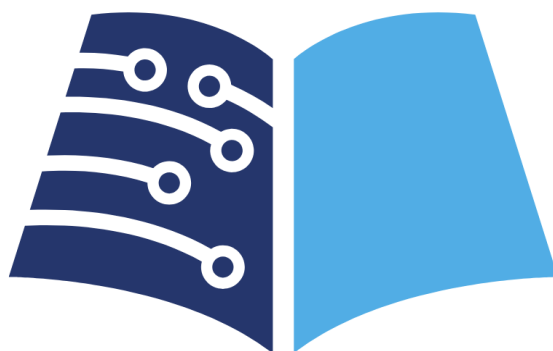




DIGITABILITY

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

BASIC KNOWLEDGE OF DEVICES

COGNITIVE ACCESSIBILITY



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Contents

1.	Introduction.....	1
1.1	Learning Objectives	1
1.2	Duration	1
2.	Working with Accessibility devices.....	2
2.1	MS Windows OS.....	2
2.1.1	Accessibility for people with Cognitive Impairments	3
	Alternative – Custom Keyboards	3
	Touchscreen Monitors.....	5
2.1.2	Exercises.....	5
2.1.3	Resources	6
2.2	Mac OS	7
	i-tec USB 3.0 / USB-C / Thunderbolt 3 Dual Display Docking Station	8
	i-tec Thunderbolt 3 Travel Dock Dual 4K Display with Power Delivery 60W + i-tec Universal Charger 77 W .9	
	i-tec USB4 Metal Docking station Dual 4K HDMI DP with Power Delivery 80 W + i-tec Universal Charger 100 W.....	9
	i-tec Thunderbolt 3/USB-C Dual 4K Docking Station + USB-C to DisplayPort Cable (1,5 m) + Power Delivery 60W.....	10
2.2.1	Accessibility devices for people with Cognitive Impairments.....	11
	Customizable Keyboards	11
	Customizable Touchpads.....	12
2.2.2	Exercises.....	14
2.2.3	Resources	16
2.3	Linux OS	16
2.3.1	Accessibility for people with Cognitive Impairments	17
	Enabling Devices Talkable IV Communication Aid.....	17
2.3.2	Resources	18
3.	Operating System Accessibility Management for Computers.....	19
3.1	MS Windows OS.....	19
3.1.1	Built in features & Settings	19
3.1.1.1	Cognitive Accessibility	19
3.1.1.2	Exercises	19
3.1.1.3	Resources.....	21
3.1.2	File Management.....	21
3.1.2.1	Cognitive Accessibility	21
	File Management with Text to Speech Software	21
3.1.2.2	Exercises	23
3.1.2.3	Resources.....	24

3.2 Mac OS	25
3.2.1 Built in features & Settings	25
3.2.1.1 Cognitive Accessibility	25
Customizable Display	25
Time Limits and Restrictions within Parental Control	27
Speak Selected Text.....	28
3.2.1.2 Exercises	29
3.2.1.3 Resources.....	31
3.2.2 File Management.....	31
3.2.2.1 Cognitive Impairments	31
3.2.2.3 Resources.....	31
3.3 Linux OS	36
3.3.1 Built in features & Settings	36
3.3.1.1 Accessibility for Cognitive Impairments	36
Accessibility Features	36
3.3.1.2 Exercises	38
3.3.1.3 Resources.....	40
3.3.2 File Management.....	40
3.3.2.1 Exercises	41
3.3.2.2 Resources.....	42
4. Other Working Tools – Smart Devices.....	42
4.1 Accessibility features in Android Tablets.....	42
4.1.1 Cognitive Accessibility.....	42
4.1.2 Exercises.....	44
4.1.3 Resources.....	44
4.2 Accessibility features on I-Pad	44
4.2.1 Cognitive Accessibility.....	44
Minimize disruptions and sensory input	45
Pair audio and text.....	47
4.2.2 Exercises.....	48
4.2.3 Resources.....	50
5. Annex – Exercise Answers	50
2.1.2 Exercises.....	50
2.2.2 Exercises.....	51
3.1.1.2 Exercises	51
3.1.2.2 Exercises	52
3.2.1.2 Exercises	52

3.3.1.2 Exercises	53
3.3.2.1 Exercises	54
4.1.2 Exercises.....	54
4.2.2 Exercises.....	54

1. Introduction

This document aims to share knowledge on emerging technologies, systems, and devices designed to enhance the lives of individuals with disabilities. The initial chapter delves into the realm of assistive devices, offering both technological insights and theoretical foundations. It focuses on devices that can be seamlessly integrated with computers to enhance user experience, especially in professional settings. The second chapter casts a spotlight on the accessibility features inherent in major operating systems - Windows, Apple, and Linux - while also addressing practical aspects of folder management. The concluding chapter extends the discussion to include accessibility features tailored for tablet devices, recognizing their growing significance as secondary tools in the contemporary workplace.

To reinforce comprehension, each chapter concludes with a set of exercises designed to solidify the understanding of the presented material.

1.1 Learning Objectives

In completing this training document, the learner will be able to:

- Gain knowledge about accessibility devices catering to cognitive disabilities
- Acquire insights into accessibility devices compatible with Microsoft, Apple, and Linux Operating Systems (OS)
- Familiarize themselves with valuable shortcuts specific to each OS
- Understand the built-in accessibility features available in each OS
- Learn practical tips for effective file management on each OS
- Explore accessibility features in select smart devices
- Access specific processes through informative videos tailored to each OS

1.2 Duration

Global duration – 3,5 academic hours

Estimated duration of each sub-section: lesson / useful resources for the lesson / practical exercises:

- lessons / learning – 2 academic hours

- exercises – 2/3 academic hours (40 min)

- useful resources – 1 academic hour

Each suggested duration may vary for each trainee.

