101: HTML: Overview

Introduction & Basics

Ivan Malone
For: Cornerstone International Community College Vancouver

Class Structure

Class Time: Four Hours

Teacher (20%)
- In Person - Start of Class
– Followed by Q&A
– Followed by 15 min Break

Student (80%)
- Practice
- Explore
- Understand
- Ask Questions
- Do Assignments

This slideshow is to be used in class meeting with your Instructor.

A recording is also made available.

- **Video Content**
  - <Video Lecture>

Class Content

Class Time: Four Hours

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Student (80%)
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- Explore
- Understand
- Ask Questions
- Do Assignments

Additional Resources

- **Online Material**
  - <Google Classrooms>
    Provides Class Structure,
    Assignments, Grading etc
  - <Github Classrooms>
    Provides Supporting Material
    In the topic dedicated repository
  - CICCC.xyz
    Provides additional Support

Labs & Assignment

Class Time: Four Hours

Teacher (20%)
- In Person - Start of Class
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Student (80%)
- Practice
- Explore
- Understand
- Ask Questions
- Do Assignments

Labs & Assignment

- **Assignment**
  - Build Resume:
    Over the next few weeks we will build many things but we will keep coming back to *us as a person*.

    We will begin the foundation for this larger project.

  - Optional Extra Points:
    Everyone moves at a different pace and while learning HTML we will also begin to teach side skills that make later content easier to manage.
    Github Starter Project
    Github Classrooms

101: HTML: Day 1

Introduction & Basics

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Summary

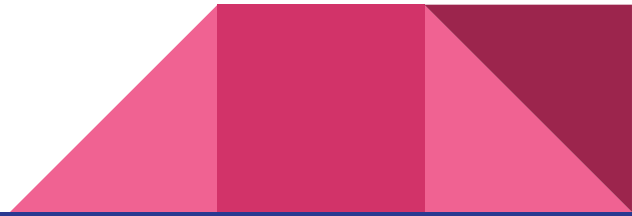
What is HTML #1

HTML is the standard markup language for creating Web pages.

- HTML stands for Hyper Text Markup Language

HTML is the standard markup language for creating Web pages

- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as
  - "this is a heading", "this is a paragraph", "this is a link", etc.



What is HTML #2

HTML (Hypertext Markup Language) is based on SGML (Standard Generalized Markup Language).

SGML is a standard for defining markup languages, which was widely used in the 1980s and 1990s for document and content management.

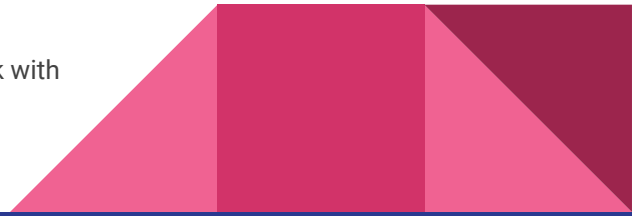
- HTML was originally created as a subset of SGML
  using many of its syntax and concepts. HTML was designed to be a simpler and more practical markup language for creating documents for the web.
- HTML was also specifically designed to work well with the HTTP (Hypertext Transfer Protocol), which is the protocol used to transfer web pages over the internet.(more on this later)

- Like SGML, HTML uses markup tags to define the structure and content of a document.
  HTML markup tags are defined in a Document Type Definition (DTD) which specifies the rules for the markup language.

Although HTML has evolved and diverged from SGML over time; it still retains some of its concepts and syntax.

- For example, HTML5, the latest version of HTML
  still uses the concept of a DTD to define the rules for the markup language.

Furthermore, HTML5 also introduces new elements and attributes that are specifically designed to work with SGML-based tools and workflows.



What is NOT HTML

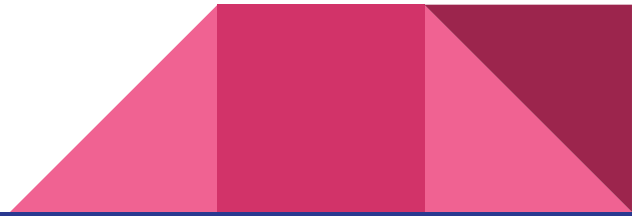
HTML (Hypertext Markup Language) is a markup language used for creating and structuring content on the web.

- It is not a programming language because it does not contain
  - logical statements,
  - control structures
  - or algorithms that can manipulate data
  - or perform complex operations.

Instead, HTML is used to define the structure and presentation of pages by using a set of predefined markup tags.

Which a web browser, or other application uses to understand what is contained in that page and how it should handle it.

- These tags are used to describe the content of a page
  - such as headings,
  - paragraphs,
  - lists,
  - links,
  - images, tables, forms, and more.



What is NOT HTML

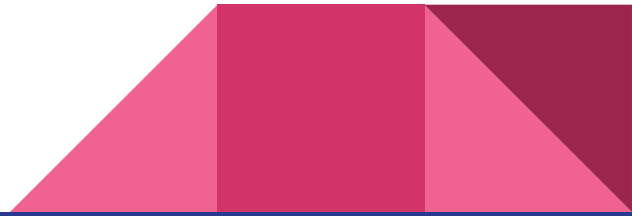
Instead, HTML is used to define the structure and presentation of pages by using a set of predefined markup tags. Which a web browser, or other application uses to understand what is contained in that page and how it should handle it.

- But it also describes behaviour
  - How to Render the View or Respond to Changes
  - How to work in cases of Accessibility needs
  - How To speak, read the content for the Blind

Therefore, HTML is a markup language and not a programming language.

Other examples of markup languages include

- XML,
- Markdown,
- and LaTeX.



Summary: Markup

What is ‘Markup’

Markup refers to the process of adding extra information, known as "tags," to text in order to give it a specific structure or meaning.

It is something you are already familiar with.

For example, when you filled out the college application form you had to

- First Name: John
- Last Name: Johnson

If you didn’t have the First and Lastname ‘markup’ you wouldn’t know

- Where to enter your name on the form

And the College wouldn’t know

- If your name was John Johnson or Johnson Jon

Markup languages, such as XML, HTML, and JSON, use tags to define the structure of a document and provide instructions for how the content should be displayed or processed.

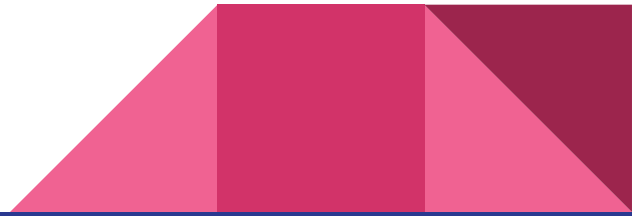
Web Browser looks these things up and does something with the data inside them.

What is ‘Markup’

In XML and HTML

- Markup involves adding tags to content to describe the structure and meaning of the things.
- These tags indicate which parts of the content are
  - Headings,
  - paragraphs,
  - links, images, and so on.

The tags are typically enclosed in angle brackets (< >) and are used to define the start and end of the content they describe.



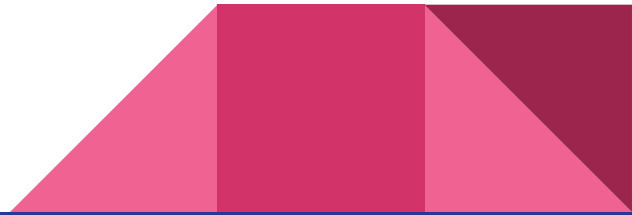
What is ‘Markup’

In JSON, markup involves using curly braces

- ({ }) and square brackets ([ ]) to define the structure of the data.

JSON uses key-value pairs to define the data elements and their corresponding values.

Terminology like this is something you will begin to get used to if you spend any time at all working with Text Documents on the web.



Importance of Markup

The act of “applying markup” to something involves

- adding tags to text to provide additional information about its structure and meaning.

This is often done by hand;

- using a text editor
- or specialized markup tool,
- or automatically using software that can recognize and apply markup to text.

Markup is essential in XML, HTML, JSON, and other older formats because it enables the content to be processed and displayed in a consistent and structured manner. Especially over time and by different pieces of software doing different things.

Markup provides a way to describe the meaning and structure of the content, which makes it easier for software to interpret and process the data. Without markup, it would be difficult to differentiate between different types of content or to specify how content should be displayed.

For Example, Humans read HTML and need to be able to ‘read it’ - but Google Robot also reads that HTML and just needs to know something about the information inside of it, not render it to screen like our browser does.

Summary: A HTML Document

A Simple HTML Document

Example

```
<!DOCTYPE html>

<html>
        <head>
                <title>Page Title</title>
        </head>
        <body>
                <h1>My First Heading</h1>
                <p>My first paragraph.</p>
        </body>
</html>
```

- The <!DOCTYPE html> declaration

  defines that this document is a HTML5 document.

  You will always use this.

- The <html> element is the root element of an HTML page.

  The Root element is the first element and where all programs will begin reading from.

A Simple HTML Document

Example

```
<!DOCTYPE html>

<html>
        <head>
                <title>Page Title</title>
        </head>
        <body>
                <h1>My First Heading</h1>
                <p>My first paragraph.</p>
        </body>
</html>
```

- The <head> element contains meta information about the HTML page.

  This is usually used by Search Engines for SEO purposes or Browsers to Organize your Tabs by knowing the ‘title’ of your page.

- The <title> element specifies a title for the HTML page.

  Which is shown in the browser's title bar or in the page's tab.

A Simple HTML Document

Example

```
<!DOCTYPE html>

<html>
        <head>
                <title>Page Title</title>
        </head>
        <body>
                <h1>My First Heading</h1>
                <p>My first paragraph.</p>
        </body>
</html>
```

- The <body> element defines the document's body

  and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

- The <h1> element defines a large heading

- The <p> element defines a paragraph

Summary: The HTML Element

A Simple HTML Document

Example

```
<!DOCTYPE html>
OUTSIDE
<html>

    INSIDE

    <head>
        <META INFORMATION>
    </head>
    <body>
        <CONTENT OF PAGE>
    </body>

    INSIDE
</html>

OUTSIDE
```

The <html> element is the root element of an HTML page

1. Everything outside of the HTML is ignored
2. Everything inside of it will be processed

Summary: The HEAD Element

A Simple HTML Document

Example

```
<!DOCTYPE html>

<html>
        <head>
                <title>Page Title</title>
        </head>
        <body>
                <h1>My First Heading</h1>
                <p>My first paragraph.</p>
        </body>
</html>
```

The <head> element contains meta information about the HTML page

Meta information is useful information that can be used to organize the information or tell something about it, or what it relates to.

A Simple HTML Document

Example

```
<!DOCTYPE html>

<html>
	<head>
		<title>Page Title</title>
	</head>
	<body>
		<h1>My First Heading</h1>
		<p>My first paragraph.</p>
	</body>
</html>
```

The <head> element contains meta information about the HTML page

- <title>: specifies the title of the document, which appears in the browser's title bar and may be used by search engines.

A Simple HTML Document

Example

```
<!DOCTYPE html>

<html>
	<head>
		<title>Page Title</title>
	</head>
	<body>
		<h1>My First Heading</h1>
		<p>My first paragraph.</p>
	</body>
</html>
```

The <title> element specifies a title for the HTML page (which is shown in the browser's title bar or in the page's tab)

There are many elements that may be used.

- <meta>: used to provide additional information about the document, such as keywords, description, author, and encoding.
- <link>: used to link to external resources, such as stylesheets, scripts, and icons.
- <script>: used to embed JavaScript code in the document.
- <style>: used to define styles for the document.

