is actually named MyPhotos.html. This is not the same on the World Wide Web.

Publication to pandora.inf.elte.hu

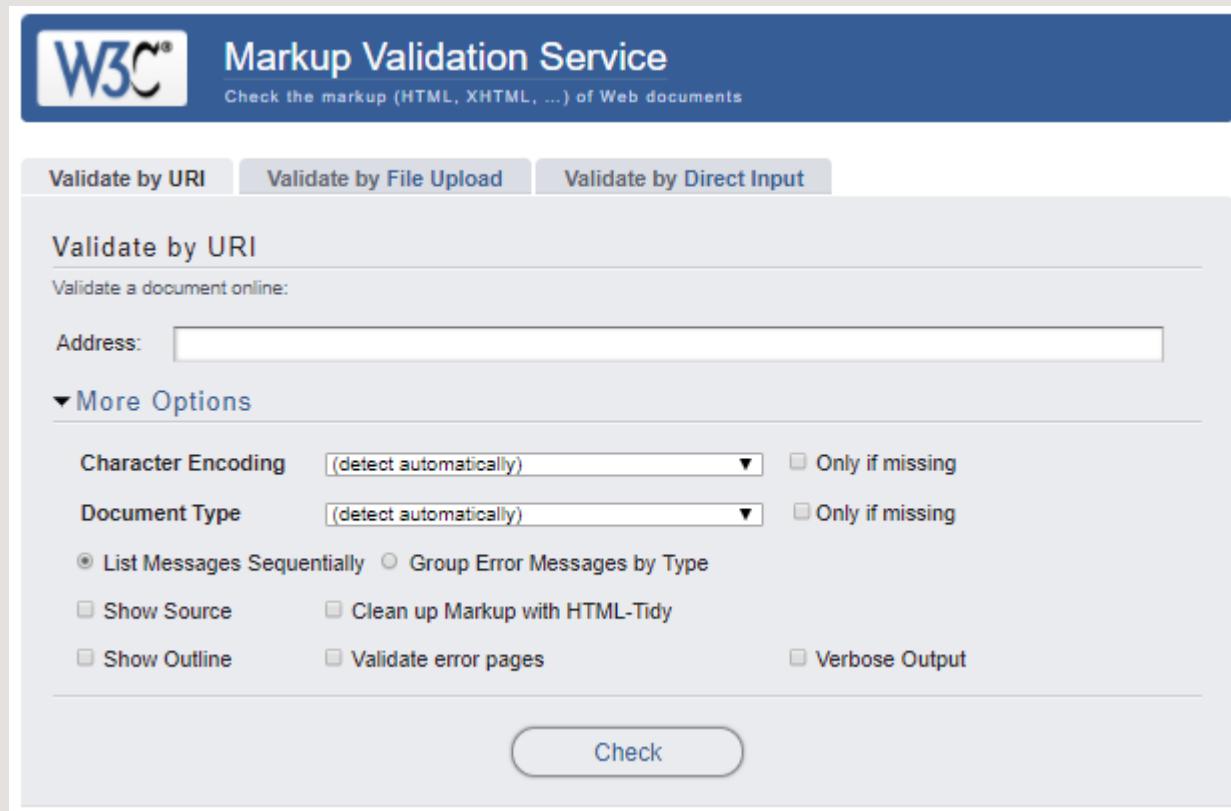
Uploading Pages

- You may start uploading by dragging your files to remote panel of WinSCP.
- You can drag the files either from local panel (if you are using Commander interface) or from Windows Explorer.

MARKUP VALIDATION

Markup validation

- The W3C validator checks the markup validity of Web documents in HTML, XHTML, SMIL, MathML, etc.



The screenshot shows the W3C Markup Validation Service interface. At the top, there's a blue header bar with the W3C logo and the text "Markup Validation Service" and "Check the markup (HTML, XHTML, ...) of Web documents". Below the header are three buttons: "Validate by URI", "Validate by File Upload", and "Validate by Direct Input". The "Validate by URI" button is highlighted. The main area has a light gray background and contains a "Validate by URI" section with a "Address:" input field. Below it is a "More Options" section with several configuration options:

- Character Encoding: A dropdown set to "(detect automatically)" with a "Only if missing" checkbox.
- Document Type: A dropdown set to "(detect automatically)" with a "Only if missing" checkbox.
- Radio buttons for "List Messages Sequentially" (selected) and "Group Error Messages by Type".
- Checkboxes for "Show Source", "Clean up Markup with HTML-Tidy", "Show Outline", "Validate error pages", and "Verbose Output".

A large "Check" button is at the bottom of the form.

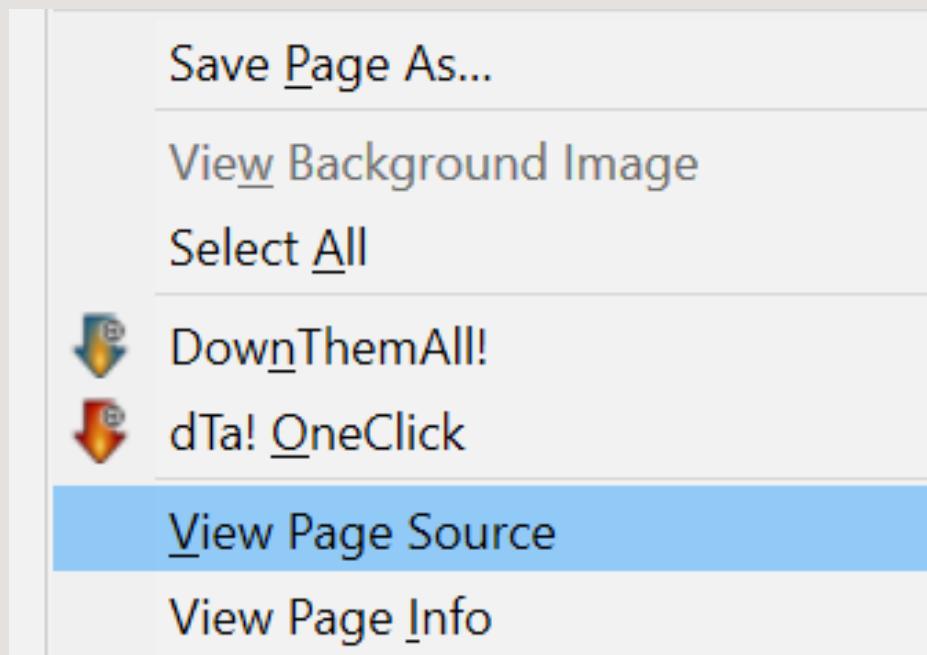
<https://validator.w3.org/>

LOOKING AT HOW OTHER SITES ARE BUILT

View source code

- You can look at the code that a web server sends to your browser.
- How to view the HTML source code of a web page

<https://www.computerhope.com/issues/ch000746.htm>



Task

- Open the following link in your web browser:
<http://info.cern.ch/>
- Browse the first website, and view the source.
- This was the first web page of the world.

World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents.

Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#), [Policy](#), November's [W3 news](#), [Frequently Asked Questions](#).

[What's out there?](#)

Pointers to the world's online information. [subjects](#), [W3 servers](#), etc.
[Help](#)

on the browser you are using

[Software Products](#)

A list of W3 project components and their current state. (e.g. [Line Mode](#), [X11 Viola](#), [NeXTStep](#), [Servers](#), [Tools](#), [Mail robot](#), [Library](#))

[Technical](#)

Details of protocols, formats, program internals etc

[Bibliography](#)

Paper documentation on W3 and references.

[People](#)

A list of some people involved in the project.

[History](#)

A summary of the history of the project.

[How can I help ?](#)

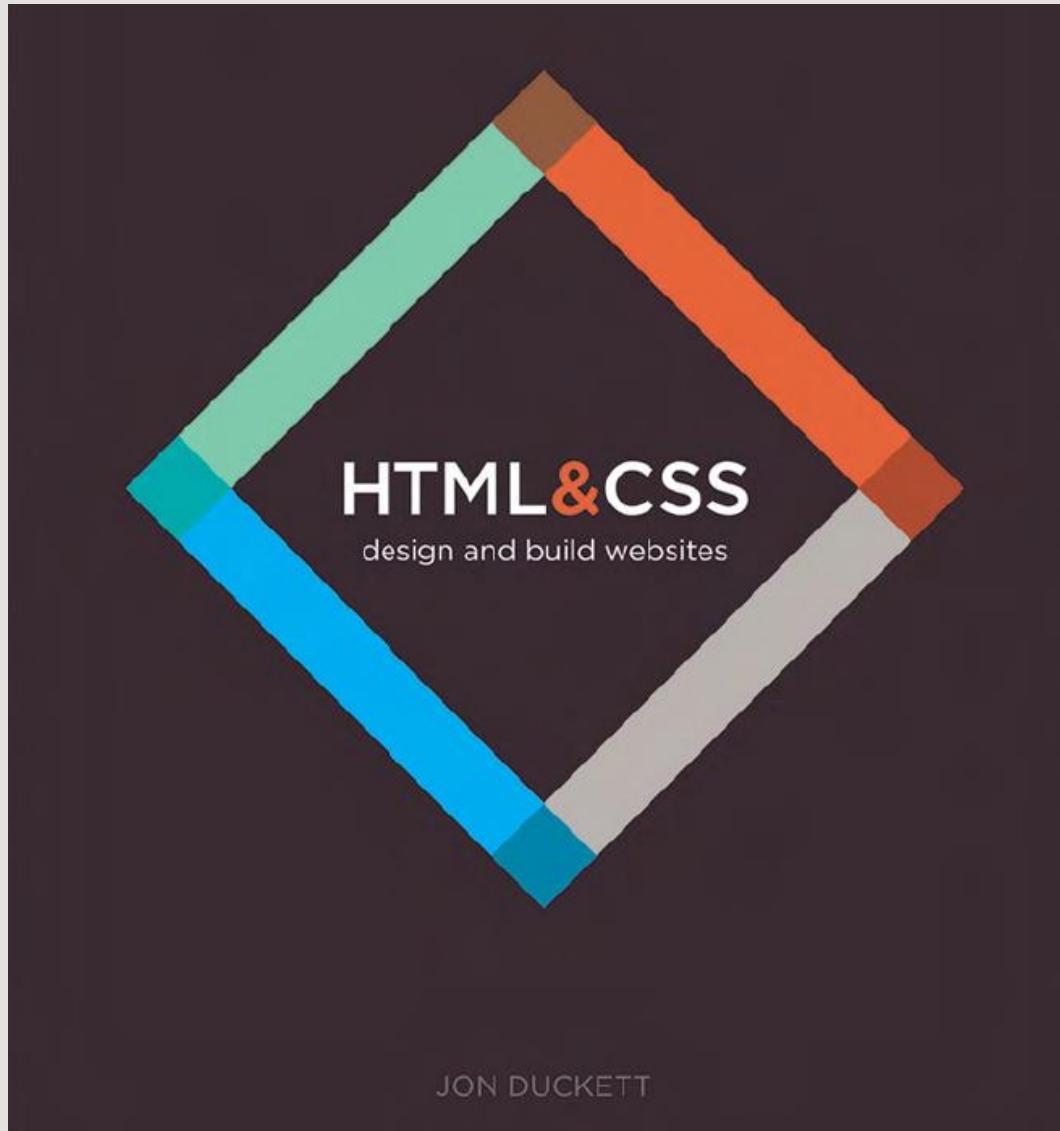
If you would like to support the web..

