

# ICTF 0554 Web Technologies

## HTML - Text, Hyperlinks, Multimedia and Embedding

Part 1



# Contents

- Semantic web
- Text formatting
- Hyperlinks



# Semantic Web



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# Semantics Elements

- Semantic elements = elements with a meaning.
- Examples of non-semantic elements:  
`<div>` and `<span>` - Tells nothing about its content.
- Examples of semantic elements:  
`<form>`, `<table>`, and `<article>` - Clearly defines its content.

Using semantic tags :

`<header>`

`<nav>`

`<main>`

`<article>`

`<section>`

`<footer>`

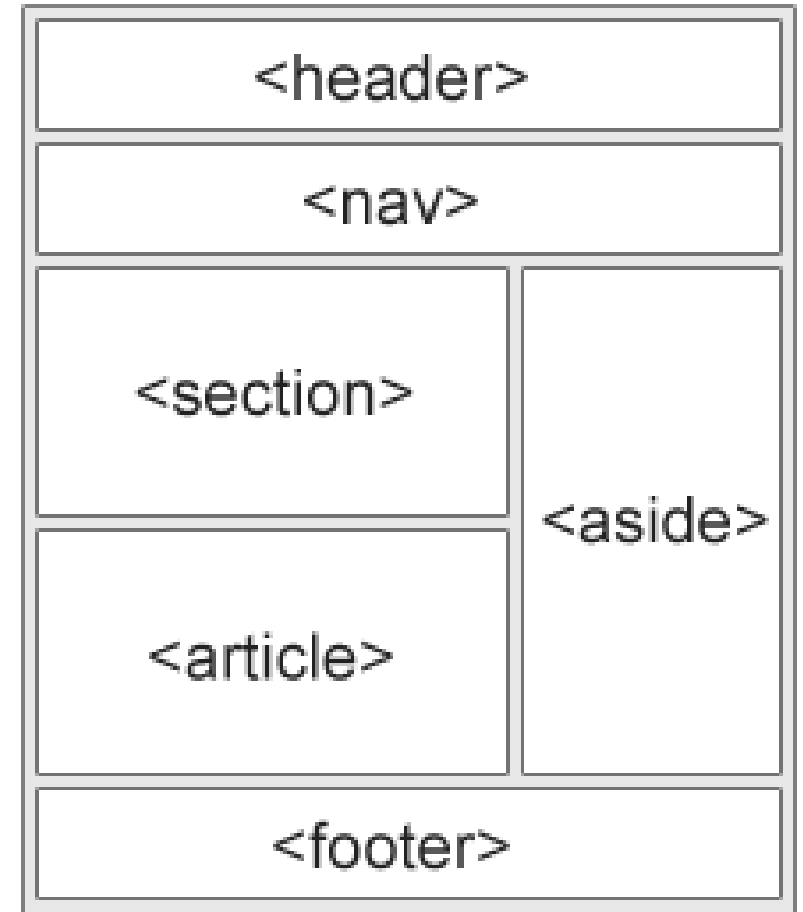


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# Semantics Elements

- The `<section>` element defines a section in a document.
- The `<article>` element specifies independent, self-contained content.
- The `<header>` element represents a container for introductory content or a set of navigational links.
- The `<footer>` element defines a footer for a document or section.
- The `<nav>` element defines a set of navigation links.
- The `<aside>` element defines some content aside from the content it is placed in (like a sidebar).



# Example 1 (Without Style)

```
<!DOCTYPE html>
<html>
<head>
  <title>HTML Semantic Elements</title>
</head>
<body>
  <header>
    <h1>My Website</h1>
    <nav>
      <ul>
        <li><a href="#about">About</a></li>
        <li><a href="#services">Services</a></li>
        <li><a href="#contact">Contact</a></li>
      </ul>
    </nav>
  </header>

  <main>
    <article>
      <h2>About Me</h2>
      <p>I am a passionate web developer with a keen interest in creating user-friendly and visually appealing websites.</p>
    </article>

    <section>
      <h2>Services</h2>
      <ul>
        <li>Web Design</li>
        <li>Front-end Development</li>
        <li>Responsive Web Development</li>
      </ul>
    </section>

    <section>
      <h2>Services</h2>
      <ul>
        <li>Web Design</li>
        <li>Front-end Development</li>
        <li>Responsive Web Development</li>
      </ul>
    </section>
  </main>
  <footer>
    <p>&copy; 2025 My Website. All rights reserved.</p>
  </footer>
</body>
</html>
```

## My Website

- [About](#)
- [Services](#)
- [Contact](#)

### About Me

I am a passionate web developer with a keen interest in creating user-friendly and visually appealing websites.