2. Working with Accessibility devices

2.1 MS Windows OS

Windows Operating System (OS) is a user-friendly graphical user interface (GUI) based system developed by Microsoft Corporation. Introduced in 1985, it has undergone numerous updates, becoming a widely used choice for personal and business computing. Compatible with diverse hardware and software, it offers a built-in security system against malware and viruses and a robust file management system for easy organization. The OS enables concurrent operation of multiple applications, facilitating multitasking.

Key Features of Windows Operating System:

- Control Panel: Centralized system settings management for security, privacy, display, hardware, sound, and programs.
- Internet Browser (Microsoft Edge): Built-in browser with features like tabbed browsing, search suggestions, and web notes.
- File Explorer: File management tool allowing users to browse, open, and manage files and folders with search, copy, move, and delete functions.
- Taskbar: Horizontal bar at the bottom of the desktop providing quick access to applications and displaying open windows and programs.
- Microsoft Paint: Graphics editing software offering basic drawing tools, shapes, text, and image additions.
- Start Menu: Access point for frequently used applications, settings, and files, with a search bar for quick retrieval.
- Task Manager: System tool to view and manage running applications and processes, providing information on CPU and memory usage.
- Disk Cleanup: System tool freeing up hard drive space by removing unnecessary files and data.
- Cortana: Virtual assistant allowing users to interact with the computer using voice commands for information, reminders, emails, and tasks.

2.1.1 Accessibility for people with Cognitive Impairments

In the world of technology, innovation knows no bounds, especially when it comes to making technology accessible for all. Customized keyboards designed to meet the specific cognitive needs of users are a shining example of this commitment. These keyboards go beyond the conventional, offering a simplified input experience, enhanced memory support, and minimized distractions.

Alternative – Custom Keyboards



Figure 1. Alternative Keyboard 1



Figure 2. Alternative Keyboard 2

Some companies offer customized keyboards designed for specific cognitive needs. These keyboards may have larger, color-coded keys, and can be programmed to simplify the input process.

These keyboards are tailored to address challenges related to memory, attention, and motor skills, and they can help people work more effectively on their PCs in several ways:

- **Simplified Input**

Customized keyboards often feature larger and more prominent keys with clear and easy-to-read labels. This can make it easier for individuals with cognitive impairments to locate and press the correct keys, reducing the chances of input errors.

- **Color-Coding**

Many of these keyboards use color-coded keys to help users associate specific functions or keys with distinct colours. This visual aid can assist in memory retention and cognitive processing.

- **Programmability**

Customized keyboards can be programmed to simplify the input process further. Users and caregivers can assign specific functions or commands to individual keys, making it more intuitive and reducing the complexity of using a standard keyboard.

- **Visual and Auditory Feedback**

Some custom keyboards offer visual and auditory feedback. For example, a keypress may trigger a visual or auditory cue to reinforce the action, which can enhance memory and recognition for users with cognitive impairments.

- **Reduced Distractions**

Custom keyboards often have fewer keys, removing unnecessary or potentially distracting keys that may confuse users. This streamlined approach can help users stay focused on the essential tasks at hand.

Many alternative keyboards, especially those with unique features or layouts, may require specific drivers or software to ensure full compatibility with Windows. These drivers or software are essential to make the keyboard's special functions or customizations work correctly with the operating system.

Before purchasing such a keyboard, it's essential for the user to check the manufacturer's specifications and compatibility information. The manufacturer typically provides information about the required drivers or software that need to be installed on the user's Windows system for the keyboard to function properly. Additionally, they might offer support resources or downloads on their website.

In some cases, Windows might automatically recognize and install basic drivers for alternative keyboards, but for full functionality and customization, it's often advisable for the user to install the manufacturer's recommended drivers or software.

Touchscreen Monitors



Figure 3. Different types of Touchscreen Monitor

Touchscreen monitors can be seamlessly connected to a Windows laptop or PC through USB, HDMI, or DisplayPort, offering a tactile and intuitive interaction experience. This technology holds notable benefits for individuals with cognitive impairments, providing an accessible means of engagement. The intuitive nature of touchscreens simplifies tasks, and the tactile feedback, coupled with visual aids, enhances the overall user experience. Features such as multi-touch support, high resolution, adjustable stands, and anti-glare technology contribute to a more comfortable and adaptable interface. Notable models include:

- the Dell P2418HT,
- HP EliteDisplay E230t, and
- ViewSonic TD2230, each offering unique features to cater to diverse needs.

While Windows operating systems typically support touch input without additional downloads, users may explore specific software options to further enhance accessibility features. Consideration of compatibility and specifications ensures an optimal and tailored solution for individuals with cognitive impairments.

2.1.2 Exercises

Quiz 1

Select the Correct Word

1. Alternative keyboards often feature larger and more prominent keys with clear and easy-to-read ____.

A) Labels

- B) Locks
- C) Legumes
- D) Libraries

2. Many alternative keyboards use ____ keys to help users associate specific functions or keys with distinct colours.

- A) Under covered
- B) Color-coded
- C) Corroded
- D) Cooked

Quiz 2: Multiple Choice

1. Alternative keyboards are designed to help with challenges related to:

- A) Cooking
- B) Memory, attention, and motor skills
- C) Planting
- D) Musical skills

Quiz 3

Select if the following sentence is True or False

1. Alternative keyboards may require specific drivers or software for full compatibility with Windows.

2.1.3 Resources

Touchscreen Monitors: Examples

- <https://www.youtube.com/watch?v=Q6zSrV9UgAI>
- <https://www.youtube.com/watch?v=8yqDOsgVVJE>

- https://www.youtube.com/watch?v=De2MwwES_iw

2.2 Mac OS

macOS, Apple's operating system for Mac desktops and laptops, is a proprietary OS designed to optimize performance on specific hardware. It manages resources like memory and processing power to execute tasks efficiently.

macOS provides a diverse range of features and applications for users, enhancing various aspects of their experience:

- **Media Features:** Users can engage with content through applications like Music, TV, Podcasts, Books, and Photos.
- **Creativity-Based Features:** Applications such as Photos, GarageBand, and iMovie empower users to view, edit, and create media.
- **Productivity Features:** Graphic tools are available in applications like Pages, Numbers, and Keynote for efficient work.
- **Communications Features:** Communication is facilitated through text, visual, and audio applications like Mail, Messages, and FaceTime.
- **Organization Features:** Applications such as Notes, Reminders, Calendar, Voice Memos, and Contacts help users find and manage their content.
- **iCloud:** Users can access and share content seamlessly across different devices.
- **Accessibility Features:** Assistive tools like VoiceOver, Accessibility Keyboard, and Text to Speech cater to users with disabilities.
- **Compatibility Features:** Easy transfer of Windows-based files, running Microsoft Office or Windows on a Mac provides flexibility.

