

Web Fundamentals



Session-04

HTML Advanced

HTML Advanced



01

Semantic HTML

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Forms

03

Embed

04

Audio, Video API

05

iframe

06

Portfolio app

Is this code readable?

```
<!-- Below code is justly written using <div>, there is no meaning by structure -->
<div id="article">
  <div id="header">
    <h1>Article Title</h1>
    <p>By <a href="#">Author Name</a></p>
  </div>
  <div id="section">
    <h2>Section Title</h2>
    <p>This is some text</p>
  </div>
  <div id="footer">
    <p>Published on <time datetime="2023-04-11">April 11, 2023</time></p>
  </div>
</div>
```



This looks like a
<div> soup



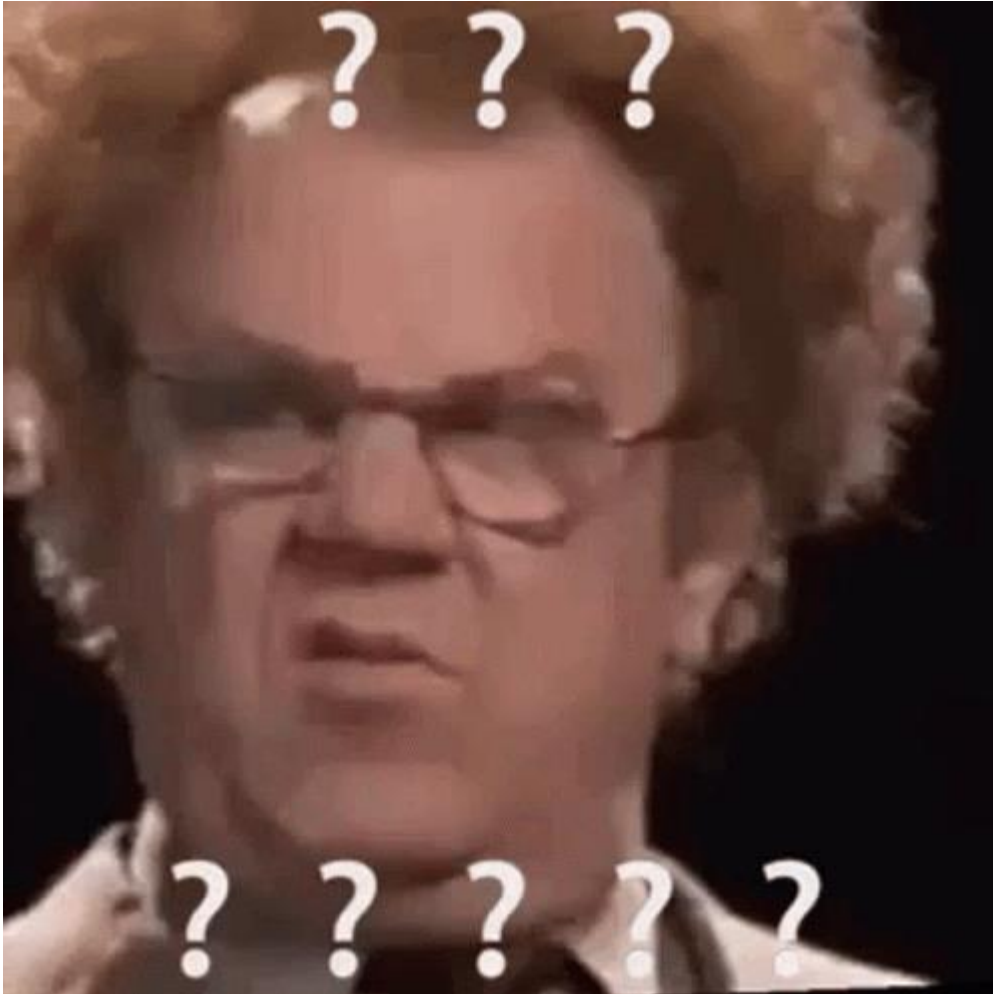
Search engines cannot understand <div> soup

the below code is janky written using divs, there is no meaning by structure.

```
<div id="article">
  <div id="header">
    <h1>Article Title</h1>
    <p>By <a href="#">Author Name</a></p>
  </div>
  <div id="section">
    <h2>Section Title</h2>
    <p>This is some text</p>
  </div>
  <div id="footer">
    <p>Published on <time datetime="2023-04-11">April 11, 2023</time></p>
  </div>
</div>
```



How search engines can differentiate more important and less important tags with this <div> soup



Confused Search Engine!

