

# Accessibility Tools / Article 2.0

#blog

#writing

#penta

#web

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## Blurb Space:

- Apples Accessibility Tools
- Chrome's Accessibility Tools
- The one we built (on StackBlitz)
- Wave
- what percent of the population has visual impairment
- Assets
- what MDN says
- My favorite Chrome Extensions:
- Links / Resources:
  - [Monica Artifact](#)
  - [Stackblitz / repo link](#)
  - [pentecost.ai](#)
  - Github repo
    - ◆ [oshkoshbagoshh/penta-accessibility-toolkit: Pentacost.AI Accessibility Toolkit for Web Development and SEO](#)
    - ◆ [cheatsheet](#)
    - ◆ [checklist](#)
  - [Vimeo](#)
  -

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- Apple's Accessibility shortcuts



Tue Jul 30 3:34 AM

## Accessibility Shortcuts

### Vision

- VoiceOver
- Zoom
- Invert Colors
- Color Filters
- Increase Contrast
- Reduce Transparency

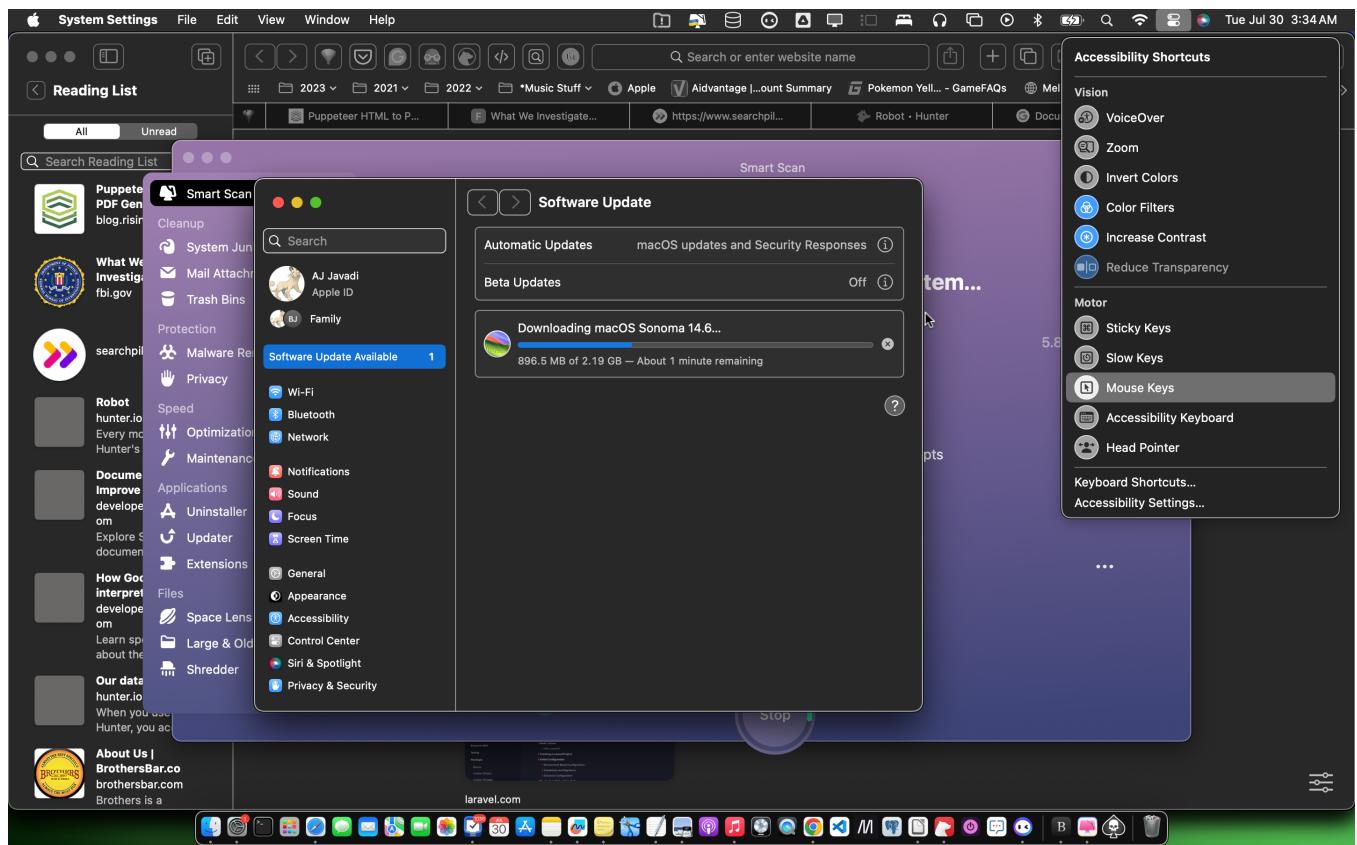
### Motor

- Sticky Keys
- Slow Keys
- Mouse Keys
- Accessibility Keyboard
- Head Pointer

Keyboard Shortcuts...

Accessibility Settings...

...



- Google Chrome's Accessibility:

The screenshot shows the Google Chrome settings page with the 'Accessibility' tab selected. The left sidebar lists various settings categories, and the main content area is dedicated to accessibility options. Key features shown include 'Live Caption' (on), 'Preferred caption language' (set to English), 'Manage languages' (with an 'Add languages' button), 'Hide profanity' (off), 'Live Translate' (off), 'Caption preferences' (checkbox), 'Show a quick highlight on the focused object' (checkbox), 'Navigate pages with a text cursor' (checkbox), 'Get image descriptions from Google' (checkbox), 'Swipe between pages' (checkbox), and 'Add accessibility features' (button).

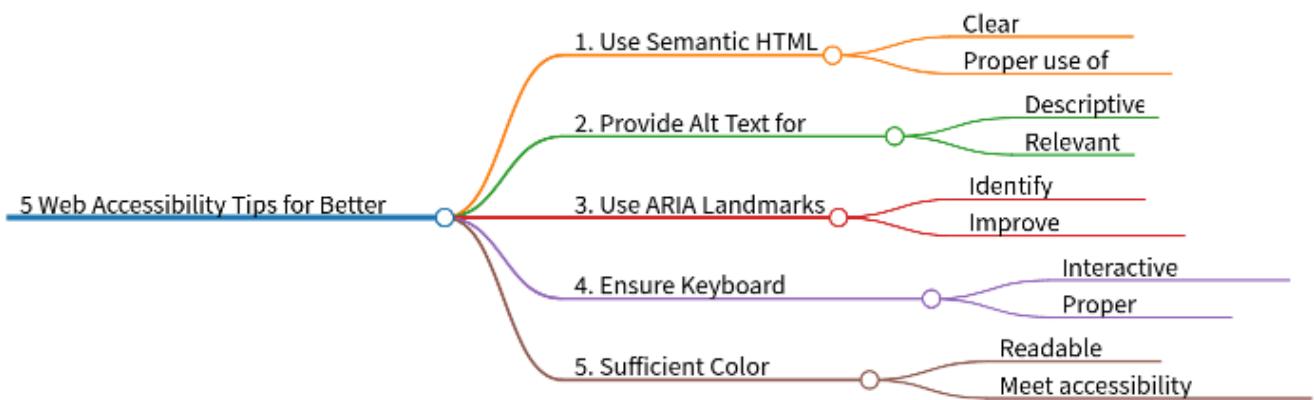
- Chrome Extensions:
- 

## Assets:

- Images:



- mindmap



- poor contrast vs. good contrast
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# Poor Contrast

This screenshot shows a website with poor contrast. The background is white, and the text is black. The main heading "Poor Contrast" is in a bold sans-serif font. Below it is a paragraph of smaller text. On the left, there's a sidebar with various color swatches and labels like "Color palette", "Color hex", and "Color names". The overall design is visually challenging to read.