### Services

- Web Design
- Front-end Development
- Responsive Web Development

### Services

- Web Design
- Front-end Development
- Responsive Web Development

© 2023 My Website. All rights reserved.

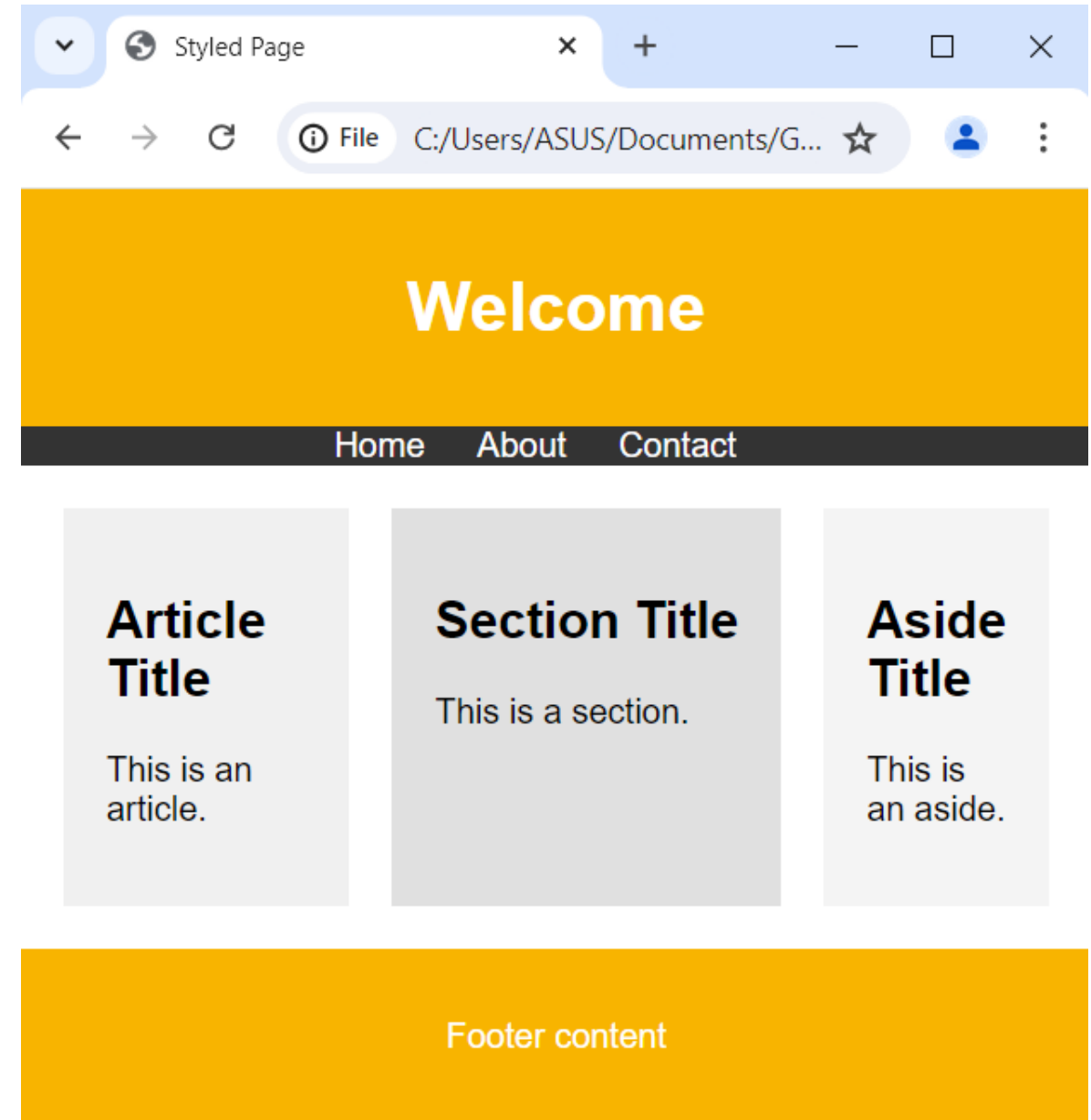


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# Example 2 (With Style)

```
<!DOCTYPE html>
<html>
<head>
  <title>Styled Page</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      margin: 0;
      padding: 0;
    }
    header {
      background-color: #f8b400;
      color: white;
      text-align: center;
      padding: 1em 0;
    }
    nav ul {
      list-style-type: none;
      padding: 0;
      margin: 0;
      text-align: center;
      background-color: #333;
    }
    nav ul li {
      display: inline;
      margin-right: 20px;
    }
    nav ul li a {
      color: white;
      text-decoration: none;
    }
    nav ul li a:hover {
      text-decoration: underline;
    }
    main {
      display: flex;
      margin: 20px;
    }
    article {
      flex: 3;
      padding: 20px;
      background-color: #f0f0f0;
      margin-right: 20px;
    }
    section {
      padding: 20px;
      background-color: #e0e0e0;
      margin-right: 20px;
    }
    aside {
      flex: 1;
      background-color: #f4f4f4;
      padding: 20px;
    }
    footer {
      background-color: #f8b400;
      color: white;
      text-align: center;
      padding: 1em 0;
    }
  </style>
</body>
</html>
```

```
<nav>
  <ul>
    <li><a href="#home">Home</a></li>
    <li><a href="#about">About</a></li>
    <li><a href="#contact">Contact</a></li>
  </ul>
</nav>
<main>
  <article>
    <h2>Article Title</h2>
    <p>This is an article.</p>
  </article>
  <section>
    <h2>Section Title</h2>