These applications come pre-installed and are optimized for macOS, ensuring efficient resource allocation. Recent additions include focus modes for customized notifications, Live Text for copying text from photos, universal control for seamless device interaction, and a Recording Indicator for enhanced security, revealing which apps have microphone access.

Assistive technologies play a crucial role in enhancing accessibility on Apple PCs, making them more inclusive for users with diverse needs. These technologies offer valuable features and capabilities that cater to individuals with visual impairments, low vision, motor disabilities, and other accessibility challenges.

However, a significant challenge with some Apple devices lies in their ports. For instance, Apple devices do not have USB ports; instead, they utilize the original port type in Mac PCs known as Thunderbolt. Consequently, users often need a special device called a DOKER to connect peripherals with USB and other commonly used ports to Apple PCs.

Examples of Dokers include:

i-tec USB 3.0 / USB-C / Thunderbolt 3 Dual Display Docking Station



Figure 4. Image of Cadual4kdock-2 Device

The i-tec USB 3.0 / USB-C / Thunderbolt 3 Dual Display Docking Station, known as cadual4kdock-2, is a versatile and high-performance docking solution. This secure universal docking station, part of the i-tec Docker Pro series, facilitates maximum performance by enabling the connection of up to two monitors simultaneously. Users can customize their workspace and link assistive accessories to laptops or tablets using USB-A 3.0 or USB-C. The docking station features six USB ports for seamless connection of USB devices and peripherals. With GLAN Ethernet support, it ensures network speeds of 10/100/1000 Mbps, delivering a robust and high-speed internet connection. Additionally, the dock is VESA mount-compatible, allowing for vertical mounting behind a monitor.

i-tec Thunderbolt 3 Travel Dock Dual 4K Display with Power Delivery 60W + i-tec Universal Charger 77 W



Figure 5. Image of Thunderbolt 3

This Thunderbolt 3/4 secure universal docking station from the i-tec Docker Pro series offers a great performance in a compact design. Capable of connecting up to two 4K external monitors or one at 8K/30Hz, it features DisplayPort and HDMI ports for versatile display options. Users can effortlessly connect their USB devices and peripherals. The inclusion of Gigabit Ethernet RJ-45 ensures reliable, robust, and high-speed internet connectivity supporting 10/100/1000 Mbps speeds. Additionally, a combined jack for audio and microphone enhances the station's functionality. It is noted that the package includes a 77W (65W USB-C PD) power supply, and the dock can also be utilized with the USB-C PSU provided with the laptop, available as a standalone item.

i-tec USB4 Metal Docking station Dual 4K HDMI DP with Power Delivery 80 W + i-tec Universal Charger 100 W



Figure 6. Image of i-tec USB4 Metal Docking station

This secure universal docking solution from the i-tec Docker Pro series is compatible with USB4, USB-C, and Thunderbolt laptops and tablets, with the host device required to support DisplayPort Alt mode. The docking station features 1x DisplayPort and 1x HDMI, supporting dual 4K/60Hz or a single 8K/30Hz display, contingent on host performance, connecting multiple USB devices and peripherals is convenient. Additional features include GLAN Ethernet for network speeds of 10/100/1000 Mbps, SD and microSD slots for memory cards, and a combo 3.5mm audio input/output jack for easy connection to headsets or speakers.

**i-tec Thunderbolt 3/USB-C Dual 4K Docking Station + USB-C to DisplayPort Cable (1,5 m)
+ Power Delivery 60W**



Figure 7. Image of i-tec Thunderbolt 3/USB-C

This secure universal docking station from the i-tec Docker Pro series delivers high performance and supports two external screens. Compatible with Thunderbolt, USB4, and USB-C laptops and tablets (host device must support DisplayPort Alt mode), it features 1x HDMI and 1x Thunderbolt 3 ports, supporting dual 4K/60Hz or a single 8K/30Hz display depending on host performance. Provides connecting multiple USB devices and peripherals is effortless. Providing up to 60W Power Delivery for compatible USB4, USB-C, and Thunderbolt laptops and tablets. The inclusion of GLAN Ethernet supports network speeds of 10/100/1000 Mbps, offering a robust and high-speed internet connection. Additional features include SD and microSD slots for memory card connection, and a combo 3.5mm audio input/output jack for easy headset or speaker connection.

(link to VIKO part 4.4. [Accessibility features on Mac.](#))

2.2.1 Accessibility devices for people with Cognitive Impairments

In the technological landscape, specialized tools emerge as invaluable aids for individuals facing cognitive challenges. These tools, exemplified by personalized apps and software compatible with Mac computers, serve as functional guides. They offer assistance in memory retention, organizational tasks, and overall productivity. Analogous to a supportive companion, these tools streamline the computer usage experience for everyone, fostering a more accommodating digital environment for individuals requiring additional support.

Customizable Keyboards



Figure 8. Different types of Customizable Keyboards

Customizable keyboards are input devices with keys that can be configured and programmed to perform specific functions or actions according to the user's preferences. These keyboards offer flexibility in layout, key assignments, and sometimes even the appearance of keys, catering to individual needs and improving accessibility.

Customizable keyboards are used to enhance the typing experience for individuals with specific requirements, including those with physical disabilities or cognitive impairments. They allow users to adapt the keyboard to their unique needs, making it more comfortable and efficient for their work or daily computer activities.

