

Hands-on Activity 2.2 Building Optimized and Accessible Web Content	
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1. Discussion	
<p>Module 5 of the HTML Essentials discusses the different semantic markups that can be implemented to your html program or website. This enables programmers to utilize different tags for specific parts of their website. This makes the codebase have meaning rather than just relying on presentation. Through this we can promote accessibility for users that have disabilities and improve SEO so that the website we create can be seen to more people.</p>	
3. Procedure	
<h2>5.7.1 Harbor Light Community Center Website: Adding Accessibility and Structured Data</h2>	
<p>Scenario</p> <p>The local community center, "Harbor Light Community Center," currently has a basic website that provides information about its services, events, and educational programs. While the website is functional, it lacks semantic structure, accessibility features, and modern web practices that could enhance user experience and accessibility. You, as an aspiring web developer, have volunteered to revamp the website.</p>	
<p>Your goal is to apply your understanding of semantic markup, accessibility, and HTML best practices to make the website more informative, accessible, and user-friendly for everyone in the community.</p>	
<p>Instructions</p>	

Follow the instructions below to create the webpage step by step:

1. Semantic HTML Implementation

- Convert the first `<div>` that includes the community center's logo and welcome message into a `<header>` element.
- Transform the second `<div>` with textual navigation into a `<nav>` element containing a list (``) of navigation links (`` with `<a>` tags). Assign `href` attributes to these links for in-page navigation.

2. Main Content Structure

- Enclose the content starting from "About Us" to "Join Our Events" in a `<main>` element for the primary content area.
- For each major section ("About Us", "Our Services", "Join Our Events"), replace the `<div>` with a `<section>` element and ensure the use of appropriate headings (`<h2>` instead of `<h1>` for section titles to maintain hierarchy).
- Ensure the event listed in the "Join Our Events" section ("Annual Summer Festival") is enclosed with the `<p>` tag. Separate the name of the event and the time it takes place with a line break. Add importance to the event name using the `` tag.

3. Optimizing Events SEO with Schema.org

- For the event's start date, enclose the date within a `<time>` element, ensuring to use the `datetime` attribute for specifying the machine-readable date format.
- Implement Schema.org's Event microdata in this section for better SEO and structure, wrapping the event details. Start with a `<section>` element attributed with `itemscope` and `itemtype="http://schema.org/Event"`. Make sure that the description and start date of the event are marked up with `itemprop="description"` and `itemprop="startDate"`, respectively.

4. Contact Section and Footer

- Convert the last `<div>` into a `<footer>` element.
- Add an actual email link using `info@harborlight.com` and the `mailto` protocol in the "Contact Us" section for direct email communication.
- Add a paragraph at the end of the `<footer>` to include the copyright symbol followed by the year and the organization's name: "© 2050 Harbor Light Community Center".

5. Accessibility Enhancements

- Apply descriptive `alt` attributes to the `logo.jpg` and `community-center.jpg` images ("Harbor Light Community Center Logo" and "Harbor Light Community Center People" respectively).
- Add the `navigation` ARIA role to the navigation for better accessibility.
- For the decorative banner added to the website, ensure it's correctly marked to be ignored by screen readers to enhance accessibility – apply the `aria-hidden="true"` attribute to the `` tag of the decorative banner. Ensure the `alt` attribute is set to an empty string (`alt=""`) to reinforce that this image does not convey essential information.

6. Adding Anchor Links for Navigation

- Assign unique IDs to each section (`id="about"`, `id="services"`, `id="events"`, and `id="contact"`) corresponding to the navigation links.
- Add anchor links by updating the `<nav>` links to point to these IDs, enabling smooth scrolling to each section.

7. Replace Deprecated Tag and Introduce CSS

- Locate and remove the deprecated `` tag. In the `<head>` section of your HTML, add an internal stylesheet (`<style>` element). Within this stylesheet, set the font style for the `<body>` element to ensure all text inherits this style, effectively replacing the visual effect previously applied with the `` tag.
- Remove the deprecated `<center>` tag and apply CSS for centering and

spacing:

- Wrap the webpage image logo element in a `<div>` container.
- In the `<style>` block of the `<head>` section, define a class named `.center-and-space-content`. The class should center the content horizontally within its `<div>` container (use the `text-align: center;` property) and introduce padding for both vertical and horizontal spacing (use the `padding: 10px;` property), enhancing the visual layout.

8. Testing and Review

- Validate the HTML to ensure it meets web standards.
- Test for accessibility, ensuring all content is accessible and navigable.
- Experiment, experiment, experiment!