Summary: The BODY Element

A Simple HTML Document

Example

```
<!DOCTYPE html>

<html>
	<head>
		<title>Page Title</title>
	</head>
	<body>
		<h1>My First Heading</h1>
		<p>My first paragraph.</p>
	</body>
</html>
```

- The <body> element defines the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

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

A Simple HTML Document

Example

```
<!DOCTYPE html>

<html>
        <head>
                <title>Page Title</title>
        </head>
        <body>
                <h1>My First Heading</h1>
                <p>My first paragraph.</p>
        </body>
</html>
```

The Head is Typically for giving information to the Browser such as the Title of the page but also language information or search engine optimization information can be added also.

The Body section is usually what is displayed inside a web browser and represents the ‘content’ of the web page.

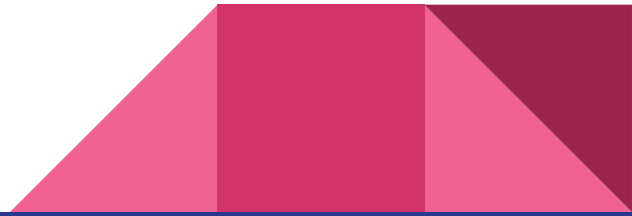
This is the basics, but there are more.

Summary: The QUICK History

Quick History of HTML

Since the early days of the World Wide Web, there have been many versions of HTML:

Year	Version
1989	Tim Berners-Lee invented www
1991	Tim Berners-Lee invented HTML
1993	Dave Raggett drafted HTML+
1995	HTML Working Group defined HTML 2.0
1997	W3C Recommendation: HTML 3.2
1999	W3C Recommendation: HTML 4.01
2000	W3C Recommendation: XHTML 1.0
2008	WHATWG HTML5 First Public Draft
2012	WHATWG HTML5 Living Standard
2014	W3C Recommendation: HTML5
2016	W3C Candidate Recommendation: HTML 5.1
2017	W3C Recommendation: HTML5.1 2nd Edition
2017	W3C Recommendation: HTML5.2



Quick History of HTML

HTML was first created in the early 1990s by Tim Berners-Lee, a computer scientist who was working at CERN.

- HTML was created as a means of sharing scientific information between researchers.

- At that time, there was no Standard Easy way to do this and the methods that were available were not suited to the then rising ARPA-NET

HTML initially appeared on the first web browser, WorldWideWeb, which was also created by Tim Berners-Lee. Idea was the tags would describe the data they contained.

- HTML quickly spread to other web browsers and became the standard for creating web pages. Meaning, web browsers implemented HTML.

Quick History of HTML

HTML solved many of the problems associated with sharing information over the Internet, such as formatting, layout, and linking.

- HTML spawned off other technologies such as CSS and JavaScript, which helped to create more dynamic and interactive web pages.

  But it was a long road from then to now.

- HTML has become the foundation of the modern web and continues to evolve to meet the needs of new technologies and trends.

Its rise played crucial role in the development of the World Wide Web, and its impact will continue to be felt for years to come.

Quick History of HTML

The ***Browser Wars*** refer to the intense competition between web browsers during the late 1990s and early 2000s.

The main players were Internet Explorer (Microsoft) and Netscape Navigator (Netscape Communications Corporation).

- Microsoft gained an advantage by bundling Internet Explorer with Windows, which allowed it to dominate the browser market.
- Netscape fought back by making its browser open source and creating the Mozilla project, which eventually led to the development of Firefox.

During this time HTML was messy and didn't really have the consistency we feel today. Netscape lost that war, but it evolved to become Mozilla Firefox and in the end, Internet Explorer couldn't keep up. Other browser like Chromium (chrome, brave, modern microsoft edge), WebKit (Safari) and others took off also.

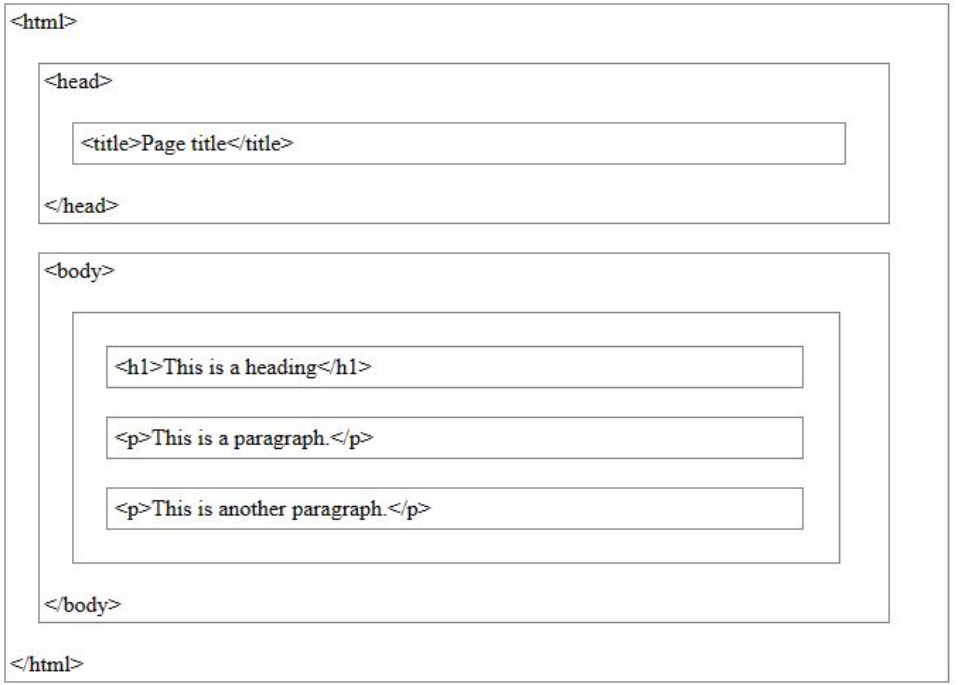
The Browser Wars around HTML led to the development of many new technologies and standards, such as CSS and JavaScript, which helped to create the modern web.

Summary: Page Structure

Basic Structure of HTML

A Web Page is layered like

- Outer Boxes
  - Inner Boxes
    - More Inner Boxes
      - Buttons, Lists
    - Even More
      - Games, Music
  - Inner Boxes
    - Advertisements
- Outer Boxes
  - More stuff



Basic Structure of HTML

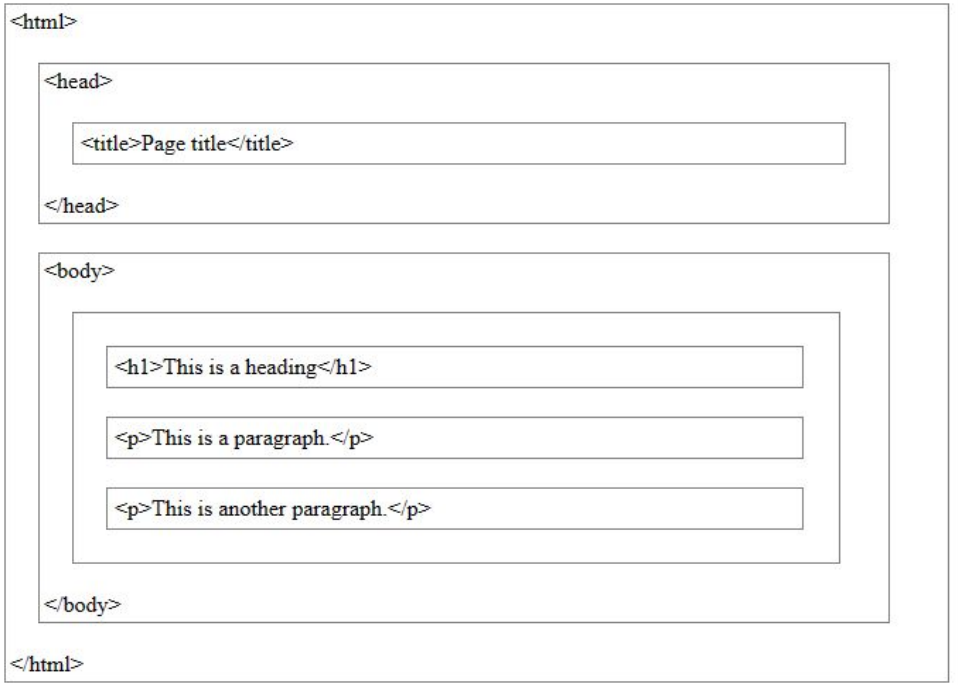
Note:

The content inside the <body> section

- (the white area) will be displayed in a browser.

The content inside the <title> element

- will be shown in the browser's title bar or in the page's tab.



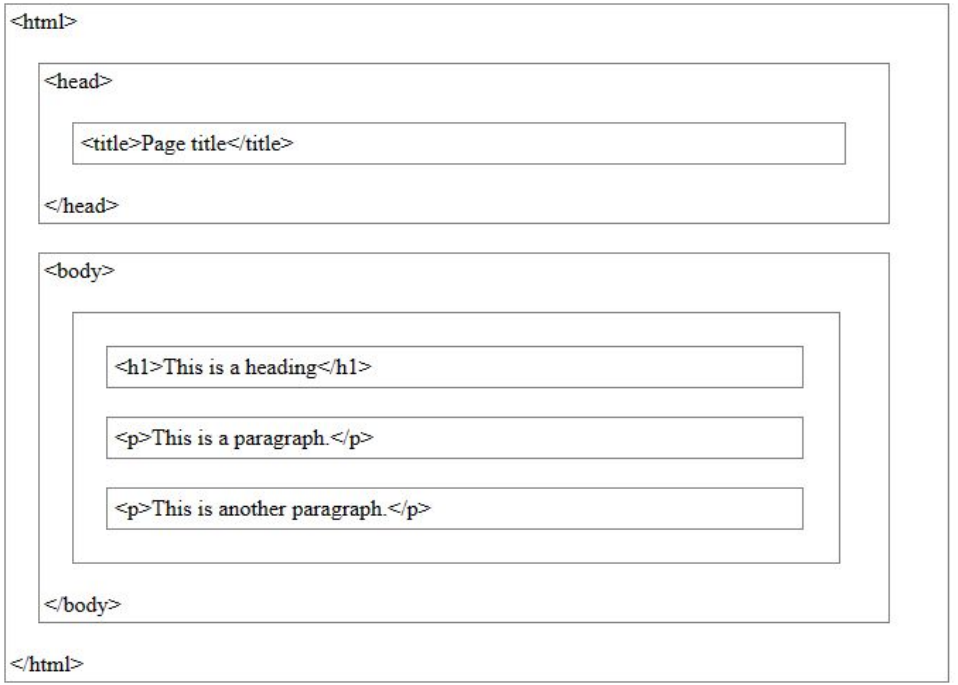
Basic Structure of HTML

Note:

HTML is NOT just for Websites.
It started that way but it is used in many areas.

- Not just Web Browsers
  - Google Robot & Web Crawlers:
    They need to know what your page
    Is about, it's structure and other data
  - Programs such as Document Editors:
    May use HTML to just lay out documents

    Remember. HTML is not a programming
    Language, it is a Markup Language and
    describes what's on a page.
  - Accessibility:
    Visually Impaired for example.



