

Web Technologies

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HTML

HyperText Markup Language

HTML (HyperText Markup Language)

- HTML is the most basic building block of the Web
- It defines the meaning and **structure** of web **content**
- Other technologies besides HTML are generally used to describe:
 - a web page's appearance/presentation (CSS) or
 - functionality/behaviour (JavaScript)
- HTML is not a programming language

HTML (HyperText Markup Language)

- "**Hypertext**" refers to **links** that connect web pages to one another, either within a single website or between websites.
- **Links** are a fundamental aspect of the Web.
- By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web.

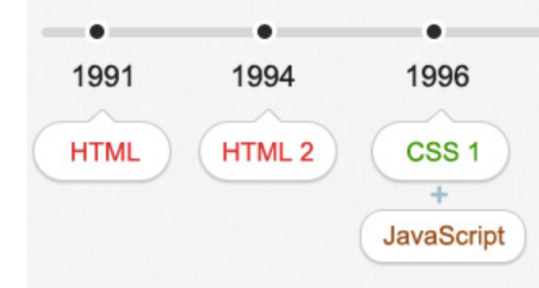
Evolution of HTML

HTML 1.0 (1991)

- HTML 1.0 was the first release of HTML to the world
- Not many people were involved in website creation
- The language was very limiting
- Simple text onto the web

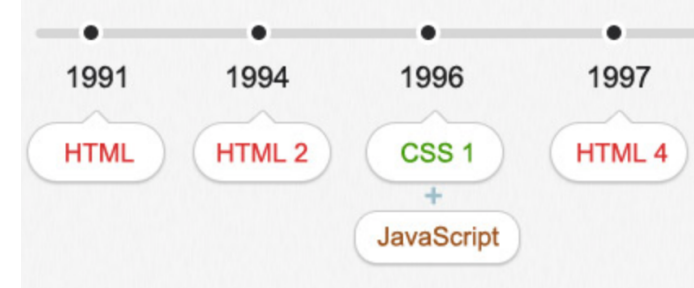
HTML 2.0 (1994)

- HTML 2.0 included everything from the original 1.0 specifications
- HTML 2.0 was the standard for website design until January 1997
- Defined many core HTML features for the first time.



HTML 3.0 (1996)

- It included many new and improved abilities for HTML, and promised far more powerful opportunities for webmasters to design their pages.
- Sadly, the browsers were awfully slow in implementing any of the new improvements, only adding in a few and leaving out the rest.



HTML 4.0 (1997)

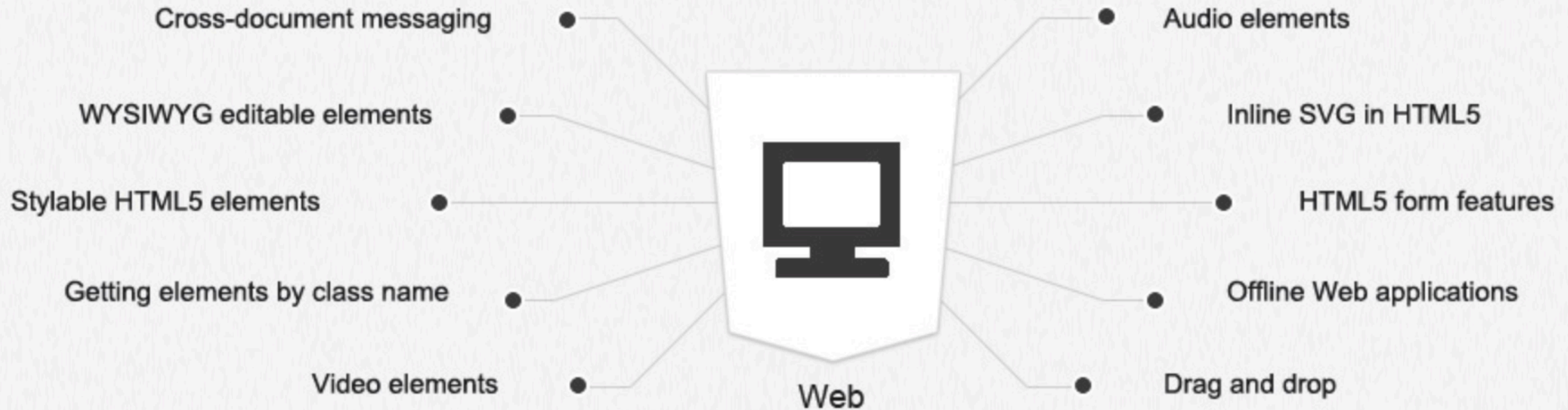
- Separation of Structure and Presentation
 - cascading stylesheets (CSS)
- Accessibility
- Internationalization
- Client-side Scripting
- Frames
- Advanced Tables