4. Output

BEFORE OPTIMIZATION

HTML

```
<!DOCTYPE html>
<html>
<head>
    <title>Harbor Light Community Center</title>
</head>
<body>
    <font face="Arial, sans-serif">
        <div>
            <center>
                Welcome to Harbor Light Community Center</center>
        </div>
        <div>
            Home | About | Services | Events | Contact
        </div>
        <div class="banner">
            
        </div>
        <div>
            <h1>About Us</h1>
```

```

<p>The Harbor Light Community Center has been at the heart of our community for over 30 years, offering a wide range of services and programs designed to support and enrich the lives of our residents.</p>
<p></p>
</div>
<div>
    <h1>Our Services</h1>
    <p>From educational workshops and sports leagues to wellness programs and art classes, our services are tailored to meet the diverse needs of our community members.</p>
</div>
<div>
    <h1>Join Our Events</h1>
    <p>Our community center is a hub of activity, hosting events throughout the year. Don't miss our annual summer festival for fun, food, and festivities for all ages.</p>
    <br>
    Annual Summer Festival:
    Starts: July 20, 2050
</div>
<div>
    Contact Us
    <p>Have questions or want to get involved? Email us!</p>
</div>
</font>
</body>
</html>

```

AFTER OPTIMIZATION

```

HTML
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Harbor Light Community Center</title>
    <style>
        body {
            font-family: Arial, sans-serif;
        }
        .center-and-space-content {
            text-align: center; /* Centers inline or inline-block content within the div */
            padding: 10px; /* Adds padding around the content inside the div */
        }
    </style>
</head>
<body>
    
    <h1>Our Services</h1>
    <p>From educational workshops and sports leagues to wellness programs and art classes, our services are tailored to meet the diverse needs of our community members.</p>
    <h1>Join Our Events</h1>
    <p>Our community center is a hub of activity, hosting events throughout the year. Don't miss our annual summer festival for fun, food, and festivities for all ages.</p>
    <br>
    Annual Summer Festival:
    Starts: July 20, 2050
</body>
</html>

```

```
        }
    </style>
</head>
<body>
    <header>
        <div class="center-and-space-content">
            
            <p>Welcome to Harbor Light Community Center</p>
        </div>
    </header>

    <nav role="navigation">
        <ul>
            <li><a href="#about">About</a></li>
            <li><a href="#services">Services</a></li>
            <li><a href="#events">Events</a></li>
            <li><a href="#contact">Contact</a></li>
        </ul>
    </nav>

    <!-- Decorative banner marked to be ignored by screen readers -->
    <div class="banner">
        
    </div>

    <main>
        <section id="about">
            <h2>About Us</h2>
            <p>The Harbor Light Community Center has been at the heart
of our community for over 30 years, offering a wide range of services
and programs designed to support and enrich the lives of our
residents.</p>
            <p></p>
        </section>

        <section id="services">
            <h2>Our Services</h2>
            <p>From educational workshops and sports leagues to wellness
programs and art classes, our services are tailored to meet the diverse
needs of our community members.</p>
        </section>

        <section id="events" itemscope
itemtype="http://schema.org/Event">
```

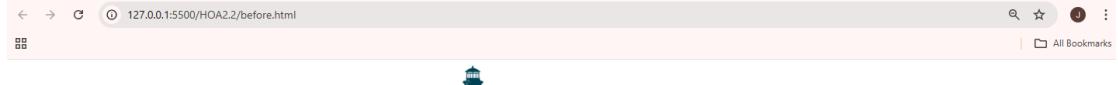
```

<h2>Join Our Events</h2>
<p itemprop="description">Our community center is a hub of activity, hosting events throughout the year. Don't miss our annual summer festival for fun, food, and festivities for all ages.</p>
<p><strong>Annual Summer Festival:</strong> <br>
Starts: <time itemprop="startDate" datetime="2050-07-20">July 20, 2050</time>
</p>
</section>
</main>

<footer>
<h2 id="contact">Contact Us</h2>
<p>Have questions or want to get involved? Email us at <a href="mailto:info@harborlight.com">info@harborlight.com</a>.</p>
<p>&copy; 2050 Harbor Light Community Center</p>
</footer>
</body>
</html>

```

BEFORE OUTPUT



Our Services

From educational workshops and sports leagues to wellness programs and art classes, our services are tailored to meet the diverse needs of our community members.

Join Our Events

Our community center is a hub of activity, hosting events throughout the year. Don't miss our annual summer festival for fun, food, and festivities for all ages.

Annual Summer Festival: Starts: July 20, 2050

Contact Us

Have questions or want to get involved? Email us!

AFTER OUTPUT



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

About Us

The Harbor Light Community Center has been at the heart of our community for over 30 years, offering a wide range of services and programs designed to support and enrich the lives of our residents.

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Starts: July 20, 2050

Contact Us

Have questions or want to get involved? Email us at info@harborlight.com.

© 2050 Harbor Light Community Center

5. Supplementary Activity

Why is the improved website better? (Cite specific points/differences between the original and improved website) 3-5 sentences.

The first visible difference is the arrangement of elements on the updated code is better and we can see that the different relevant elements are grouped together. Also we can see more emphasis on the different texts such as the emails, contacts and even the navigation elements on the page. In terms of the program itself or the code, it is also better since the updated html uses proper markups for each section of the website making it to have better SEO. This enables the website to be more visible for the right people when they search something related to this website.

Conclusion

After performing this activity I was able to learn the usage of semantic markups in HTML. This activity

helped me understand that in order to improve the website's accessibility we can use different semantic markups so that we can cater to the users who have a disability. Also this activity helped me learn about SEO in html which is important for improving the visibility of the site towards users when searching relevant data to the website. Through this I was able to compare the difference between a website that has no semantic markup and one that has and I can say that using semantic markups not only improves the presentation of elements in the website but it also gives meaning to each element on our website when evaluating the codebase.