    <p>This is a section.</p>
  </section>
  <aside>
    <h2>Aside Title</h2>
    <p>This is an aside.</p>
  </aside>
</main>
<footer>
  <p>Footer content</p>
</footer>
</body>
</html>
```



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# Text Formatting & Hyperlink



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# HTML Elements

- **HTML Formatting:** Use to defining text (bold, italic, etc.)
- **Hyperlink:** use href to specify URL or location
- **HTML Images:** <img> tag is used to embed an image in a web page.



# HTML Formatting

- HTML Formatting: Use to defining text (bold, italic, etc.)

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

Home > HTML > HTML Formatting Tryit: HTML italic text

Run > Result Size: 467 x 483 Get your website

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

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

<p><i>This text is italic.</i></p>
<p><em>This text is emphasized.</em></p>
<p><b>This text is bold.</b></p>

<p><strong>This text is important!</strong></p>
<p><small>This is some smaller text.</small></p>
<p>Do not forget to buy <mark>milk</mark> today.</p>

<p>My favorite color is <del>blue</del> red.</p>
<p>This is <sub>subscripted</sub> text.</p>
<p>This is <sup>superscripted</sup> text.</p>

</body>
</html>
```

This text is normal.

*This text is italic.*

*This text is emphasized.*

**This text is bold.**

**This text is important!**

This is some smaller text.

Do not forget to buy **milk** today.

My favorite color is ~~blue~~ red.

This is subscripted text.

This is superscripted text.



# HTML Links

- **HTML Links:** use href (hyperlink reference) to specify URL or location.

```
<a href="url">Link text</a>
```

- Example:

```
<a href="https://www.w3schools.com/">Visit W3Schools.com!</a>
```

[Visit W3Schools.com!](https://www.w3schools.com/)



# URL and paths

- URLs use paths to find files.
- Paths specify where in the filesystem the file you are interested in is located.

- Root directory: creating hyperlinks

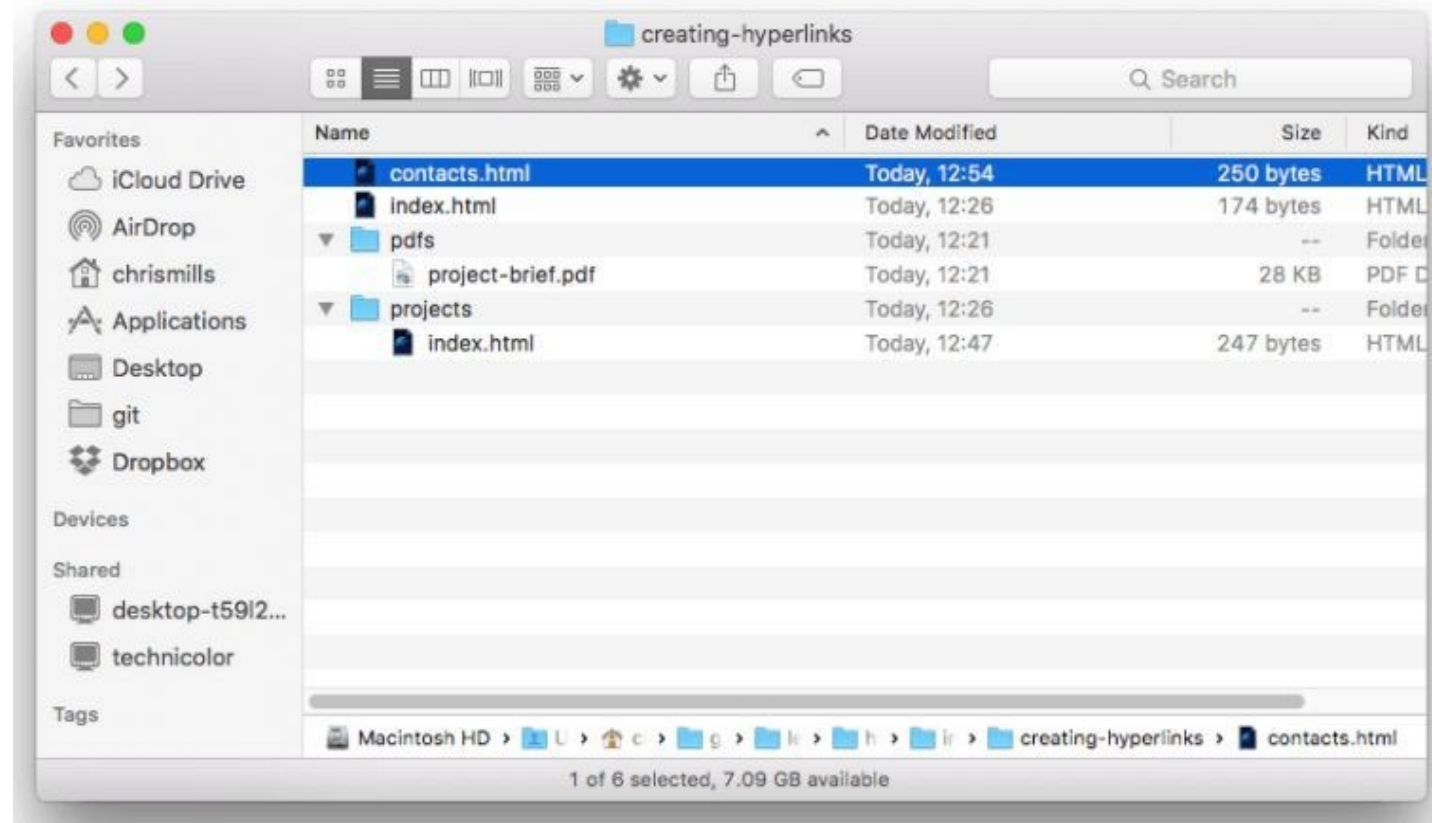
Find details on our `<a href="contacts.html"> contacts page</a>.`

- Moving down into sub-directories: specify directory

`<p>Visit my <a href="projects/index.html">project homepage</a>.</p>`

- Moving back up into parent directories: go up to a directory level, then back into another directory.

`<p>A link to my <a href=" ../pdfs/project-brief.pdf">project brief</a>.</p>`



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# Absolute vs. Relative links

- Absolute URL

Points to a location defined by its absolute location on the web, including protocol and domain name

<http://www.example.com/projects/index.html>

(or even just)  
<http://www.example.com/projects/>

**use relative links wherever possible when linking to other locations within the same website**

- Relative URL

Points to a location that is *relative* to the **file** you are linking from, more like what we looked at in the previous slide.

[pdfs/project-brief.pdf](#)



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# Email links

It is possible to create links or buttons that, when clicked, open a new outgoing email message rather than linking to a resource or page. This is done using the [<a>](#) element and the `mailto:` URL scheme.

