# HTML\_BASICS\_4\_HOMEWORK:

1.) If we change the display property of div tag to inline will it be converted to span tag or act equivalent to span tag and vice-versa?

1.) Changing the `display` property of a `<div>` tag to `inline` will change its rendering behavior to act more like an inline element, but it won't convert it into a `<span>` tag. Similarly, changing the `display` property of a `<span>` tag to `block` will change its rendering behavior to act more like a block-level element, but it won't convert it into a `<div>` tag.

Here's what happens when you change the `display` property:

1. Changing `<div>` to `display: inline;`:

- The `<div>` element will start behaving like an inline-level element.

- It will no longer create a new block formatting context and will not start on a new line.

- It will only take up as much width as its content, just like an inline element.

- However, it will still retain its `<div>` tag semantics and any associated attributes.

2. Changing `<span>` to `display: block;`:

- The `<span>` element will start behaving like a block-level element.

- It will create a new block formatting context and will start on a new line.

- It will take up the full width available by default, just like a block-level element.

- It will retain its `<span>` tag semantics and any associated attributes.

Changing the `display` property allows you to modify the layout behavior of these elements while retaining their inherent HTML semantics. It's a way to control the visual presentation of the elements without changing their fundamental nature. So, while you can make a `<div>` act similar to a `<span>` (inline) and vice versa (block-level), it won't actually change their tag names or their core roles as block and inline containers, respectively.



2.) What is the difference beween header and h1 tags?

2.) The `<header>` and `<h1>` tags are distinct elements in HTML, each serving a specific purpose with unique characteristics.

1. `<header>` Tag:

- The `<header>` tag is a semantic HTML5 element used to encapsulate introductory content at the beginning of a section or page. It often includes elements such as logos, navigation menus, and other content situated at the top of a document or section.

- It provides a structural container for organizing header-related elements, fostering consistency across web pages or content blocks.

- The `<header>` element can contain various types of elements, such as text, images, links, and navigation menus.

- Unlike the `<h1>` tag, the `<header>` tag does not inherently apply any styling, such as bold formatting, to its content. It serves as a semantic grouping element without affecting the visual appearance of its contents.

- Example usage:

```html

<header>

<h1>Website Name</h1>

<nav>

<ul>

<li><a href="#">Home</a></li>

<li><a href="#">About</a></li>

<li><a href="#">Contact</a></li>

</ul>

</nav>

</header>

```

2. `<h1>` Tag:

- The `<h1>` tag is a heading element in HTML that represents the highest level of headings, indicating the main heading of a section or page.

- It plays a pivotal role in establishing the primary topic or purpose of the content within the section and contributes to the logical hierarchy of headings on a page.

- The `<h1>` tag inherently imparts a bold styling to its content, creating a visually distinct and prominent heading.

- It is reserved for text and is meant to provide a clear and concise label for the section's content.

- Proper use of heading elements, including `<h1>`, enhances search engine optimization (SEO) and assists assistive technologies in interpreting content structure.

- Example usage:

```html

<h1>Welcome to Our Online Store</h1>

<p>Explore a wide range of products...</p>

```

In summary, the `<header>` tag serves as a structural container for introductory content, such as logos and navigation menus, whereas the `<h1>` tag functions as the main heading with inherent bold styling for textual content. The distinction between these tags ensures effective semantic markup and facilitates content organization and presentation.



3.) Can a header tag be used inside a footer tag?

3.) Yes, a `<header>` tag can be used inside a `<footer>` tag in HTML. Both `<header>` and `<footer>` are semantic elements that define specific sections of a web page, and they can be nested within each other to structure the content as needed.

Here's an example of how you might use a `<header>` tag inside a `<footer>` tag:

```html

<!DOCTYPE html>

<html>

<head>

</head>

<body>

<footer>

<header>

<h2>Contact Information</h2>

</header>

<p>Email: <a href="mailto:contact@example.com">contact@example.com</a></p>

</footer>

</body>

</html>

```

In this example, the `<footer>` tag contains both a `<header>` and a paragraph with contact information. The `<header>` within the `<footer>` is used to provide a sub-section header within the footer area, which might contain additional information related to the footer content.