[Getting code](#)

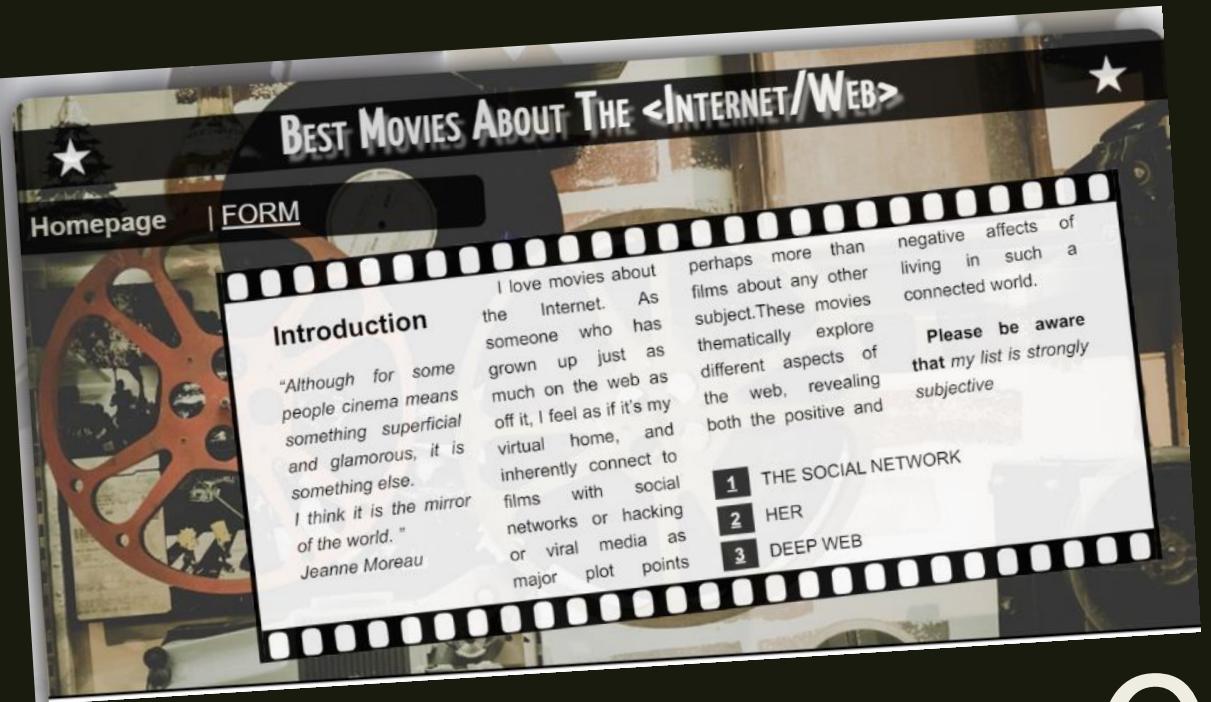
Getting the code by [anonymous FTP](#), etc.

RECOMMENDED BOOKS

Jon Duckett: HTML & CSS



You can download the chapters of this book from the Canvas LMS.



CASE STUDY

Best Movies About The Internet/Web

BEST MOVIES ABOUT THE <INTERNET/WEB>

[Homepage](#) | [FORM](#)

Introduction

"Although for some people cinema means something superficial, it is something else. I think it is the mirror of the world." Jeanne Moreau

I love movies about the Internet. As someone who has grown up just as much on the web as off it, I feel as if it's my virtual home, and inherently connect to films with social networks or hacking or viral media as major plot points perhaps more than negative affects of living in such a connected world.

Please be aware that my list is strongly subjective

THE SOCIAL NETWORK

HER

DEEP WEB

The Social Network

Source codes in the movie

There's quite a bit of code in The Social Network and it looks like it might have been written specially for the film.

```
#!/usr/bin/perl
$wget = "wget -qO- http://leverett.harvard.edu/facebook/compa
print "$wget\n";
$page = "$wget";
while ($page =~ /compactshow\.php\?student_id=(\d\d-\d\d)/g) {
    $id=$1;
    $wget = "wget -qO- http://leverett.harvard.edu/facebook
    print "$wget\n";
```

Bit of code in The social Network movie

Movie soundtrack

My favourite song from the movie: Trent Reznor and Atticus Ross: A Familiar Taste

0:00 / 3:55

Photo from the Social Network movie

Her

Movie datasheet

- Release Date: January 10, 2014
- Title: Her
- IMDb's rating: 8/10

In a near future, a lonely writer develops an **unlikely relationship** with an **operating system** designed to meet his every need.

It's touching and funny and thought provoking and compelling and the music is a perfect partner to the picture. This is bravura filmmaking, risking all on trusting the instinct of a writer and the

Deep web

Movie datasheet

- Release Date: November 21, 2015
- Title: Deep web
- IMDb's rating: 7,1/10

Deep Web is a 2015 documentary film directed by Alex Winter, chronicling events surrounding Silk Road, bitcoin and politics of the dark web.

Director Alex Winter does a great job of delving into the underworld of the internet and the intricacies of the Silk Road case, it's just a shame it's not a more rounded view, as you can't help but feel there's another side to the case you're not being told about.

What is the deep web?

This presentation shows shortly what is the deep web.

The Deep Web

Visit www.seminarlinks.blogspot.in to Download

1 of 24

Sources

- [TECHTIMES.COM](#)
- [IMDB.COM](#)

Author: John Smith (JOHNSMITH@MAILINATOR.COM).
H-1117 Budapest, Noname street 17

BEST MOVIES ABOUT THE <INTERNET/WEB>

[HOMEPAGE](#) | [Form](#)

Send your favourite movies

Do you have favourite movie in this topic? If yes, please fill the following form!

Form to submit a new movie

Datasheet of movie

Title

IMDb webaddress:

Story shortly
No spoilers, please!

Rating
Your rating in a 1 to 5 scale
 1 - unwatchable 2 3 4 5 - must watch

Personal info

Name

E-mail address

 I'd like to subscribe to a newsletter

Send

These movies are already on my list:

- 1 [THE SOCIAL NETWORK](#)
- 2 [HER](#)
- 3 [DEEP WEB](#)

Author: John Smith (JOHNSMITH@MAILINATOR.COM)
H-1117 Budapest, Noname street 17

Content of the website (docx)

BEST MOVIES ABOUT THE <INTERNET/WEB>

[Homepage](#) | [Form](#)

Introduction

Although for some people cinema means something superficial and glamorous, it is something else.
I think it is the mirror of the world.

Jeanne Moreau

I love movies about the Internet. As someone who has grown up just as much on the web as off it, I feel as if it's my virtual home, and inherently connect to films with social networks or hacking or viral media as major plot points perhaps more than films about any other subject. These movies thematically explore different aspects of the web, revealing both the positive and negative affects of living in such a connected world.

Please be aware that *my list is strongly subjective*

1. [The Social Network](#)
2. [Her](#)
3. [Deep Web](#)

The Social Network

Movie datasheet
[Help](#)

Release Date	October 1, 2010
Title	<i>The Social Network</i>
IMDb's rating	7.7/10

Harvard student Mark Zuckerberg creates the social networking site that would become known as Facebook, but is later sued by two brothers who claimed he stole their idea, and the co-founder who was later squeezed out of the business.

The Social Network is a great film not because of its dazzling style or visual cleverness, but because it is splendidly well-made. Despite the baffling complications of computer programming, web strategy and big finance, Aaron Sorkin's screenplay makes it all clear, and we don't follow the story so much as get dragged along behind it.

TheSocialNetwork.jpg



Photo from the *Social Network* movie

Source codes in the movie

There's quite a bit of code in *The Social Network* and it looks like it might have been written specially for the film.

```
*!/usr/bin/perl
$wget = "wget -qO- http://levacett.harvard.edu/facebook/compactshow.php --post-data='action=Search'";
print "$wget\n";
$page = ">$wget";
while ($page =~ m/<compactshow>.php?student_id=(\d+)</g) {
    $id=$1;
    $wget = "wget -qO- http://levacett.harvard.edu/facebook/compactshow.php?student_id=$id";
    print "$wget\n";
}
```

Bit of code in *The Social Network* movie

Movie soundtrack

My favourite song from the movie: *Trent Reznor and Atticus Ross: A Familiar Taste*

Embedded soundtrack (*socialnetwork.mp3*)

Her

Movie datasheet
[Help](#)

Release Date	January 10, 2014
Title	<i>Her</i>
IMDb's rating	8/10

In a near future, a lonely writer develops an unlikely relationship with an operating system designed to meet his every need.

It's touching and funny and thought provoking and compelling and the music is a perfect partner to the picture. This is bravura filmmaking, risking all on trusting the instinct of a writer and the ability to create a complex, fascinating persona that the audience never sees. But we do feel her.

The trailer of movie

Embedded trailer with poster
her.mp4, her.jpg

Wireframe of the website

Best Movies About The <Internet/Web>

HomePage Form

Introduction

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat. Aliquam egestas, velit at condimentum placerat, sem sapien laoreet mauris, dictum porttitor lacus est nec enim. Vivamus feugiat elit lorem, eu porttitor ante ultrices id. Phasellus suscipit tellus ante, nec dignissim elit imperdiet nec. Nullam fringilla feugiat nisl. Ut pretium, metus venenatis dictum viverra, dui metus finibus enim, ac rhoncus sem lorem vitae.

1. Jump to Movie 1 (The Social Network)
2. Jump to Movie 2 (Her)
3. Jump to Movie 3 (Deep web)

The Social Network

Release date | Lorem ipsum
Title | Lorem ipsum
IMDB's rating | Lorem ipsum

Movie datasheet

Source codes in the movie

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat. Aliquam egestas, velit at condimentum placerat, sem sapien laoreet mauris, dictum porttitor lacus est nec enim. Vivamus feugiat elit lorem, eu porttitor ante ultrices id. Phasellus suscipit tellus ante, nec dignissim elit imperdiet nec. Nullam fringilla feugiat nisl. Ut pretium, metus venenatis dictum viverra, dui metus finibus enim, ac rhoncus sem lorem vitae.

Movie soundtrack

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat. Aliquam egestas, velit at condimentum placerat, sem sapien laoreet mauris, dictum porttitor lacus est nec enim. Vivamus feugiat elit lorem, eu porttitor ante ultrices id. Phasellus suscipit tellus ante, nec dignissim elit imperdiet nec. Nullam fringilla feugiat nisl. Ut pretium, metus venenatis dictum viverra, dui metus finibus enim, ac rhoncus sem lorem vitae.

Her

Release date | Lorem ipsum
Title | Lorem ipsum
IMDB's rating | Lorem ipsum

Movie datasheet

00:00:00

0.00

MAIN

ARTICLE

SECTION

HEADING 1

NAV (MAIN MENU)

ARTICLE

SECTION

HEADING 2

PARAGRAPHS

NAV (PAGE MENU)

ORDERED LIST

FIGURE

HEADING 2

ASIDE

PARAGRAPHS

HEADING 3

PARAGRAPHS

FIGURE

HEADING 3

PARAGRAPHS

AUDIO

HEADING 2

ASIDE

PARAGRAPHS

HEADING 3

VIDEO

Deep web

Release date | Lorem ipsum
Title | Lorem ipsum
IMDB's rating | Lorem ipsum

Movie datasheet

What is the deep web?

Sources

- Item 1
- Item 2

Contact information

HEADING 2

ASIDE

PARAGRAPHS

FIGURE

ARTICLE

SECTION

HEADING 3

IFRAME

SECTION

HEADING 2

UNORDERED LIST

ASIDE

ADDRESS

FOOTER

Wireframe of the website

Best Movies About The <Internet/Web>

[HomePage](#) [Form](#)

Send your favourite movies

Form to submit a new movie

Datasheet of movie

Title

IMDb webaddress:

Story shortly
No spoilers, please!

Rating

Your rating in a 1 to 5 scale

1 - unwatchable
 2
 3
 4
 5 - must watch

Personal info

Name

E-mail address

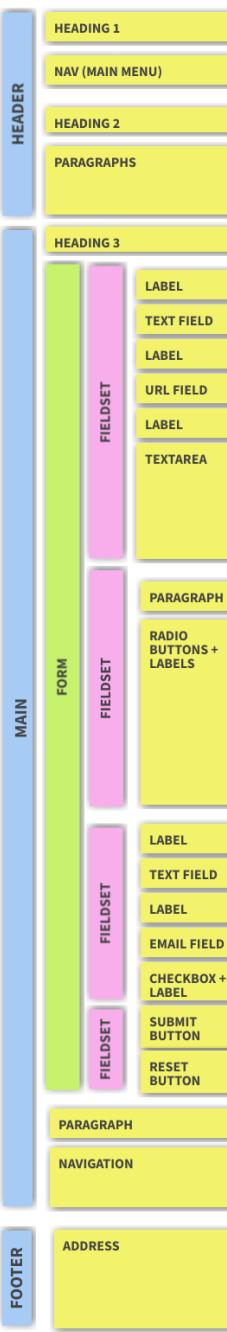
I'd like to subscribe to a newsletter

Send

These movies are already on my list:

1. [Jump to Movie 1 \(The Social Network\)](#)
2. [Jump to Movie 2 \(Her\)](#)
3. [Jump to Movie 3 \(Deep web\)](#)

Contact information



LET'S START THE
DEVELOPMENT OF THIS
WEBSITE!

