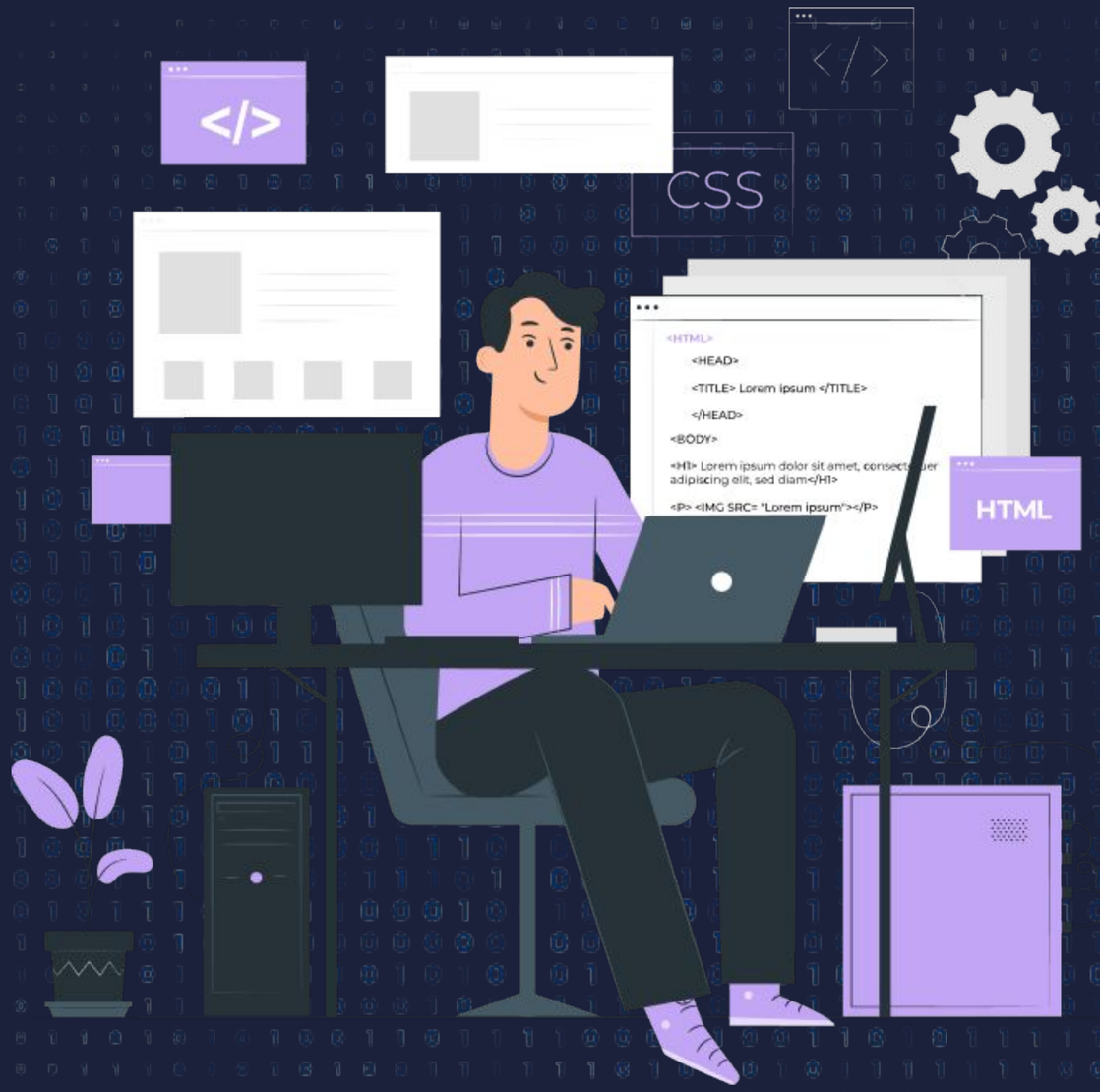
PW SKILLS

Accessibility in HTML

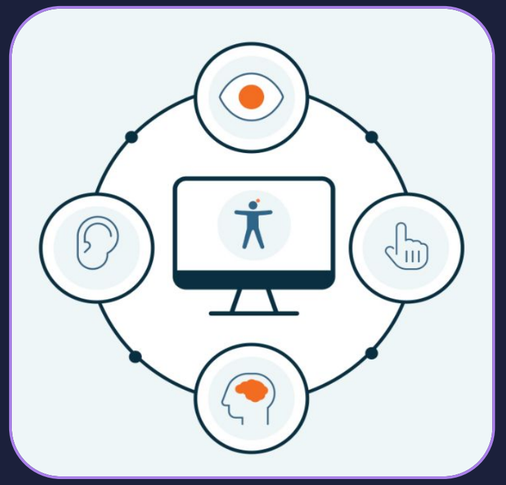


Topics

- What is Web Accessibility?
- Several ways to Improving accessibility in html.
- Keyboard accessibility

What is web accessibility?