Basic Structure of HTML

Note:

Of course, the one me mostly think of

- For just Web Browsers
  - Page Title
  - Other information for the browser
    - Document Type
    - Media
    - Language
    - Encoding
    - Meta Tags

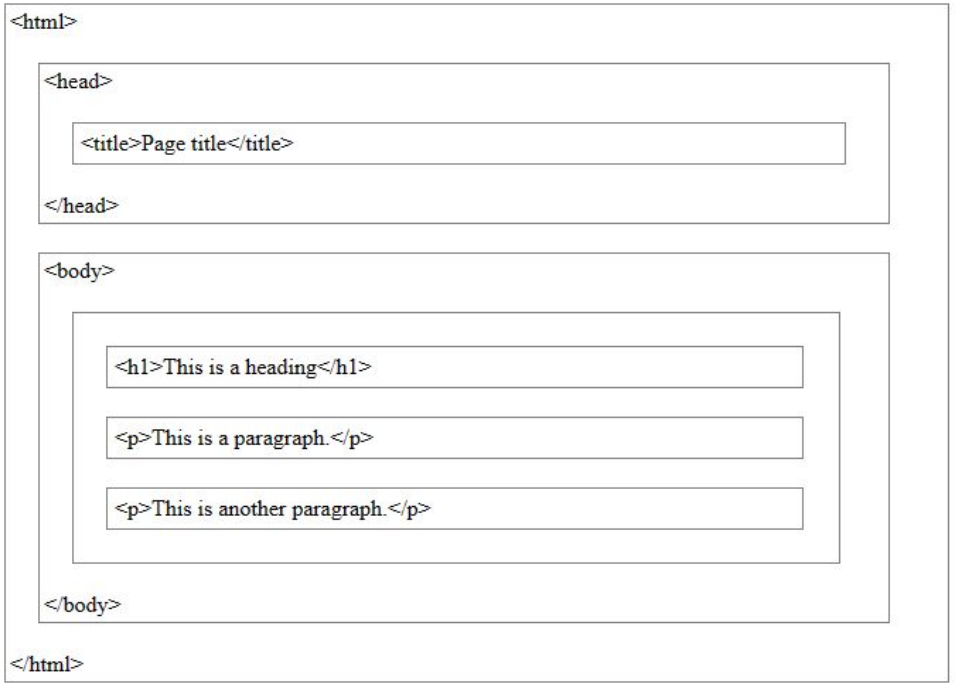
```
<html>
  <head>
    <title>Page title</title>
  </head>
  <body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
    <p>This is another paragraph.</p>
  </body>
</html>
```

Basic Structure of HTML

Note:

Or things we don't

- For Cross Platform, Multi Device UI-UX
  - Android Phone/Tablet
  - Apple iPhone/Tablet
  - Xbox/Playstation/SteamBox
  - PC/Mac
  - Raspberry Pi Homebrew Projects
  - Router Applications
  - Enterprise Applications
  - Document Archival
  - Network Protocol



Summary: Elements, Tags

HTML Elements, Tags & Attributes

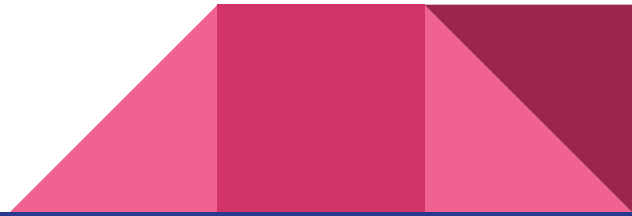
An HTML **element** is defined by a start tag, some content, and an end tag:

<**tagname**> Content goes here... </**tagname**>

The HTML element is everything from the start tag to the end tag:

<**h1**>My First Heading</**h1**>

<**p**>My first paragraph.</**p**>

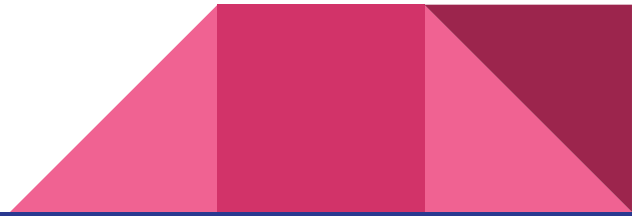


HTML Elements, Tags & Attributes

Start tag	Element content	End tag
<h1>	My First Heading	</h1>
	My first paragraph.	
 	none	none

Note: Some HTML elements have no content (like the
 element).

These elements are called empty elements.
Empty elements do not have an end tag!



HTML Elements, Tags & Attributes

Nested HTML Elements

HTML elements can be nested (this means that elements can contain other elements).

- All HTML documents consist of nested HTML elements.

The following example contains four HTML elements (<html>, <body>, <h1> and <p>)

```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

HTML Elements, Tags & Attributes

Nested HTML Elements

HTML elements can be nested (this means that elements can contain other elements).

- All HTML documents consist of nested HTML elements.

The following example contains four HTML elements (<html>, <body>, <h1> and <p>)

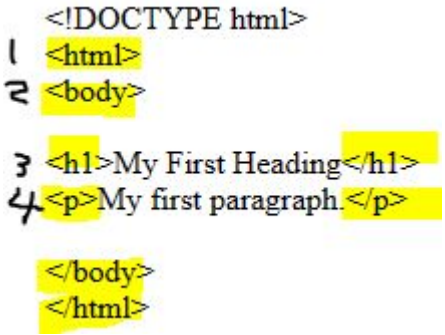
```
<!DOCTYPE html>
1 <html>
2 <body>

3 <h1>My First Heading</h1>
4 <p>My first paragraph.</p>

</body>
</html>
```

HTML Elements, Tags & Attributes

Example Explained

The <html> element is the root element and it defines the whole HTML document.

It has a start tag <html> and an end tag </html>.



HTML Elements, Tags & Attributes

Example Explained

Then, inside the <html> element there is a <body> element:

It has a start tag <body> and an end tag </body>.

```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

HTML Elements, Tags & Attributes

Then, inside the <body> element there are two other elements: <h1> and :

- <h1>My First Heading</h1>
- My first paragraph.

The <h1> element defines a heading. It has a start tag <h1> and an end tag </h1>:
The element defines a paragraph. It has a start tag and an end tag :

```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

HTML Elements, Tags & Attributes

Never Skip the End Tag

Some HTML elements will display correctly, even if you forget the end tag: Some ““may”.

```
<html>
<body>

<p>This is a paragraph
<p>This is a paragraph

</body>
</html>
```

```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

However, never rely on this! Unexpected results and errors may occur if you forget the end tag

HTML Elements, Tags & Attributes

Empty HTML Elements

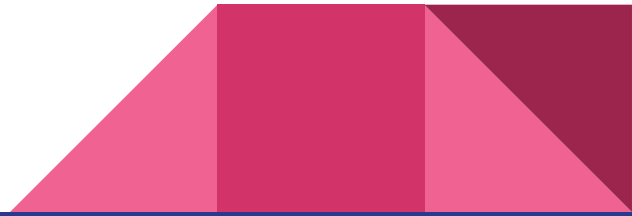
HTML elements with no content are called empty elements.

The
 tag defines a line break, and is an empty element without a closing tag:

Example

This is a
 paragraph with a line break.

You will learn more about links in our HTML Links chapter.



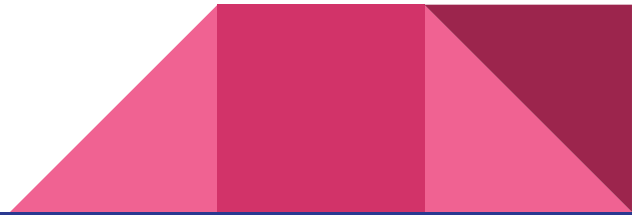
Summary: Attributes

HTML Elements, Tags & Attributes

HTML attributes provide additional information about HTML elements.

HTML Attributes

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



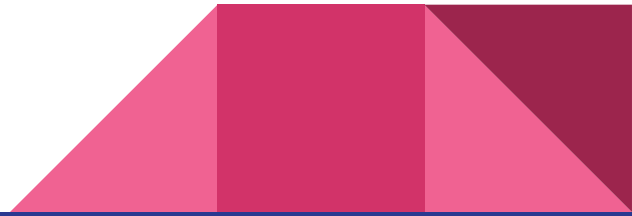
HTML Elements, Tags & Attributes

The href Attribute

- The <a> tag defines a hyperlink.

The href attribute specifies the URL of the page the link goes to:

- **Example**
- Visit W3Schools



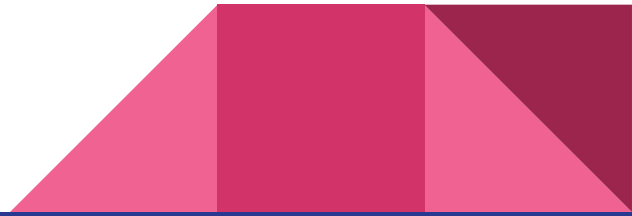
HTML Elements, Tags & Attributes

The src Attribute

- The <img> tag is used to embed an image in an HTML page. The src attribute specifies the path to the image to be displayed:

Example

```
<img src="img_girl.jpg">
```



HTML Elements, Tags & Attributes

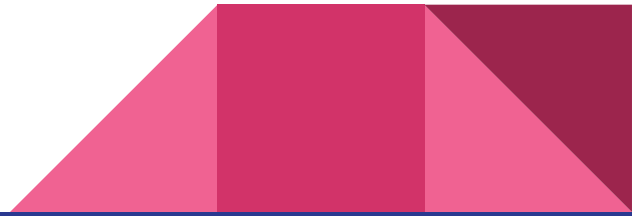
There are two ways to specify the URL in the src attribute:

1. **Absolute URL** - Links to an external image that is hosted on another website. Example: src="https://www.w3schools.com/images/img_girl.jpg".

Notes: External images might be under copyright. If you do not get permission to use it, you may be in violation of copyright laws. In addition, you cannot control external images; it can suddenly be removed or changed.

1. **Relative URL** - Links to an image that is hosted within the website. Here, the URL does not include the domain name. If the URL begins without a slash, it will be relative to the current page. Example: src="img_girl.jpg". If the URL begins with a slash, it will be relative to the domain. Example: src="/images/img_girl.jpg".

Tip: It is almost always best to use relative URLs. They will not break if you change domain.



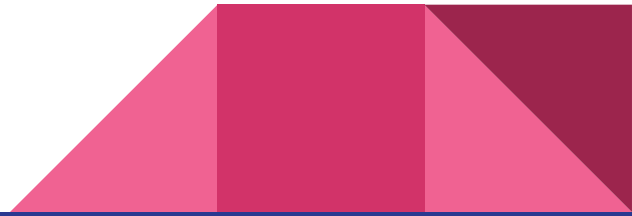
HTML Elements, Tags & Attributes

The width and height Attributes

The <img> tag should also contain the width and height attributes, which specify the width and height of the image (in pixels):

Example

```
<img src="img_girl.jpg" width="500" height="600">
```



HTML Elements, Tags & Attributes

The alt Attribute

The required alt attribute for the <img> tag specifies an alternate text for an image, if the image for some reason cannot be displayed. This can be due to a slow connection, or an error in the src attribute, or if the user uses a screen reader.

Example

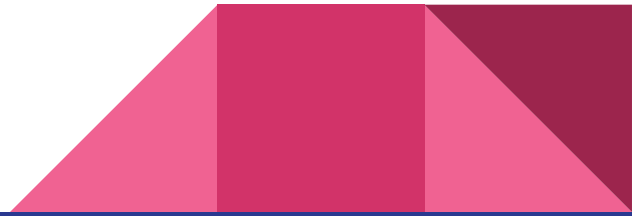
```
<img src="img_girl.jpg" alt="Girl with a jacket">
```

Example

See what happens if we try to display an image that does not exist:

```
<img src="img_typo.jpg" alt="Girl with a jacket">
```

You will learn more about images in our HTML Images chapter.



HTML Elements, Tags & Attributes

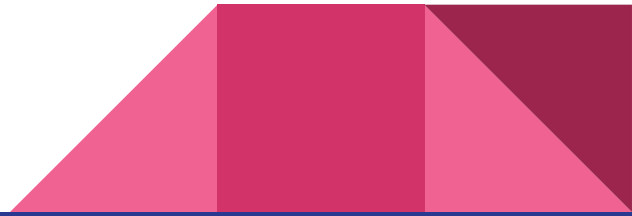
The style Attribute

The style attribute is used to add styles to an element, such as color, font, size, and more.