Starting package

Download this package:

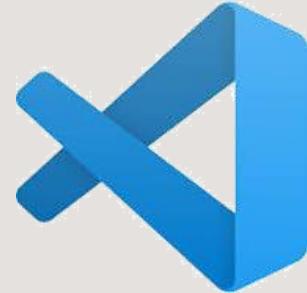
<http://tiny.cc/bestmovstart>

Content of the zip file

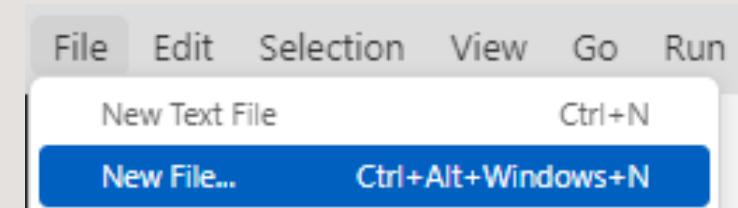
- Book folder
 - *Jon Duckett: HTML & CSS (PDF)*
- CSS folder
 - *Stylesheet file (base.css)*
- Media folder
 - *Images, video and audio files*
- Wireframe_mockup_content folder
 - *Wireframe, content and mockup of the website*
- Root folder
 - *form.html (partially completed)*

Visual Studio Code

- Let's open the Visual Studio program!
- Open the folder containing the supporting materials!
- Let's create an html file called `index.html`. This will be the home page!
- Insert the basic html5 structure!



File / Open folder



emmet: html:5

BODY, HEAD, TITLE,
COMMENTS

BODY, HEAD & TITLE

<body>

You met the <body> element in the first example we created. Everything inside this element is shown inside the main browser window.

<head>

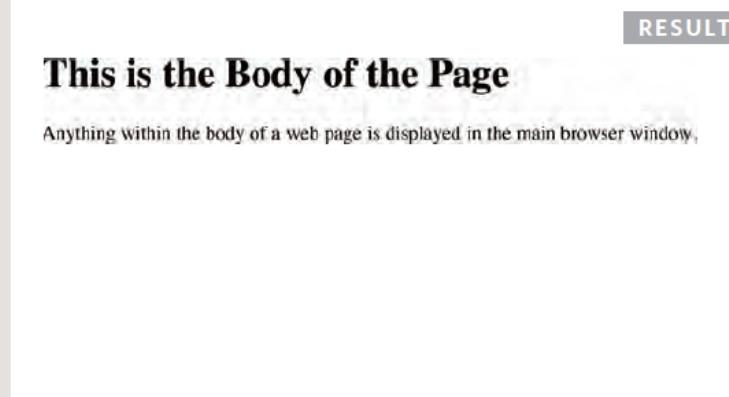
Before the <body> element you will often see a <head> element. This contains information about the page (rather than information that is shown within the main part of the browser window that is highlighted in blue on the opposite page). You will usually find a <title> element inside the <head> element.

<title>

The contents of the <title> element are either shown in the top of the browser, above where you usually type in the URL of the page you want to visit, or on the tab for that page (if your browser uses tabs to allow you to view multiple pages at the same time).

/chapter-01/body-head-title.html **HTML**

```
<html>
  <head>
    <title>This is the Title of the Page</title>
  </head>
  <body>
    <h1>This is the Body of the Page</h1>
    <p>Anything within the body of a web page is displayed in the main browser window.</p>
  </body>
</html>
```



Welcome index.html

```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8">
5     <meta http-equiv="X-UA-Compatible" content="IE=edge">
6     <meta name="viewport" content="width=device-width, initial-scale=1.0">
7     <title>Document</title>
8   </head>
9   <body>
10
11 </body>
12 </html>
```

Let's change the title of the page!

Best Movies About The Internet/Web - Homepage

HTML chapter-08/comments-in-html.html

```
<!-- start of introduction -->
<h1>Current Exhibitions</h1>
<h2>Olafur Eliasson</h2>
<!-- end of introduction -->
<!-- start of main text -->
<p>Olafur Eliasson was born in Copenhagen, Denmark  
in 1967 to Icelandic parents.</p>
<p>He is known for sculptures and large-scale  
installation art employing elemental materials  
such as light, water, and air temperature to  
enhance the viewer's experience.</p>
<!-- end of main text -->
<!--
<a href="mailto:info@example.org">Contact</a>
-->
```

RESULT

Current Exhibitions

Olafur Eliasson

Olafur Eliasson was born in Copenhagen, Denmark in 1967 to Icelandic parents.

He is known for sculptures and large-scale installation art employing elemental materials such as light, water, and air temperature to enhance the viewer's experience.

<!-- -->

If you want to add a comment to your code that will not be visible in the user's browser, you can add the text between these characters:

<!-- comment goes here -->

It is a good idea to add comments to your code because, no matter how familiar you are with the page at the time of writing it, when you come back to it later (or if someone else needs to look at the code), comments will make it much easier to understand.

Although comments are not visible to users in the main browser window, they can be viewed by anyone who looks at the source code behind the page.

On a long page you will often see comments used to indicate where sections of the page start or end, and to pass on notes to help anyone who is looking at the code understand it.

Comments can also be used around blocks of code to stop that code from being displayed in the browser. In the example on the left, the email link has been commented out.

Task: Let's insert a comment with this content at the end of the page:

Created by Visual Studio Code

18 </body>

19 </html>

20 <!-- Created by Visual Studio Code -->

HTML5 LAYOUT

HEADERS & FOOTERS

<header> <footer>

The <header> and <footer> elements can be used for:

- The main header or footer that appears at the top or bottom of every page on the site.
- A header or footer for an individual <article> or <section> within the page.

In this example, the <header> element used to contain the site name and the main navigation. The <footer> element contains copyright information, along with links to the privacy policy and terms and conditions. Each individual <article> and <section> element can also have its own <header> and <footer> elements to hold the header or footer information for that section within the page.

For example, on a page with several blog posts, each individual post can be thought of as a separate section. The <header> element can therefore be used to contain the title and date of each individual post, and the <footer> might contain links to share the article on social networking sites.

Please note that all of the code shown in this chapter is referenced in one HTML document which is called: html5-layout.html

NEW HTML5 LAYOUT ELEMENTS

chapter-17/example.html

HTML

```
<header>
  <h1>Yoko's Kitchen</h1>
  <nav>
    <ul>
      <li><a href="" class="current">home</a></li>
      <li><a href="">classes</a></li>
      <li><a href="">catering</a></li>
      <li><a href="">about</a></li>
      <li><a href="">contact</a></li>
    </ul>
  </nav>
</header>
```

chapter-17/example.html

HTML

```
<footer>
  &copy; 2011 Yoko's Kitchen
</footer>
```

HTML5 introduces a new set of elements that allow you to divide up the parts of a page. The names of these elements indicate the kind of content you will find in them.

Task: Let's insert the header and footer elements.

<header></header>
<footer></footer>

<main>

The `<main>` [HTML](#) element represents the dominant content of the `<body>` of a document. The main content area consists of content that is directly related to or expands upon the central topic of a document, or the central functionality of an application.



HTML Demo: <main>

HTML

CSS

```
1 <header>Gecko facts</header>
2
3 <main>
4     <p>Geckos are a group of usually small, usually nocturnal
   lizards. They are found on every continent except Australia.</p>
5
6     <p>Many species of gecko have adhesive toe pads which enable
   them to climb walls and even windows.</p>
7 </main>
8
```

Reset

Output

Gecko facts

Geckos are a group of usually small, usually nocturnal lizards. They are found on every continent except Australia.

Many species of gecko have adhesive toe pads which enable them to climb walls and even windows.

Usage notes

The content of a `<main>` element should be unique to the document. Content that is repeated across a set of documents or document sections such as sidebars, navigation links, copyright information, site logos, and search forms shouldn't be included unless the search form is the main function of the page.

`<main>` doesn't contribute to the document's outline; that is, unlike elements such as `<body>`, headings such as `<h2>`, and such, `<main>` doesn't affect the [DOM](#)'s concept of the structure of the page. It's strictly informative.

Task:

Let's insert the `<main>` element to the right place (after the header, but before the footer)

<header></header>
<main></main>
<footer></footer>

NAVIGATION

<nav>

HTML

chapter-17/example.html

```
<nav>
  <ul>
    <li><a href="" class="current">home</a></li>
    <li><a href="">classes</a></li>
    <li><a href="">catering</a></li>
    <li><a href="">about</a></li>
    <li><a href="">contact</a></li>
  </ul>
</nav>
```

The <nav> element is used to contain the major navigational blocks on the site such as the primary site navigation.

Going back to our blog example, if you wanted to finish an article with links to related blog posts, these would not be counted as major navigational blocks and therefore should not sit inside a <nav> element.

Task:

Let's insert the <nav> elements for the main menu and page menu! Fill it with the right content!
Use the following id's!

mainmenu
pagemenu

Emmet: nav#mainmenu

```
<nav id="mainmenu">Homepage | Form</nav>
```

Emmet: nav#pagemenu

```
<nav id="pagemenu">
  1. The Social Network
  2. Her
  3. Deep Web
</nav>
```

ARTICLES

<article>

The <article> element acts as a container for any section of a page that could stand alone and potentially be syndicated.

This could be an individual article or blog entry, a comment or forum post, or any other independent piece of content.

If a page contains several articles (or even summaries of several articles), then each individual article would live inside its own <article> element.

The <article> elements can even be nested inside each other. For example, a blog post might live inside one <article> element and each comment on the article could live inside its own child <article> element.

chapter-17/example.html

HTML

```
<article>
  <figure>
    
    <figcaption>Bok Choi</figcaption>
  </figure>
  <hgroup>
    <h2>Japanese Vegetarian</h2>
    <h3>Five week course in London</h3>
  </hgroup>
  <p>A five week introduction to traditional Japanese vegetarian meals, teaching you a selection of rice and noodle dishes.</p>
</article>
<article>
  <figure>
    
    <figcaption>Teriyaki Sauce</figcaption>
  </figure>
  <hgroup>
    <h2>Sauces Masterclass</h2>
    <h3>One day workshop</h3>
  </hgroup>
  <p>An intensive one-day course looking at how to create the most delicious sauces for use in a range of Japanese cookery.</p>
</article>
```

Task:

Let's insert the article elements to the right places! Please check the structure on wireframe!

You can use this emmet abbreviation:
article*3

Result:

```
<header>
  <nav id="mainmenu"></nav>
  <article></article>
  <nav id="pagemenu"></nav>
</header>
<main>
  <article></article>
  <article></article>
  <article></article>
</main>
<footer></footer>
```

ASIDES

<aside>

HTML

chapter-17/example.html

```
<aside>
  <section class="popular-recipes">
    <h2>Popular Recipes</h2>
    <a href="">Yakitori (grilled chicken)</a>
    <a href="">Tsukune (minced chicken patties)</a>
    <a href="">Okonomiyaki (savory pancakes)</a>
    <a href="">Mizutaki (chicken stew)</a>
  </section>
  <section class="contact-details">
    <h2>Contact</h2>
    <p>Yoko's Kitchen<br />
      27 Redchurch Street<br />
      Shoreditch<br />
      London E2 7DP</p>
  </section>
</aside>
```

The `<aside>` element has two purposes, depending on whether it is inside an `<article>` element or not.

When the `<aside>` element is used inside an `<article>` element, it should contain information that is related to the article but not essential to its overall meaning. For example, a pullquote or glossary might be considered as an aside to the article it relates to.