Web accessibility refers to the practice of designing and developing websites, web applications, and other digital content that can be accessed and used by people with disabilities or different needs, without barriers or limitations.



Assistive Devices

There are some assistive devices which play a major role in providing accessibility.

1. **Screen Reader :** A screen reader is a software that reads out loud the content of a web page to individuals who are visually impaired. It can also interpret and communicate information about graphics, multimedia, and other elements on the page.

2. **Voice recognition software:** Voice recognition software enables users to navigate web pages and input text using voice commands. This technology is particularly useful for individuals with mobility impairments or those who have difficulty using a keyboard or mouse.

3. **Keyboard alternatives:** Keyboard alternatives such as sip-and-puff devices, head-tracking devices, and eye-tracking devices allow individuals with physical disabilities to navigate and interact with web pages without the use of a traditional keyboard or mouse.

Text content Accessibility

The **screen reader reads** each content out as you progress through the content, notifying you **what is heading** and **what is a paragraph**.

```
<h2>My subheading</h2>
<p>
  This is the first subsection of my document. I'd love people to be able to find
this content!
</p>
<h2>My 2nd subheading</h2>
<p>
  This is the second subsection of my content, which I think is more interesting
than the last one.
</p>
```

Page layouts Accessibility

Utilise proper sectioning elements to encapsulate your main navigation (<nav>), footer (<footer>), repeated content units (<article>), and other relevant content.

These elements offer additional semantics to screen readers and other assistive tools, providing users with more context and information about the content they are browsing.

```
<header>
  <h1>Header</h1>
</header>

<nav>
  <!— main navigation in here —>
</nav>

<!— Here is our page's main content —>
<main>
  <article>
    <h2>Article heading</h2>
    <!— article content in here —>
  </article>
</main>

<footer>
  <!— footer content in here —>
</footer>
```

UI Control Accessibility

Define links, buttons, form elements, appropriately with proper labels using **<label>** tag.

```
<— Link --!>
<p>This is a link to <a
href="https://www.mozilla.org">Mozilla</a>.</p>

<— buttons -!>
<p>
  <button data-message="First button">Click here!</button>
  <button data-message="Second button">Click right here!</button>
  <button data-message="Third button">Submit!</button>
</p>
```

Alt attribute

The **alt** attribute is an important attribute in HTML that is used to provide alternative text for an image if the image cannot be displayed or if the user is using a screen reader to access the page.

```
<img src="sample.jpg" alt="A sample image">
```

Title attribute

The title attribute is an important attribute in HTML that can be used to provide additional information about an element, such as a link or an image.

```
<h1 title="This is the h1 tag">Hover me</h1>
```

Keyboard Accessibility

Those who cannot use a mouse, are able to navigate and interact with web content using only a keyboard.

```
<div data-message="First button" tabindex="0" role="button">
  Click here!
</div>
<div data-message="Second button" tabindex="0" role="button">
  Click right here!
</div>
<div data-message="Third button" tabindex="0" role="button">
  Submit here
</div>
```

Keyboard Accessibility

Basically, the **tabindex** attribute is primarily intended to allow tabbable elements to have a custom tab order (specified in positive numerical order), instead of just being tabbed through in their default source order.

There are two additional options available for tabindex:

1. **tabindex="0"** - Allows elements that are not usually able to be focused via the keyboard to become focusable.

2. tabindex="-1" - Enables elements that are not typically focusable to receive focus programmatically, such as through JavaScript, or as the target of links.

ARIA

ARIA stand for The Accessible Rich Internet Applications (ARIA)

It comprises **roles** that establish methods for improving the accessibility of web content and web applications, for individuals with disabilities.

Example 1 - List roles **“list”, “listitem”**

```
<div role="list">
  <div role="listitem">List item 1</div>
  <div role="listitem">List item 2</div>
  <div role="listitem">List item 3</div>
</div>
```

For content that comprises an external container enclosing a group of items within it, assistive technologies can recognize the “**list**” and “**listitem**” containers, respectively.

ARIA

Example 2 - **img role**

```
<div role="img" aria-label="Description of the overall image">
  <img src="image1.png" alt="alt text"/>
  <img src="image2.png" alt="alt text" />
</div>
```

The ARIA **img role** can be used to identify multiple elements inside page content that should be considered as a single image.

Similarly, we have other ARIA roles like link roles, grid roles, form roles and many more, we use and study about them as per our requirement.


SKILLS
THANK YOU