When to use which one?

Great Mark-up conveys the meaning by code, hence Semantic HTML!!

No meaning

```
<div id="article">
  <div id="header">
    <h1>Article Title</h1>
    <p>By <a href="#">Author Name</a></p>
  </div>
  <div id="section">
    <h2>Section Title</h2>
    <p>This is some text</p>
  </div>
  <div id="footer">
    <p>Published on <time datetime="2023-04-11">April 11, 2023</time></p>
  </div>
</div>
```

Semantic means "relating to meaning"

```
<article>
  <header>
    <h1>Article Title</h1>
    <p>By <a href="#">Author Name</a></p>
  </header>
  <section>
    <h2>Section Title</h2>
    <p>This is some text</p>
  </section>
  <footer>
    <p>Published on <time datetime="2023-04-11">April 11, 2023</time></p>
  </footer>
</article>
```

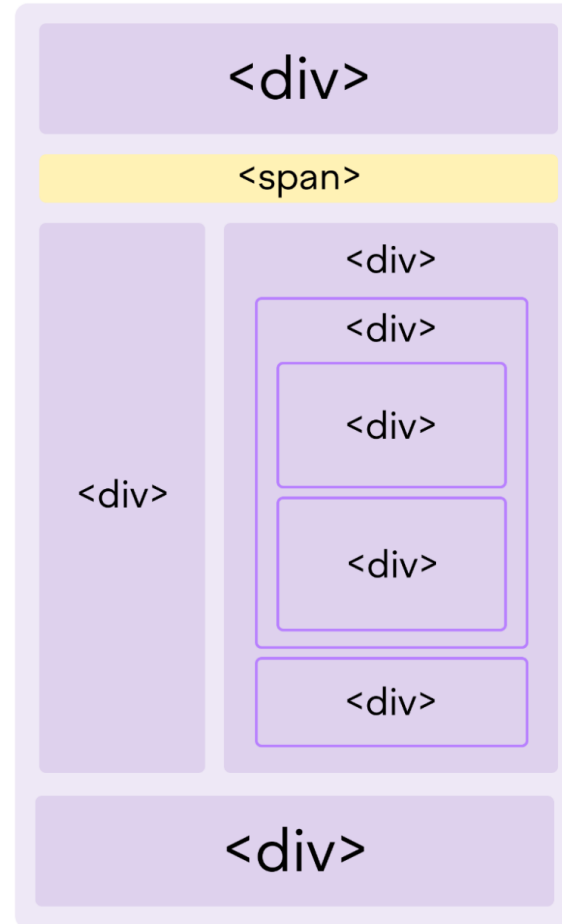
A Semantic HTML makes the code

- more readable
- more accessible
- easy to maintain
- and more semantically meaningful to search engines