When the `<aside>` element is used outside of an `<article>` element, it acts as a container for content that is related to the entire page. For example, it might contain links to other sections of the site, a list of recent posts, a search box, or recent tweets by the author.

Task:

Let's insert the aside elements to the right places! Please check the structure on wireframe!

<main>

```
<article>
  <aside></aside>
</article>
<article>
  <aside></aside>
</article>
<article>
  <aside></aside>
</article>
<article>
  <aside></aside>
</article>
<aside></aside>
</main>
```

SECTIONS

<section>

The <section> element groups related content together, and typically each section would have its own heading.

For example, on a homepage there may be several <section> elements to contain different sections of the page, such as latest news, top products, and newsletter signup.

Because the <section> element groups related items together, it may contain several distinct <article> elements that have a common theme or purpose.

Alternatively, if you have a page with a long article, the <section> element can be used to split the article up into separate sections.

The <section> element should not be used as a wrapper for the entire page (unless the page only contains one distinct piece of content). If you want a containing element for the entire page, that job is still best left to the <div> element.

chapter-17/example.html

HTML

```
<section class="popular-recipes">
  <h2>Popular Recipes</h2>
  <a href="">Yakitori (grilled chicken)</a>
  <a href="">Tsukune (minced chicken patties)</a>
  <a href="">Okonomiyaki (savory pancakes)</a>
  <a href="">Mizutaki (chicken stew)</a>
</section>
<section class="contact-details">
  <h2>Contact</h2>
  <p>Yoko's Kitchen<br />
    27 Redchurch Street<br />
    Shoreditch<br />
    London E2 7DP</p>
</section>
```

Task:

Let's insert the section elements to the right places! Please check the structure on wireframe!

<main>

<article>

<aside></aside>

<section></section>

<section></section>

</article>

<article>

<aside></aside>

<section></section>

</article>

<article>

<aside></aside>

<section></section>

</article>

<aside></aside>

</main>

HEADINGS

HEADINGS

<h1>
<h2>
<h3>
<h4>
<h5>
<h6>

HTML has six "levels" of headings:

<h1> is used for main headings

<h2> is used for subheadings

If there are further sections under the subheadings then the <h3> element is used, and so on...

chapter-02/headings.html

```
<h1>This is a Main Heading</h1>
<h2>This is a Level 2 Heading</h2>
<h3>This is a Level 3 Heading</h3>
<h4>This is a Level 4 Heading</h4>
<h5>This is a Level 5 Heading</h5>
<h6>This is a Level 6 Heading</h6>
```

HTML

This is a Main Heading

This is a Level 2 Heading

This is a Level 3 Heading

This is a Level 4 Heading

This is a Level 5 Heading

This is a Level 6 Heading

RESULT

Task:

Let's insert the heading elements to the right places! Please check the structure on wireframe!

Fill it with the right content!

```
<header>
```

```
    <h1>Best Movies About The <Internet/Web></h1>
```

```
    <nav id="mainmenu"></nav>
```

```
    <article>
```

```
        <h2>Introduction</h2>
```

```
    </article>
```

```
    <nav id="pagemenu"></nav>
```

```
</header>
```

```
<main>
```

```
    <article>
```

```
        <h2>The Social Network</h2>
```

```
        <aside></aside>
```

```
        <section>
```

```
            <h3>Source codes in the movie</h3>
```

```
        </section>
```

```
        <section>
```

```
            <h3>Movie soundtrack</h3>
```

```
        </section>
```

... and so on

PARAGRAPHS,
LINE BREAKS,
HORIZONTAL RULES

PARAGRAPHS

HTML

chapter-02/paragraphs.html

```
<p>A paragraph consists of one or more sentences  
that form a self-contained unit of discourse. The  
start of a paragraph is indicated by a new  
line.</p>
```

```
<p>Text is easier to understand when it is split up  
into units of text. For example, a book may have  
chapters. Chapters can have subheadings. Under  
each heading there will be one or more  
paragraphs.</p>
```

RESULT

A paragraph consists of one or more sentences that form a self-contained unit of discourse. The start of a paragraph is indicated by a new line.

Text is easier to understand when it is split up into units of text. For example, a book may have chapters. Chapters can have subheadings. Under each heading there will be one or more paragraphs.

<p>

To create a paragraph, surround the words that make up the paragraph with an opening `<p>` tag and closing `</p>` tag.

By default, a browser will show each paragraph on a new line with some space between it and any subsequent paragraphs.

Task:

Let's insert the 3 paragraph elements to the right places within the `<header>` element!

Also insert the paragraphs belonging to the first movie (The Social Network).

Please check the structure on wireframe!

Fill it with the right content!

Solution

```
<article>
  <h2>Introduction</h2>
  <p>Although for some people cinema means something superficial and glamorous, it
is something else.
    I think it is the mirror of the world.
    Jeanne Moreau
  </p>
  <p>I love movies about the Internet. As someone who has grown up just as much on
the web as off it, I feel as if it's my virtual home, and inherently connect to
films with social networks or hacking or viral media as major plot points perhaps
more than films about any other subject. These movies thematically explore different
aspects of the web, revealing both the positive and negative affects of living in
such a connected world.
  </p>
  <p>Please be aware that my list is strongly subjective
  </p>
</article>
```

Solution

```
<article>
  <h2>The Social Network</h2>
  <aside></aside>
    <p>Harvard student Mark Zuckerberg creates the social networking site
that would become known as Facebook, but is later sued by two brothers who claimed
he stole their idea, and the co-founder who was later squeezed out of the
business.</p>
    <p>"The Social Network" is a great film not because of its dazzling
style or visual cleverness, but because it is splendidly well-made. Despite the
baffling complications of computer programming, web strategy and big finance, Aaron
Sorkin's screenplay makes it all clear, and we don't follow the story so much as
get dragged along behind it.</p>
  <section>
    <h3>Source codes in the movie</h3>
    <p>There's quite a bit of code in The Social Network and it looks
like it might have been written specially for the film.</p>
  </section>
  <section>
    <h3>Movie soundtrack</h3>
    <p>My favourite song from the movie: Trent Reznor and Atticus Ross:
A Familiar Taste</p>
  </section>
</article>
```

LINE BREAKS

HTML

chapter-02/line-breaks.html

```
<p>The Earth<br>gets one hundred tons heavier  
every day<br>due to falling space dust.</p>
```

RESULT

The Earth
gets one hundred tons heavier every day
due to falling space dust.

As you have already seen, the browser will automatically show each new paragraph or heading on a new line. But if you wanted to add a line break inside the middle of a paragraph you can use the line break tag
 .

Task:

Let's insert line breaks!

<p>Although for some people cinema means something superficial and glamorous, it is something else.

I think it is the mirror of the world.

Jeanne Moreau

</p>

Although for some people cinema means something superficial and glamorous, it is something else.
I think it is the mirror of the world.

Jeanne Moreau

HORIZONTAL RULES

<hr>

To create a break between themes — such as a change of topic in a book or a new scene in a play — you can add a horizontal rule between sections using the <hr /> tag.

There are a few elements that do not have any words between an opening and closing tag. They are known as **empty elements** and they are written differently.

An empty element usually has only one tag. Before the closing angled bracket of an empty element there will often be a space and a forward slash character. Some web page authors miss this out but it is a good habit to get into.

Task:

Let's insert the horizontal rules among the article elements and before the footer element!

```
</article>
<hr>
<article>
...
</main>
<hr>
<footer></footer>
```

TEXT FORMATTING

Preformatted text and code content

<pre>: The Preformatted Text 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, or monospaced, font. Whitespace inside this element is displayed as written.

<code>: The Inline Code element

- The <code> HTML element displays its contents styled in a fashion intended to indicate that the text is a short fragment of computer code. By default, the content text is displayed using the user agent's default monospace font.

Task:

Let's insert the <pre> and <code> element

Solution

```
<section>
  <h3>Source codes in the movie</h3>
  <p>There's quite a bit of code in The Social Network and it looks like
it might have been written specially for the film.</p>
  <pre>
    <code>
#!/usr/bin/perl
$wget = "wget -q0- http://leverett.harvard.edu/facebook/compactshow.php --
post-data='action=Search'";

print "$wget\n";
$page = ` $wget`;
while ($page =~ m/compactshow\.php\?student_id=([0-9]+)/g) {
  $id=$1
  $wget = "wget -q0-
http://leverett.harvard.edu/facebook/compactshow.php?student_id=$id";
  print "$wget\n";
}
    </code>
  </pre>
</section>
```

BOLD

By enclosing words in the tags and we can make characters appear bold.

The element also represents a section of text that would be presented in a visually different way (for example key words in a paragraph) although the use of the element does not imply any additional meaning.

chapter-02/bold.html

HTML

```
<p>This is how we make a word appear <b>bold.</b>
</p>
<p>Inside a product description you might see some
<b>key features</b> in bold.</p>
```

This is how we make a word appear **bold**.
Inside a product description you might see some **key features** in bold.

RESULT

Task:

Let's insert some elements!

```
<nav
id="mainmenu"><b>Homepage</b>
| Form</nav>
```

<p>
Harvard student **Mark Zuckerberg** creates the **social networking site** that would become known as **Facebook**, but is later sued by two brothers who claimed he stole their idea, and the co-founder who was later squeezed out of the business.
</p>

ITALIC

<i>

By enclosing words in the tags `<i>` and `</i>` we can make characters appear italic.

The `<i>` element also represents a section of text that would be said in a different way from surrounding content — such as technical terms, names of ships, foreign words, thoughts, or other terms that would usually be italicized.

chapter-02/italic.html

HTML

```
<p>This is how we make a word appear <i>italic</i>.</p>
<p>It's a potato <i>Solanum teberosum</i>.</p>
<p>Captain Cook sailed to Australia on the
<i>Endeavour</i>.</p>
```

This is how we make a word appear *italic*.

RESULT

It's a potato *Solanum teberosum*.

Captain Cook sailed to Australia on the *Endeavour*.

Task:

Let's insert some `<i>` elements!

<p><i>"The Social Network" is a great film not because of its dazzling style or visual cleverness, but because it is splendidly well-made. Despite the baffling complications of computer programming, web strategy and big finance, Aaron Sorkin's screenplay makes it all clear, and we don't follow the story so much as get dragged along behind it. </i></p>

STRONG & EMPHASIS

The use of the `` element indicates that its content has strong importance. For example, the words contained in this element might be said with strong emphasis.

By default, browsers will show the contents of a `` element in bold.

chapter-02/strong.html

HTML

```
<p><strong>Beware:</strong> Pickpockets operate in  
this area.</p>  
<p>This toy has many small pieces and is <strong>not  
suitable for children under five years old.  
</strong></p>
```

Beware: Pickpockets operate in this area.

RESULT

This toy has many small pieces and is **not**
suitable for children under five years old.

The `` element indicates emphasis that subtly changes the meaning of a sentence.

By default browsers will show the contents of an `` element in italic.

chapter-02/emphasis.html

HTML

```
<p>I <em>think</em> Ivy was the first.</p>  
<p>I think <em>Ivy</em> was the first.</p>  
<p>I think Ivy was the <em>first</em>. </p>
```

I *think* Ivy was the first.

I think *Ivy* was the first.

I think *Ivy* was the *first*.

Task:

Let's insert `` and `` elements!

<p>Please be aware that my list
is strongly subjective</p>

QUOTATIONS

HTML

chapter-02/quotations.html

```
<blockquote cite="http://en.wikipedia.org/wiki/  
Winnie-the-Pooh">  
  <p>Did you ever stop to think, and forget to start  
    again?</p>  
</blockquote>  
<p>As A.A. Milne said, <q>Some people talk to  
  animals. Not many listen though. That's the  
  problem.</q></p>
```

RESULT

Did you ever stop to think, and forget
to start again?

As A.A. Milne said, "Some people talk to animals.
Not many listen though. That's the problem."

There are two elements
commonly used for marking up
quotations:

<blockquote>

The `<blockquote>` element is
used for longer quotes that take
up an entire paragraph. Note
how the `<p>` element is still
used inside the `<blockquote>`
element.

Browsers tend to indent the
contents of the `<blockquote>`
element, however you should not
use this element just to indent a
piece of text — rather you should
achieve this effect using CSS.