Features:

- Users can assign different functions or macros to individual keys, allowing for customized shortcuts or commands.
- Some customizable keyboards feature backlit keys, aiding visibility in various lighting conditions.
- Users may be able to adjust the sensitivity of keys to accommodate different typing preferences.

- Certain models allow the customization of keycap labels or symbols for improved visibility.
- Many customizable keyboards come with ergonomic designs to enhance user comfort during extended typing sessions.

Software for Mac OS

Customizable keyboards may require specific software for programming and configuring key assignments. Examples of software that may be used with customizable keyboards on Mac OS include:

- **Keyboard Maestro**
This automation software for Mac allows users to create custom macros, key mappings, and automation scripts for enhanced keyboard functionality.
- **Karabiner-Elements**
This open-source software enables advanced customization of keyboard layouts, key remapping, and other modifications on Mac OS.

Customizable Touchpads



Figure 9. Images of Built-in and non-built in touchpad

Customizable touchpads are input devices with touch-sensitive surfaces that can be configured and programmed to perform specific functions or gestures according to user preferences. These touchpads offer flexibility in user interaction, allowing individuals to tailor the touchpad's behaviour to their specific needs and enhance their overall computing experience.

Customizable touchpads are used as an alternative or complement to traditional mice or trackpads. They serve a variety of purposes, including navigation, gesture control, and accessibility improvements. Users can customize gestures and commands to streamline tasks, making the touchpad a versatile tool for both general computer use and specialized applications.

Features:

- Users can define and customize gestures for various actions such as scrolling, zooming, and launching applications.
- Some customizable touchpads come with programmable physical buttons that can be assigned specific functions or macros.
- Users may have the option to adjust the sensitivity of the touchpad to suit their preferences and control requirements.
- The ability to customize tapping actions, including single-tap, double-tap, and triple-tap, enhances user control and efficiency.
- Many customizable touchpads integrate seamlessly with accessibility software, allowing individuals with motor impairments to configure the touchpad according to their unique needs.

Connection to Mac OS

Connecting a customizable touchpad to Mac OS is typically straightforward. The process involves the following steps:

- **Plug and Play**
Many customizable touchpads connect to Mac computers using USB or Bluetooth, allowing for easy plug-and-play functionality, only if an adaptor is implemented on the Mac OS system.
- **Bluetooth Pairing**
For wireless touchpads, users can activate Bluetooth on their Mac, put the touchpad in pairing mode, and select it in the Bluetooth settings to establish a connection.

Some touchpads may come with specific drivers or software that need to be installed on the Mac for full customization features. Users should check the manufacturer's instructions for details.

Examples of customizable touchpads:

- Logitech T650 Wireless Rechargeable Touchpad → This touchpad features customizable gestures, such as swiping and tapping. It connects to Mac OS via a USB receiver (if an adaptor is implemented on the computer with the suitable USB port) or Bluetooth.
- Apple Magic Trackpad → Designed specifically for Mac, this touchpad supports a variety of gestures and provides a large, smooth surface for navigation. It connects to Mac computers via Bluetooth.
- Dell TP713 Wireless Touchpad → This touchpad offers customizable gestures and buttons. It connects to Mac OS wirelessly via Bluetooth.

2.2.2 Exercises

Quiz 1

Chose which sentence is True or False

True/False: Customizable keyboards allow users to assign different functions or macros to individual keys.

True/False: Customizable keyboards may feature backlit keys to aid visibility in various lighting conditions.

Quiz 2

Multiple Choice

1.What can users define and customize for various actions on customizable touchpads?

- A. Screen brightness
- B. Gestures
- C. Keyboard shortcuts

2.What is one feature of customizable touchpads?

- A. Fixed tapping actions
- B. Inability to adjust touchpad sensitivity

C. Programmable physical buttons

Quiz 3

Select the Correct Sentence

Which software allows users to create custom macros, key mappings, and automation scripts for enhanced keyboard functionality?

A. Karabiner-Elements

B. Keyboard Maestro

C. Microsoft Word

What is a feature of customizable keyboards?

A. Limited key assignments

B. Ergonomic designs for discomfort

C. Customization of keycap labels for improved visibility

Quiz 4

Select the Correct Word

1.What is a versatile tool for both general computer use and specialized applications?

A. Keyboard

B. Trackpad

C. Mouse

2.What is a seamless way to connect customizable touchpads to Mac computers?

A. Plug and Play

B. Manual Configuration

C. Wired Connection

2.2.3 Resources

Let's explore some features of the Touchpads for Desktops

Touchpads for Desktop – Examples

- <https://www.youtube.com/watch?v=DU-T9u5zmrs>
- <https://www.youtube.com/watch?v=798Rz6pHh5w>

Apple has its own official website and YouTube Channel about Apple devices accessibility:

- <https://www.apple.com/shop/accessories/all/accessibility>
- <https://www.youtube.com/@Apple/search>

2.3 Linux OS

Similar to Windows, iOS, and macOS, Linux functions as an operating system, playing a crucial role in managing hardware resources for desktops and laptops. Notably, Android, a widely-used platform, operates on the Linux OS. The Linux OS consists of key components:

- **Bootloader:** Manages the computer's boot process, often presented as a splash screen for users.
- **Kernel:** The core element named 'Linux,' governing CPU (Central Processing Unit), memory, and peripheral devices at the lowest OS level.
- **Init System:** Bootstraps the user space, controlling daemons.
- **Daemons:** Background services like printing and sound, initiating during boot or after logging into the desktop.
- **Graphical Server:** Sub-system displaying graphics on the monitor, known as the X server or simply X.
- **Desktop Environment:** The user-interaction component, offering various choices like GNOME, Cinnamon, KDE, etc., each equipped with built-in applications.

- Applications: Linux provides a vast array of high-quality software titles, similar to Windows and macOS. Modern Linux distributions feature centralized tools (e.g., Ubuntu Software Center) for easy app discovery and installation.