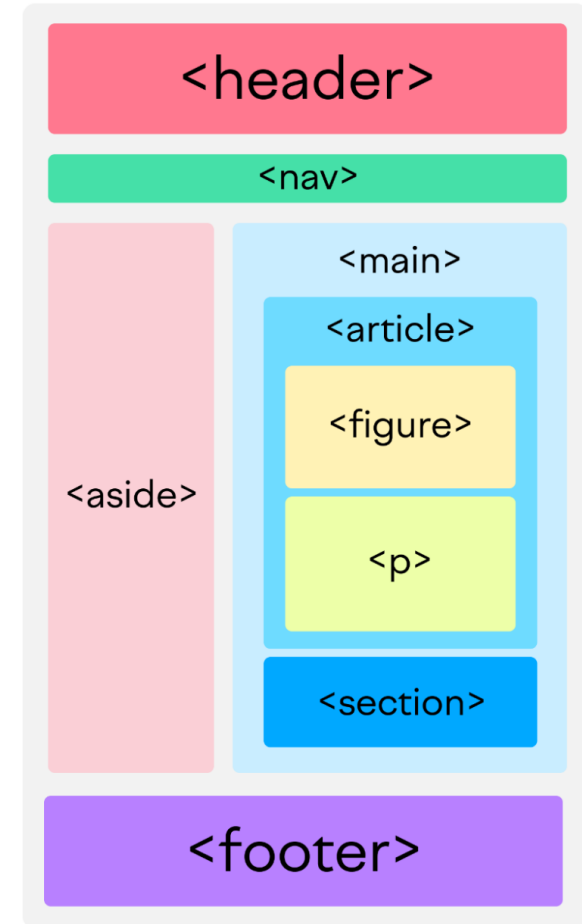
Benchmark Semantic HTML layout

Let's not make
<div> soup
**** salad

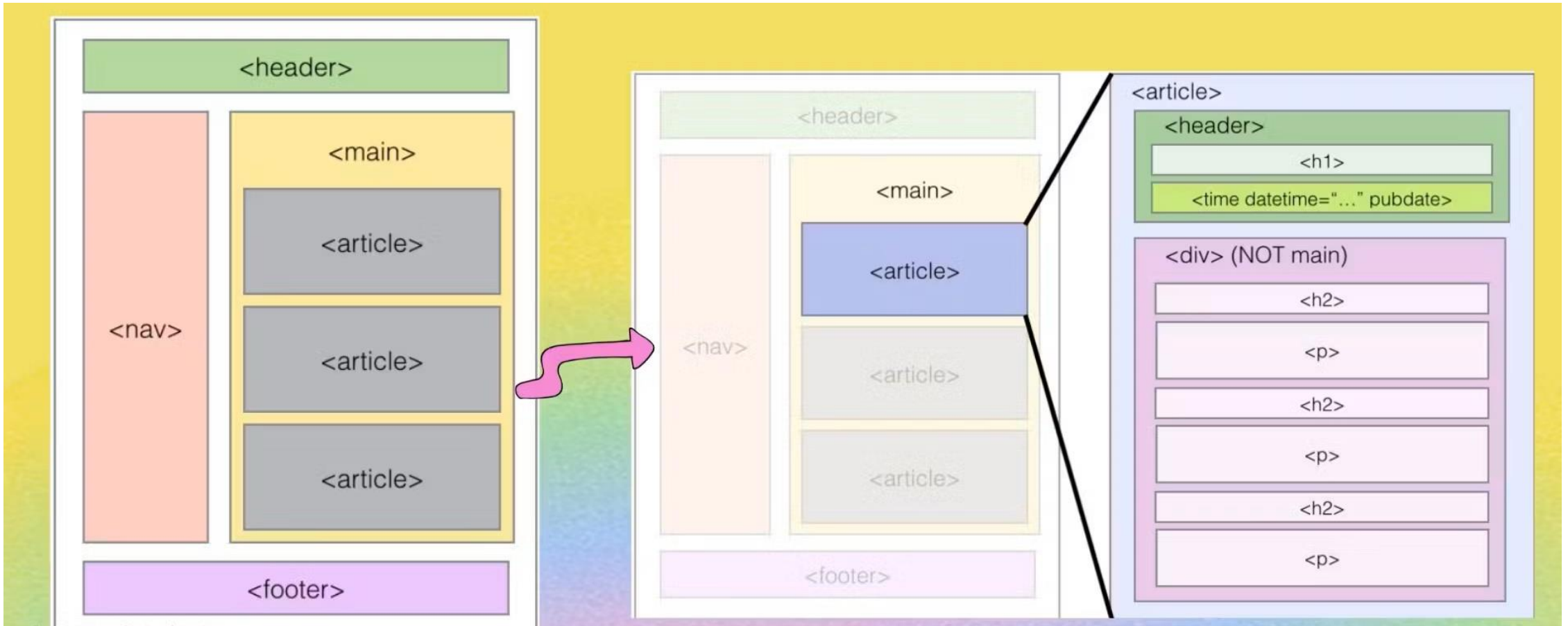
Non-Semantic HTML



Semantic HTML



Semantic HTML layout- Boilerplate



Be careful – Non-Semantic

<button>

Represents a interactive, clickable button.