Example

```
<p style="color:red;">This is a red paragraph.</p>
```

You will learn more about styles in our HTML Styles chapter.



HTML Elements, Tags & Attributes

The lang Attribute

You should always include the lang attribute inside the <html> tag, to declare the language of the Web page. This is meant to assist search engines and browsers.

The following example specifies English as the language:

```
<!DOCTYPE html>
        <html lang="en">
                <body>
                </body>
        </html>
```

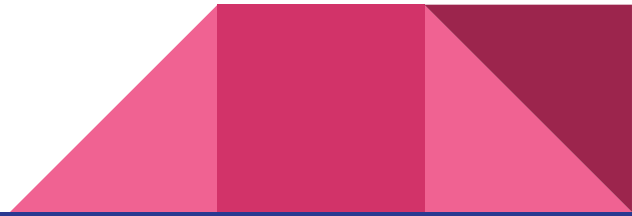
HTML Elements, Tags & Attributes

The lang Attribute

Country codes can also be added to the language code in the lang attribute. So, the first two characters define the language of the HTML page, and the last two characters define the country.

The following example specifies English as the language and United States as the country:

```
<!DOCTYPE html>
	<html lang="en-US">
		<body>
		</body>
	</html>
```



HTML Elements, Tags & Attributes

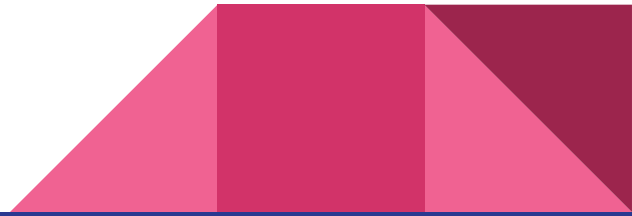
The title Attribute

The title attribute defines some extra information about an element.

The value of the title attribute will be displayed as a tooltip when you mouse over the element:

Example

```
<p title="I'm a tooltip">This is a paragraph.</p>
```



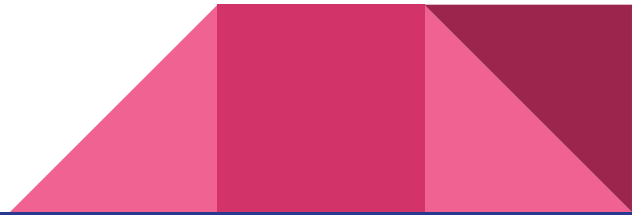
HTML Elements, Tags & Attributes

We Suggest: Always Use Lowercase Attributes

The HTML standard does not require lowercase attribute names.

The title attribute (and all other attributes) can be written with uppercase or lowercase like **title** or **TITLE**.

However, W3C **recommends** lowercase attributes in HTML, and **demands** lowercase attributes for stricter document types like XHTML.



HTML Elements, Tags & Attributes

We Suggest: Always Quote Attribute Values

The HTML standard does not require quotes around attribute values.

However, W3C **recommends** quotes in HTML, and **demands** quotes for stricter document types like XHTML.

Good:

```
<a href="https://www.w3schools.com/html/">Visit our HTML tutorial</a>
```

Bad:

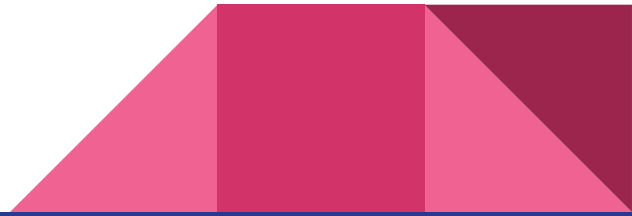
```
<a href=https://www.w3schools.com/html/>Visit our HTML tutorial</a>
```

Sometimes you have to use quotes. This example will not display the title attribute correctly, because it contains a space:

Example

```
<p title=About W3Schools>
```

Try always use quotes around attribute values.



HTML Elements, Tags & Attributes

Single or Double Quotes?

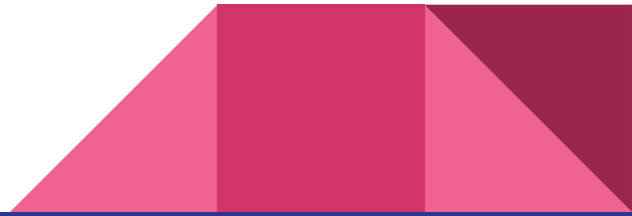
Double quotes around attribute values are the most common in HTML, but single quotes can also be used.

In some situations, when the attribute value itself contains double quotes, it is necessary to use single quotes:

```
<p title='John "ShotGun" Nelson'>
```

Or vice versa:

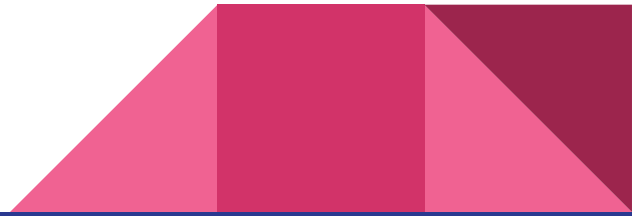
```
<p title="John 'ShotGun' Nelson">
```



HTML Elements, Tags & Attributes

Summary

- All HTML elements can have **attributes**
  a. The href attribute of <a> specifies the URL of the page the link goes to
  b. The src attribute of <img> specifies the path to the image to be displayed
  c. The width and height attributes of <img> provide size information for images
  d. The alt attribute of <img> provides an alternate text for an image
  e. The style attribute is used to add styles to an element, such as color, font, size, and more
  f. The lang attribute of the <html> tag declares the language of the Web page
  g. The title attribute defines some extra information about an element



Summary: Editors

HTML Editors

HTML is meant to me ‘mostly’ human readable, meaning, that you can

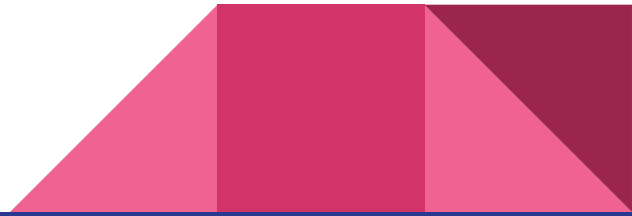
- Write it yourself, so it can be simple, a little complex, or very complex
  - Modern HTML is often quite complex
- Write it in an editor, notepad, Visual Studio, XCode or anything else.
  - Since it is just a Text File

More Advanced Editors

From Visual Studio Code to Visual Studio Professional, Sublime, XCode or dozens of others, there are almost to many to choose from.

For now, keep it simple.

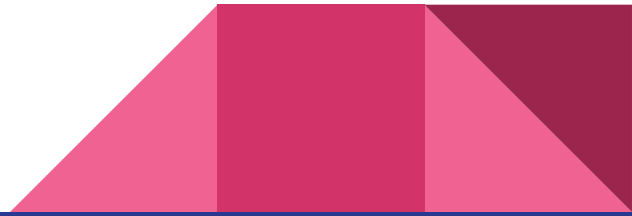
Later, you will then appreciate the extra features in more Editor programs



HTML Editors

Learn HTML Using Notepad or TextEdit

- Web pages can be created and modified by using professional HTML editors.
- However, for learning HTML we recommend a simple text editor like Notepad (PC) or TextEdit (Mac).
- We believe that using a simple text editor is a good way to learn HTML.
- Follow the steps to create your first web page with Notepad or TextEdit.



HTML Editors

Step 1: Open Notepad (PC)
Windows 8 or later:

Open the Start Screen
(the window symbol at the bottom left on your screen).

Type Notepad.

Windows 7 or earlier:

Open Start > Programs > Accessories > Notepad

Step 1: Open TextEdit (Mac)
Open Finder > Applications > TextEdit

Also change some preferences to get the application to save files correctly. In Preferences > Format > choose "Plain Text"

Then under "Open and Save", check the box that says "Display HTML files as HTML code instead of formatted text".

Then open a new document to place the code.

Step 2: Write Some HTML

```
<!DOCTYPE html>
<html>
<body>

<h1>My First Heading</h1>

<p>My first paragraph.</p>

</body>
</html>
```

Step 3: Save the HTML Page

- Make sure it has .html extension

HTML Editors

Step 1: Open Notepad (PC)
Windows 8 or later:

Open the Start Screen
(the window symbol at the bottom left on your screen).

Type Notepad.

Windows 7 or earlier:

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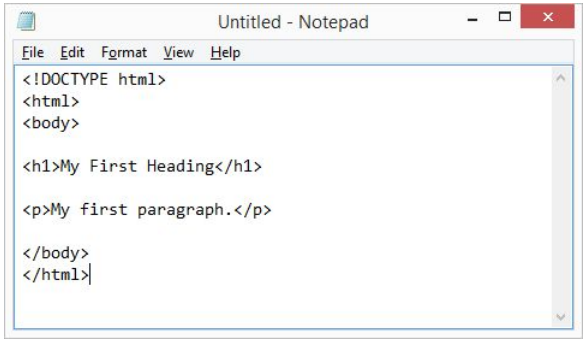
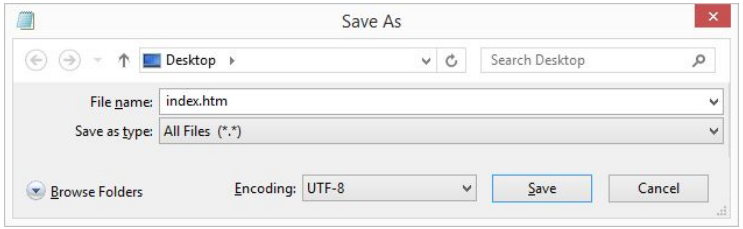
Then open a new document to place the code.

Step 2: Write Some HTML



Step 3: Save the HTML Page

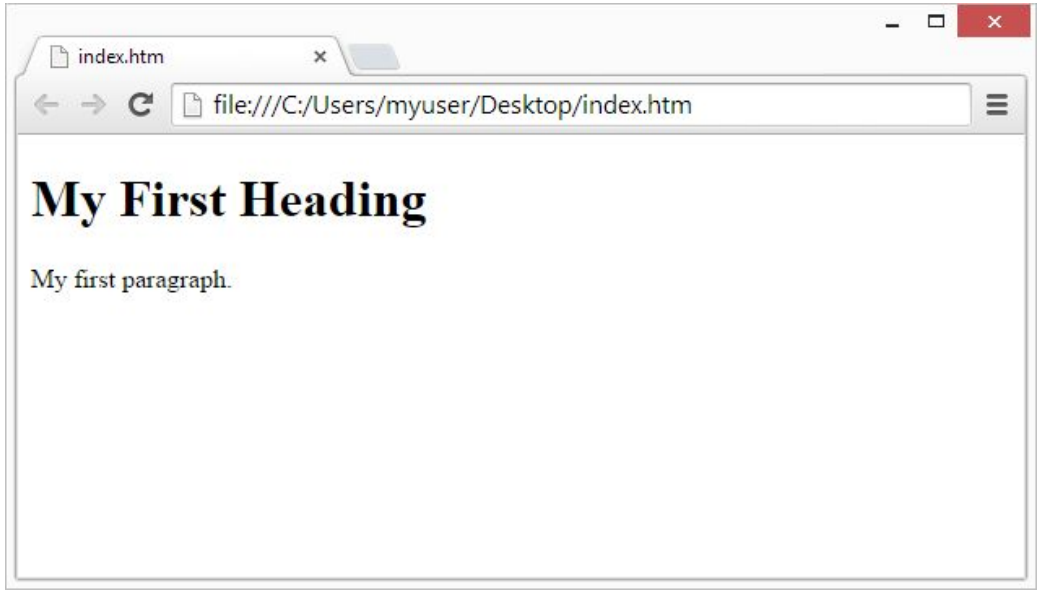


HTML Editors

Step 4: View the HTML Page in Your Browser

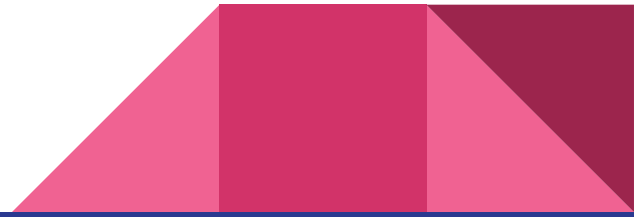
Open the saved HTML file in your favorite browser

(double click on the file, or right-click - and choose "Open with").



