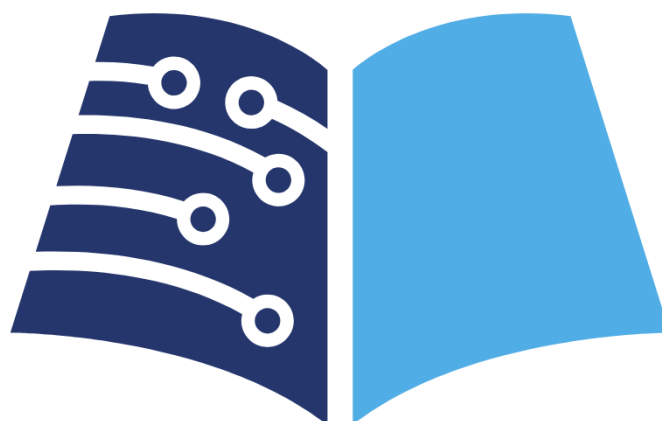




DIGITABILITY

**PROMOTING PEOPLE WITH DISABILITIES' EMPLOYMENT
BY ENHANCING THEIR DIGITAL SKILLS AND COMPETENCES TO SUPPORT
A REMOTE WORKING SCHEME**

Module on: Accessing information online



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A. Accessing information online

Introduction

The development of digital literacy involves as much knowledge of the logic of how the Web works - such as the use of search engines and links - as it does the use of a cognitive component that disregards the fact that one is using an online channel to satisfy one's information need, but at the same time cannot disregard the fact that the abundance of information found online makes the cognitive process itself more complex.

That is why a person mastering a skill such as digital literacy should:

- be familiar with the places online where information can be found;
- be able to use the right keywords to pursue their research;

- make use of tools that deal with the collection of materials from different sources;
- be able to assess the validity of a source, paying particular attention to the phenomenon known as "fake news."

Knowing the main dynamics typical of the web is therefore fundamental, and the functioning of search engines is certainly among them. A user, in fact, cannot consider himself "digitally literate" if he does not know, even at a minimal level, the mechanism behind the generation of search results of a tool such as Google, since the information he can access (based on the keywords entered) depends precisely on the logic behind the so-called "online indexing."

Search engines, therefore, can certainly be considered as the primary online environment in which information can be found. But they are certainly not the only one: from the various wikis, to Quora, passing through Google Scholar, ResearchGate, ScienceDirect without forgetting the TED repository, the tools available to users are really many.

Just as many are also the solutions that allow users not to go in search of content, but to make sure that content reaches users directly: tools such as Feedly, thanks to the ability of users to identify the most authoritative and interesting information sources, facilitate, and not a little, those who are never satiated with learning about and delving into new topics.

Finally, it is interesting to note that today we find ourselves in the same situation as the first generations who had to learn how to apply grammar and syntax appropriately: just as today this is no longer considered a complex task to complete, neither will "using the Internet and information technologies to access, manage, integrate and evaluate information from a wide range of sources accessible through a variety of technological devices" be so in a few years.

In other words, digital literacy is a digital soft skill (for a more in-depth discussion of (digital) skills, please refer to the article *The (digital) skills in the context of digital transformation*) that has now been assimilated into a real basic skill as inescapable as writing, reading and counting: so much so that it is now a curricular skill even in schools. Digital literacy is now also a skill of great importance in the life of organizations. To succeed in bringing innovation, it is increasingly common to make use of projects aimed at generating Open Innovation, a process through which sources, partners and opportunities for external "contamination" are sought that can inspire and innovate the

activities that the organization carries out. With this in mind, knowing how to act a critical and structured reading of information and sources is a basic requirement for each of us.

What is Web Accessibility

Web accessibility means that websites, tools, and technologies are designed and developed so that people with disabilities can use them. More specifically, people can: perceive, understand, navigate, and interact with the Web contribute to the Web

Web accessibility encompasses all disabilities that affect access to the Web, including:

- auditory
- cognitive
- neurological
- physical
- speech
- visual

Web accessibility also benefits people without disabilities, for example:

people using mobile phones, smart watches, smart TVs, and other devices with small screens, different input modes, etc.

older people with changing abilities due to ageing people with “temporary disabilities” such as a broken arm or lost glasses;

people with “situational limitations” such as in bright sunlight or in an environment where they cannot listen to audio;

people using a slow Internet connection, or who have limited or expensive bandwidth.