# Good Contrast

This screenshot shows the same website as above, but with good contrast. The background is dark gray, and the text is white. The main heading "Good Contrast" is in a bold sans-serif font. Below it is a paragraph of smaller text. The sidebar on the left also has white text on a dark background. The high contrast makes the text much easier to read.

## Checklist



## MDN Accessibility

### 7.1 Accessibility basics

Learning outcomes:

- Understand the importance of accessibility, its benefits, and legal requirements.
- Accessibility should be considered from the start of a project.
- Understand the Web Content Accessibility Guidelines (WCAG) conformance criteria.

- Use semantic HTML, accessible link text, form labels, and mobile-friendly input types.
- Make tables accessible using appropriate elements and attributes.
- Use plain language and provide definitions when needed.
- Understand the purpose of audio transcripts and text tracks.
- Ensure keyboard accessibility, including built-in browser controls and appropriate use of accesskey and tabindex.

My Not... ▾

July 2024

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1. Web Accessibility cheat sheet ([PDF](#))  
 - if you subscribe, you get to download it for free  
 - it's also a blog post on Medium, daily dev, dev.to, [pentecost.ai/blogs](https://pentecost.ai/blogs)

2. Site Clone / Copy

3. [SEO](#) / Web Dev Report / plan  
 - PDF Whitepaper  
 - turn spreadsheet into an app (maybe...)

## Pentecost AI - Website Accessibility Checklist

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# Website Accessibility Checklist

## Common Accessibility Issues to Address

- [ ] Improve color contrast
- [ ] Add alternative text for images
- [ ] Make forms accessible
- [ ] Ensure responsive design
- [ ] Implement keyboard navigation
- [ ] Use proper heading structure
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- [ ] Make PDFs and other documents accessible
- [ ] Add captions and transcripts for multimedia
- [ ] Provide alternatives to CAPTCHA
- [ ] Create consistent navigation
- [ ] Allow sufficient time for user interactions
- [ ] Implement skip navigation

## ## Benefits of Improving Website Accessibility

- [ ] Increased user base and market reach
- [ ] Enhanced SEO performance
- [ ] Improved user experience for all
- [ ] Legal compliance and risk mitigation
- [ ] Better mobile experience
- [ ] Improved brand image and corporate social responsibility
- [ ] Cost savings in the long run
- [ ] Innovation and better design
- [ ] Improved website performance
- [ ] Higher conversion rates
- [ ] Future-proofing your website

## ## Steps to Improve Website Accessibility

- [ ] Conduct an accessibility audit
  - [ ] Use automated tools (e.g., WAVE, aXe)
  - [ ] Perform manual testing with keyboard and screen readers
- [ ] Implement proper semantic HTML
  - [ ] Use appropriate heading levels (H1, H2, H3, etc.)
  - [ ] Utilize semantic elements (nav, main, article, etc.)
- [ ] Provide alternative text for images
  - [ ] Add descriptive alt text to meaningful images
  - [ ] Use empty alt attributes for decorative images
- [ ] Ensure keyboard accessibility
  - [ ] Make all functionality available via keyboard
  - [ ] Implement a logical tab order
- [ ] Improve color contrast
  - [ ] Use contrast checking tools
  - [ ] Don't rely solely on color to convey information

- [ ] Create accessible forms
  - [ ] Label all form fields properly
  - [ ] Provide clear error messages and instructions
- [ ] Add captions and transcripts
  - [ ] Provide captions for videos
  - [ ] Include transcripts for audio content
- [ ] Implement ARIA when necessary
  - [ ] Use ARIA roles and attributes for complex widgets
- [ ] Test with real users
  - [ ] Involve people with disabilities in testing
- [ ] Stay updated on accessibility guidelines
  - [ ] Familiarize yourself with WCAG
  - [ ] Keep up with evolving accessibility standards

## ## Resources to Utilize

- [ ] Explore WebAIM (<https://webaim.org/>)
- [ ] Review W3C Web Accessibility Initiative (<https://www.w3.org/WAI/>)
- [ ] Check out The A11Y Project (<https://a11yproject.com/>)
- [ ] Install Axe DevTools browser extension
- [ ] Download and test with NVDA screen reader

Remember: Improving website accessibility is an ongoing process. Start with the most critical issues and gradually work towards a fully accessible website.