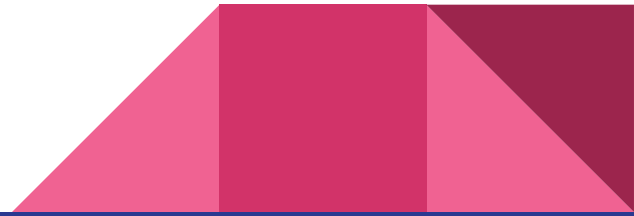
Try it Yourself on W3 Schools

HTML vs XHTML



HTML Less Brief History

A Less Brief History of HTML



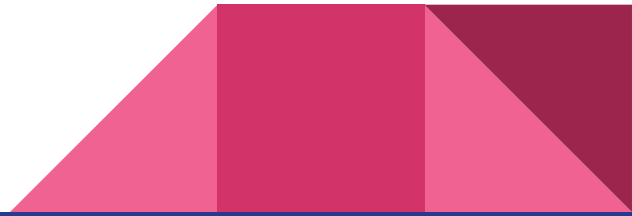
HTML vs XHTML

XHTML vs HTML

XHTML (Extensible Hypertext Markup Language) and HTML (Hypertext Markup Language) are both markup languages used to create web pages.

- However, there are some key differences between the two.

The reason I mention it is to do with the kind of documentation and examples you may find online that include different HTML versions and may confuse the beginner.



XHTML vs HTML

Syntax:

- XHTML follows the stricter syntax rules of XML
- while HTML has a more relaxed syntax.

Tags:

- XHTML requires all tags to be closed properly, whereas HTML does not.
- For example, in HTML, you can write
, but in XHTML, you must write
.

Document Structure:

- XHTML documents must have a proper document structure and follow a strict hierarchy, whereas HTML is more lenient in this regard.

XHTML vs HTML

Syntax:

- XHTML follows the stricter syntax rules of XML
- while HTML has a more relaxed syntax.

Browser Compatibility:

- XHTML is designed to be more compatible with different browsers and platforms, whereas HTML may not render properly on older browsers.

In general, XHTML is considered to be a more strict and well-formed version of HTML that is more compatible with modern web technologies.

However, HTML is still widely used and is often the preferred option for simpler web pages or for backwards compatibility with older browsers.

XHTML vs HTML

Syntax:

- XHTML follows the stricter syntax rules of XML
- while HTML has a more relaxed syntax.

Browser Compatibility:

- XHTML is designed to be more compatible with different browsers and platforms, whereas HTML may not render properly on older browsers.

Parsing:

- XHTML documents are parsed as XML, which allows for more precise error handling and makes it easier to write automated tools that check for errors in the document

In this course, we are studying HTML, not XHTML.

The role of HTML

Role of HTML in Web Development

HTML (Hypertext Markup Language) is a markup language used to create web pages.

- HTML provides the structure and content of a web page, defining the layout, text, images, and other elements on the page.
- HTML works in conjunction with other web technologies such as CSS and JavaScript to create modern, dynamic web pages.
- Web developers use HTML to create the underlying structure of a web page, defining the different sections and elements that make up the page.
- HTML is an essential part of web development, providing the foundation upon which modern web technologies and applications are built.

Role of HTML in Search Engines

HTML plays an important role in search engine optimization (SEO), which is the process of improving the visibility and ranking of a website on search engines such as Google and Bing.

- Search engines use web crawlers to scan and index the content of web pages, and HTML provides the structure and content that the crawlers use to understand the page.
- Properly structured HTML code can help search engines to better understand the content of a web page and to rank it more accurately.
- Some HTML elements, such as the title tag and meta description, are specifically designed to provide information to search engines and can be used to improve SEO.
- Web developers and designers should keep SEO in mind when creating and optimizing HTML code to ensure that web pages are easily discoverable and rank well on search engines.

Role of HTML in Digital Marketing

HTML plays a crucial role in digital marketing, which encompasses a wide range of online marketing activities including email marketing, social media marketing, and search engine marketing (SEM).

- HTML is used to create the content and layout of marketing emails, newsletters, and other digital communications.
- Properly formatted HTML code can improve the deliverability and appearance of marketing emails, as well as ensure that they are accessible across different email clients and devices.
- HTML is also important for creating landing pages and other web pages used in digital marketing campaigns, as it provides the structure and content needed to convey marketing messages and drive conversions.
- Digital marketers should work closely with web developers and designers to ensure that HTML code is optimized for digital marketing purposes, and that it adheres to best practices for SEO, accessibility, and usability.

Role of HTML in other Areas

HTML plays a critical role in customer service and hospitality, helping to create a positive user experience and reinforce brand messaging.

- User interface (UI) and user experience (UX) design are key components of customer service and hospitality, and HTML provides the structure and layout needed to create effective designs that are easy to navigate and use.
- Branding is also important in customer service and hospitality, and HTML can be used to create consistent and visually appealing branding elements such as logos, color schemes, and fonts across all web pages and digital communications.
- HTML is essential for creating digital marketing campaigns that promote customer service and hospitality offerings and drive engagement with customers.
- Properly structured HTML code can also improve search engine optimization (SEO), making it easier for potential customers to find information about customer service and hospitality offerings online.
- HTML is important for document archival and management, providing a standardized format for saving and retrieving digital documents.
- Custom software can also be built using HTML and other web technologies, providing powerful tools for managing customer service and hospitality operations and enhancing the customer experience.

Role of HTML in the Future

HTML plays an important role in the development of emerging technologies such as artificial intelligence (AI) and the Internet of Things (IoT).

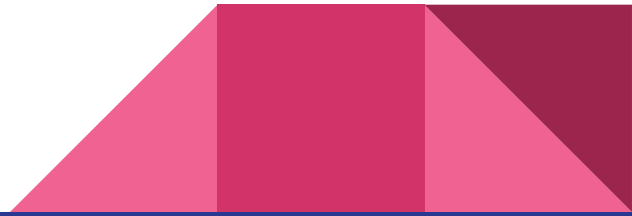
- HTML is used in the development of web-based applications and interfaces for AI-powered systems, allowing users to interact with these systems through web browsers.
- The widespread adoption of IoT devices has created a need for standardized communication protocols and formats, and HTML provides a common language that can be used to facilitate communication between different devices and systems.
- HTML can be used to create dynamic, responsive web pages that can adapt to changing conditions and user interactions, providing a more personalized and engaging user experience.
- As AI and IoT technologies continue to evolve and become more prevalent, HTML will play an increasingly important role in shaping the user interfaces and experiences of these systems.
- HTML5, the latest version of HTML, includes features that enable the development of advanced web applications and user interfaces, such as real-time communication, multimedia support, and offline storage capabilities.
- Web developers and designers should stay up-to-date on the latest developments in HTML and other web technologies to take advantage of the opportunities presented by AI, IoT, and the future of technology

HTML vs HTML5

HTML Versions (html vs html5)

HTML and HTML5 are related but distinct versions of the Hypertext Markup Language used for creating web pages.

- HTML (HyperText Markup Language) is the original version of the markup language, and has undergone several iterations since it was first introduced in the early days of the web.
- HTML4 was the last major version of HTML before the introduction of HTML5.

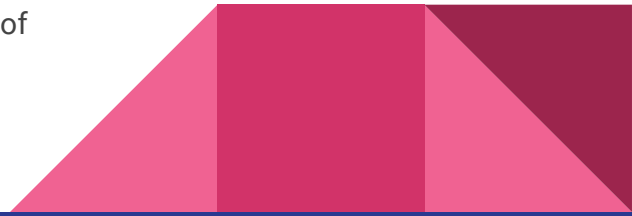


HTML Versions (html vs html5)

HTML5 is the latest version of HTML, and includes several new features and improvements over previous versions.

Some of the key differences between HTML and HTML5 are:

- **Structure**: HTML5 has a simplified and more semantic structure, making it easier to read and understand for both humans and search engines.
- **Multimedia**: HTML5 includes built-in support for multimedia elements such as video and audio, making it easier to embed media content into web pages without relying on third-party plugins.
- **Forms**: HTML5 includes new form elements such as date pickers and sliders, providing a better user experience for form-based interactions.
- **Mobile**: HTML5 includes support for mobile devices, with features such as responsive design and touch events that make it easier to create web pages that work well on a wide range of devices.
- **Performance**: HTML5 includes several optimizations that improve the performance of web pages, such as lazy loading of images and better handling of scripts and stylesheets.

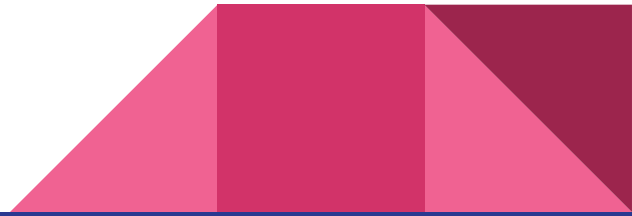


HTML Versions (html vs html5)

HTML5 is a more advanced and feature-rich version of HTML, designed to make it easier for web developers and designers to create high-quality, modern web pages.

While HTML remains a widely-used language for creating web pages, and XHTML are seeing increased usage

- HTML5 is the most popular and increasingly becoming the standard for web development.



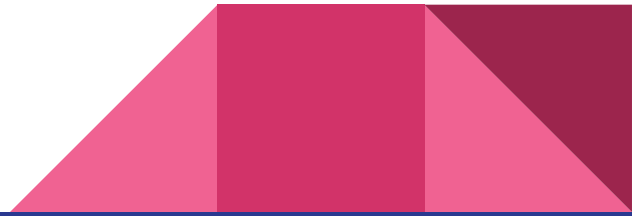
HTML Resources

HTML Resources & References

W3C HTML Standard: https://www.w3.org/TR/html52/

This is the official HTML5 specification published by the World Wide Web Consortium (W3C), the organization responsible for developing and maintaining web standards.

This document provides a detailed description of the HTML5 language and its features.

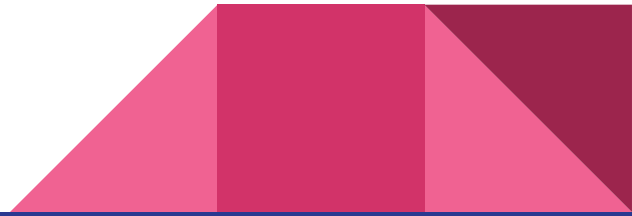


HTML Resources & References

MDN Web Docs: https://developer.mozilla.org/en-US/docs/Web/HTML

MDN Web Docs is a comprehensive resource for web developers, providing tutorials, reference guides, and examples for HTML and other web technologies.

The HTML section includes detailed documentation on HTML5 elements, attributes, and APIs.

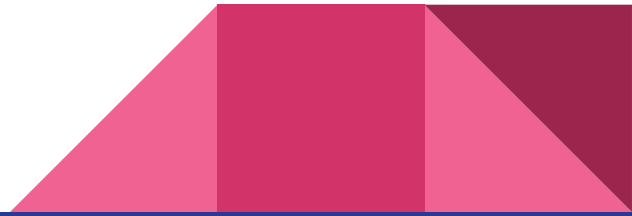


HTML Resources & References

HTML Validator: https://validator.w3.org/

The HTML Validator is a tool provided by the W3C that allows you to check the validity of your HTML code.

