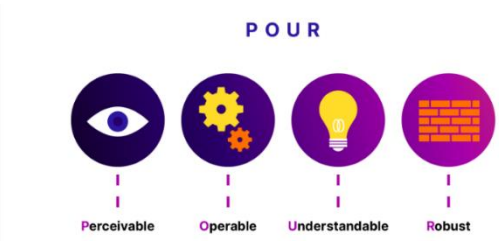
Task 1 – Research Document

Web Accessibility Research (KU3)

In today's digital world, the internet has become an important platform for communication, education, and business, also making websites accessible to all people, regardless of ability or disability. It is both a legal requirement and a moral necessity (Reid, 2022; Webmonster, 2023; WillowTree Staff, 2015). Web accessibility is the process of creating and constructing websites that are usable by everyone, including individuals with visual, auditory, motor, or mental health conditions (Reid, 2022; WebMonster, 2023; WillowTree Staff, 2015). This accessibility assures that all users have equal access to information and functions, hence creating a more egalitarian digital environment.

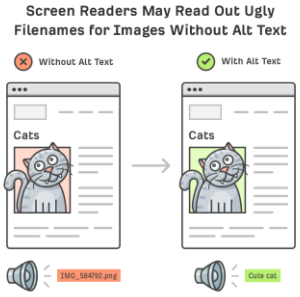
Principles of Web Accessibility

The Web Content Accessibility Guidelines (WCAG) describe four core principles known as POUR Principles of Accessibility to guide accessible web:



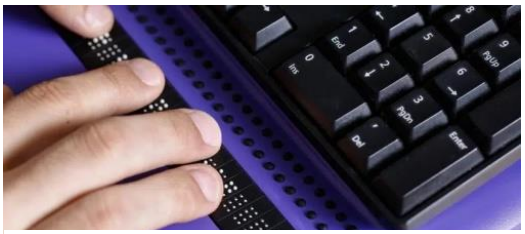
The four principles of web accessibility: Perceivable, Operable, Understandable, and Robust (POUR) (Pantheon, 2024)

Perceivable: Information and user interface components must be accessible to users. This means that the material should be accessible by sight, hearing, or touch. This includes adding text alternatives for non-text items like images. This allows screen readers to interact with visually challenged people. The usage of alt text for photos is an important example, as it allows screen readers to convey visual material to individuals with visual impairments (WillowTree Staff, 2015; Pantheon, 2024).



Alternative text ensures visually impaired users can understand images through screen readers (Hardwick, 2020)

Operable: The user interface components and navigation should be functional. Users should be able to navigate and engage with a website by a variety of input methodologies, including keyboards and assistive technologies. As an example, ensuring that all interactive features are available with keyboard navigation is crucial for users who are unable to use a mouse (Reid, 2022; Weaccess.ai, 2025).



Keyboard-friendly navigation allows users with motor disabilities to browse websites without a mouse. (Miller, 2022)

Understandable: Information and the operation of the user interface must be understandable. This involves making content readable and predictable, guaranteeing that users can understand and work the website effectively. For example, using clear and concise language, high contrast colours, stable navigation, and offering helpful error messages which impact to a more understandable user experience (WillowTree Staff, 2015).

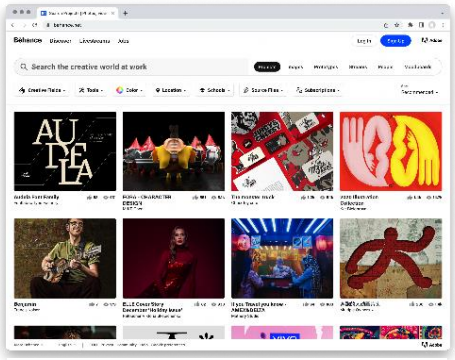
Clear and simple language improves website usability for all users, including those with cognitive disabilities. (UXPin, 2023)

Robust: The content must be strong enough to be clarified consistently by a wide range of user agents, including assistive technologies. This guarantees that the material stays available even as technology evolves and changes. For example, applying appropriate HTML markup and sticking to web standards improves interaction across many platforms and devices (WillowTree Staff, 2015; Burt, 2023).

Following web standards ensures websites remain accessible across various devices and assistive technologies (Burt, 2023).

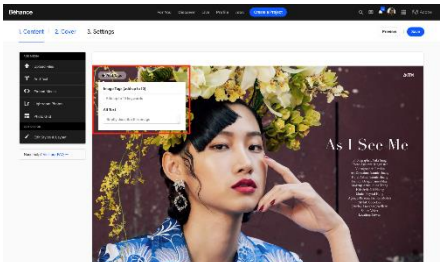
Application of Accessibility Principles in Websites

The content must be robust enough to be consistently clarified by various types of user agents, including assistive technologies. This ensures that the material remains available even as technology advances and changes. Using proper HTML markup and following to web standards enhances engagement across several platforms and devices (WillowTree Staff, 2015).



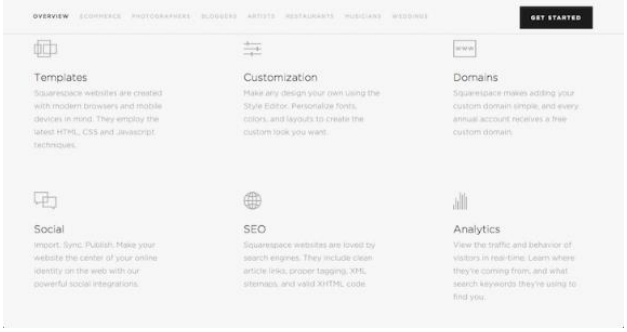
A screenshot of the Behance website.