HTML 5 (2009)

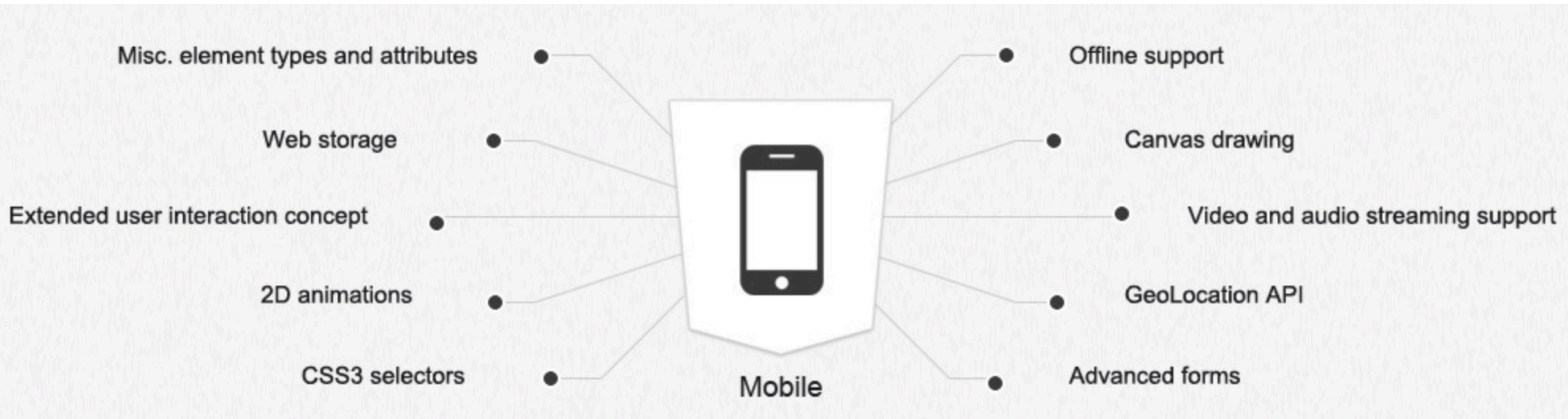


- Simplified and Clear Syntax
- Multimedia Elements
- Accessing User Geographical location
- Client Side storage
- Client Server Communication
- JavaScript Threading Mechanism
- Browser Compatibility

HTML5 - Web



HTML 5 – Mobile devices



HTML 5 - canvas

- A canvas is a rectangular area on an HTML page
- The <canvas> tag is used to draw graphics using JavaScript.
- It is only a container for graphics.
- Inside this container, graphics are drawn using JavaScript.
- Canvas has different methods for paths, circles, boxes, characters and adding images.
- By default it has no border and no content.