Accessibility is Important for Individuals, Businesses, Society

The Web is an increasingly important resource in many aspects of life: education, employment, government, commerce, health care, recreation, and more. It is essential that the Web be accessible in order to provide equal access and equal opportunity to people with diverse abilities. Access to information and communications technologies, including the Web, is defined as a basic human right in the United Nations Convention on the Rights of Persons with Disabilities (UN CRPD).

The Web offers the possibility of unprecedented access to information and interaction for many people with disabilities. That is, the accessibility barriers to print, audio, and visual media can be much more easily overcome through web technologies.

Accessibility supports social inclusion for people with disabilities as well as others, such as:

- older people
- people in rural areas
- people in developing countries

There is also a strong business case for accessibility. As shown in the previous section, accessible design improves overall user experience and satisfaction, especially in a variety of situations, across different devices, and for older users. Accessibility can enhance your brand, drive innovation, and extend your market reach.

1.1 The Learning Objectives Covered by Topic

In completing this Topic, the learner will be able to:

Learn how to access information online:

MS Edge

Google chrome

Safari

Firefox

Opera

Search Engines Accessibility Management:

Google

Activate and enable accessibility features related to each specific impairment

2. MS Edge Accessibility for People with Visual Impairments

In the vast landscape of web browsers, Microsoft Edge emerges as a beacon of inclusivity, diligently crafted to provide an accessible online experience for users grappling with visual impairments. This expansive chapter embarks on an immersive exploration, unveiling the myriad accessibility features and functionalities intricately embedded within the architecture of Microsoft Edge. Each facet is meticulously designed to transcend barriers, shaping an elevated and enriching browsing experience for individuals navigating the digital realm with visual challenges.

Screen Reader Harmony:

In the symphony of accessibility, Microsoft Edge orchestrates seamless compatibility with a myriad of popular screen readers. This pivotal feature goes beyond mere functionality; it represents a gateway for users with visual impairments to audibly traverse web pages, access content, and engage with online resources. By fostering a harmonious relationship with screen reading software, Edge dismantles barriers, unlocking the digital world for a diverse spectrum of users.

High Contrast Mode Brilliance:

For those who find solace in heightened color contrast, Microsoft Edge introduces the transformative High Contrast Mode. This feature transcends the visual realm, enhancing visibility by artfully adjusting the color scheme. In doing so, it renders text and graphics on web pages with unparalleled clarity, catering to the nuanced needs of individuals with visual impairments. High Contrast Mode is not merely an adjustment; it's a conduit to a more vibrant and accessible online experience.

Reading View Serenity:

In the pursuit of a serene and clutter-free reading experience, Microsoft Edge champions the innovative Reading View feature. A digital sanctuary, this addition allows users to immerse themselves in the core content of a webpage, liberated from distractions. This feature, tailored for individuals with visual impairments, stands as a testament to Edge's commitment to simplicity, presenting text in a clean, easy-to-read format that transcends the challenges of crowded layouts.

Font Customization and Text Scaling Artistry:

Acknowledging the paramount importance of readability, Microsoft Edge introduces a symphony of customization options for fonts and text scaling. This artistry empowers users to orchestrate their reading experience by adjusting font styles, sizes, and overall text scaling. The result is not just comfort but an accessible and personalized journey through the vast expanse of digital content.

Immersive Image Descriptions:

In the quest to enrich the understanding of visual content, Microsoft Edge unfurls its banner of inclusivity through image descriptions and alt text. This pivotal feature constructs a tapestry of descriptive narratives, providing textual elucidation of images encountered during web exploration. In embracing this feature, Edge amplifies the comprehensibility of the online narrative, offering a richer and more inclusive browsing experience for all users.

As we embark on this journey through the diverse landscape of Microsoft Edge's accessibility features, it becomes evident that the browser is not merely a tool but a gateway to an inclusive digital universe. The features discussed in this expansive chapter embody Microsoft Edge's unwavering commitment to accessibility, ensuring that every user, regardless of visual challenges, can navigate the online world with ease, empowerment, and a sense of belonging.

2.1 Exercises:

Exercise 1: Activate and Test Screen Reader Compatibility

Open Microsoft Edge and navigate to a webpage.

Enable the screen reader of your choice on your operating system.

Explore the webpage using the screen reader to verify compatibility and effective navigation.

Exercise 2: Enable High Contrast Mode

Access Microsoft Edge settings.

Locate the high contrast mode option and activate it.

Visit a webpage to observe how the high contrast mode enhances visibility.

Exercise 3: Utilize Reading View

Open a news article or blog post in Microsoft Edge.

Activate Reading View to simplify the layout.

Compare the standard view with Reading View to appreciate the enhanced readability.