It can help you identify errors and ensure that your code conforms to the HTML5 standard.

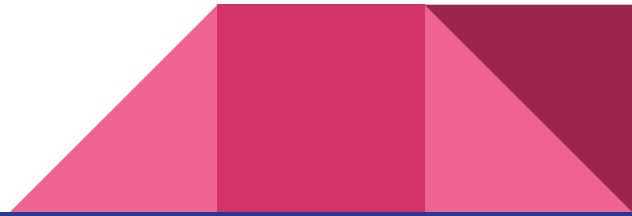


HTML Resources & References

Can I Use: https://caniuse.com/

Can I Use is a website that provides up-to-date information on the browser support for HTML5 features and other web technologies.

This can be a useful resource when developing web pages that need to work across multiple browsers and devices.

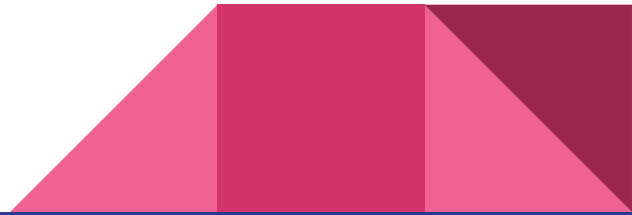


HTML Resources & References

HTML5 Boilerplate: https://html5boilerplate.com/

HTML5 Boilerplate is a popular starting point for HTML5 development, providing a set of best practices and templates that can help you get started with your project quickly and efficiently.

It includes a range of features such as responsive design, performance optimizations, and cross-browser compatibility.

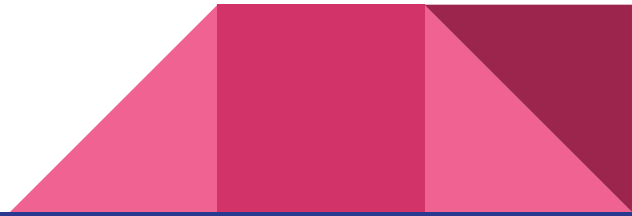


HTML Resources & References

W3 Schools: https://www.w3schools.com/

A resource is fantastic for looking up basic things, examples and reminding yourself how things work in a not technical way.

We will use many resources from W3 Schools along the way and then progress into more technical documentation like those available on the W3 Standards sites.

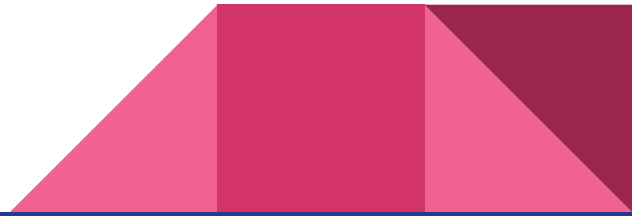


HTML Resources & References

ChatGPT AI: https://chat.openai.com/chat

AI is going to be an important tool for us all into the future, especially as developers. We will utilize AI to assist us in understanding, explaining, troubleshooting, investigating, researching and developing but ultimately we have to use our own Mind’s.

AI can’t replace us. At least not yet.



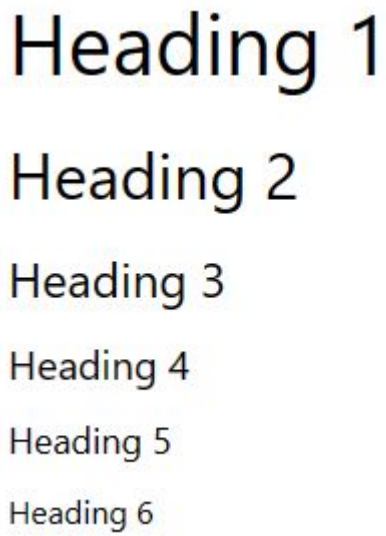
HTML Elements

Headings

HTML Headings

HTML headings are titles or subtitles that you want to display on a webpage.

```
<!DOCTYPE html>
<html>
<body>

<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>

</body>
</html>
```



HTML Headings

HTML headings are titles or subtitles that you want to display on a webpage.

HTML headings are defined with the

`<h1>` to `<h6>` tags.

`<h1>`
defines the most important heading.

`<h6>`
defines the least important heading.

Remember, this is not just a ‘visual thing’.

Google Robot, Programs and other Systems take into account this relationship.

For example, if H2 appears under H1, it is considered a subsection or subheader of H1.

```
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>
```

HTML Headings

Headings Are Important

Search engines use the headings to index the structure and content of your web pages.

Users often skim a page by its headings. It is important to use headings to show the document structure.

<h1> headings should be used for main headings, followed by <h2> headings, then the less important <h3>, and so on.

Note: Use HTML headings for headings only. Don't use headings to make text BIG or bold.

```
<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>
```

HTML Headings

Bigger Headings

Each HTML heading has a default size.

However, you can specify the size for any heading with the `style` attribute, using the CSS `font-size` property:

```
<!DOCTYPE html>
<html>
<body>

<h1 style="font-size:60px;">Heading 1</h1>

<p>You can change the size of a heading with the
style attribute, using the font-size property.</p>

</body>
</html>
```

HTML Headings

tag reference contains additional information about these tags and their attributes.

Tag	Description
<html>	Defines the root of an HTML document
<body>	Defines the document's body
<h1> to <h6>	Defines HTML headings

HTML Elements

Paragraphs

HTML Paragraphs

You cannot be sure how HTML will be displayed.

Large or small screens, and resized windows will create different results.

Different Browsers will give different results.

With HTML, you cannot change the display by adding extra spaces or extra lines in your HTML code. Its pointless.

The browser will automatically remove any extra spaces and lines when the page is displayed:

It is not always browsers reading your HTML.

```
<!DOCTYPE html>
<html>
<body>

<p>
This paragraph
contains a lot of lines
in the source code,
but the browser
ignores it.
</p>

<p>
This paragraph
contains      a lot of spaces
in the source     code,
but the    browser
ignores it.
</p>

<p>
The number of lines in a paragraph depends
on the size of the browser window. If you
resize the browser window, the number of
lines in this paragraph will change.
</p>

</body>
</html>
```

HTML Paragraphs

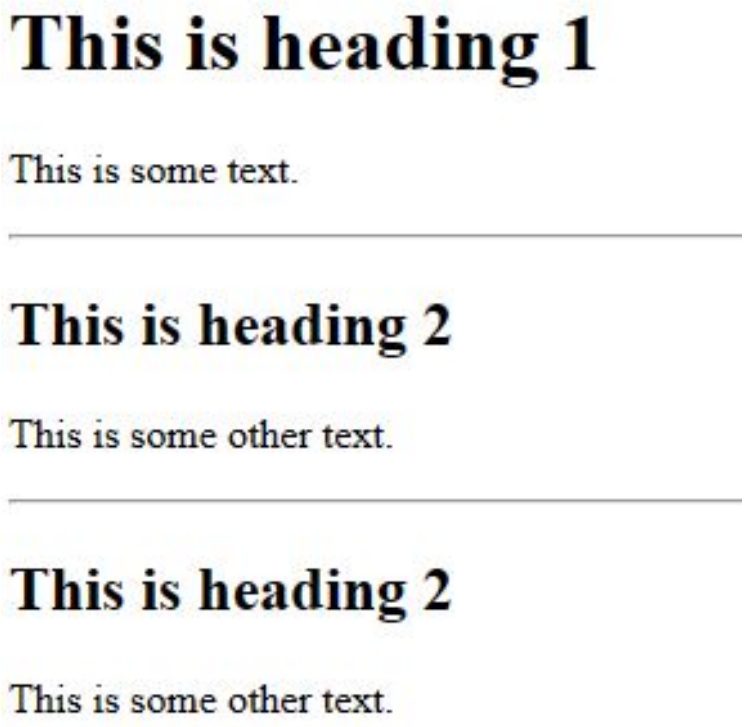
Horizontal Rules

The <hr> tag defines a thematic break in an HTML page, and is most often displayed as a horizontal rule.

The <hr> element is used to separate content (or define a change) in an HTML page:

The <hr> tag is an empty tag, which means that it has no end tag.

```
<h1>This is heading 1</h1>
<p>This is some text.</p>
<hr>
<h2>This is heading 2</h2>
<p>This is some other text.</p>
<hr>
```



HTML Paragraphs

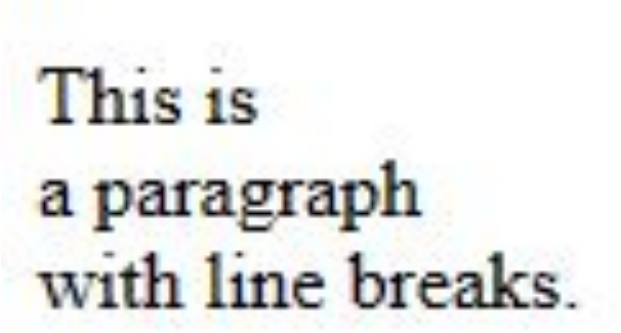
Line Breaks

The HTML
 element defines a line break.

Use
 if you want a line break (a new line) without starting a new paragraph:

The
 tag is an empty tag, which means that it has no end tag.

```
<!DOCTYPE html>
<html>
<body>

<p>This is<br>a paragraph<br>with line breaks.</p>

</body>
</html>
```



HTML Paragraphs

The Poem Problem

This poem will display on a single line:

```
<p>
  My Bonnie lies over the ocean.

  My Bonnie lies over the sea.

  My Bonnie lies over the ocean.

  Oh, bring back my Bonnie to me.
</p>
```

In HTML, spaces and new lines are ignored:

My Bonnie lies over the ocean. My Bonnie lies over the sea. My Bonnie lies over the ocean. Oh, bring back my Bonnie to me.

HTML Paragraphs

Solution - The HTML <pre> Element

The HTML `<pre>` element defines preformatted text.

The text inside a `<pre>` element is displayed in a fixed-width font (usually Courier), and it preserves both spaces and line breaks:

The pre tag preserves both spaces and line breaks:

```
My Bonnie lies over the ocean.

My Bonnie lies over the sea.

My Bonnie lies over the ocean.

Oh, bring back my Bonnie to me.
```

```
<pre>
  My Bonnie lies over the ocean.

  My Bonnie lies over the sea.

  My Bonnie lies over the ocean.

  Oh, bring back my Bonnie to me.
</pre>
```

HTML Paragraphs

Solution - The HTML <pre> Element

Tag	Description
<p>	Defines a paragraph
<hr>	Defines a thematic change in the content
 	Inserts a single line break
<pre>	Defines pre-formatted text

For a complete list of all available HTML tags, visit the HTML Tag Reference.

HTML Elements

Styles

HTML Styles

The HTML `style` attribute is used to add styles to an element, such as color, font, size, and more.

Setting the style of an HTML element, can be done with the `style` attribute.

```
<!DOCTYPE html>
<html>
<body>

<p>I am normal</p>
<p style="color:red;">I am red</p>
<p style="color:blue;">I am blue</p>
<p style="font-size:50px;">I am big</p>

</body>
</html>
```

I am normal

I am red

I am blue

I am big

HTML Styles

The HTML `style` attribute is used to add styles to an element, such as color, font, size, and more.

Setting the style of an HTML element, can be done with the `style` attribute.

The HTML `style` attribute has the following syntax:

```
<tagname style="property:value;">
```

The ***property*** is a CSS property.