## MDN Accessibility Basics:



Certainly! I'll provide bullet point summaries for each of the main categories that MDN suggests we should focus on for web accessibility:

**1. Accessibility basics:**

- Understand the importance of accessibility for all users
- Consider accessibility from the start of a project
- Use semantic HTML for better built-in accessibility
- Provide alt text for images
- Use clear and descriptive link text
- Label form elements properly
- Make tables accessible with proper structure
- Use simple, plain language
- Provide transcripts and captions for audio/video content
- Ensure keyboard accessibility

**2. Accessible styling:**

- Ensure text is well-laid out, consistent, and legible
- Consider large-type interfaces for visually impaired users
- Check and maintain proper color contrast
- Provide high-contrast modes
- Use appropriate :focus and :hover styles
- Use animation subtly and allow users to turn it off
- Be careful when hiding content to maintain accessibility

**3. Accessible JavaScript:**

- Avoid overusing JavaScript
- Implement unobtrusive JavaScript as a usability enhancement

- Use events sensibly to not exclude specific control types
  - Ensure functionality works without relying solely on JavaScript
4. Assistive technology:
- Understand different types of assistive technologies and their users
  - Consider the importance of source order in HTML
  - Be aware of the accessibility layer in browsers
  - Learn to test with screen readers on desktop and mobile
  - Familiarize yourself with other assistive technologies (e.g., alternative keyboards, pointing devices, magnifiers)
  - Use accessibility auditing tools for testing
5. WAI-ARIA:
- Understand the purpose of WAI-ARIA for providing semantics to non-semantic HTML
  - Follow the first rule of ARIA: use native HTML elements when possible
  - Learn the basic syntax: roles, properties, and states
  - Implement landmarks and signposting
  - Enhance keyboard accessibility
  - Use live regions to announce dynamic content updates

These categories cover the main areas of focus for creating accessible web content according to the MDN curriculum.

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## Outline

- Thank you for providing me with the search results. I've gathered some valuable information about accessibility statistics and the importance of web accessibility. Now, let me create an outline for your paper on the importance of Accessibility from a Web Developer's perspective and ethical site design. I'll present this outline to you for review before we proceed with writing the content.

Proposed Outline:

1. Introduction (150 words)

  - Definition of web accessibility
  - Importance of accessibility in modern web development
2. The Scope of Accessibility Needs (250 words)

  - Statistics on the percentage of the population with disabilities
  - Types of disabilities affecting web use
3. Web Accessibility Guidelines and Standards (200 words)

  - Introduction to WCAG (Web Content Accessibility Guidelines)
  - Legal requirements and ethical considerations
4. Common Accessibility Issues in Web Design (300 words)

  - Visual impairments and color blindness
  - Hearing impairments
  - Motor disabilities
  - Cognitive disabilities
5. Best Practices for Accessible Web Design (350 words)

  - Semantic HTML structure
  - Proper use of ARIA attributes
  - Keyboard navigation
  - Color contrast and text readability
  - Alternative text for images
6. Tools and Techniques for Testing Accessibility (250 words)

  - Automated testing tools
  - Manual testing methods
  - User testing with individuals with disabilities
7. The Business Case for Accessibility (200 words)

  - Increased user base and market reach
  - Improved SEO and user experience
  - Legal compliance and risk mitigation
8. Ethical Considerations in Accessible Design (250 words)

  - Inclusivity and equal access to information

- Social responsibility of web developers
  - Creating a more accessible digital world
9. Conclusion (150 words)
- Recap of the importance of web accessibility
  - Call to action for web developers to prioritize accessibility

Total word count: 2100 words

Does this outline meet your expectations for the paper? Would you like to make any changes or additions before we proceed with writing the content?