2.3.1 Accessibility for people with Cognitive Impairments

While the market offers an array of assistive technologies tailored for physical disabilities, there is a notable scarcity of specific hardware solutions designed explicitly for cognitive challenges. Cognitive impairments can manifest in diverse ways, affecting memory, attention, problem-solving, and other cognitive functions. Despite the limited availability of dedicated devices for Linux OS, ongoing advancements in technology hold the potential to address the unique needs of individuals with cognitive impairments. Current assistive solutions often involve software applications, wearable technologies, and smart home devices that aim to support cognitive functions indirectly. As the field of assistive technology continues to evolve, there is a growing awareness of the necessity to develop hardware solutions explicitly catered to the cognitive diversity of individuals, fostering inclusivity and improving overall quality of life.

Enabling Devices Talkable IV Communication Aid



Figure 10. Enabling Talkable Device

The Enabling Devices Talkable IV Communication Aid is a versatile assistive technology device designed to support individuals with communication challenges, including those with speech and language disabilities. It serves as a communication aid by providing users with the ability to express themselves using pre-recorded messages or custom recordings. The Talkable IV features a simple interface with large, accessible buttons that users can press to play recorded messages, facilitating communication in various settings.

Key features and functions include:

Pre-Recorded Messages

The device comes with pre-recorded messages that cover common communication needs. Users can select the appropriate button to play the desired message.

Customizable Recordings

Users have the option to record their own messages, allowing for personalized communication based on individual preferences and needs.

Accessible Design

The Talkable IV is designed with accessibility in mind, featuring large buttons that are easy to press. This design is particularly beneficial for individuals with motor or dexterity challenges.

Portability

The compact and lightweight design of the Talkable IV makes it a portable solution, allowing users to carry it with them for communication in various environments.

Versatility

The device can be used in a variety of settings, including at home, in educational settings, or in healthcare environments, providing a means of expression and communication.

For the Talkable IV Communication Aid to function, it typically does not require connection to other devices or software interfaces. The device operates independently, and users can interact with it directly to initiate communication. While it does not usually involve connecting to a Linux operating system or other external devices, users may need to refer to the specific product documentation or manufacturer's instructions for any details related to compatibility or additional features.

2.3.2 Resources

Let's explore a few assistive technologies:

- <https://www.youtube.com/watch?v=JwRkuVtzWTQ>

3. Operating System Accessibility Management for Computers

3.1 MS Windows OS

3.1.1 Built in features & Settings

3.1.1.1 Cognitive Accessibility

To ensure that its software is accessible and user-friendly for individuals with cognitive impairments, Microsoft Windows has incorporated a range of built-in features and settings that simplify the computing experience. These features are designed to make the computer environment more comprehensible and manageable for users who may have challenges related to cognitive processing. By offering options like simplified interfaces, Text-to-Speech (TTS) capabilities, and easy access to critical accessibility features such as sticky keys, toggle keys, and filter keys, Windows empowers users to customize their settings for a more comfortable and productive computing experience.

[Link to previous subchapter Visual Accessibility](#)

3.1.1.2 Exercises

Exercise 1

Choose if the sentence is True or False

1. Narrator is a screen reader that helps users operate the computer without a mouse. (True/False)
2. When Narrator is activated, it reads only the body text of a page. (True/False)
3. Changing the language in Narrator requires going to "Windows > Settings > Time & Language > Language & Region." (True/False)

Exercise 2

Match the accessibility settings with their descriptions:

1. Text size
2. Visual effects

3. Mouse pointer and touch

4. Color filters

5. Contrast themes

Descriptions:

- a. Customize mouse pointer appearance and behavior.
- b. Adjust the size of the text throughout the Windows interface.
- c. Turn off or customize animations and transitions.
- d. Change the color palette of the entire screen.
- e. High-contrast themes with distinct foreground and background.

Exercise 3

Choose the correct answer

What do Color Filters in Accessibility settings allow users to do?

- a) Change the size of the text
- b) Customize the appearance of the mouse pointer
- c) Adjust the color palette of the entire screen
- d) Increase the thickness of the text cursor

Exercise 4

Fill in the Blank with the given words.

1. Narrator is a _____ that allows the user to operate their computer without a mouse. It reads and communicates with onscreen items using simple words, acting as a _____.

2. Using Narrator, users can perform common tasks such as reading and writing emails, browsing the web, and working with _____.

3. When Narrator is activated, it reads the headlines, or the first sentences/paragraphs of the page being screened. Narrator is set by default in _____, and to change or download another language, users must go to:

Windows → Settings → Time & Language → Language & Region

and then download English United States or the preferred language.

4. Narrator, like other software, also contains a set of _____ with keyboard shortcuts for the convenience of users.

Given words: e. screen reader, d. screen reader, c. documents, b. English, a. instructions-commands

3.1.1.3 Resources

Closed Caption/Subtitles:

- https://support.microsoft.com/en-us/windows/use-live-captions-to-better-understand-audio-b52da59c-14b8-4031-ae6b-f6a47e6055df#bkmk_turnoncaptions
- <https://www.youtube.com/watch?v=0BIOApH8z3k>
- <https://www.youtube.com/watch?v=HBu5UJBNKTo>

Sounds Notifications:

- <https://www.technewstoday.com/change-notification-sound-windows/>

Official MS Windows channel:

- <https://www.youtube.com/@MicrosoftWindows>

3.1.2 File Management

3.1.2.1 Cognitive Accessibility

File Management with Text to Speech Software

File management in Microsoft Windows can be made more efficient with various keyboard shortcuts.

Ctrl + C → Copy the selected file(s) or folder(s).

Ctrl + X → Cut the selected file(s) or folder(s).

Ctrl + V → Paste the copied or cut file(s) or folder(s) into the current location.

Ctrl + Z → Undo the last action.

Delete → Move the selected file(s) or folder(s) to the Recycle Bin.