Should be used in forms

Do not use to link to another page—use the <a> tag.

No meaning to themselves

<div>

Inherits meaning from its children.

**
**

Creates a line break

Useful where the division of lines is important.

Do not use to create space in a design—use margins and padding.

Thanos is more powerful with **semantic!!!**



Are you?

Thanos wants to collect some data, How can he do it



You're a click away
Do it. That's what you are here for.

Email

Password

By signing up, I agree to to the Terms of Service and Privacy Policy

CREATE MY ACCOUNT

Forms

Why & What HTML Forms



Collect the data and send data

Form input types


<code><input type="text"></code>	→	<input type="text" value="ABCD"/>
<code><input type="password"></code>	→	<input type="password" value="*****"/>
<code><input type="radio"></code>	→	<input type="radio"/> Yes <input checked="" type="radio"/> No
<code><input type="number"></code>	→	<input type="number" value="987654"/>
<code><input type="image"></code>	→	<input alt="Submit image" type="image"/>
<code><input type="checkbox"></code>	→	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<code><input type="button"></code>	→	<input type="button" value="Button"/>
<code><input type="color"></code>	→	<input type="color" value="#800080"/>
<code><input type="email"></code>	→	<input type="email" value="abc@gmail.com"/>
<code><input type="file"></code>	→	<input type="file" value="Choose file name.pdf"/>
<code><input type="hidden"></code>	→	<input type="hidden"/>

Can you help Thanos to add validations?



Get Started


User Name

 Joy Shaheb

Email

 abc@gmail.com

Password

 Password here

Submit




Input Constraints

Attribute	Description
disabled	Specifies that the input element should be disabled
max	Specifies the maximum value of an input element
min	Specifies the minimum value of an input element
pattern	Specifies the value pattern of an input element
required	Specifies that the input field requires an element
type	Specifies the type of an input element

Input Attributes

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <meta charset="utf-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1">
6      <title> Input attributes </title>
7  </head>
8  <body>
9      <form>
10         <input type="text" readonly><br>
11         <input type="submit" value="Submit">
12     </form>
13 </body>
14 </html>
15
```



Input Attributes

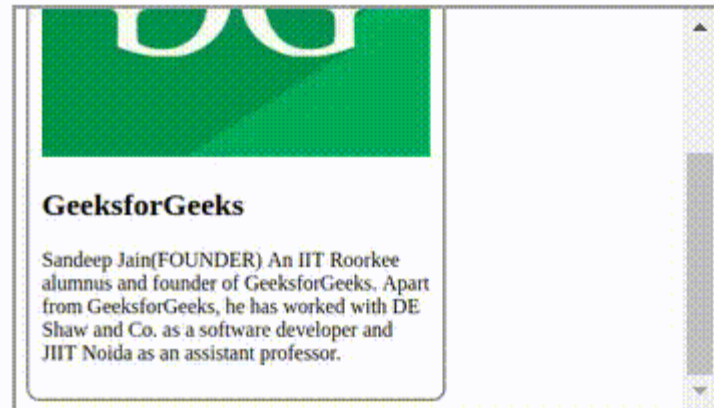
Type	Description
tel	The input value is of type telephone number
search	The input field is a search field
url	The input value is a URL
email	The input value is one or more email addresses
datetime	The input value is a date and/or time
date	The input value is a date
month	The input value is a month
week	The input value is a week
time	The input value is of type time
datetime-local	The input value is a local date/time
number	The input value is a number
range	The input value is a number in a given range
color	The input value is a hexadecimal color, like #FF8800
placeholder	Specifies a short hint that describes the expected value of an input field

Iframe

Iframe- inline frame is used to embed another document within the current HTML document.

HTML iframe Tag

Click the link text



audio

<audio> tag is used to embed audio content

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

<h1>The audio element</h1>

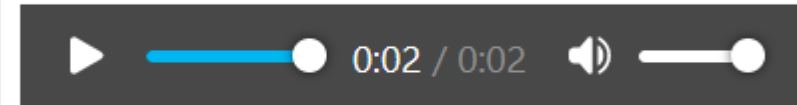
<p>Click on the play button to play a sound:</p>

<audio controls>
  <source src="horse.ogg" type="audio/ogg">
  <source src="horse.mp3" type="audio/mpeg">
  Your browser does not support the audio element.
</audio>

</body>
</html>
```