One example of an accessible website is Behance, a creative platform. Behance offers alternative text for images, which allows screen readers to easily convey visual content to users with visual impairments. Additionally, the website offers keyboard navigation, allows users to view portfolios and projects without using a mouse. These elements are consistent with the perceivable and operable principles of web accessibility (Reid, 2022; WebMonster, 2023; WillowTree Staff, 2015).



Behance incorporates accessibility features like alternative text and keyboard navigation, making it easier for all users to browse.

On the other hand, some websites, such as Squarespace.com, fail to offer essential accessibility features. For instance, some platforms use low contrast text against the background colours which makes it difficult for people who have visual impairments to understand the content. Furthermore, without keyboard navigation support, people with motor disabilities could find it difficult to interact effectively with the site. These flaws highlight the need of following the perceivable and operable principles (Reid, 2022; WillowTree Staff, 2015).



This example from Squarespace.com shows low contrast text, making it hard to read for visually impaired users, highlighting the need for accessible design.

When developing my website, I aim to include the following accessibility features:

Alternative Text for Images: I will make sure that all pictures contain informative alt text so that screen readers can provide visual information to those who have visual impairments. This technique corresponds with the perceivable principle and improves the general accessibility of the website.

High Contrast Design: The use of strong contrast between text and background colours will improve the reading for those with visual impairments. This approach strengthens the perceivable principle by making the content clearer.

Consistent Layout and Navigation: Maintaining the same layout and navigation structure across all pages can assist users understand and trust the site's functionality. This uniformity links with the understandable principle, which improves the user experience.

Responsive Design: Having the website that adjusts with different devices and screen sizes would make it robust and accessible to a larger audience. By following to web standards and best practices, the site will stay operating across several platforms, hence supporting the robust principle.

In conclusion, Web accessibility is an essential feature for modern web design nowadays since it guarantees that all users, regardless of ability, have equal access to and interaction with online content (Miller, 2022; Webmonster, 2023). Developers can build accessible websites for a wide range of users by following to the principles of perceivable, operable, understandable, and robust design (Reid, 2022; Pantheon, 2024). Adding accessibility features on websites not only expands the platform's reach but also shows a commitment to diversity and social responsibility. As I work on developing my website, using these accessibility principles will be crucial to create a welcome and functioning site for all users.

Bibliography

The Fundraising Coach Contributor (2023). *Web Accessibility: A Nonprofit Website Design Must-Have*. [online] FundraisingCoach. Available at: https://fundraisingcoach.com/2023/11/10/web-accessibility-a-nonprofit-website-design-must-have/.

accessibilityspark. (2023). *The Ultimate Guide to WCAG Audits: Ensuring Web Accessibility Compliance - Accessibility Spark*. [online] Available at: https://accessibilityspark.com/wcag-audit/.

Burt, M. (2023). *A Beginner's Guide to Achieving Web Design Consistency*. [online] Go Fish Digital. Available at: https://gofishdigital.com/blog/guide-design-consistency/.

Hardwick, J. (2020). *Alt Text for SEO: How to Optimize Your Images*. [online] SEO Blog by Ahrefs. Available at: https://ahrefs.com/blog/alt-text/.

Harshita (2023). *Web Accessibility: Creating Inclusive Websites - Stickboy Creative*. [online] Stickboy Creative. Available at: https://stickboycreative.com/web-accessibility-creating-inclusive-websites/.

Marc (2024). *Comprehensive Guide to Website Accessibility with HubSpot CMS*. [online] Huble.com. Available at: https://huble.com/blog/accessibility-in-ux.

Miller, M. (2022). *Is Your Website Navigation Menu Accessible?* [online] AccessiCart. Available at: https://accessicart.com/is-your-website-navigation-menu-accessible/.

Pantheon. (2024). *Deciphering the WCAG: The Complete Guide to Web Accessibility | Pantheon.io*. [online] Available at: https://pantheon.io/learning-center/accessibility.

Rank, S. (2024). *Breadcrumbs*. [online] AudioEye. Available at: https://www.audioeye.com/post/accessible-website-design-examples/.

Reid, M. (2022). *Web Accessibility Checklist, Examples & Best Practices*. [online] UserWay Blog. Available at: https://userway.org/blog/web-accessibility/ [Accessed 10 Mar. 2025].

UXPin (2023). *What is Contrast in Web Design? [+7 Tips How to Use it]*. [online] Studio by UXPin. Available at: https://www.uxpin.com/studio/blog/contrast-in-web-design/.

Weaccess.ai. (2025). *Exploring Web Accessibility: Examples of Accessible Websites*. [online] Available at: https://www.weaccess.ai/blogs/accessibility-example.

webaim.org. (n.d.). *WebAIM: Quick Reference - Web Accessibility Principles*. [online] Available at: https://webaim.org/resources/quickref/.

Webmonster. (2023). *Webmonster*. [online] Available at: https://www.webmonster.com/importance-of-accessibility-in-web-design/ [Accessed 11 Mar. 2025].

WillowTree Staff (2015). *The Four Principles of Accessibility*. [online] willowtreeapps. Available at: https://www.willowtreeapps.com/craft/the-four-principles-of-accessibility.

Zheng, R. (2016). *Learn to Create Accessible Websites with the Principles of Universal Design*. [online] The Interaction Design Foundation. Available at: https://www.interaction-

design.org/literature/article/learn-to-create-accessible-websites-with-the-principles-of-universal-design?srsltid=AfmBOoowOXkmP9cBCVM129Pq3hYw85zf3yQga8mQLa7GyO-H9riVDUGi.