Shift + Delete → Permanently delete the selected file(s) or folder(s) without moving them to the Recycle Bin.

Ctrl + D → Send the selected item to the desktop.

F2 → Rename the selected file or folder.

Ctrl + N → Open a new File Explorer window.

Alt + Enter → Open the Properties dialog for the selected file or folder.

Alt + Up Arrow → Go up one level in the folder hierarchy.

Backspace → Go back to the previous folder.

Alt + Left Arrow → Go back in navigation history.

Alt + Right Arrow → Go forward in navigation history.

Ctrl + W → Close the current File Explorer window.

Ctrl + Shift + N → Create a new folder in the current location.

F5 → Refresh the current window.

Alt + Enter → Open the Properties dialog for the selected file or folder.

Ctrl + F → Activate the search bar in File Explorer.

Shift + F10 → Open the context menu for the selected item.

Ctrl + P → Print the selected file or folder.

Alt + Enter → Open the Properties dialog for the selected file or folder.

Ctrl + Shift + Esc → Open Task Manager.

Ctrl + A → Select all items in the current window.

Ctrl + Shift + A → Invert selection, deselects all selected items and selects unselected ones.

3.1.2.2 Exercises

Quiz 1

Choose if the sentence is True or False

1. Ctrl + C is used to permanently delete selected files or folders. (True/False)
2. F2 is a keyboard shortcut to rename a selected file or folder. (True/False)
3. Alt + Up Arrow is used to navigate up one level in the folder hierarchy. (True/False)

Quiz 2

Select the correct answer

1. What does Ctrl + V do in file management with Speech Recognition?
 - a) Paste
 - b) Cut
 - c) Copy
2. Which shortcut is used to create a new folder in Speech Recognition?
 - a) Ctrl + D
 - b) Ctrl + N
 - c) Ctrl + Shift + N
3. How can you open the Properties dialog for a selected file or folder in Speech Recognition?
 - a) Alt + Enter
 - b) Ctrl + W
 - c) Shift + F10

Quiz 3

Match the following file management shortcuts with their corresponding actions:

1. Ctrl + A
2. Alt + Up Arrow
3. F5

Options:

- a. Select all items
- b. Go up one level
- c. Refresh the current window

Quiz 4

Fill in the blanks in the following sentences related to file management keyboard shortcuts:

1. Ctrl + ___ is used to paste the copied or cut file(s) or folder(s).
2. F2 is a shortcut to ___ the selected file or folder.
3. Alt + Right Arrow is used to ___ in navigation history.

Match with:

- a. V
- b. Rename
- c. Go forward

3.1.2.3 Resources

Videos and related articles for file management:

<https://www.youtube.com/watch?v=QqLbk-PmX2Q>

[Computer Keyboard Shortcutss \(computerhope.com\)](https://computerhope.com/computer-keyboard-shortcuts/)

<https://edu.gcfglobal.org/en/windowsbasics/working-with-files/1/#>

Lecture in File Management: <https://www.youtube.com/watch?v=wIj9szVzp2k>

3.2 Mac OS

3.2.1 Built in features & Settings

3.2.1.1 Cognitive Accessibility

From simplified interfaces to customizable settings, macOS prioritizes inclusivity, allowing individuals with cognitive challenges to navigate and interact with their Mac devices with greater comfort and efficiency. Let's explore the thoughtful design and functionality that makes macOS a supportive platform for users with cognitive impairments.

Customizable Display

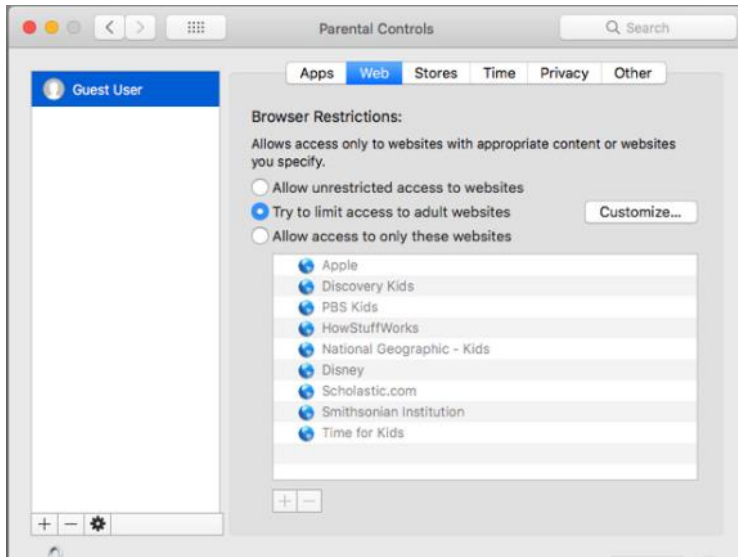


Users can personalize the display settings to reduce visual distractions. This includes adjusting font sizes, enhancing contrast, and choosing specific colors to improve readability.

Key Aspects:

Features	Description
Display Resolutions	Users can adjust the display resolution to tailor the level of detail and clarity. This is particularly useful for users who may prefer larger text and icons or those who require higher resolution for specific tasks.
Scaling Options	MacOS offers scaling options that allow users to adjust the size of text and other on-screen elements.
High Contrast Mode	MacOS provides a High Contrast mode that increases the contrast between text and background elements.
Cursor Size and Color	Users can customize the size and color of the cursor, making it more visible on the screen.
Night Shift	Night Shift adjusts the color temperature of the display based on the time of day, reducing blue light exposure during the evening. This can contribute to a more comfortable viewing experience, especially for users with sensitivity to blue light.
Color Filters	macOS includes color filters that allow users to adjust the display's color spectrum.
Invert Colors	The "Invert Colors" option reverses the colors on the display, creating a high-contrast and inverted appearance.
Accessibility Keyboard	The Accessibility Keyboard provides an on-screen keyboard with customizable layouts and display options. Users can adjust the size and appearance of the keyboard to suit their preferences.