<q>

The `<q>` element is used for
shorter quotes that sit within
a paragraph. Browsers are
supposed to put quotes around
the `<q>` element, however
Internet Explorer does not —
therefore many people avoid
using the `<q>` element.

Task:

Let's insert a `<q>` element!

<p>

<q>Although for some people
cinema means something
superficial and glamorous, it
is something else.
 I think
it is the mirror of the world.
</q>

Jeanne Moreau
</p>

CITATIONS

HTML

chapter-02/citations.html

```
<p><cite>A Brief History of Time</cite> by Stephen  
Hawking has sold over ten million copies  
worldwide.</p>
```

RESULT

A Brief History of Time by Stephen Hawking has
sold over ten million copies worldwide.

<cite>

When you are referencing a piece of work such as a book, film or research paper, the `<cite>` element can be used to indicate where the citation is from.

In HTML5, `<cite>` should not really be used for a person's name — but it was allowed in HTML 4, so most people are likely to continue to use it.

Browsers will render the content of a `<cite>` element in italics.

Task:

Let's insert some `<cite>` element!

```
<h2><cite>The Social  
Network</cite></h2>
```

```
<h2><cite>Her</cite></h2>
```

AUTHOR DETAILS

<address>

The <address> element has quite a specific use: to contain contact details for the author of the page.

It can contain a physical address, but it does not have to. For example, it may also contain a phone number or email address.

Browsers often display the content of the <address> element in italics.

You may also be interested in something called the hCard microformat for adding physical address information to your markup.

chapter-02/address.html

HTML

```
<address>
  <p><a href="mailto:homer@example.org">
    homer@example.org</a></p>
  <p>742 Evergreen Terrace, Springfield.</p>
</address>
```

homer@example.org

RESULT

742 Evergreen Terrace, Springfield.

Task:

Let's insert an <address> element!

<address>

<p>Author: John Smith
(johnsmith@mailinator.com)

H-1117 Budapest, Noname
street 17</p>

</address>

ESCAPE CHARACTERS

There are some characters that are used in and reserved by HTML code. (For example, the left and right angled brackets.)

Therefore, if you want these characters to appear on your page you need to use what are termed "escape" characters (also known as escape codes or entity references). For example, to write a left angled bracket, you can use either <; or <. For an ampersand, you can use either &; or &.

There are also special codes that can be used to show symbols such as copyright and trademark, currency symbols, mathematical characters, and some punctuation marks. For example, if you want to include a copyright symbol on a web page you can use either ©; or ©.

Task:
Let's repair the content of heading 1!

<h1>Best Movies About The <Internet/Web> </h1>

<	Less-than sign < <	¢	Cent sign ¢ ¢	'	Left single quote ‘ ‘
>	Greater-than sign > >	£	Pound sign £ £	'	Right single quote ’ ’
&	Ampersand & &	¥	Yen sign ¥ ¥	"	Left double quotes “ “
"	Quotation mark " "	€	Euro sign € €	"	Right double quotes ” ”
		©	Copyright symbol © ©	×	Multiplication sign × ×
		®	Registered trademark ® ®	÷	Division sign ÷ ÷
		™	Trademark ™ ™		

LISTS

ORDERED LISTS

The ordered list is created with the element.

Each item in the list is placed between an opening tag and a closing tag. (The li stands for list item.)

Browsers indent lists by default.

Sometimes you may see a type attribute used with the element to specify the type of numbering (numbers, letters, roman numerals and so on). It is better to use the CSS list-style-type property covered on pages 333-335.

chapter-03/ordered-lists.html

HTML

```
<ol>
  <li>Chop potatoes into quarters</li>
  <li>Simmer in salted water for 15-20
      minutes until tender</li>
  <li>Heat milk, butter and nutmeg</li>
  <li>Drain potatoes and mash</li>
  <li>Mix in the milk mixture</li>
</ol>
```

RESULT

1. Chop potatoes into quarters
2. Simmer in salted water for 15-20 minutes until tender
3. Heat milk, butter and nutmeg
4. Drain potatoes and mash
5. Mix in the milk mixture

Task:

Let's insert the ordered list within the <nav id="pagemenu"> element!

```
<nav id="pagemenu">
  <ol>
    <li>The Social Network</li>
    <li>Her</li>
    <li>Deep Web</li>
  </ol>
</nav>
```

1. The Social Network
2. Her
3. Deep Web

UNORDERED LISTS

HTML

chapter-03/unordered-lists.html

```
<ul>
  <li>1kg King Edward potatoes</li>
  <li>100ml milk</li>
  <li>50g salted butter</li>
  <li>Freshly grated nutmeg</li>
  <li>Salt and pepper to taste</li>
</ul>
```

RESULT

- 1kg King Edward potatoes
- 100ml milk
- 50g salted butter
- Freshly grated nutmeg
- Salt and pepper to taste

The unordered list is created with the `` element.

Each item in the list is placed between an opening `` tag and a closing `` tag. (The `li` stands for list item.)

Browsers indent lists by default.

Sometimes you may see a type attribute used with the `` element to specify the type of bullet point (circles, squares, diamonds and so on). It is better to use the CSS `list-style-type` property covered on pages 333-335.

Task:

Let's insert the unordered list after the Sources heading!

<h2>Sources</h2>

Techtimes.com
imdb.com

Sources

- Techtimes.com
- imdb.com

HIPERLINKS

WRITING LINKS

Links are created using the `<a>` element. Users can click on anything between the opening `<a>` tag and the closing `` tag. You specify which page you want to link to using the `href` attribute.

The text between the opening `<a>` tag and closing `` tag is known as link text. Where possible, your link text should explain where visitors will be taken if they click on it (rather than just saying "click here"). Below you can see the link to IMDB that was created on the previous page.

THIS IS THE PAGE THE
LINK TAKES YOU TO

THIS IS THE TEXT THE
USER CLICKS ON

OPENING LINK TAG

CLOSING
LINK TAG

```
<a href="http://www.imdb.com">IMDB</a>
```

OPENING LINKS IN A NEW WINDOW

HTML

chapter-04/opening-links-in-a-new-window.html

```
<a href="http://www.imdb.com" target="_blank">  
Internet Movie Database</a> (opens in new window)
```

RESULT

[Internet Movie Database](http://www.imdb.com) (opens in new window)

target

If you want a link to open in a new window, you can use the target attribute on the opening `<a>` tag. The value of this attribute should be `_blank`.

One of the most common reasons a web page author might want a link to be opened in a new window is if it points to another website. In such cases, they hope the user will return to the window containing their site after finishing looking at the other one.

LINKING TO OTHER SITES

<a>

Links are created using the <a> element which has an attribute called href. The value of the href attribute is the page that you want people to go to when they click on the link.

Users can click on anything that appears between the opening <a> tag and the closing tag and will be taken to the page specified in the href attribute.

When you link to a different website, the value of the href attribute will be the full web address for the site, which is known as an **absolute URL**.

Browsers show links in blue with an underline by default.

chapter-04/linking-to-other-sites.html

HTML

```
<p>Movie Reviews:<br/><ul><li><a href="http://www.empireonline.com">Empire</a></li><li><a href="http://www.metacritic.com">Metacritic</a></li><li><a href="http://www.rottentomatoes.com">Rotten Tomatoes</a></li><li><a href="http://www.variety.com">Variety</a></li></ul></p>
```

RESULT

Movie Reviews:

- [Empire](#)
- [Metacritic](#)
- [Rotten Tomatoes](#)
- [Variety](#)

Task:

Let's insert links to external sites!

<a

href="http://www.techtimes.com/articles/10259/20140711/the-best-movies-about-the-internet.htm"

target="_blank">Techtimes.com

<a href="http://imdb.com"

target="_blank">imdb.com

LINKING TO OTHER PAGES ON THE SAME SITE

HTML

chapter-04/linking-to-other-pages.html

```
<p>
  <ul>
    <li><a href="index.html">Home</a></li>
    <li><a href="about-us.html">About</a></li>
    <li><a href="movies.html">Movies</a></li>
    <li><a href="contact.html">Contact</a></li>
  </ul>
</p>
```

<a>

When you are linking to other pages within the same site, you do not need to specify the domain name in the URL. You can use a shorthand known as a **relative URL**.

If all the pages of the site are in the same folder, then the value of the href attribute is just the name of the file.

Task:

Let's insert link to other page on the same site!

```
<nav id="mainmenu">
  <b>Homepage</b> | <a href="form.html" title="Do you want to send your own favourite movies? Here you can do it.">Form</a>
</nav>
```

LINKING TO A SPECIFIC PART OF THE SAME PAGE

At the top of a long page you might want to add a list of contents that links to the corresponding sections lower down. Or you might want to add a link from part way down the page back to the top of it to save users from having to scroll back to the top.

Before you can link to a specific part of a page, you need to identify the points in the page that the link will go to. You do this using the `id` attribute (which can be used on every HTML element). You can see that the `<h1>` and `<h2>` elements in this example have been given `id` attributes that identify those sections of the page.

The value of the `id` attribute should start with a letter or an underscore (not a number or any other character) and, on a single page, no two `id` attributes should have the same value.

chapter-05/linking-to-a-specific-part.html

HTML

```
<h1 id="top">Film-Making Terms</h1>
<a href="#arc_shot">Arc Shot</a><br />
<a href="#interlude">Interlude</a><br />
<a href="#prologue">Prologue</a><br /><br />
<h2 id="arc_shot">Arc Shot</h2>
<p>A shot in which the subject is photographed by an encircling or moving camera</p>
<h2 id="interlude">Interlude</h2>
<p>A brief, intervening film scene or sequence, not specifically tied to the plot, that appears within a film</p>
<h2 id="prologue">Prologue</h2>
<p>A speech, preface, introduction, or brief scene preceding the main action or plot of a film; contrast to epilogue</p>
<p><a href="#top">Top</a></p>
```

Task:

Let's insert link to the different movies within the page!

```
<nav id="pagemenu">
<ol>
  <li><a href="#socialweb">
    The Social Network </a></li>
  <li><a href="#her">Her</a></li>
  <li><a href="#deepweb">Deep
    Web</a></li>
</ol>
</nav>

<h2 id="socialweb">
```

EMAIL LINKS

mailto:

To create a link that starts up the user's email program and addresses an email to a specified email address, you use the `<a>` element. However, this time the value of the `href` attribute starts with `mailto:` and is followed by the email address you want the email to be sent to.

chapter-04/email-links.html **HTML**

```
<a href="mailto:jon@example.org">Email Jon</a>
```

RESULT

[Email Jon](mailto:jon@example.org)

Task:

Let's insert link to the email address!

`<address>`

`<p>Author: John Smith (johnsmith@mailinator.com)
`

`H-1117 Budapest, Noname street
17</p>`
`</address>`

Skip Navigation Links

Overview

On most pages, keyboard and screen reader users must navigate a long list of navigation links and other elements before ever arriving at the main content. This can be particularly difficult for users with some forms of motor disabilities.

Consider users with no or limited arm movement who navigate a web page by tapping their heads on a switch or that use a stick in their mouth to press keyboard keys. Requiring users to perform any action numerous times before reaching the main content poses an accessibility barrier.

Of course, sighted people who use their mouse do not have any trouble with web pages like this. They can almost immediately scan over the page and identify where the main content is. Skip navigation links are useful to give screen reader and keyboard users the same capability of navigating directly to the main content.

Creating "Skip Navigation" Links

The idea is simple enough: provide a link at the top of the page that, when activated, jumps the user to the beginning of the main content area.

Task:

Let's create this skip navigation link!

```
<nav id="skip">
  <h2>Skip to main content</h2>
  <a href="#content">Skip to main content</a>
</nav>
<main id="content">
...
</main>
```

Temporarily hidden skip links

Many designers worry about the aesthetic impact of visible skip navigation links. They may think these links are unattractive or confusing to users who do not need them, so they may decide to make them invisible. A very small or hidden link does not benefit the audience that most needs skip links—sighted keyboard users. While screen readers have many mechanisms to jump around the page (e.g., headings and regions/landmarks), other keyboard users do not.