Examples: <https://github.com/alopezag/WT/tree/master/unit02/activity03/html5>

HTML 5 – new media elements

- New media elements for displaying media content:
 - `<audio>`
 - `<embed>`
 - `<source>`
 - `<track>`
 - `<video>`

Examples: <https://github.com/alopezag/WT/tree/master/unit02/activity03/html5>

HTML Structure

HTML (HyperText Markup Language)

- HTML uses "markup" to annotate text, images, and other content.
- HTML markup includes special "elements" such as:

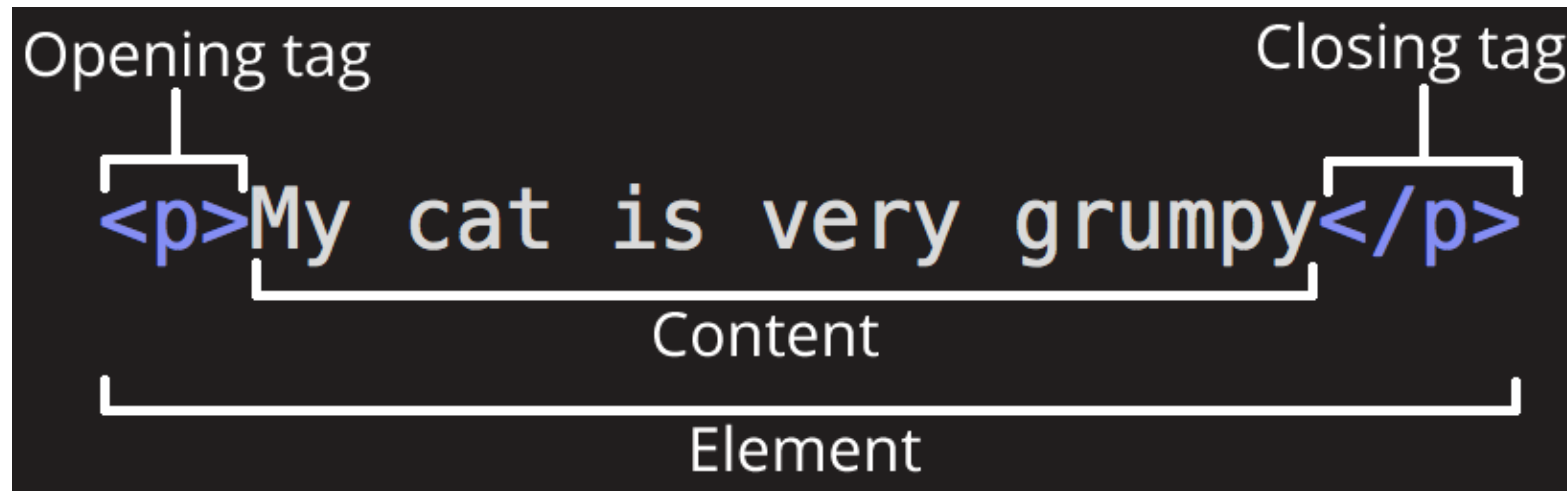
<head>, <title>, <body>, <header>, <footer>, <article>, <section>, <p>, <div>, , , <aside>, <audio>, <canvas>, <datalist>, <details>, <embed>, <nav>, <output>, <progress>, <video>, , ,

HTML (HyperText Markup Language)

- An **HTML element** is set off from other text in a document by "**tags**"
- **Tags** consist of the element name surrounded by "<" and ">"
- The **name** of an element inside a tag is **case insensitive**.
 - For example, the <title> tag can be written as <Title>, <TITLE>, or in any other way.