The ***value*** is a CSS value

You will learn more about CSS later

```
<!DOCTYPE html>
<html>
<body>

<p>I am normal</p>
<p style="color:red;">I am red</p>
<p style="color:blue;">I am blue</p>
<p style="font-size:50px;">I am big</p>

</body>
</html>
```

HTML Elements

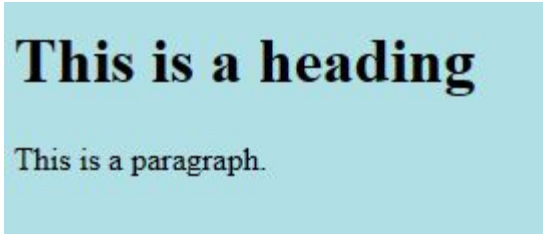
Styles: Color

HTML Styles - Background Color

The CSS `background-color` property defines the background color for an HTML element.

Set the background color for a page to powderblue:

```
<!DOCTYPE html>
<html>
<body style="background-color:powderblue;">

<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

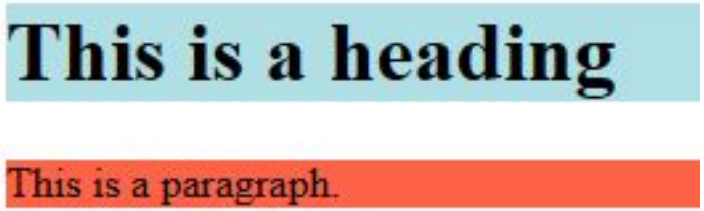


HTML Styles - Background Color

The CSS `background-color` property defines the background color for an HTML element.

Set the background color for a page to powderblue:

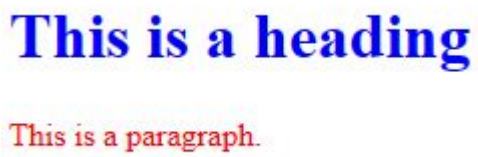
```
<!DOCTYPE html>
<html>
<body>

<h1 style="background-color:powderblue;">This is a heading</h1>
<p style="background-color:tomato;">This is a paragraph.</p>

</body>
</html>
```



HTML Styles - Text Color

The CSS `color` property defines the text color for an HTML element:

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue;">This is a heading</h1>
<p style="color:red;">This is a paragraph.</p>

</body>
</html>
```



HTML Elements

Styles: Text and Fonts

HTML Styles - Fonts

The CSS `font-family` property defines the font to be used for an HTML element:

```
<!DOCTYPE html>
<html>
<body>

<h1 style="font-family:verdana;">This is a heading</h1>
<p style="font-family:courier;">This is a paragraph.</p>

</body>
</html>
```

HTML Styles - Text Size

The CSS `font-size` property defines the text size for an HTML element:

```
<!DOCTYPE html>
<html>
<body>

<h1 style="font-size:300%;">This is a heading</h1>
<p style="font-size:160%;">This is a paragraph.</p>

</body>
</html>
```

HTML Styles - Text Alignment

The CSS `text-align` property defines the horizontal text alignment for an HTML element:

```
<!DOCTYPE html>
<html>
<body>

<h1 style="text-align:center;">Centered Heading</h1>
<p style="text-align:center;">Centered paragraph.</p>

</body>
</html>
```

HTML Elements

Style: Summary

HTML Styles - Summary

The CSS `text-align` property defines the horizontal text alignment for an HTML element:

Styles Summary

- Use the `style` attribute for styling HTML elements
- Use `background-color` for background color
- Use `color` for text colors
- Use `font-family` for text fonts
- Use `font-size` for text sizes
- Use `text-align` for text alignment

HTML Elements

Formatting

HTML Formatting

HTML contains several elements for defining text with a special meaning.

Setting the style of an HTML element, can be done with the `style` attribute.

```
<!DOCTYPE html>
<html>
<body>

<p><b>This text is bold</b></p>
<p><i>This text is italic</i></p>
<p>This is<sub> subscript</sub> and
<sup>superscript</sup></p>

</body>
</html>
```

This text is bold

This text is italic

This is $_{\text{subscript}}$ and $^{\text{superscript}}$

HTML Formatting

Formatting elements were designed to display special types of text:

- <b> - Bold text
- - Important text
- <i> - Italic text
- - Emphasized text
- <mark> - Marked text
- <small> - Smaller text
- <del> - Deleted text
- <ins> - Inserted text
- <sub> - Subscript text
- <sup> - Superscript text

HTML <b> and Elements

The HTML <b> element defines bold text, without any extra importance.

```
<b>This text is bold</b>
```

The HTML element defines text with strong importance. The content inside is typically displayed in bold.

```
<strong>This text is important!</strong>
```

HTML Formatting

HTML <i> and Elements

The HTML <i> element defines a part of text in an alternate voice or mood. The content inside is typically displayed in italic.

Tip: The <i> tag is often used to indicate a technical term, a phrase from another language, a thought, a ship name, etc.

```
<!DOCTYPE html>
<html>
<body>

<p>This text is normal.</p>

<p><i>This text is italic.</i></p>

</body>
</html>
```

HTML Formatting

HTML <i> and Elements

The HTML element defines emphasized text.
The content inside is typically displayed in italic.

```
<em>This text is emphasized</em>
```

A Web Browser may Emphasize the Text

This text is normal.

This text is emphasized.

```
<!DOCTYPE html>
<html>
<body>

<p>This text is normal.</p>

<p><em>This text is emphasized.</em></p>

</body>
</html>
```

But a Screen Reader may '**EMPHASIZE**! The text when *reading it aloud!*

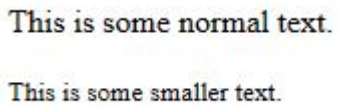
HTML Formatting

HTML <small> Element

The HTML <small> element defines smaller text:

```
<!DOCTYPE html>
<html>
<body>

<p>This is some normal text.</p>
<p><small>This is some smaller text.</small></p>

</body>
</html>
```

The text with <smaller> will be *smaller* that whatever came before or is contained in.



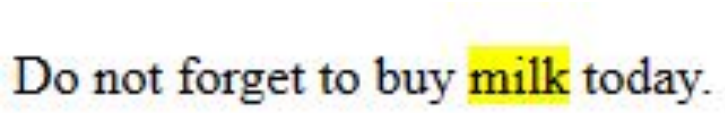
This is *RELATIVE* - it is smaller relative to something else. Not absolute, which would have a 'fixed size' like headings H1,H2,H3 etc.

HTML Formatting

HTML <mark> Element

The HTML <mark> element defines text that should be marked or highlighted:

```
<p>Do not forget to buy <mark>milk</mark>
today.</p>
```

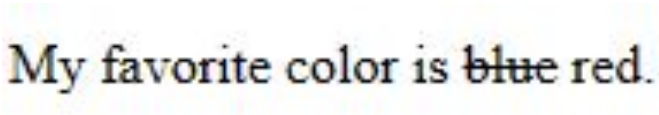


HTML Formatting

HTML <del> Element

The HTML <del> element defines text that has been deleted from a document. Browsers will usually strike a line through deleted text:

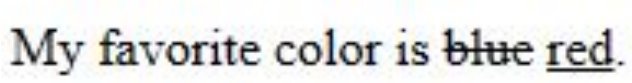
```
<p>My favorite color is <del>blue</del>
red.</p>
```



HTML Formatting

HTML <ins> Element

The HTML <ins> element defines a text that has been inserted into a document. Browsers will usually underline inserted text:




```
<p>My favorite color is <del>blue</del>
<ins>red</ins>.</p>
```

HTML Formatting

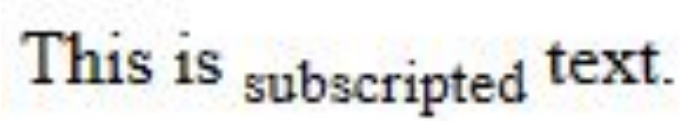
HTML <sub> Element

The HTML <sub> element defines subscript text.

Subscript text appears half a character below the normal line, and is sometimes rendered in a smaller font.

Subscript text can be used for chemical formulas, like H2O:

```
<!DOCTYPE html>
<html>
<body>

<p>This is <sub>subscripted</sub> text.</p>

</body>
</html>
```



HTML Formatting

This is subscripted text.

HTML <sup> Element

The HTML <sup> element defines superscript text. Superscript text appears half a character above the normal line, and is sometimes rendered in a smaller font. Superscript text can be used for footnotes, like WWW[1]:

This is superscripted text.

```
<p>This is <sup>superscripted</sup>
text.</p>
```

HTML Formatting

HTML <sup> Element

Tag	Description
<b>	Defines bold text
	Defines emphasized text
<i>	Defines a part of text in an alternate voice or mood
<small>	Defines smaller text
	Defines important text
<sub>	Defines subscripted text
<sup>	Defines superscripted text
<ins>	Defines inserted text
<del>	Defines deleted text
<mark>	Defines marked/highlighted text

For a complete list of all available HTML tags, visit the HTML Tag Reference.

HTML Elements

Quotation & Citation Elements

HTML Quotations

HTML <blockquote> for Quotations

In this chapter we will go through the

- `<blockquote>`,
- `<q>`,
- `<abbr>`,
- `<address>`,
- `<cite>`,
- and `<bdo>` HTML elements.

Here is a quote from WWF's website:

> For 60 years, WWF has worked to help people and nature thrive. As the world's leading conservation organization, WWF works in nearly 100 countries. At every level, we collaborate with people around the world to develop and deliver innovative solutions that protect communities, wildlife, and the places in which they live.

HTML Quotations

The HTML <blockquote> element defines a section that is quoted from another source.

Browsers usually indent <blockquote> elements.

Here is a quote from WWF's website:

> For 60 years, WWF has worked to help people and nature thrive. As the world's leading conservation organization, WWF works in nearly 100 countries. At every level, we collaborate with people around the world to develop and deliver innovative solutions that protect communities, wildlife, and the places in which they live.

```
<!DOCTYPE html>
<html>
<body>

<p>Here is a quote from WWF's website:</p>

<blockquote
cite="http://www.worldwildlife.org/who/index.html">
For 60 years, WWF has worked to help people and nature
thrive. As the world's leading conservation
organization, WWF works in nearly 100 countries. At
every level, we collaborate with people around the world
to develop and deliver innovative solutions that protect
communities, wildlife, and the places in which they
live.
</blockquote>

</body>
</html>
```

HTML Quotations

HTML <q> for Short Quotations

The HTML <q> tag defines a short quotation.

Browsers normally insert quotation marks around the quotation.

```
<!DOCTYPE html>
<html>
<body>

<p>Browsers usually insert quotation marks around the
q element.</p>

<p>WWF's goal is to: <q>Build a future where people
live in harmony with nature.</q></p>

</body>
</html>
```

Browsers usually insert quotation marks around the q element.

WWF's goal is to: “Build a future where people live in harmony with nature.”

HTML Quotations

HTML <abbr> for Abbreviations

The HTML <abbr> tag defines an abbreviation

or an acronym, like "HTML", "CSS", "Mr.", "Dr.", "ASAP", "ATM".

Marking abbreviations can give useful information to browsers, translation systems and search-engines.

Tip: Use the global title attribute to show the description for the abbreviation/acronym when you mouse over the element.

```
<p>The <abbr title="World Health Organization">WHO</abbr> was founded in 1948.</p>
```

The WHO was founded in 1948.

Marking up abbreviations can give useful information to browsers, translation systems and search-engines.

HTML Quotations

HTML <address> for Contact Information

The HTML <address> tag defines the contact information for the author/owner of a document or an article.

The contact information can be an email address, URL, physical address, phone number, social media handle, etc.