The audio element

Click on the play button to play a sound:



Text is displayed when browser is not supported

Video

<video> tag is used to embed video content

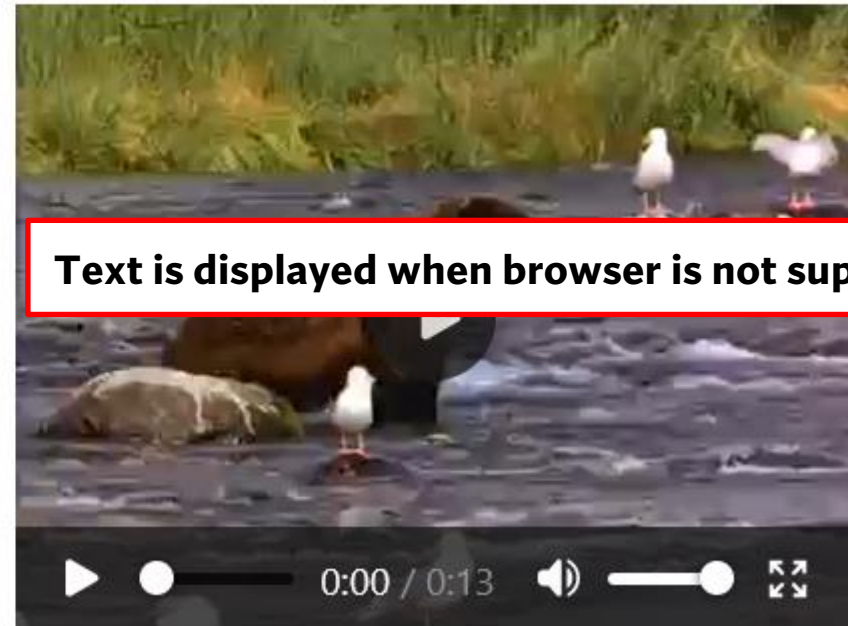
```
<!DOCTYPE html>
<html>
<body>

<h1>The video element</h1>

<video width="320" height="240" controls>
  <source src="movie.mp4" type="video/mp4">
  <source src="movie.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>

</body>
</html>
```

The video element



Text is displayed when browser is not supported

embed

<embed> tag defines a container for an external resource, such as a web page, a picture, a media player

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

<embed type="video/webm" src="movie.mp4"
width="400" height="300">

</body>
</html>
```



embed**Suggestions**

- Use it when we don't know what we are embedding
- To display a picture, it is better to use the `` tag.
- To display HTML, it is better to use the `<iframe>` tag.
- To display video or audio, it is better to use the `<video>` and `<audio>` tags.

Canvas

HTML <canvas> element is used to draw graphics, on the fly, via scripting (usually JavaScript).



Canvas

HTML Canvas Can Draw Text

HTML Canvas Can Draw Graphics

HTML Canvas Can be Animated

HTML Canvas Can be Interactive

HTML Canvas Can be Used in Games

**Hands on time
Mini Project**

**Build portfolio website using semantic HTML,
Forms**

Best Practices & Resources

- Indent and format properly.
- Use head tag properly for performance, load assets when needed
- Use semantic HTML.
- Optimize images for web.
- Test code on various browsers.
- Use fallback fonts.
- Use meaningful tags, avoid meaningless tags
- Avoid <div>soup, salad

“If you want to learn to swim,
jump into the water.”

–Bruce Lee



Q & A