Nesting semantic elements like `<header>` and `<footer>` helps create a clear and organized structure for your web page's content. Just make sure that the nesting makes sense in terms of the content hierarchy and purpose.



4.) Can multiple header tags be used and can they be nested inside one another?

4.) Yes, you can use a `<header>` tag inside another `<header>` tag in HTML. Semantic elements like `<header>` can be nested within each other to create a structured and meaningful document outline.

Here's an example of using a `<header>` tag inside another `<header>` tag:

```html

<!DOCTYPE html>

<html>

<head>

</head>

<body>

<header>

<h1>Main Header</h1>

<nav>

<ul>

<li><a href="#">Home</a></li>

<li><a href="#">About</a></li>

<li><a href="#">Contact</a></li>

</ul>

</nav>

<header>

<h2>Sub Header</h2>

</header>

</header>

</body>

</html>

```

In this example, the outer `<header>` contains the main header content, including a navigation menu. Inside the outer `<header>`, there's another `<header>` that serves as a sub-header. This nesting is valid and allows you to structure your content with different levels of headers.

Using nested `<header>` tags can help you organize and delineate different sections of your content, making your HTML document's structure more semantically meaningful. Just ensure that the nesting aligns with the logical hierarchy of your content and enhances its clarity and accessibility.

Yes, multiple `<header>` tags can be used in an HTML document, and they can also be nested inside one another. The `<header>` tag is a semantic element that represents introductory content at the beginning of a section or page. It is meant to provide a structural container for header-related content, and it can be used to logically group and organize different headers within a document.

Here's an example of using multiple `<header>` tags, including nesting:

```html

<!DOCTYPE html>

<html>

<head>

</head>

<body>

<header>

<h1>Main Header</h1>

<nav>

<ul>

<li><a href="#">Home</a></li>

<li><a href="#">About</a></li>

<li><a href="#">Contact</a></li>

</ul>

</nav>

</header>

<section>

<header>

<h2>Section Header</h2>

</header>

<p>Section content...</p>

</section>

<footer>

<header>

<h3>Footer Header</h3>

</header>

<p>Footer content...</p>

</footer>

</body>

</html>

```

In this example:

- The first `<header>` contains the main header of the page, including navigation links.

- Inside a `<section>`, there's another `<header>` that serves as a sub-section header.

- In the `<footer>`, there's yet another `<header>` that provides a header for the footer content.

Using multiple `<header>` tags and nesting them allows you to create a structured and meaningful document outline. Each `<header>` tag indicates the beginning of a new section or sub-section, and nesting helps convey relationships between headers and content.

Remember that while multiple `<header>` tags can be used, it's important to maintain a logical and coherent structure for your content. Each `<header>` should represent a distinct section or block of content, and the nesting should align with the hierarchical relationships within your page.



5.) Can float be assigned center value?

5.) No, the `float` property cannot be assigned a value of "center." The `float` property is used to position an element to the left or right of its containing element, allowing other content to flow around it. The valid values for the `float` property are "left" and "right."

If you want to horizontally center an element within its containing element, you would typically use different approaches, such as using the `margin` property or using Flexbox or Grid layout techniques.

For example, to center an element horizontally using the `margin` property, you can set the left and right margins to "auto":

```css

.centered-element {

margin-left: auto;

margin-right: auto;

/\* Other styles as needed \*/

}

```

If you're looking to center an element within a parent container, Flexbox or Grid layout would provide more flexible and powerful options for achieving centered layouts.

Here's a simple example of using Flexbox to center an element both horizontally and vertically:

```css

.container {

display: flex;

justify-content: center; /\* Center horizontally \*/

align-items: center; /\* Center vertically \*/

/\* Other styles as needed \*/

}

```

In summary, while the `float` property is not used for centering elements, other CSS techniques like `margin`, Flexbox, and Grid layout are more suitable for achieving centering effects.



6.) What is the difference between body tag and main tag?

6.) The `<body>` and `<main>` tags are both important elements in HTML, but they serve different purposes and are used in different ways.