Time Limits and Restrictions within Parental Control



Parental Controls include features for setting time limits and restrictions on a Mac for specific user accounts, especially useful for managing children's computer usage.

General steps to set time limits and restrictions on a Mac:

1. Log in to the Mac using the administrator account.
2. Open "System Preferences" from the Apple menu.
3. Locate and click on "Parental Controls" within System Preferences.
4. Choose the user account for which the user wants to set time limits and restrictions.
5. Check the box labeled "Enable Parental Controls" for the selected user account.
6. Navigate to the "Time Limits" or "Bedtime" section.
7. Specify the allowed usage duration for weekdays and weekends.
8. Go to the "Apps" or "Allowed Apps" section to restrict access to specific applications.
9. Choose the apps that the user can or cannot access during certain times.

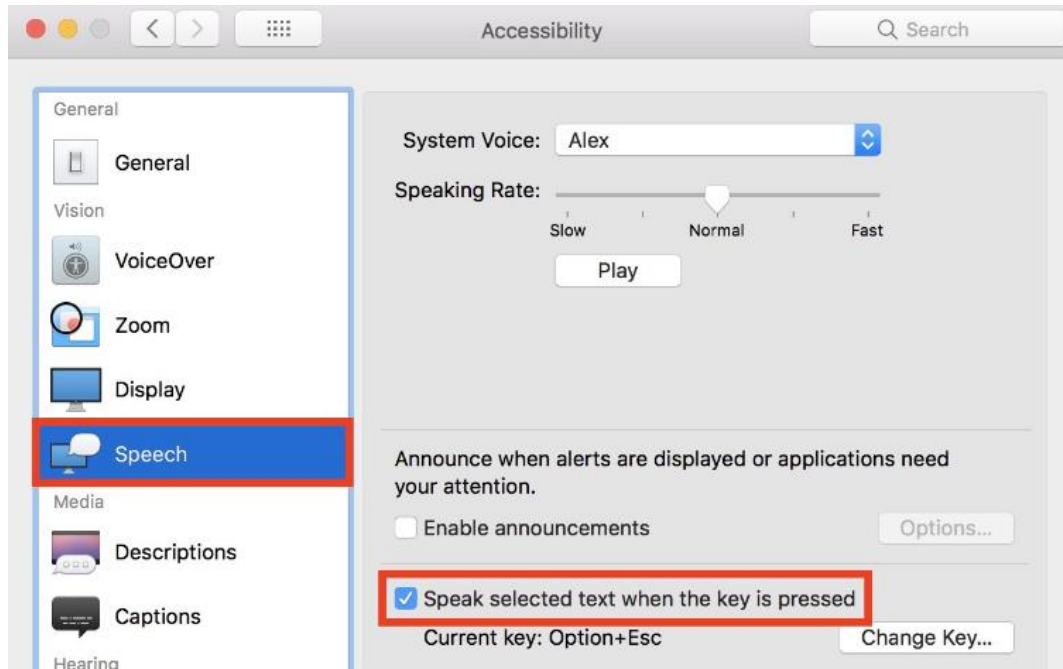
If needed, set restrictions on web browsing by configuring options within the "Web" or "Content" section.

Explore other sections within Parental Controls to customize additional restrictions, such as Game Center, Mail, and Messages.

10. Double-check the settings to ensure they align with the user's intended restrictions.
11. Confirm or save the changes.

Some changes may require entering the administrator password to apply the settings.

Speak Selected Text



"Speak Selected Text" is a built-in accessibility feature on Apple Mac computers that allows users to have the computer read aloud selected text. This feature is particularly helpful for individuals with visual impairments, those who prefer auditory learning, or anyone who wants text content to read aloud to them.

Users can highlight a portion of text in any application, such as a document, webpage, or email. After selecting the text, they can press the assigned shortcut keys, and the Mac will read the highlighted text aloud using the system's built-in text-to-speech capabilities.

Key Aspects:

Features	Description
Activation	Users can activate "Speak Selected Text" in the Accessibility settings of their Mac. To enable this feature, users can go to System Preferences > Accessibility > Spoken Content and check the box for "Speak selected text when the key is pressed."
Shortcut Key	Once activated, users can assign a specific keyboard shortcut to trigger the "Speak Selected Text" feature. By default, the Option + Esc keys are commonly used, but users can customize this shortcut based on their preferences.

Features	Description
Voice Options	The "Speak Selected Text" feature allows users to choose from various system voices and adjust the speaking rate to suit their preferences. Users can access these options in the Speech settings within the Accessibility preferences.
System Integration	Users can use this feature in text editors, browsers, email clients, and other applications that support text selection.
Reading Controls	While text is being read aloud, users have control over playback. They can pause, resume, or stop the reading at any time using keyboard shortcuts or on-screen controls.
Customization	Users can customize the behavior of "Speak Selected Text" to suit their preferences. This includes choosing the voice, adjusting the speaking rate, and fine-tuning other speech-related settings.
Multilingual Support	The text-to-speech voices used by "Speak Selected Text" support multiple languages, allowing users to listen to content in different languages based on their preferences.

3.2.1.2 Exercises

Quiz 1

Select if the sentence is True or False

1. Users can adjust the display resolution to tailor the level of detail and clarity.
2. Night Shift increases blue light exposure during the evening.
3. The Accessibility Keyboard provides an off-screen keyboard.

Quiz 2

Match the numbers with the letters

1. Users can set time limits for weekdays and weekends.
2. The "Speak Selected Text" feature is activated in the Accessibility settings.