Exercise 4: Customize Fonts and Text Scaling

Navigate to Microsoft Edge settings.

Explore options related to fonts and text scaling.

Adjust font styles, sizes, and scaling to optimize the reading experience.

Exercise 5: Test Image Descriptions

Visit a webpage with images.

Ensure that image descriptions or alt text is enabled in Microsoft Edge settings.

Explore the webpage to experience how image descriptions enhance content understanding.

3. Safari for people with visual impairments

Accessibility is a key component in ensuring an inclusive browsing experience for all users, particularly those with visual impairments. Apple, committed to creating accessible products, integrates several features into its Safari Browser to improve accessibility and enable easy navigation for people with different visual needs.

VoiceOver: The Intuitive Voice Interface

One of the cornerstones of accessibility in Safari is VoiceOver, a sophisticated screen-reading system that opens the door to a screen-less browsing experience. VoiceOver provides detailed voice description of elements on the page, enabling users to navigate effectively through intuitive voice gestures.

To enable VoiceOver on Safari

Go to System Settings on macOS or Settings on iOS.

Select "Accessibility" and then "VoiceOver."

Enable VoiceOver.

Zoom and Contrast: Adjust the View to Your Needs

Safari allows users to adjust zoom settings to magnify text and images, making them easier to read. It also offers the possibility of customising the colour scheme to improve contrast and make it easier to understand the information displayed.

Adjust the zoom level through multi-touch gestures or access the accessibility settings of your device.

Simplified Navigation: Identifying Elements and Links

Safari simplifies navigation for visually impaired users through several features:

Automatic Element Detection: Safari automatically identifies key elements on a page, such as titles, links and buttons, making navigation easier.

Tab Order: Users can navigate between page elements in a logical order, enhancing the browsing experience also with the help of VoiceOver.

Compatibility with Web Standards: ARIA and Alt Text

Safari supports ARIA (Accessible Rich Internet Applications), a technology that improves the accessibility of dynamic web applications. Developers can use ARIA to provide additional information to VoiceOver, improving understanding of interactive elements.

In addition, Safari handles images through alternative text (Alt Text), allowing VoiceOver to accurately describe the visual content.

Accessibility Extensions: Additional Customisation

In addition to its built-in functionality, Safari supports accessibility extensions. Users can find and install extensions to further customise their browsing experience.

3.1 Exercises

To find accessibility extensions on Safari:

Open Safari and go to the 'Safari' menu in the menu bar.

Select 'Safari Extensions' to access the Safari Extension Gallery.

Search for accessibility extensions and install the ones that interest you.

exercises:

Exercise 1: Enable VoiceOver

Objective: To enable the screen-reading system VoiceOver.

Procedure:

Open Settings on your Apple device.

Select "Accessibility."

Find and select "VoiceOver."

Flip the switch to enable VoiceOver.

Exercise 2: Navigating Using VoiceOver

Objective: Use VoiceOver to navigate between elements on a web page.

Procedure:

Open Safari on your device.

Visit a web page of your choice.

Swipe left or right with two fingers to navigate between elements on the page.

Use the double-tap gesture to select a link or button.

Exercise 3: Adjusting the Zoom Level

Objective: Change the zoom level to enlarge text and images.

Procedure:

Open Safari on your device.

Visit a web page with text and images.

Use the two-finger pinch gesture to zoom in or out.

Exercise 4: Customise Contrast

Objective: Adjust contrast settings to improve visibility.

Procedure:

Go to Settings on your Apple device.

Select "Accessibility" and then "Display and Text."

Find and select "Contrast."

Choose a contrast theme that suits your preferences.

Exercise 5: Navigating with Detection Elements

Objective: Make use of the automatic element detection function on a page.

Procedure:

Open Safari and visit a page with different types of elements.

Use VoiceOver to navigate through the elements on the page.

Listen to the automatically provided voice descriptions to identify links, buttons and other elements.

Exercise 6: Installing an Accessibility Extension

Objective: Find and install an accessibility extension to further customise your browsing experience.

Procedure:

Open Safari and go to the 'Safari' menu in the menu bar.

Select 'Safari Extensions' to access the Safari Extension Gallery.

Search for accessibility extensions using the search function.

Select an extension that interests you and click on "Install."

Accessibility is a crucial element in the evolution of web browsers, and Apple is committed to making the Safari Browser inclusive for all categories of users, including people with hearing impairments. In this chapter, we will explore the features and

possibilities of Safari, focusing on tools that make web browsing accessible for those with hearing impairments.