To address the concerns that a visible skip link can be intrusive, but still create a skip link that is useful for sighted keyboard users, **we recommend creating a link that is hidden until the user navigates to it with a keyboard**.

To be usable by all keyboard users, particularly sighted keyboard users, the link must:

- be hidden by default
- be accessible to keyboard navigation
- become prominently visible when it is focused
- properly set focus to the main content area when activated

IMAGES

To add an image into the page you need to use an element. This is an empty element (which means there is no closing tag). It must carry the following two attributes:

src

This tells the browser where it can find the image file. This will usually be a relative URL pointing to an image on your own site. (Here you can see that the images are in a child folder called *images* — relative URLs were covered on pages 83-84).

alt

This provides a text description of the image which describes the image if you cannot see it.

title

You can also use the title attribute with the element to provide additional information about the image. Most browsers will display the content of this attribute in a tooltip when the user hovers over the image.

chapter-05/adding-images.html

HTML

```

```

RESULT



Task

■ Insert the

TheSocialNetwork.jpg and deepweb.jpg images into the page!

■ Also specify the alt and title parameters.

```

```

The text used in the alt attribute is often referred to as **alt text**. It should give an accurate description of the image content so it can be understood by screen reader software (used by people with visual impairments) and search engines.

If the image is just to make a page look more attractive (and it has no meaning, such as a graphic dividing line), then the alt attribute should still be used but the quotes should be left empty.

HTML5: FIGURE AND FIGURE CAPTION

HTML

chapter-05/figure-and-figure-caption.html

```
<figure>
  
  <br />
  <figcaption>Sea otters hold hands when they
    sleep so they don't drift away from each
    other.</figcaption>
</figure>
```

RESULT



Sea otters hold hands when they sleep so they don't drift away from each other.

<figure>

Images often come with captions. HTML5 has introduced a new `<figure>` element to contain images and their caption so that the two are associated.

You can have more than one image inside the `<figure>` element as long as they all share the same caption.

<figcaption>

The `<figcaption>` element has been added to HTML5 in order to allow web page authors to add a caption to an image.

Before these elements were created there was no way to associate an `` element with its caption.

Older browsers that do not understand HTML5 elements simply ignore the new elements and display the content of them.

Task

Add figure tags to both the source code and the two images

<figure>

```

```

<figcaption>Photo from the

```
<cite>Social Network</cite>
movie</figcaption>
```

</figure>

VIDEO AND AUDIO

HTML5: ADDING VIDEO TO YOUR PAGES

HTML

chapter-09/adding-html5-video.html

```
<!DOCTYPE html>
<html>
  <head>
    <title>Adding HTML5 Video</title>
  </head>
  <body>
    <video src="video/puppy.mp4"
      poster="images/puppy.jpg"
      width="400" height="300"
      preload
      controls
      loop>
      <p>A video of a puppy playing in the snow</p>
    </video>
  </body>
</html>
```

In HTML5 you do not need to supply values for all attributes, such as the controls, autoplay, and loop attributes used with the `<video>` element. These attributes are like on/off switches. If the attribute is present, it turns that option on. If the attribute is omitted, the option is turned off.

If the browser does not support the `<video>` element or the format of video used, it will display whatever is between the opening `<video>` and closing `</video>` tags.

preload

This attribute tells the browser what to do when the page loads. It can have one of three values:

none

The browser should not load the video until the user presses play.

auto

The browser should download the video when the page loads.

metadata

The browser should just collect information such as the size, first frame, track list, and duration.

<video>

The `<video>` element has a number of attributes which allow you to control video playback:

src

This attribute specifies the path to the video. (The example video is in H264 format so it will only work in IE and Safari.)

poster

This attribute allows you to specify an image to show while the video is downloading or until the user tells the video to play.

width, height

These attributes specify the size of the player in pixels.

controls

When used, this attribute indicates that the browser should supply its own controls for playback.

autoplay

When used, this attribute specifies that the file should play automatically.

loop

When used, this attribute indicates that the video should start playing again once it has ended.

Task

Let's embed the `her.mp4` video with 750px width!

<video controls

`poster="media/her.jpg"`

`width="750"`

`src="media/her.mp4" >`

</video>

HTML5: ADDING HTML5 AUDIO TO YOUR PAGES

<audio>

HTML5 introduced the <audio> element to include audio files in your pages. As with HTML5 video, browsers expect different formats for the audio.

The <audio> element has a number of attributes which allow you to control audio playback:

src

This attribute specifies the path to the audio file.

controls

This attribute indicates whether the player should display controls. If you do not use this attribute, no controls will be shown by default. You can also specify your own controls using JavaScript.

autoplay

The presence of this attribute indicates that the audio should start playing automatically. (It is considered better practice to let visitors choose to play audio.)

```
chapter-09/adding-html5-audio.html      HTML
<!DOCTYPE html>
<html>
  <head>
    <title>Adding HTML5 Audio</title>
  </head>
  <body>
    <audio src="audio/test-audio.ogg"
           controls autoplay>
      <p>This browser does not support our audio
         format.</p>
    </audio>
  </body>
</html>
```



Task

Let's embed the *socialnetwork.mp3* audio file!

<audio controls

```
src="media/socialnetwork.mp3">
</audio>
```

preload

This attribute indicates what the browser should do if the player is not set to autoplay. It can have the same values we saw on page 214 for the <video> element.

loop

This attribute specifies that the audio track should play again once it has finished.

This example only works in browsers that support the Ogg Vorbis audio format (Firefox, Chrome, and Opera). For it to work in Safari 5 and IE 9, the audio would need to be in MP3 format (or use the <source> element covered on the next page to offer different formats).

INLINE FRAMES

IFRAMES

<iframe>

An iframe is like a little window that has been cut into your page — and in that window you can see another page. The term iframe is an abbreviation of inline frame.

One common use of iframes (that you may have seen on various websites) is to embed a Google Map into a page. The content of the iframe can be any html page (either located on the same server or anywhere else on the web).

An iframe is created using the <iframe> element. There are a few attributes that you will need to know to use it:

src

The src attribute specifies the URL of the page to show in the frame.

height

The height attribute specifies the height of the iframe in pixels.

width

The width attribute specifies the width of the iframe in pixels.

```
chapter-08/iframes.html
```

HTML

RESULT

```
<iframe  
width="450"  
height="350"  
src="http://maps.google.co.uk/maps?q=moma+new+york  
&output=embed">  
</iframe>
```

Task

Let's embed a slideshare presentation about the deep web!

<iframe>

```
src="http://www.slideshare.net/  
slideshow/embed_code/key/19oozb  
2TPXXn14" width="595"  
height="485"></iframe>
```

USING EXTERNAL STYLE SHEET

USING EXTERNAL CSS

<link>

The <link> element can be used in an HTML document to tell the browser where to find the CSS file used to style the page. It is an empty element (meaning it does not need a closing tag), and it lives inside the <head> element. It should use three attributes:

href

This specifies the path to the CSS file (which is often placed in a folder called css or styles).

type

This attribute specifies the type of document being linked to. The value should be text/css.

rel

This specifies the relationship between the HTML page and the file it is linked to. The value should be stylesheet when linking to a CSS file.

An HTML page can use more than one CSS style sheet. To do this it could have a <link> element for every CSS file it uses. For example, some authors use one CSS file to control the presentation (such as fonts and colors) and a second to control the layout.

```
chapter-10/using-external-css.html
```

HTML

```
<!DOCTYPE html>
<html>
  <head>
    <title>Using External CSS</title>
    <link href="css/styles.css" type="text/css"
          rel="stylesheet" />
  </head>
  <body>
    <h1>Potatoes</h1>
    <p>There are dozens of different potato varieties. They are usually described as early, second early and maincrop.</p>
  </body>
</html>
```

```
chapter-10/styles.css
```

CSS

```
body {
  font-family: arial;
  background-color: rgb(185,179,175);}
h1 {
  color: rgb(255,255,255);}
```

RESULT

```
Potatoes
```

There are dozens of different potato varieties. They are usually described as early, second early and maincrop potatoes.

Task

Make a link to the „css/base.css” external stylesheet!

```
<link rel="stylesheet"
      href="css/base.css">
```

BLOCK LEVEL AND INLINE ELEMENTS

GROUPING TEXT & ELEMENTS IN A BLOCK

<div>

The `<div>` element allows you to group a set of elements together in one block-level box.

For example, you might create a `<div>` element to contain all of the elements for the header of your site (the logo and the navigation), or you might create a `<div>` element to contain comments from visitors.

In a browser, the contents of the `<div>` element will start on a new line, but other than this it will make no difference to the presentation of the page.

Using an `id` or `class` attribute on the `<div>` element, however, means that you can create CSS style rules to indicate how much space the `<div>` element should occupy on the screen and change the appearance of all the elements contained within it.

It can also make it easier to follow your code if you have used `<div>` elements to hold each section of the page.

chapter-08/grouping-block-elements.html

HTML

```
<div id="header">
  
  <ul>
    <li><a href="index.html">Home</a></li>
    <li><a href="biography.html">Biography</a></li>
    <li><a href="works.html">Works</a></li>
    <li><a href="contact.html">Contact</a></li>
  </ul>
</div><!-- end of header -->
```

RESULT



- [Home](#)
- [Biography](#)
- [Works](#)
- [Contact](#)

Since there may be several other elements inside a `<div>` element, it can be helpful to add a comment after the closing `</div>` tag.

This allows you to clearly see which opening tag it is supposed to correspond to, as shown at the end of the example here.

GROUPING TEXT & ELEMENTS INLINE

The `` element acts like an inline equivalent of the `<div>` element. It is used to either:

1. Contain a section of text where there is no other suitable element to differentiate it from its surrounding text
2. Contain a number of inline elements

The most common reason why people use `` elements is so that they can control the appearance of the content of these elements using CSS.

You will usually see that a `class` or `id` attribute is used with `` elements:

- To explain the purpose of this `` element
- So that CSS styles can be applied to elements that have specific values for these attributes

chapter-08/grouping-inline-elements.html

HTML

```
<p>Anish Kapoor won the Turner Prize in 1991 and exhibited at the <span class="gallery">Tate Modern</span> gallery in London in 2003.</p>
```

RESULT

Anish Kapoor won the Turner Prize in 1991 and exhibited at the TATE MODERN gallery in London in 2003.

GROUPING TEXT & ELEMENTS IN A BLOCK

<div>

The `<div>` element allows you to group a set of elements together in one block-level box.

For example, you might create a `<div>` element to contain all of the elements for the header of your site (the logo and the navigation), or you might create a `<div>` element to contain comments from visitors.

In a browser, the contents of the `<div>` element will start on a new line, but other than this it will make no difference to the presentation of the page.

Using an `id` or `class` attribute on the `<div>` element, however, means that you can create CSS style rules to indicate how much space the `<div>` element should occupy on the screen and change the appearance of all the elements contained within it.

It can also make it easier to follow your code if you have used `<div>` elements to hold each section of the page.

chapter-08/grouping-block-elements.html

HTML

```
<div id="header">
  
  <ul>
    <li><a href="index.html">Home</a></li>
    <li><a href="biography.html">Biography</a></li>
    <li><a href="works.html">Works</a></li>
    <li><a href="contact.html">Contact</a></li>
  </ul>
</div><!-- end of header -->
```

RESULT



- [Home](#)
- [Biography](#)
- [Works](#)
- [Contact](#)

Task

Introduction

"Although for some people cinema means something superficial and glamorous, it is something else. I think it is the mirror of the world."
Jeanne Moreau

I love **movies about the Internet**. As someone who has grown up just as much on the web as off it, I feel as if it's my virtual home, and inherently connect to films with social networks or hacking or viral media as major plot points perhaps more than films about any other subject. These movies thematically explore different aspects of the web, revealing both the positive and negative affects of living in such a connected world.

Please be aware that my list is *strongly subjective*

- 1 [THE SOCIAL NETWORK](#)
- 2 [HER](#)
- 3 [DEEP WEB](#)

Let's group these elements with the `<div>` tag.

Give it the next unique ID: introduction

Since there may be several other elements inside a `<div>` element, it can be helpful to add a comment after the closing `</div>` tag.

