

Internet

Think of the internet as a huge web that connects millions of computers around the world. Just like how roads connect different cities, the internet connects different computers, allowing them to share information, like websites, emails, and videos.

How Does The Internet Work

Imagine sending a letter through the post. You write the letter, put it in an envelope, and address it to someone. The letter goes through various post offices and delivery people until it reaches the recipient. The internet works similarly but much faster. When you send data (like a web page), it gets broken into small pieces called packets. These packets travel through different networks and routers to reach their destination.

What is HTTP?

HTTP (Hypertext Transfer Protocol) is like the language that computers use to talk to each other when they want to share web pages. Imagine you're ordering food at a restaurant. You use a menu (HTTP) to tell the waiter (server) what you want. The waiter then brings you your food (web page) based on your order.

Domain Name

A domain name is like a street address for a house. It helps you find a specific website on the internet. For example, "www.google.com" is a domain name that leads you to Google's website, just like how "123 Main Street" leads you to a specific house.

Hosting

Hosting is like renting space for your website on the internet. Just like you need a physical space to open a shop, you need hosting to store your website's files so people can visit it. Web hosting companies provide this space and make your website accessible to everyone.

DNS

DNS (Domain Name System) is like a phone book for the internet. When you type a domain name into your browser, the DNS translates it into an IP address (a series of numbers) so your computer can find the correct server. It's like looking up someone's phone number in a phone book to call them.

Browsers

Browsers are like your window to the internet. They are applications that you use to view and interact with websites. Examples include Google Chrome, Mozilla Firefox, Safari, and Microsoft Edge. Think of them as the remote control that lets you watch different channels (websites) on your TV (computer).

Web Accessibility

Web accessibility is about making sure that everyone, including people with disabilities, can use websites. For example, adding text descriptions to images helps visually impaired users who rely on screen readers. It's like adding ramps and elevators to a building so that everyone can access it.

HTML Tags and Attributes for Accessibility

1. **<alt> Attribute:** Use the `alt` attribute on `` tags to provide alternative text descriptions for images. This helps screen readers describe images to users who are visually impaired.

```

```

2. **<aria-*> Attributes** (Accessible Rich Internet Applications): ARIA attributes enhance the accessibility of web content by adding roles, properties, and states. Examples include `aria-label`, `aria-labelledby`, `aria-describedby`, and more.

```
<button aria-label="Close">X</button>
```

3. **<header>**, **<main>**, **<footer>**, **<nav>**, **<section>**, **<article>**: These semantic HTML5 elements help define the structure of a web page, making it easier for screen readers to navigate and understand the content.

```
<header>
  <nav>
    <!-- Navigation links -->
  </nav>
</header>
<main>
  <article>
    <!-- Main content -->
  </article>
</main>
<footer>
  <!-- Footer content -->
</footer>
```

4. **<label>** and **<input>**: Always associate **<label>** elements with their corresponding **<input>** elements to

improve form accessibility.

```
<label for="name">Name:</label>  
<input type="text" id="name" name="name">
```

5. **<button>**: Use the **<button>** element for interactive buttons instead of using **<div>** or ****. This ensures proper keyboard accessibility and default button behavior.

```
<button type="submit">Submit</button>
```

6. **<fieldset>** **and** **<legend>**: Use these elements to group related form controls and provide a caption for the group, making forms easier to understand.

```
<fieldset>  
  <legend>Personal Information</legend>  
  <label for="name">Name:</label>  
  <input type="text" id="name" name="name">  
</fieldset>
```

7. **<a>**: Ensure that links are meaningful and descriptive. Avoid using "click here" and provide context.

```
<a href="contact.html">Contact Us</a>
```

CSS Properties for Accessibility

1. **Color Contrast:** Ensure sufficient color contrast between text and background to make text readable for users with visual impairments. Use tools like the WebAIM Contrast Checker to test contrast.

```
body {  
  background-color: #ffffff;  
  color: #000000;  
}
```

2. **Focus Indicators:** Make sure focusable elements (like links and buttons) have visible focus indicators, so keyboard users can navigate your site easily.

```
a:focus, button:focus {  
  outline: 2px solid #0000ff;  
}
```

3. **Responsive Design:** Use media queries to ensure your site is accessible on various devices and screen sizes.

```
@media (max-width: 600px) {  
  body {  
    font-size: 16px;  
  }  
}
```

Additional Resources

- **WAI-ARIA (Web Accessibility Initiative – Accessible Rich Internet Applications):** Learn more about ARIA roles, properties, and states [here](#).
- **WCAG (Web Content Accessibility Guidelines):** Follow the guidelines provided by the WCAG to ensure your web content is accessible [here](#).

4.