The text in the <address> element usually renders in *italic,* and browsers will always add a line break before and after the <address> element.

```
<!DOCTYPE html>
<html>
<body>

<p>The HTML address element defines
contact information (author/owner) of
a document or article.</p>

<address>
Written by John Doe.<br>
Visit us at:<br>
Example.com<br>
Box 564, Disneyland<br>
USA
</address>

</body>
</html>
```

The HTML address element defines contact information (author/owner) of a document or article.

Written by John Doe.
Visit us at:
Example.com
Box 564, Disneyland
USA

HTML Quotations

HTML <cite> for Work Title

The HTML <cite> tag defines the title of a creative work (e.g. a book, a poem, a song, a movie, a painting, a sculpture, etc.).

Note: A person's name is not the title of a work.

The text in the <cite> element usually renders in *italic*.

```
<!DOCTYPE html>
<html>
<body>

<p>The HTML cite element defines the
title of a work.</p>
<p>Browsers usually display cite
elements in italic.</p>

<img src="img_the_scream.jpg"
width="220" height="277" alt="The
Scream">
<p><cite>The Scream</cite> by Edvard
Munch. Painted in 1893.</p>

</body>
</html>
```

The HTML cite element defines the title of a work

Browsers usually display cite elements in italic.

The Scream by Edvard Munch. Painted in 1893.

HTML Quotations

HTML <bdo> for Bi-Directional Override

BDO stands for Bi-Directional Override.

The HTML <bdo> tag is used to override the current text direction:

```
<!DOCTYPE html>
<html>
<body>

<p>If your browser supports bi-directional override (bdo), the next line will be written from right to left (rtl):</p>

<bdo dir="rtl">This line will be written from right to left</bdo>

</body>
</html>
```

If your browser supports bi-directional override (bdo), the next line will be written from right to left (rtl):

tfel ot thgir morf nettirw eb lliw enil sihT

HTML Elements

Comments

HTML Comments

HTML comments are not displayed in the browser, but they can help document your HTML source code.

You can add comments to your HTML source by using the following syntax:

```
<!-- Write your comments here -->
```

Notice that there is an exclamation point (!) in the start tag, but not in the end tag.

Note: Comments are not displayed by the browser, but they can help document your HTML source code.

Add Comments

With comments you can place notifications and reminders in your HTML code:

```
<!-- This is a comment -->

<p>This is a paragraph.</p>

<!-- Remember to add more information here
-->
```

This is a paragraph.

HTML Comments

Hide Content

Comments can be used to hide content.

This can be helpful if you hide content temporarily:

But, not really hide it, just, ignore it - so it is hidden from ‘rendering’ in the browser.

Add Comments

With comments you can place notifications and reminders in your HTML code:

```
<!-- This is a comment -->

<p>This is a paragraph.</p>

<!-- Remember to add more information here
-->
```

This is a paragraph.

HTML Comments

Hide Content

Comments can be used to hide content.

This can be helpful if you hide content temporarily:

But, not really hide it, just, ignore it - so it is hidden from ‘rendering’ in the browser.

```
<p>This is a paragraph.</p>

<!-- <p>This is another paragraph </p> -->

<p>This is a paragraph too.</p>
```

This is a paragraph.

This is a paragraph.

HTML Comments

Hide Content

You can also hide more than one line. Everything between the <!-- and the --> will be hidden from the display.

Hide a section of HTML code:

```
<p>This is a paragraph.</p>
<!--
<p>Look at this cool image:</p>
<img border="0" src="pic_trulli.jpg"
alt="Trulli">
-->
<p>This is a paragraph too.</p>
```

HTML Comments

Hide Inline Content

Comments can be used to hide parts in the middle of the HTML code.

```
<p>This <!-- great text --> is a
paragraph.</p>
```

Hide a section of HTML code:

```
<p>This is a paragraph.</p>
<!--
<p>Look at this cool image:</p>
<img border="0" src="pic_trulli.jpg"
alt="Trulli">
-->
<p>This is a paragraph too.</p>
```

HTML Elements

Colors

HTML Colors

HTML colors are specified with predefined color names, or with RGB, HEX, HSL, RGBA, or HSLA values.

Color Names

In HTML, a color can be specified by using a color name:

- Tomato
- Orange
- DodgerBlue
- MediumSeaGreen
- Gray
- SlateBlue
- Violet
- LightGray

```
<!DOCTYPE html>
<html>
<body>

<h1 style="background-color:Tomato;">Tomato</h1>
<h1 style="background-color:Orange;">Orange</h1>
<h1 style="background-color:DodgerBlue;">DodgerBlue</h1>
<h1 style="background-color:MediumSeaGreen;">MediumSeaGreen</h1>
<h1 style="background-color:Gray;">Gray</h1>
<h1 style="background-color:SlateBlue;">SlateBlue</h1>
<h1 style="background-color:Violet;">Violet</h1>
<h1 style="background-color:LightGray;">LightGray</h1>

</body>
</html>
```

HTML Colors

HTML colors are specified with predefined color names, or with RGB, HEX, HSL, RGBA, or HSLA values.

Color Names

HTML supports 140 standard color names.

Where there isn't a name though, there is a number.

```
<!DOCTYPE html>
<html>
<body>

<h1 style="background-color:Tomato;">Tomato</h1>
<h1 style="background-color:Orange;">Orange</h1>
<h1 style="background-color:DodgerBlue;">DodgerBlue</h1>
<h1 style="background-color:MediumSeaGreen;">MediumSeaGreen</h1>
<h1 style="background-color:Gray;">Gray</h1>
<h1 style="background-color:SlateBlue;">SlateBlue</h1>
<h1 style="background-color:Violet;">Violet</h1>
<h1 style="background-color:LightGray;">LightGray</h1>

</body>
</html>
```

HTML Colors

Background Color

You can set the background color for HTML elements:


```
<!DOCTYPE html>
<html>
<body>

<h1 style="background-
color:DodgerBlue;">Hello World</h1>

<p style="background-color:Tomato;">
Lorem ipsum dolor sit amet, consectetuer
adipiscing elit, sed diam nonummy nibh
euismod tincidunt ut laoreet dolore magna
aliquam erat volutpat.
Ut wisi enim ad minim veniam, quis nostrud
exerci tation ullamcorper suscipit lobortis
nisl ut aliquip ex ea commodo consequat.
</p>

</body>
</html>
```

HTML Colors

Text Color

You can set the color of text:

Hello World

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat.

Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.

```
<!DOCTYPE html>
<html>
<body>

<h3 style="color:Tomato;">Hello World</h3>

<p style="color:DodgerBlue;">Lorem ipsum dolor sit
amet, consectetuer adipiscing elit, sed diam nonummy
nibh euismod tincidunt ut laoreet dolore magna
aliquam erat volutpat.</p>

<p style="color:MediumSeaGreen;">Ut wisi enim ad
minim veniam, quis nostrud exerci tation ullamcorper
suscipit lobortis nisl ut aliquip ex ea commodo
consequat.</p>

</body>
</html>
```

HTML Colors

Border Color

You can set the color of borders:

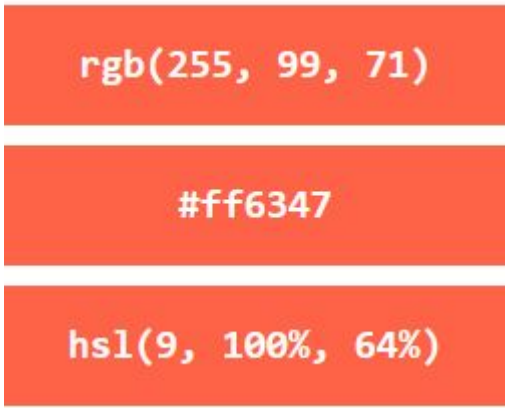
```
<!DOCTYPE html>
<html>
<body>

<h1 style="border: 2px solid Tomato;">Hello World</h1>

<h1 style="border: 2px solid DodgerBlue;">Hello World</h1>

<h1 style="border: 2px solid Violet;">Hello World</h1>

</body>
</html>
```

HTML Colors

Color Values

In HTML, colors can also be specified using RGB values, HEX values, HSL values, RGBA values, and HSLA values.

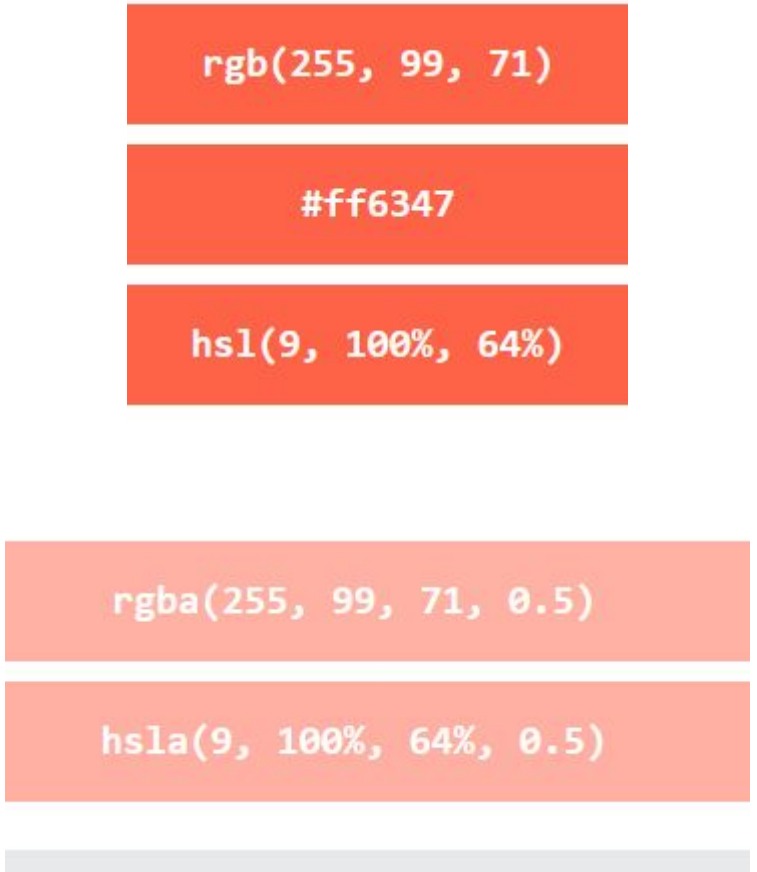
The following three elements have their background color set with RGB, HEX, and HSL values:



HTML Colors

Color Values

The following two elements have their background color set with RGBA and HSLA values, which add an Alpha channel to the color (here we have 50% transparency):



HTML Colors

Color Values

```
<h1 style="background-color:rgb(255, 99, 71);">...</h1>

<h1 style="background-color:#ff6347;">...</h1>

<h1 style="background-color:hsl(9, 100%, 64%);">...</h1>

<h1 style="background-color:rgba(255, 99, 71, 0.5);">...</h1>


<h1 style="background-color:hsla(9, 100%, 64%, 0.5);">...</h1>
```

rgb(255, 99, 71)

#ff6347

hsl(9, 100%, 64%)

rgba(255, 99, 71, 0.5)

hsla(9, 100%, 64%, 0.5)

HTML Colors

Color Values

Learn more about Color Values

You will learn more about RGB, HEX and HSL in the later chapters.

- An RGB color value represents RED, GREEN, and BLUE light sources.

  An RGBA color value is an extension of RGB with an Alpha channel (opacity).

- A hexadecimal color is specified with: #RRGGBB, where the RR (red), GG (green) and BB (blue) hexadecimal integers specify the components of the color.

- HSL stands for hue, saturation, and lightness. HSLA color values are an extension of HSL with an Alpha channel (opacity).

Further Reading about the Different Color Types within HTML

- HTML RGB and RGBA Colors (w3schools.com)
- HTML HEX Colors (w3schools.com)
- HTML HSL and HSLA Colors (w3schools.com)