```
1 | <a href="mailto:nowhere@mozilla.org">Send email to nowhere</a>
```



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# Lab Practical

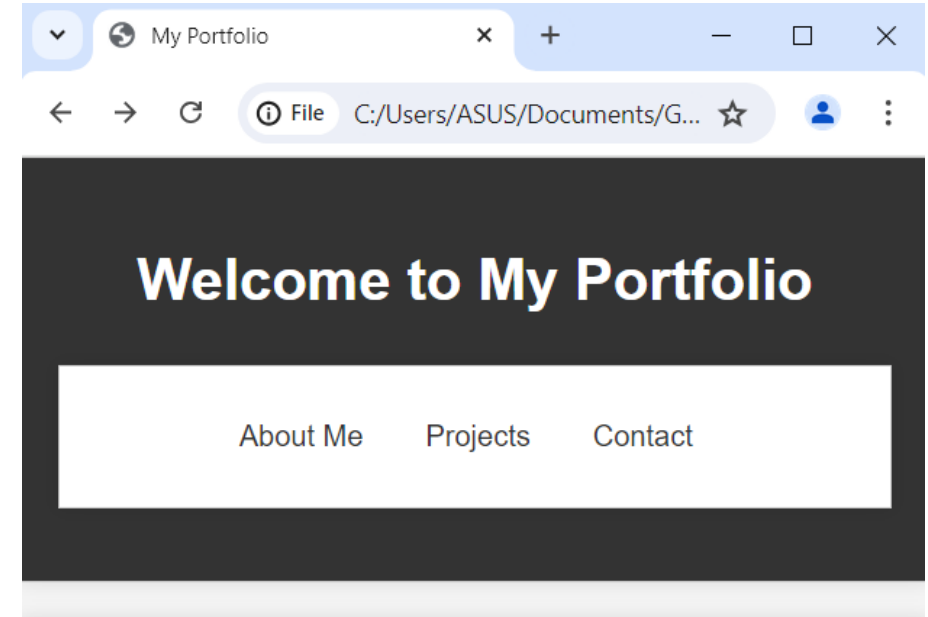


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# Activity 1

- Create a portfolio



## Welcome to My Portfolio

Welcome to my portfolio website. Here you can learn more about me, explore my projects, and get in touch.



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# Activity 2 - Try it! Creating a navigation menu

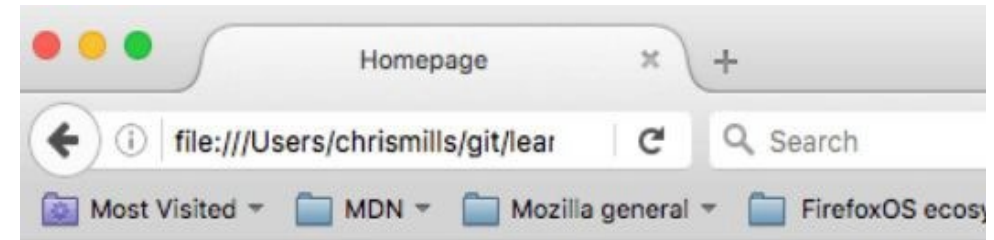
- Link some pages together with a navigation menu to create a multi-page You'll need to create the following four pages, all in the same directory:
  - [index.html](#)
  - [projects.html](#)
  - [pictures.html](#)
  - [social.html](#)
- Add an unordered list in the indicated place on one page, containing the names of the pages to link to.
- Turn each page name into a link to that page.



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Copy the navigation menu across to each page.  
On each page, remove just the link to that same



- Home
- [Pictures](#)
- [Projects](#)
- [Social](#)

## Homepage

Welcome to my exciting homepage

# Activity 3 - One step further....

- Read about 'document and website structure'

[https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction to HTML/Document and website structure](https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Document_and_website_structure)

1. What are the standard components for a typical websites?
2. List out some of the HTML semantic markups that can be identified by screen readers.
3. What is <br> and <hr>?



# Q & A

## Lab Practical



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# ICTF 0554 Web Technologies

## HTML - Text, Hyperlinks, Multimedia and Embedding

Part 2



# Contents

- Multimedia and embedding



# HTML Images

[https://developer.mozilla.org/en-US/docs/Learn/HTML/Multimedia\\_and\\_embedding/Images\\_in\\_HTML](https://developer.mozilla.org/en-US/docs/Learn/HTML/Multimedia_and_embedding/Images_in_HTML)

- **HTML Images:** <img> tag is used to embed an image in a web page.