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## Research

-  **Statistics on Population Impairments** Around 15% of the world's population experiences some form of disability, which underscores the importance of designing websites with accessibility in mind. Disabilities can range from visual impairments, hearing loss, motor disabilities, cognitive impairments like dyslexia, and more. [source](#)

## Importance of Accessibility in Web Development

When discussing the importance of accessibility from a web developer's perspective, it's crucial to understand the scale of the population that requires accessibility tools. Various studies and reports provide insights into the prevalence of disabilities and impairments that necessitate accessible web design.

### Prevalence of Disabilities

According to the World Health Organization, approximately **1.3 billion people**, or **16% of the world's population**, experience some form of disability. This includes a wide range of impairments, such as visual impairments (including color blindness), hearing impairments, and cognitive disabilities like

ADHD and dyslexia [Disability Important Accessibility Statistics to Know | Acquia](#). In the United States alone, about **42.5 million people**, which is roughly **13% of the civilian noninstitutionalized population**, have a disability [For Disability Pride Month, 8 facts about Americans with disabilities ...](#) [Disability Rates Higher in Rural Areas Than Urban Areas.](#)

## Types of Impairments

1. **Visual Impairments:** This includes color blindness, which affects around **1 in 12 men and 1 in 200 women**. Web developers should ensure that color contrast is sufficient and that information is not conveyed solely through color.
2. **Hearing Impairments:** Approximately **15% of American adults** report some trouble hearing, which emphasizes the need for captions and transcripts for audio and video content [For Disability Pride Month, 8 facts about Americans with disabilities ....](#)
3. **Cognitive Disabilities:** Conditions such as ADHD and dyslexia affect a significant portion of the population. For instance, dyslexia affects about **5-10% of the population**, highlighting the need for clear and simple navigation and content [For Disability Pride Month, 8 facts about Americans with disabilities ....](#)

## Ethical Site Design Practices

To follow ethical site design practices, web developers should:

- **Implement ARIA (Accessible Rich Internet Applications)** roles to enhance accessibility for screen readers.
- **Use semantic HTML** to ensure that assistive technologies can interpret the content correctly.
- **Provide alternative text for images** and captions for videos to accommodate users with visual and hearing impairments.
- **Ensure keyboard navigability** for users who cannot use a mouse.

By understanding the demographics of users with disabilities and implementing these practices, web developers can create more inclusive and accessible web experiences. This not only adheres to ethical standards but also expands the reach of their websites to a broader audience.

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# **Version 3 (with outline)**

Title: The Importance of Accessibility from a Web Developer's Perspective and Ethical Site Design

In today's digital age, web accessibility is a crucial aspect of modern web development. As web developers, it is our responsibility to ensure that websites are accessible to all users, regardless of their abilities. In this article, we will explore the significance of accessibility from a web developer's perspective and ethical site design.

## **Introduction**

Web accessibility refers to the inclusive practice of removing barriers that prevent interaction with, or access to websites, by people with disabilities. It encompasses all disabilities that affect access to the web, including visual, auditory, physical, speech, cognitive, and neurological disabilities. The importance of accessibility in modern web development cannot be overstated. By making websites more accessible, we can ensure that all users have equal access to information and functionality.

## **The Scope of Accessibility Needs**

According to the World Health Organization, over a billion people, or approximately 15% of the world's population, live with some form of disability. This highlights the significant impact that accessibility has on a large portion of the global population. Disabilities affecting web use can range from visual impairments and color blindness to hearing impairments, motor disabilities, and cognitive disabilities.

## **Web Accessibility Guidelines and Standards**

The Web Content Accessibility Guidelines (WCAG) provide a set of recommendations for making web content more accessible. Adhering to these guidelines not only ensures legal compliance but also demonstrates ethical consideration for all users, regardless of their abilities.

## **Common Accessibility Issues in Web Design**

Visual impairments and color blindness can affect how users perceive and interact with web content. Similarly, hearing impairments may impact the ability to consume audio content. Motor disabilities can affect the use of traditional input devices, while cognitive disabilities may require additional support for comprehension and navigation.