1. Subtitles and Transcripts: Making Content Accessible

Safari is notable for its built-in support for subtitles and transcripts, which improve accessibility for the hard-of-hearing. These features allow users to enjoy audiovisual content, including videos and podcasts, through visual text that accompanies or describes the audio content.

To enable subtitles on Safari, look for the relevant option in the video settings of a website.

2. Visual Vibration: Visually Perceived Notifications

Safari offers the possibility of receiving notifications via visual vibration, a feedback that can be useful for users with hearing disabilities. This allows notifications to be perceived without having to rely on audible signals.

Enable visual vibration in Safari's notification settings to take advantage of this feature.

3. Visual Indicators: Clear Feedback for Users

Safari provides clear visual indicators for various interactions, such as loading a page or opening new tabs. These indicators help users with hearing disabilities understand the status and progress of browsing activities.

Observe the visual indicators in the address bar and tab bar when navigating.

4. Compatibility with Assistive Technologies: Simplified Interaction

Safari is designed to be compatible with various assistive technologies used by people with hearing disabilities. This includes integration with assistive devices, such as cochlear implants and hearing aids, to ensure an optimal browsing experience.

5. Accessibility Extensions: Additional Customisation

To further customise the browsing experience on Safari, users can explore accessibility extensions. However, it is important to note that Safari handles extensions slightly differently than other browsers.

To find accessibility extensions on Safari

Open Safari and go to the 'Safari' menu in the menu bar.

Select 'Safari Extensions' to access the Safari Extension Gallery.

Search for accessibility extensions and install the ones that interest you.

4. FireFox Accessibility for People with Visual Impairments

Accessibility is a fundamental concept in the design of digital products and services, aiming to ensure that everyone, regardless of their abilities, can access and use online resources effectively. In the context of web browsers, FireFox is committed to providing an inclusive experience for people with visual impairments by implementing a range of features and tools designed to enhance access and navigation.

Integrated Screen Readers

One key element in web accessibility is compatibility with screen readers, essential tools for individuals who are blind or visually impaired. FireFox integrates advanced support for screen readers, ensuring that visual information on the web is converted into understandable audio output. This allows users to listen to verbal descriptions of content, facilitating smoother navigation through web pages.

Keyboard and Navigation

Keyboard navigation is crucial for many people with visual impairments. FireFox provides a set of intuitive keyboard shortcuts to ease movement between links, form elements, and different sections of a web page. Additionally, the browser's navigation structure is designed to be understandable through exclusive keyboard use, ensuring a barrier-free experience.

Contrast Enhancement and Color Customization

For individuals with low vision, the contrast between text and background can be a critical factor. FireFox offers color customization options to adapt to individual user needs. Users can adjust contrast and select color combinations that make text display more comfortable and readable.

Image Labels and Descriptions

Images on the web can pose a challenge for people with visual disabilities. FireFox is committed to improving the experience by providing support for the insertion of labels and descriptions for images. This allows screen readers to effectively communicate the content of images, ensuring that even blind users can fully understand the visual context of a web page.

Developer Testing Tools

Web developers play a crucial role in creating accessible experiences. FireFox provides integrated development tools that allow developers to test the accessibility of their web pages. These tools facilitate the correction of any accessibility issues, contributing to ensuring an inclusive web environment for all.

4.1 Exercises

Exercise 1: Using Keyboard Shortcuts for Navigation

Objective: Learn to navigate through pages using FireFox keyboard shortcuts.

Open a New Tab:

Press Ctrl + T to open a new tab in the browser.

Close a Tab:

Select an open tab.

Press Ctrl + W to close the current tab.

Navigate between Open Tabs:

Use Ctrl + Tab to move to the next tab.

Use Ctrl + Shift + Tab to move to the previous tab.

Exercise 2: Accessibility with Screen Reader

Objective: Experience accessibility using a screen reader with FireFox.

Activate the Screen Reader:

Open FireFox.

Press Alt + H, followed by A, to activate the integrated screen reader.

Navigate through a Page:

Visit a webpage of your choice.

Use screen reader commands (usually arrow up/down) to navigate through the content.

Read Alternative Text for Images:

Find an image on a page.

The screen reader should announce the alternative text of the image. Verify if this information is clear and helpful.

Exercise 3: Customizing Colors and Contrast

Objective: Personalize colors and contrast to improve visibility.

Open the Options Menu:

Click on the menu icon (three horizontal lines) in the top-right corner.

Select "Options" or "Preferences."

Modify Colors:

Go to the "General" or "Appearance" section in the options.

Experiment with color options to tailor them to your preferences.