```

```

- The <img> tag has two required attributes and does not have a closing tag:

- ✓ src – Specifies the path to the image
- ✓ alt – Specifies an alternate text for the image

```

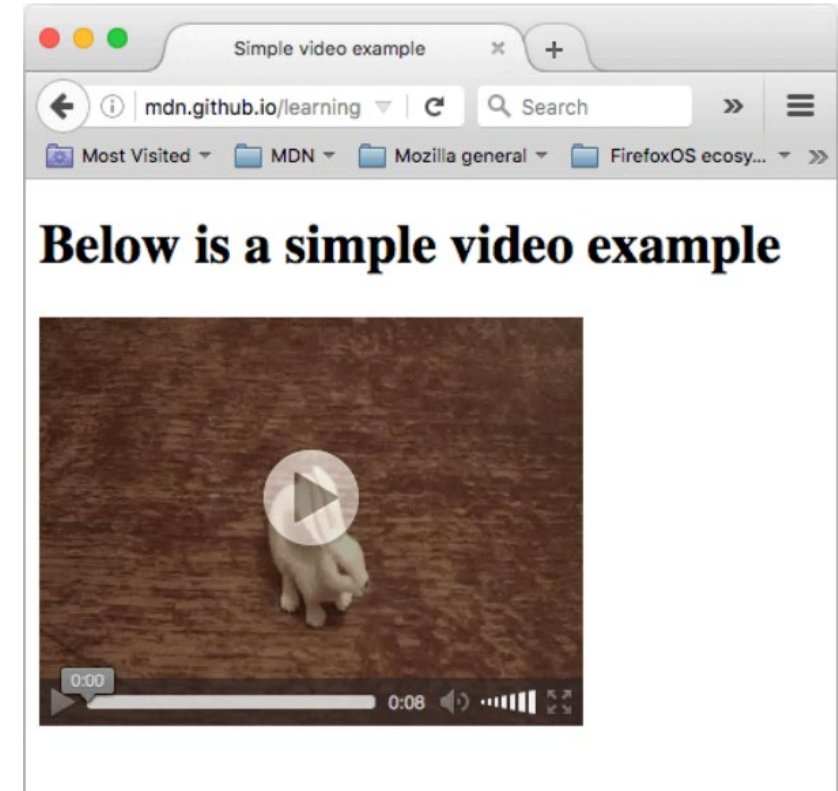
```



# Video element

[https://developer.mozilla.org/en-US/docs/Learn\\_web\\_development/Core/Structuring\\_content/HTML\\_video\\_and\\_audio](https://developer.mozilla.org/en-US/docs/Learn_web_development/Core/Structuring_content/HTML_video_and_audio)

```
<video src="rabbit320.webm" controls>
  <p>
    Your browser doesn't support HTML video. Here is a
    <a href="rabbit320.webm">link to the video</a> instead.
  </p>
</video>
```

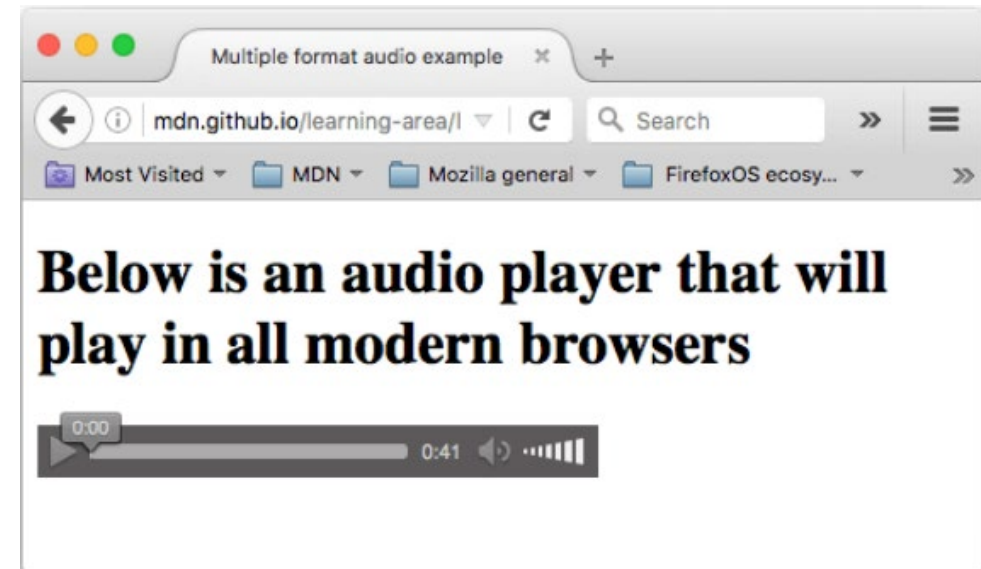


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# Audio element

[https://developer.mozilla.org/en-US/docs/Learn\\_web\\_development/Core/Structuring\\_content/HTML\\_video\\_and\\_audio#the\\_audio\\_element](https://developer.mozilla.org/en-US/docs/Learn_web_development/Core/Structuring_content/HTML_video_and_audio#the_audio_element)