This allows you to clearly see which opening tag it is supposed to correspond to, as shown at the end of the example here.

Task

- Group the <iframe> with a <div> tag.
- Enter the class parameter with **slideshare16x9** value!
- Check the result in the web browser!

```
<div class="slideshare16x9">
    <iframe
        src="http://www.slideshare.net/slideshow/embed_code/
key/19oozb2TPXXn14" width="595" height="485">
    </iframe>
</div>
```

TABLES

BASIC TABLE STRUCTURE

<table>

The <table> element is used to create a table. The contents of the table are written out row by row.

<tr>

You indicate the start of each row using the opening <tr> tag. (The tr stands for table row.)

It is followed by one or more <td> elements (one for each cell in that row).

At the end of the row you use a closing </tr> tag.

<td>

Each cell of a table is represented using a <td> element. (The td stands for table data.)

At the end of each cell you use a closing </td> tag.

chapter-06/basic-table-structure.html

HTML

```
<table>
  <tr>
    <td>15</td>
    <td>15</td>
    <td>30</td>
  </tr>
  <tr>
    <td>45</td>
    <td>60</td>
    <td>45</td>
  </tr>
  <tr>
    <td>60</td>
    <td>90</td>
    <td>90</td>
  </tr>
</table>
```

RESULT

15	15	30
45	60	45
60	90	90

TABLE HEADINGS

HTML

chapter-06/table-headings.html

```
<table>
  <tr>
    <th></th>
    <th scope="col">Saturday</th>
    <th scope="col">Sunday</th>
  </tr>
  <tr>
    <th scope="row">Tickets sold:</th>
    <td>120</td>
    <td>135</td>
  </tr>
  <tr>
    <th scope="row">Total sales:</th>
    <td>$600</td>
    <td>$675</td>
  </tr>
</table>
```

RESULT

	Saturday	Sunday
Tickets sold:	120	135
Total sales:	\$600	\$675

<th>

The <th> element is used just like the <td> element but its purpose is to represent the heading for either a column or a row. (The th stands for table heading.)

Even if a cell has no content, you should still use a <td> or <th> element to represent the presence of an empty cell otherwise the table will not render correctly. (The first cell in the first row of this example shows an empty cell.)

Using <th> elements for headings helps people who use screen readers, improves the ability for search engines to index your pages, and also enables you to control the appearance of tables better when you start to use CSS.

You can use the scope attribute on the <th> element to indicate whether it is a heading for a column or a row. It can take the values: row to indicate a heading for a row or col to indicate a heading for a column.

Browsers usually display the content of a <th> element in bold and in the middle of the cell.

Task

- Let's create this table!

```
<table border="1">
  <tr>
    <th>Release Date</th>
    <td>October 1, 2010</td>
  </tr>
  <tr>
    <th>Title</th>
    <td>The Social Network</td>
  </tr>
  <tr>
    <th>IMDb's rating</th>
    <td> 7.7/10</td>
  </tr>
</table>
```

Release Date	October 1, 2010
Title	<i>The Social Network</i>
IMDb's rating	7.7/10

Table caption

Table Captions

Data tables very often have brief descriptive text before or after the table that indicates the content of that table. This text should be associated to its respective table using the `<caption>` element. The `<caption>` element must be the first thing after the opening `<table>` tag.

```
<table>
<caption>Shelly's Daughters</caption>
...
```

While it is not necessary for each table to have a caption, a caption is generally very helpful. If present, it should be associated to the table using the `<caption>` element.

Task

Let's add the `<caption>` to the tables.

```
<table border="1">
<caption>
  <strong>
    Movie datasheet
  </strong>
</caption>
```

Scope attribute

Associate the Data Cells with the Appropriate Headers

Now that we've created headers, we need to associate the data cells with the appropriate headers.

The `scope` attribute

The `scope` attribute identifies whether a table header is a column header or a row header. Here is the markup for the table, using the `scope` attribute:

The `scope` attribute tells the browser and screen reader that everything within a column that is associated to the header with `scope="col"` in that column, and that a cell with `scope="row"` is a header for all cells in that row.

All `<th>` elements should generally always have a scope attribute. While screen readers may correctly guess whether a header is a column header or a row header based on the table layout, assigning a scope makes this unambiguous.

Task

Let's add the scope attributes!

Shelly's Daughters		
Name	Age	Birthday
Jackie	5	April 5
Beth	8	January 14

```
<table>
<caption>Shelly's Daughters</caption>

<tr>
<th scope="col">Name</th>
<th scope="col">Age</th>
<th scope="col">Birthday</th>
</tr>

<tr>
<th scope="row">Jackie</th>
<td>5</td>
<td>April 5</td>
</tr>

<tr>
<th scope="row">Beth</th>
<td>8</td>
<td>January 14</td>
</tr>

</table>
```

<details>: The Details disclosure element

The `<details>` [HTML](#) element creates a disclosure widget in which information is visible only when the widget is toggled into an "open" state. A summary or label must be provided using the `<summary>` element.

A disclosure widget is typically presented onscreen using a small triangle which rotates (or twists) to indicate open/closed status, with a label next to the triangle. The contents of the `<summary>` element are used as the label for the disclosure widget.

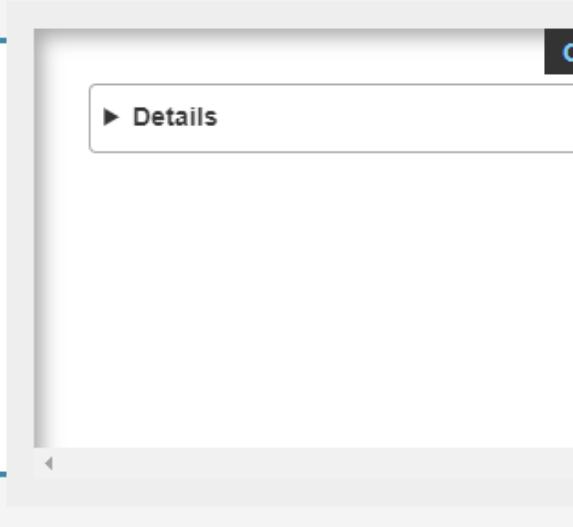


HTML Demo: <details>

HTML CSS

```
1 <details>
2   <summary>Details</summary>
3   Something small enough to escape casual notice.
4 </details>
5
```

A `<details>` widget can be in one of two states.
The default closed state displays only the triangle
and the label inside `<summary>`



```
<table border="1">
<caption>
  <strong>Movie datasheet</strong>
</caption>
<details>
  <summary>Help</summary>
  <p>In this table you will find the following rows:  
Release Date, Title,  
IMDb's rating</p>
</details>
</caption>
```

Task: Let's add the `<details>` and `<summary>` tags!

ABBREVIATIONS

ABBREVIATIONS & ACRONYMS

<abbr>

If you use an abbreviation or an acronym, then the `<abbr>` element can be used. A title attribute on the opening tag is used to specify the full term.

In HTML 4 there was a separate `<acronym>` element for acronyms. To spell out the full form of the acronym, the title attribute was used (as with the `<abbr>` element above). HTML5 just uses the `<abbr>` element for both abbreviations and acronyms.

chapter-02/abbreviations.html

HTML

```
<p><abbr title="Professor">Prof</abbr> Stephen  
Hawking is a theoretical physicist and  
cosmologist.</p>  
<p><acronym title="National Aeronautics and Space  
Administration">NASA</acronym> do some crazy  
space stuff.</p>
```

RESULT

Prof Stephen Hawking is a theoretical physicist and cosmologist.
NASA do some crazy space stuff.

National Aeronautics and Space
Administration

DATE AND TIME

<time>: The (Date) Time element

The `<time>` HTML element represents a specific period in time. It may include the `datetime` attribute to translate dates into machine-readable format, allowing for better search engine results or custom features such as reminders.

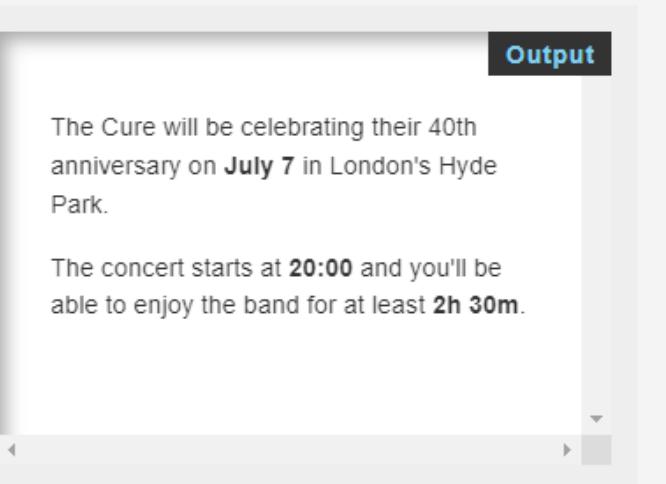
It may represent one of the following:

- A time on a 24-hour clock.
- A precise date in the [Gregorian calendar](#) (with optional time and timezone information).
- [A valid time duration](#).

HTML Demo: <time>

HTML CSS

```
1 <p>The Cure will be celebrating their 40th anniversary on <time  
2    datetime="2018-07-07">July 7</time> in London's Hyde Park.</p>  
3  
3 <p>The concert starts at <time datetime="20:00">20:00</time> and  
4    you'll be able to enjoy the band for at least <time  
    datetime="PT2H30M">2h 30m</time>.</p>
```



Valid datetime Values

a valid year string
2011

a valid month string
2011-11

a valid date string
2011-11-18

a valid yearless date string
11-18

a valid week string
2011-W47

a valid time string
14:54

14:54:39

Task

Movies have a release date.
Let's specify the dates using the <date> tag.

<time
datetime="2010-10-01"1, 2010</time>

FORMS

Open the form.html file with the Visual Studio Code

FORM CONTROLS

There are several types of form controls that you can use to collect information from visitors to your site.

ADDING TEXT:

Text input (single-line)

Used for a single line of text such as email addresses and names.



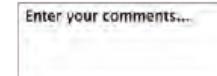
Password input

Like a single line text box but it masks the characters entered.



Text area (multi-line)

For longer areas of text, such as messages and comments.



MAKING CHOICES:

Radio buttons

For use when a user must select one of a number of options.



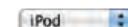
Checkboxes

When a user can select and unselect one or more options.



Drop-down boxes

When a user must pick one of a number of options from a list.



SUBMITTING FORMS:

Submit buttons

To submit data from your form to another web page.



Image buttons

Similar to submit buttons but they allow you to use an image.



UPLOADING FILES:

File upload

Allows users to upload files (e.g. images) to a website.



Datasheet of movie

Title

IMDb webaddress:

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

- 1 - unwatchable 2 3 4 5 - must watch

Personal info

Name

E-mail address

I'd like to subscribe to a newsletter

Send

FORM STRUCTURE

<form>

Form controls live inside a <form> element. This element should always carry the action attribute and will usually have a method and id attribute too.

action

Every <form> element requires an action attribute. Its value is the URL for the page on the server that will receive the information in the form when it is submitted.

method

Forms can be sent using one of two methods: get or post.

With the get method, the values from the form are added to the end of the URL specified in the action attribute. The get method is ideal for:

- short forms (such as search boxes)
- when you are just retrieving data from the web server (not sending information that should be added to or deleted from a database)

chapter-07/form-structure.html

HTML

```
<form action="http://www.example.com/subscribe.php"
      method="get">
  <p>This is where the form controls will appear.
  </p>
</form>
```

RESULT

This is where the form controls will appear.

With the post method the values are sent in what are known as HTTP headers. As a rule of thumb you should use the post method if your form:

- allows users to upload a file
- is very long
- contains sensitive data (e.g. passwords)
- adds information to, or deletes information from, a database

id

We look at the id attribute on page 183, but the value is used to identify the form distinctly from other elements on the page (and is often used by scripts — such as those that check you have entered information into fields that require values).