1. `<body>` Tag:

- The `<body>` tag is a top-level element in an HTML document and represents the main content of the page that is visible to the user.

- It contains all the content that should be displayed in the browser window, such as text, images, headings, paragraphs, links, and more.

- The `<body>` tag is required in every HTML document and should contain all the content that users interact with or consume.

- Example:

```html

<!DOCTYPE html>

<html>

<head>

<title>My Web Page</title>

</head>

<body>

<h1>Welcome to My Web Page</h1>

<p>This is some content.</p>

<!-- More content here -->

</body>

</html>

```

2. `<main>` Tag:

- The `<main>` tag is also a top-level element and is used to represent the main content of the document, similar to the `<body>` tag.

- However, the `<main>` tag has a semantic purpose: it is used to mark the main content area within the `<body>` of the document.

- The `<main>` tag helps assistive technologies and search engines identify the primary content of the page, especially in cases where there are repetitive sections like headers, footers, and sidebars.

- It is recommended to use the `<main>` tag when you have a single, dominant content block on a page.

- Example:

```html

<!DOCTYPE html>

<html>

<head>

<title>My Web Page</title>

</head>

<body>

<header>

<!-- Header content -->

</header>

<main>

<h1>Welcome to My Web Page</h1>

<p>This is the main content.</p>

<!-- More main content here -->

</main>

<footer>

<!-- Footer content -->

</footer>

</body>

</html>

```

In summary, both the `<body>` and `<main>` tags represent the main content of a web page, but the `<main>` tag has a semantic role of marking the primary content area within the `<body>`. Using the `<main>` tag can help improve the accessibility and search engine optimization of your web pages, especially in cases where the main content is distinct from other sections of the page.



7.) Draw DOM of tribute page to Linus Torvalds.

7.) Certainly! Here's a visual representation of the DOM tree structure based on the provided HTML code:

css

html

├─ head

│ ├─ meta

│ ├─ meta

│ ├─ title

│ ├─ link

│ └─ style

└─ body

├─ nav

│ ├─ h1 (Navigation Section)

│ └─ ol

│ ├─ li

│ │ └─ a (Linus Bhaiya)

│ ├─ li

│ │ └─ a (Biography)

│ ├─ li

│ │ └─ a (Achievements)

│ └─ li

│ └─ a (Resources)

├─ header

│ ├─ h1 (Linus Torvalds)

│ └─ p (The creator of Linux)

├─ section#linus

│ └─ figure

│ ├─ img

│ └─ figcaption (A photograph of Linus Torvalds)

├─ aside

│ └─ p (This Web Page is created by Aryan Srivastava ...)

├─ section#biography

│ ├─ h2 (Biography)

│ └─ p (Linus Torvalds is a Finnish-American ...)

├─ section#achievements

│ ├─ h2 (Achievements)

│ ├─ ul

│ │ ├─ li

│ │ │ ├─ b

│ │ │ └─ Text

│ │ ├─ li

│ │ │ ├─ b

│ │ │ └─ Text

│ │ ├─ ...

│ └─ blockquote

│ ├─ p

│ │ ├─ q (One of the most influential people in the world.)

│ │ └─ cite

│ │ ├─ Text

│ │ └─ a (The Famous People)

├─ section#resources

│ ├─ h2 (Resources)

│ ├─ p (Learn more about Linus Torvalds and his works)

│ └─ ul

│ ├─ li

│ │ └─ a (Wikipedia Page on Linus Torwalds)

│ ├─ li

│ │ └─ a (Linus Torvald's personal website)

│ └─ li

│ └─ a (The Linux Kernal Archives)

├─ footer

│ └─ p (This is footer)

└─ nav

├─ h1 (Navigation Section)

└─ ol

├─ li

│ └─ a (Linus Bhaiya)

├─ li

│ └─ a (Biography)

├─ li

│ └─ a (Achievements)

└─ li

└─ a (Resources)

This tree-style diagram visually represents the hierarchical structure of the provided HTML code and how the elements are nested within each other.



8.)