## **Best Practices for Accessible Web Design**

Implementing semantic HTML structure, using ARIA attributes appropriately, enabling keyboard navigation, ensuring color contrast and text readability, and providing alternative text for images are essential best practices for creating accessible web designs.

## **Tools and Techniques for Testing Accessibility**

Automated testing tools, manual testing methods, and user testing with individuals with disabilities are crucial for identifying and addressing accessibility issues in web design.

## **The Business Case for Accessibility**

Prioritizing accessibility not only expands the user base and market reach but also improves search engine optimization (SEO) and enhances overall user experience. Additionally, it mitigates legal risks associated with non-compliance.

## **Ethical Considerations in Accessible Design**

Inclusivity and equal access to information are fundamental ethical considerations in accessible design. As web developers, we have a social responsibility to create a more accessible digital world for all individuals.

## **Conclusion**

In conclusion, the importance of web accessibility from a web developer's perspective cannot be overstated. It is essential to prioritize accessibility in web design to ensure that all users have equal access to online information and services. As web developers, we must embrace the ethical responsibility of creating inclusive digital experiences for everyone.

By prioritizing accessibility in our work, we can contribute to a more inclusive and equitable online environment. Let's commit to making accessibility a top priority in our web development efforts and strive to create a digital world that is accessible to all.

In summary, the significance of accessibility from a web developer's perspective and ethical site design cannot be overlooked. Let's take proactive steps to prioritize accessibility and create a more inclusive digital landscape for all users.

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#### **Description of resources:**

Accessibility in web development is a crucial aspect that cannot be overlooked. It ensures that everyone, regardless of any disabilities or impairments, can access and use the web. In this article, we will explore various accessibility tools and resources that can help developers create more inclusive and user-friendly websites.

One of the most widely used accessibility tools is Apples Accessibility Tools. These tools provide developers with the necessary resources to test and improve the accessibility of their websites and applications on Apple devices.

Chrome's Accessibility Tools is another valuable resource for developers. It offers a range of features and extensions that can help identify and fix accessibility issues on websites viewed in the Chrome browser.

In addition to these established tools, there are also newer options available. For example, the team at StackBlitz has developed their own accessibility tool, which is designed to assist developers in creating accessible web content.

Wave is another popular accessibility evaluation tool that provides visual feedback about the accessibility of your web content. It offers a range of features to help identify and resolve accessibility issues.

It's important to consider that approximately 15% of the global population has some form of visual impairment. This statistic highlights the significance of creating websites that are accessible to all

users, regardless of their visual abilities.

When it comes to web development, assets such as images, videos, and audio files play a significant role. It's essential to ensure that these assets are accessible to users with disabilities. This can be achieved through the use of alternative text, captions, and audio descriptions.

MDN (Mozilla Developer Network) provides valuable information and resources on web development, including accessibility best practices. It offers guidance on creating accessible web content and ensuring that websites are usable by all individuals.

My favorite Chrome Extensions for accessibility include tools like Axe, which helps identify and resolve common accessibility issues on web pages. Another helpful extension is NoCoffee, which simulates various visual impairments to help developers understand how their websites may appear to users with different visual abilities.

In addition to these tools and resources, there are several links and resources that developers can explore to further enhance their understanding of web accessibility. For example, Monica Artifact provides insights into creating accessible web content, while StackBlitz offers a platform for testing and developing accessible web applications.

[Pentecost.ai](#) is another valuable resource that provides tools and guidance for improving web accessibility. The associated GitHub repository offers access to a range of resources, including cheat sheets and checklists for creating accessible web content.

Vimeo also offers a range of tutorials and resources on creating accessible video content, which can be invaluable for developers looking to ensure that their multimedia assets are inclusive and accessible to all users.

In conclusion, accessibility in web development is an essential consideration for creating inclusive and user-friendly websites. By utilizing the various accessibility tools and resources available, developers can ensure that their web content is accessible to all individuals, regardless of any disabilities or impairments. With approximately 15% of the global population experiencing visual impairment, it's crucial to prioritize accessibility in web development to create a more inclusive online experience for everyone.