Increase Contrast:

Select "Accessibility" or a similar section in the options.

Increase contrast to enhance readability.

5. Opera Accessibility for People with Visual Impairments

Opera, as a web browser, is committed to ensuring an inclusive browsing experience for all individuals, irrespective of their abilities. For users with visual impairments, Opera incorporates various features and tools designed to enhance accessibility and facilitate the complete enjoyment of online content.

Integrated Text-to-Speech

A key feature of Opera for promoting accessibility is the presence of integrated text-to-speech. This tool enables users with visual impairments to listen to the reading of textual content on web pages, contributing to making information accessible to all.

Voice Commands and Navigation

Opera provides advanced support for voice commands, allowing users to navigate through web pages and access various browser functions using their voice. This feature is particularly valuable for those who prefer or require voice interaction with the browser.

User Interface Customization

To adapt to the individual needs of users with visual impairments, Opera allows customization of the user interface. Users can adjust text sizes, modify color schemes, and select contrast options to improve readability according to their preferences.

Screen Reader Support

Opera is designed to be compatible with a variety of third-party screen readers. Users can integrate their preferred screen reader with the browser, ensuring a better experience of web content through text-to-speech synthesis.

Integrated Feedback Tools

To continually enhance the experience for users with visual impairments, Opera incorporates feedback tools directly into the browser interface. Users can report any accessibility issues and provide suggestions to contribute to the optimization of features.

5.1 Exercises

Exercise 1: Activate Text-to-Speech

Launch Opera and open a webpage of your choice.

Find and activate the integrated text-to-speech in the browser settings.

Listen to the text-to-speech reading of content on the page and assess the clarity of the conveyed information.

Exercise 2: Navigate with Voice Commands

Enable voice commands in Opera's settings.

Use your voice to navigate between open tabs and access various browser features.

Experiment with the effectiveness of voice commands in making navigation more accessible.

Exercise 3: Customize User Interface for Readability

Access Opera's user interface customization options.

Adjust text sizes, color schemes, and contrast to enhance readability.

Explore different options and find the combination that makes your browsing experience more comfortable.

B. Search Engines Accessibility Management

1. Google Accessibility for People with Visual Impairments

Google, a leading technology company, is committed to providing an inclusive online experience for users with various abilities. This chapter explores the accessibility features within Google, focusing on enhancements tailored to individuals with visual impairments. By addressing specific needs, Google aims to create a more inclusive digital environment for everyone.

Screen Reader Compatibility

Google ensures compatibility with popular screen readers, enabling users with visual impairments to navigate and interact with various Google services, including Gmail, Google Drive, and Google Docs. This compatibility enhances the overall accessibility of Google's ecosystem.

Voice Search and Voice Commands

Recognizing the importance of voice interaction, Google incorporates voice search and voice commands across its platforms. Users with visual impairments can leverage these features to perform searches, open applications, and execute commands through verbal prompts, enhancing accessibility and usability.

High Contrast Mode

Google offers a high contrast mode that enhances visibility for users with visual impairments. By increasing the contrast between text and background elements, this feature improves readability and ensures a more distinct visual experience across various Google applications and services.

Magnification and Zoom

Google provides built-in magnification and zoom features, allowing users to enlarge text and graphics for better visibility. Individuals with visual impairments can customize the level of magnification to suit their needs, ensuring a comfortable reading experience.

Braille Support

For users proficient in Braille, Google integrates Braille support across its services. This feature enables individuals with visual impairments to read and navigate content using Braille displays, enhancing accessibility for tasks such as document editing and email communication.

1.1 Exercises

Exercise 1: Activate Screen Reader

Access a Google service such as Gmail or Google Drive.

Activate the screen reader on your operating system.
Navigate through the service using the screen reader and verify compatibility.

Exercise 2: Utilize Voice Search

Open the Google search engine.
Use the voice search function to perform a specific search.
Experiment with the effectiveness of voice search in obtaining accurate results.

Exercise 3: Enable High Contrast Mode

Access the accessibility settings on your device.
Enable high contrast mode.
Explore Google services and observe how high contrast mode improves visibility.

Exercise 4: Leverage Magnification Feature

Open a document on Google Docs or a webpage on Google Chrome.
Use the magnification feature to increase the size of text and images.
Adjust the magnification level for comfortable reading.

Exercise 5: Test Braille Support

Access Google Docs or Google Drive.
Enable Braille support in the accessibility settings.
Explore documents or files and verify the usability of Braille support.

8. Resources

[Use the APA citation style – see <https://www.library.cornell.edu/research/citation/apa> for details]

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