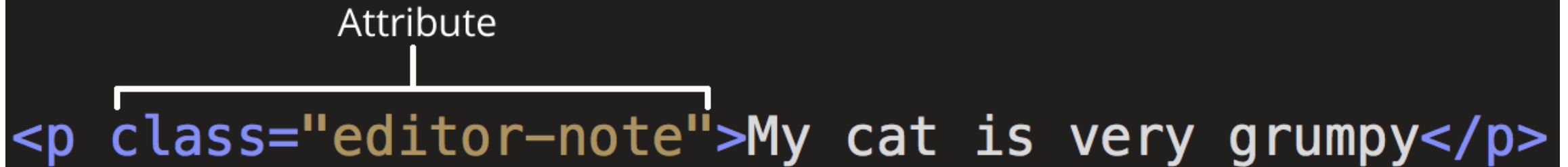
HTML (HyperText Markup Language)

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HTML (HyperText Markup Language)

- **Elements** can also have **attributes**, ex:

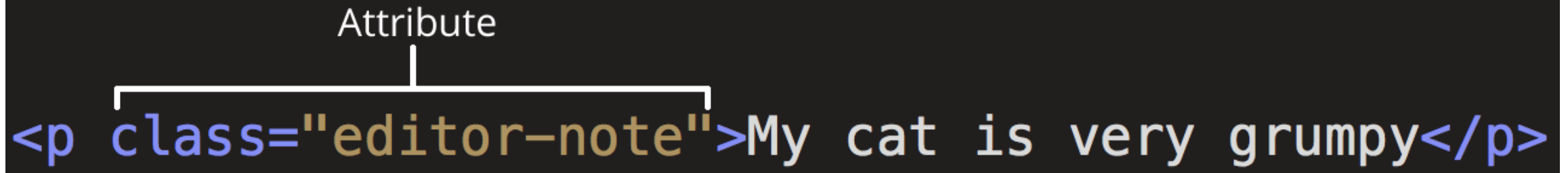


The diagram shows an HTML element `<p class="editor-note">My cat is very grumpy</p>` on a dark background. A white line with a vertical segment at the top and horizontal segments at both ends points from the word "Attribute" to the `class="editor-note"` attribute. The opening tag `<p` is blue, the attribute `class="editor-note"` is yellow, the text `My cat is very grumpy` is white, and the closing tag `</p>` is blue.

```
<p class="editor-note">My cat is very grumpy</p>
```

HTML (HyperText Markup Language)

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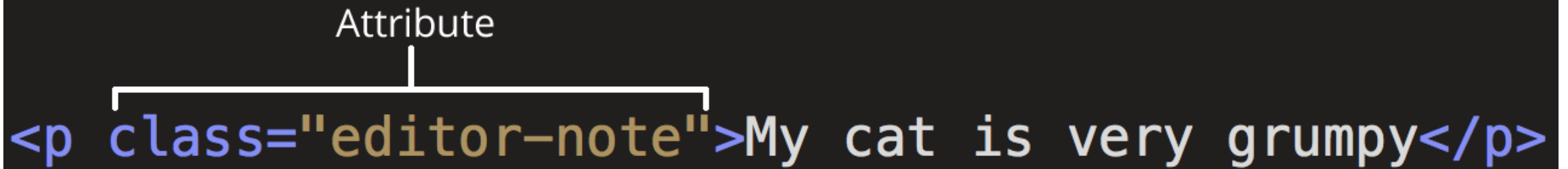


The diagram shows an HTML element `<p class="editor-note">My cat is very grumpy</p>` on a dark background. A white bracket above the opening tag `<p class="editor-note">` is labeled "Attribute" in white text, indicating that the `class="editor-note"` part is the attribute.

- Attributes contain extra information about the element

HTML (HyperText Markup Language)

- An attribute should always have the following:
 - A **space** between it and the element name
 - The **attribute name** followed by an equal sign
 - The **attribute value** wrapped by opening and closing quotation marks