```
<audio controls>
  <source src="viper.mp3" type="audio/mp3" />
  <source src="viper.ogg" type="audio/ogg" />
  <p>
    Your browser doesn't support this audio file. Here is a
    <a href="viper.mp3">link to the audio</a> instead.
  </p>
</audio>
```





# Responsive images

[https://developer.mozilla.org/en-US/docs/Web/HTML/Responsive\\_images](https://developer.mozilla.org/en-US/docs/Web/HTML/Responsive_images)

```
  
alt: Alternative image cannot load
```



## My website

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Mauris eget venenatis ligula. Ut lacinia at dolor vitae pulvinar. Aliquam pretium dignissim eros. Integer faucibus, dui non aliquet bibendum, lectus orci lobortis odio, ornare porttitor est tellus eget velit. Nulla eros elit, malesuada id neque vel, viverra vehicula neque. Nullam auctor turpis non leo iaculis finibus. Quisque blandit arcu venenatis libero tempor, ac pulvinar ligula dapibus.



Suspendisse potenti. Ut in luctus eros. Mauris pulvinar vehicula aliquet. Etiam



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# Lab Practical



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# Class Activity

- Visit W3Schools HTML Links Tutorial page and write and test the markup language for elements below:
- [HTML Formatting](#)
- [HTML Images](#)



# Exercise

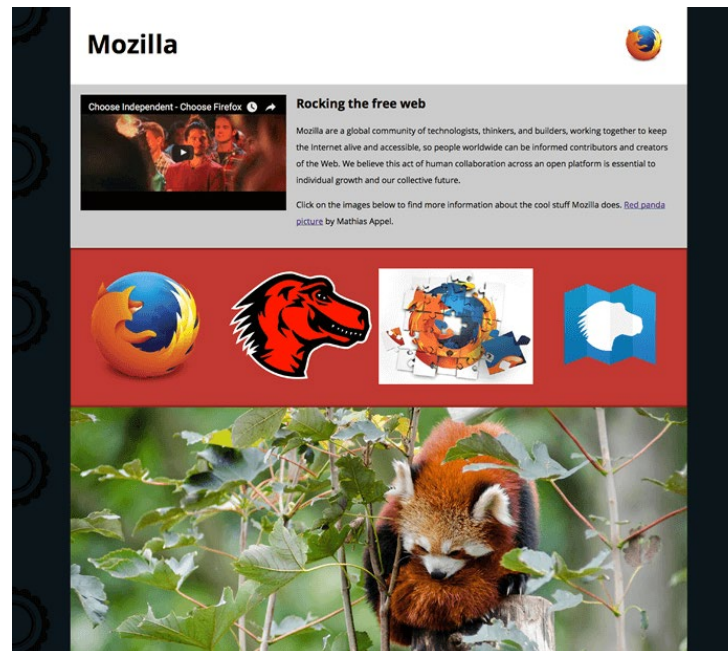
- Create a single web page to display three cats using all the HTML elements you learned today. Ensure the image are saved in the project folder.



# Take home exercise

- Visit mdn web docs link below for the the instruction:

[https://developer.mozilla.org/en-US/docs/Learn\\_web\\_development/Core/Structuring\\_content/Mozilla\\_splash\\_page](https://developer.mozilla.org/en-US/docs/Learn_web_development/Core/Structuring_content/Mozilla_splash_page)



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# Thank you!



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