Datasheet of movie

Title

IMDb webaddress:

http://www.imdb.com/

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

- 1 - unwatchable 2 3 4 5 - must watch

Personal info

Name

E-mail address

- I'd like to subscribe to a newsletter

Send

TEXT INPUT

HTML

```
chapter-07/text-input.html
<form action="http://www.example.com/login.php">
  <p>Username:
    <input type="text" name="username" size="15"
           maxlength="30" />
  </p>
</form>
```

RESULT

Username:

size

The `size` attribute should not be used on new forms. It was used in older forms to indicate the width of the text input (measured by the number of characters that would be seen).

For example, a value of 3 would create a box wide enough to display three characters

(although a user could enter more characters if they desired).

In any new forms you write, CSS should be used to control the width of form elements. The `size` attribute is only mentioned here because you may come across it when looking at older code.

maxlength

You can use the `maxlength` attribute to limit the number of characters a user may enter into the text field. Its value is the number of characters they may enter. For example, if you were asking for a year, the `maxlength` attribute could have a value of 4.

<input>

The `<input>` element is used to create several different form controls. The value of the `type` attribute determines what kind of input they will be creating.

`type="text"`

When the `type` attribute has a value of `text`, it creates a single-line text input.

`name`

When users enter information into a form, the server needs to know which form control each piece of data was entered into. (For example, in a login form, the server needs to know what has been entered as the username and what has been given as the password.) Therefore, each form control requires a `name` attribute. The value of this attribute identifies the form control and is sent along with the information they enter to the server.

Datasheet of movie

Title

IMDb webaddress:

<http://www.imdb.com/>

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

- 1 - unwatchable 2 3 4 5 - must watch

Personal info

Name

E-mail address

I'd like to subscribe to a newsletter

Send

LABELLING FORM CONTROLS

<label>

When introducing form controls, the code was kept simple by indicating the purpose of each one in text next to it. However, each form control should have its own <label> element as this makes the form accessible to vision-impaired users.

The <label> element can be used in two ways. It can:

1. Wrap around both the text description and the form input (as shown on the first line of the example to your right).

2. Be kept separate from the form control and use the `for` attribute to indicate which form control it is a label for (as shown with the radio buttons).

for

The `for` attribute states which form control the label belongs to. Note how the radio buttons use the `id` attribute. The value of the `id` attribute uniquely identifies an element from all other elements on a page. (The `id` attribute is covered on page 183.)

The value of the `for` attribute matches that of the `id` attribute on the form control it is labelling. This technique using the `for` and

chapter-07/labelling-form-controls.html HTML

```
<label>Age: <input type="text" name="age" /></label>
<br />
Gender:
<input id="female" type="radio" name="gender"
       value="f">
<label for="female">Female</label>
<input id="male" type="radio" name="gender"
       value="m">
<label for="male">Male</label>
```

RESULT

Age:

Gender: Female Male

Datasheet of movie

Title

IMDb webaddress:

<http://www.imdb.com/>

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

- 1 - unwatchable
- 2
- 3
- 4
- 5 - must watch

Personal info

Name

E-mail address

I'd like to subscribe to a newsletter

Send

`id` attributes can be used on any form control. When a <label> element is used with a checkbox or radio button, users can click on either the form control or the label to select. The expanded clickable area makes the form easier to use. The position of the label is very important. If users do not know where to enter information or what information to enter, they are less likely to use the form correctly.

As a rule of thumb, here are the best places to place labels on form controls.

ABOVE OR TO THE LEFT:

- Text inputs
- Text areas
- Select boxes
- File uploads

TO THE RIGHT:

- Individual checkboxes
- Individual radio buttons

SUBMIT BUTTON

HTML

```
chapter-07/submit-button.html
<form action="http://www.example.com/subscribe.php">
  <p>Subscribe to our email list:</p>
  <input type="text" name="email" />
  <input type="submit" name="subscribe"
    value="Subscribe" />
</form>
```

RESULT

Subscribe to our email list:

<input>

type="submit"

The submit button is used to send a form to the server.

name

It can use a name attribute but it does not need to have one.

value

The value attribute is used to control the text that appears on a button. It is a good idea to specify the words you want to appear on a button because the default value of buttons on some browsers is 'Submit query' and this might not be appropriate for all kinds of form.

Different browsers will show submit buttons in different ways and tend to fit the visual presentation of the browser. If you want to control the appearance of a submit button, you can either use CSS (as you will learn on page 343), or you can use an image for the button.

Datasheet of movie

Title

IMDb webaddress:

<http://www.imdb.com/>

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

- 1 - unwatchable
- 2
- 3
- 4
- 5 - must watch

Personal info

Name

E-mail address

I'd like to subscribe to a newsletter

Send

HTML5: EMAIL & URL INPUT

<input>

HTML5 has also introduced inputs that allow visitors to enter email addresses and URLs. Browsers that do not support these input types will just treat them as text boxes.

type="email"

If you ask a user for an email address, you can use the email input. Browsers that support HTML5 validation will check that the user has provided information in the correct format of an email address. Some smart phones also optimize their keyboard to display the keys you are most likely to need when entering an email address (such as the @ symbol).

type="url"

A URL input can be used when you are asking a user for a web page address. Browsers that support HTML5 validation will check that the user has provided information in the format of a URL. Some smart phones also optimize their keyboard to display the keys you are most likely to need when entering a URL.

chapter-07/html5-email-input.html

HTML

```
<form action="http://www.example.org/subscribe.php">
  <p>Please enter your email address:</p>
  <input type="email" name="email" />
  <input type="submit" value="Submit" />
</form>
```

Please enter your email address:

RESULT

ivy Please enter an email address.

chapter-07/html5-url-input.html

HTML

```
<form action="http://www.example.org/profile.php">
  <p>Please enter your website address:</p>
  <input type="url" name="website" />
  <input type="submit" value="Submit" />
</form>
```

Please enter your website address:

RESULT

ivy Please enter a URL.

Datasheet of movie

Title

IMDb webaddress:

http://www.imdb.com/

Story snorty

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

1 - unwatchable 2 3 4 5 - must watch

Personal info

Name

E-mail address

I'd like to subscribe to a newsletter

Send

TEXT AREA

HTML

```
chapter-07/textarea.html
<form action="http://www.example.com/comments.php">
  <p>What did you think of this gig?</p>
  <textarea name="comments" cols="20" rows="4">Enter
    your comments...</textarea>
</form>
```

RESULT

What did you think of this gig?

Enter your comments...

If you are creating a new form, you should use CSS to control the width and height of a `<textarea>`. However, if you are looking at older code, you may see the `cols` and `rows` attributes used with this element.

The `cols` attribute indicates how wide the text area should be (measured in numbers of characters). The `rows` attribute indicates how many rows the text area should take up vertically.

<textarea>

The `<textarea>` element is used to create a multi-line text input. Unlike other input elements this is not an empty element. It should therefore have an opening and a closing tag.

Any text that appears between the opening `<textarea>` and closing `</textarea>` tags will appear in the text box when the page loads.

If the user does not delete any text between these tags, this message will get sent to the server along with whatever the user has typed. (Some sites use JavaScript to clear this information when the user clicks in the text area.)

Datasheet of movie

Title

IMDb webaddress:

<http://www.imdb.com/>

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

- 1 - unwatchable 2 3 4 5 - must watch

Personal info

Name

E-mail address

- I'd like to subscribe to a newsletter

Send

RADIO BUTTON

<input>

type="radio"

Radio buttons allow users to pick just one of a number of options.

name

The name attribute is sent to the server with the value of the option the user selects. When a question provides users with options for answers in the form of radio buttons, the value of the name attribute should be the same for all of the radio buttons used to answer that question.

value

The value attribute indicates the value that is sent to the server for the selected option. The value of each of the buttons in a group should be different (so that the server knows which option the user has selected).

checked

The checked attribute can be used to indicate which value (if any) should be selected when the page loads. The value of this attribute is checked. Only one radio button in a group should use this attribute.

chapter-07/radio-button.html

HTML

```
<form action="http://www.example.com/profile.php">
  <p>Please select your favorite genre:<br />
    <input type="radio" name="genre" value="rock"
           checked="checked" /> Rock
    <input type="radio" name="genre" value="pop" />
      Pop
    <input type="radio" name="genre" value="jazz" />
      Jazz
  </p>
</form>
```

RESULT

Please select your favorite genre:

Rock Pop Jazz

Please note: Once a radio button has been selected it cannot be deselected. The user can only select a different option. If you are only allowing the user one

option and want them to be able to deselect it (for example if they are indicating they agree to terms and conditions), you should use a checkbox instead.

Datasheet of movie

Title

IMDb webaddress:

<http://www.imdb.com/>

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

1 - unwatchable 2 3 4 5 - must watch

Personal info

Name

E-mail address

I'd like to subscribe to a newsletter

Send

CHECKBOX

HTML

chapter-07/checkbox.html

```
<form action="http://www.example.com/profile.php">
  <p>Please select your favorite music service(s):
    <br />
    <input type="checkbox" name="service"
      value="itunes" checked="checked" /> iTunes
    <input type="checkbox" name="service"
      value="lastfm" /> Last.fm
    <input type="checkbox" name="service"
      value="spotify" /> Spotify
  </p>
</form>
```

RESULT

Please select your favorite music service(s):
 iTunes Last.fm Spotify

<input>

type="checkbox"

Checkboxes allow users to select (and unselect) one or more options in answer to a question.

name

The name attribute is sent to the server with the value of the option(s) the user selects. When a question provides users with options for answers in the form of checkboxes, the value of the name attribute should be the same for all of the buttons that answer that question.

value

The value attribute indicates the value sent to the server if this checkbox is checked.

checked

The checked attribute indicates that this box should be checked when the page loads. If used, its value should be checked.

Datasheet of movie

Title

IMDb webaddress:

http://www.imdb.com/

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

- 1 - unwatchable 2 3 4 5 - must watch

Personal info

Name

E-mail address

I'd like to subscribe to a newsletter

Send

GROUPING FORM ELEMENTS

HTML

chapter-07/grouping-form-elements.html

```
<fieldset>
  <legend>Contact details</legend>
  <label>Email:<br />
  <input type="text" name="email" /></label><br />
  <label>Mobile:<br />
  <input type="text" name="mobile" /></label><br />
  <label>Telephone:<br />
  <input type="text" name="telephone" /></label>
</fieldset>
```

RESULT

Contact details

Email:

Mobile:

Telephone:

<fieldset>

You can group related form controls together inside the `<fieldset>` element. This is particularly helpful for longer forms.

Most browsers will show the `fieldset` with a line around the edge to show how they are related. The appearance of these lines can be adjusted using CSS.

<legend>

The `<legend>` element can come directly after the opening `<fieldset>` tag and contains a caption which helps identify the purpose of that group of form controls.

Datasheet of movie

Title

IMDb webaddress:

<http://www.imdb.com/>

Story shortly

No spoilers, please!

Rating

Your rating in a 1 to 5 scale

- 1 - unwatchable
- 2
- 3
- 4
- 5 - must watch

Personal info

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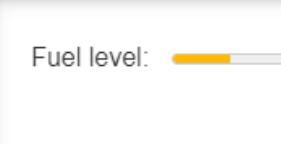
<meter>: The HTML Meter element

The `<meter>` [HTML](#) element represents either a scalar value within a known range or a fractional value.

 HTML Demo: <meter>

[HTML](#) [CSS](#)

```
1 <label for="fuel">Fuel level:</label>
2
3 <meter id="fuel"
4     min="0" max="100"
5     low="33" high="66" optimum="80"
6     value="50">
7     at 50/100
8 </meter>
9
```

Fuel level:  Output

value

The current numeric value. This must be between the minimum and maximum values (`min` attribute and `max` attribute) if they are specified. If unspecified or malformed, the value is `0`. If specified, but not within the range given by the `min` attribute and `max` attribute, the value is equal to the nearest end of the range.

Note: Unless the `value` attribute is between `0` and `1` (inclusive), the `min` and `max` attributes should define the range so that the `value` attribute's value is within it.

min

The lower numeric bound of the measured range. This must be less than the maximum value (`max` attribute), if specified. If unspecified, the minimum value is `0`.

max

The upper numeric bound of the measured range. This must be greater than the minimum value (`min` attribute), if specified. If unspecified, the maximum value is `1`.

Final package - solution

- You can find here the final result

<http://tiny.cc/bestmovsol>

THE END