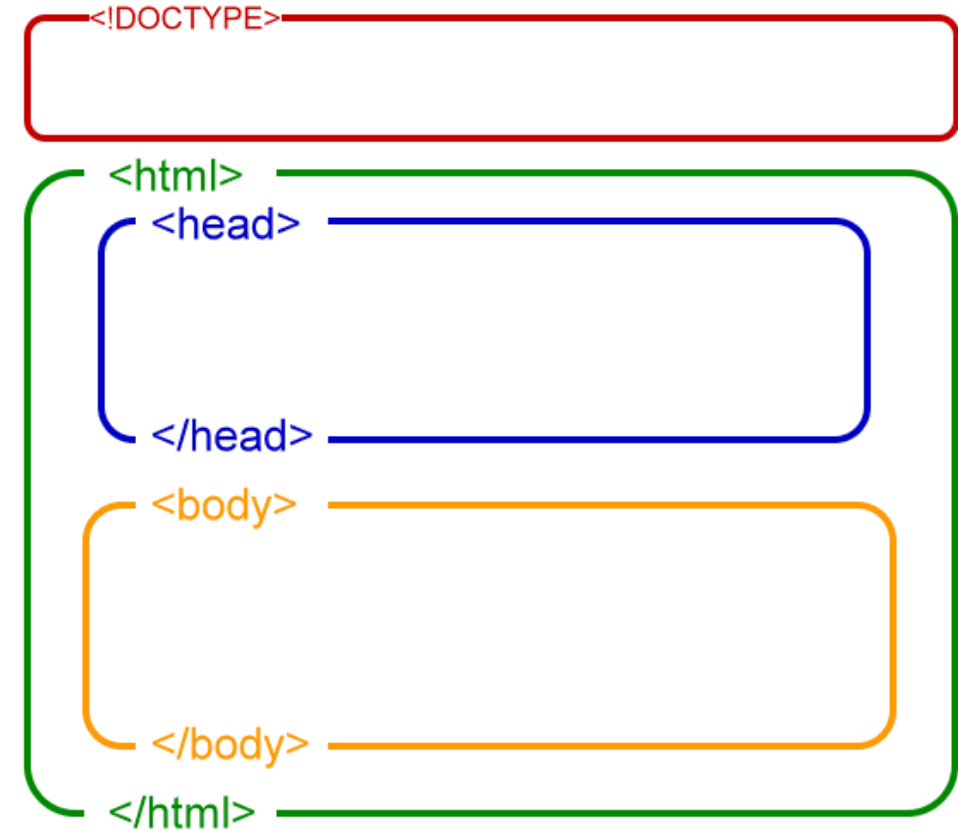


The diagram shows an HTML opening tag `<p class="editor-note">` on a dark background. A white bracket above the tag spans from the opening angle bracket to the closing angle bracket. A vertical line descends from the center of this bracket to the word "Attribute" written in white text above the tag. The text "class="editor-note"" is highlighted in a light blue color, while the rest of the tag is in a light yellow color.

```
<p class="editor-note">My cat is very grumpy</p>
```

HTML document

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta charset="utf-8">
5     <title>My test page</title>
6   </head>
7   <body>
8     
9   </body>
10 </html>
```



HTML

- **Images** `` it embeds an image into our page in the position it appears

```
1 | 
```

HTML

- **Heading elements** allow you to specify that certain parts of your content are headings — or subheadings. In the same way that a book has the main title, chapter titles and subtitles

```
1  <h1>My main title</h1>
2  <h2>My top level heading</h2>
3  <h3>My subheading</h3>
4  <h4>My sub-subheading</h4>
```


HTML

- **Paragraphs, <p>** elements are for containing paragraphs of text

```
1 | <p>This is a single paragraph</p>
```

HTML

- **Lists**

- **Unordered lists ** are for lists where the order of the items doesn't matter
- **Ordered lists ** are for lists where the order of the items does matter
- Each item inside the lists is put inside an (list item) element

```
1  <p>At Mozilla, we're a global community of</p>
2
3  <ul>
4    <li>technologists</li>
5    <li>thinkers</li>
6    <li>builders</li>
7  </ul>
8
9  <p>working together ... </p>
```

Practice

A basic html document

H1

About me

H2

Work

Most of my work centres around

ul

- Lecture
- Run labs

H2

Interests

My interests include:

ul

- Gaming
- Reading
- ...