3. Parental Controls allow restricting access to specific applications.

Match them with the sentences:

- a. Time Limits and Bedtime
- b. Speak Selected Text
- c. Apps and Allowed Apps

Quiz 3

Select the correct answer

1. What does the "Speak Selected Text" feature offer control over while reading?

- a) Screen brightness
- b) Playback of selected text
- c) Mouse sensitivity
- d) Web browser tabs

2. How can users customize the behavior of "Speak Selected Text"?

- a) Change display resolution
- b) Adjust font sizes
- c) Fine-tune speech-related settings
- d) Change cursor color

3. In what type of applications can users utilize the "Speak Selected Text" feature?

- a) Only in games
- b) Text editors, browsers, and email clients
- c) Social media apps only
- d) Offline applications

3.2.1.3 Resources

Resources regarding some of the above-mentioned built-in features:

- Switch Control: <https://www.youtube.com/watch?v=xzDui1uKPbs>
- Parental Control: <https://www.youtube.com/watch?v=ne7lvARyaP4>
- Keyboard shortcuts: <https://www.youtube.com/watch?v=GPy1fqgNkXc>

Official Apple channel:

- <https://www.youtube.com/@Apple>

3.2.2 File Management

3.2.2.1 Cognitive Impairments

File Management with Siri

Managing files on a Mac using Siri can be particularly helpful for individuals with physical impairments, as it allows for hands-free control of various tasks. Siri, Apple's virtual assistant, can perform a range of file management actions through voice commands.

Some steps to manage files on Mac using Siri:

Basic Commands

Activate Siri → Click on the Siri icon in the top menu bar or use the voice command, "Hey Siri" if it's enabled in your settings.

Open Finder → You can ask Siri to "Open Finder" to access your files.

Find Specific Files

Say commands like "Find my recent documents" or "Show files from last week" to locate specific files.

File Operations

Create a New Folder □ Command Siri to "Create a new folder on the desktop" or in a specific directory.

Move or Copy Files → Specify a file and destination with commands like "Move file X to folder Y" or "Copy document Z to desktop."

Rename Files → Request Siri to "Rename file A to B" for easy file management.

File Information

Get File Information → Ask Siri to provide information about a file, such as "What are the details of file C?"

Check Recent Files → Use commands like "What are my recent documents?" to quickly review recent activities.

Some examples of Siri commands for desktop-related tasks:

Opening Applications → "Open [Application Name]" to launch specific applications on your desktop.

Organizing Files → "Move file [file name] to desktop" or "Copy document [document name] to desktop" to manage files on the desktop.

Changing Desktop Wallpaper → "Change desktop wallpaper" or "Set desktop background to [image name]" to modify your desktop appearance.

Adjusting Display Settings → "Open System Preferences" and then navigate to "Displays" or "Desktop & Screen Saver" to make adjustments.

Arranging Icons → "Arrange icons by [Name, Kind, Date, etc.]" to organize desktop icons based on your preferences.

Creating Documents → "Create a new document on the desktop" to start a new file directly on the desktop.

Getting Information → "What's on my desktop?" to get a summary of the items currently on your desktop.

Accessibility Settings

Adjust System Preferences → Siri can help adjust accessibility settings. For example, you can say "Open System Preferences" and then navigate to the Accessibility section.

File Management with general Keyboard Shortcuts

Desktop Shortcuts:

- Desktop Navigation

Command + F3 or Command + Mission Control: Exposes the desktop, minimizing open windows.

- Cycle Through Desktop Spaces

Control + Right Arrow or Control + Left Arrow: Switch between different desktop spaces if you use Mission Control.

- Create a New Folder on Desktop

Shift + Command + N: Creates a new folder on the desktop.

- Rename Selected Item

Return: Select an item on the desktop, then press Return to enter rename mode.

- Move to Trash

Command + Delete: Sends the selected item to the Trash.

- Empty Trash

Shift + Command + Delete: Empties the Trash.

- View Options for Desktop

Control + Click on the desktop, then select "Show View Options" to customize how items are displayed on the desktop.

- Toggle Icon View Options

Command + J: Opens the View Options for the current desktop window in icon view.

- Select All Items on Desktop

Command + A: Selects all items on the desktop.

- Navigate Through Items

Use arrow keys to navigate through items on the desktop.

- Sort Items on Desktop:

Control + Command + 1 (Sort by name), Control + Command + 2 (Sort by date modified), Control + Command + 3 (Sort by kind), etc.

- Clean Up By

Control + Command + R: Automatically arranges icons on the desktop.

Other related-file shortcuts:

- Open Finder

Command + N: Opens a new Finder window.

Command + O: Opens the selected item.

- Navigate Through Folders

Command + Up Arrow: Moves to the parent folder.

Command + Down Arrow: Opens the selected folder.

- Copy, Cut, and Paste

Command + C: Copies the selected item.

Command + X: Cuts the selected item.

Command + V: Pastes the copied or cut item.

- Undo and Redo

Command + Z: Undoes the previous action.

Command + Shift + Z or Command + Y: Redoes the undone action.

- Delete and Move to Trash

Command + Delete: Moves the selected item to the Trash.

- Empty Trash

Command + Shift + Delete: Empties the Trash.

- Select All Files

Command + A: Selects all items in the active window.

- Deselect All Files

Command + Shift + A: Deselects all items.

- Minimize and Maximize Windows

Command + M: Minimizes the active window.

Command + Option + M: Minimizes all windows.

Command + F: Enters or exits full-screen mode.

- Close Window

Command + W: Closes the active window.

- Show/Hide Sidebar:

Command + Option + S: Toggles the visibility of the sidebar.

- Show/Hide Toolbar

Command + Option + T: Toggles the visibility of the toolbar.

Other Shortcuts

- Get Info

Command + I: Opens the Get Info window for the selected item.

- Search

Command + F: Initiates a search in the active window.

3.2.2.3 Resources

Some helpful videos for guidance and learning about folder management functions on a Mac.

- Moving files with VoiceOver: <https://www.youtube.com/watch?v=2q84Tqcux0E>
- General File Management: <https://www.youtube.com/watch?v=hIdUlvog6kI>

- A series of videos – Mac files and folders:
<https://www.youtube.com/watch?v=mYNchWitkyg&list=PL1bsBsPtN-9TY3YnJIY3haZ9v48i4i3Xy>

3.3 Linux OS

3.3.1 Built in features & Settings

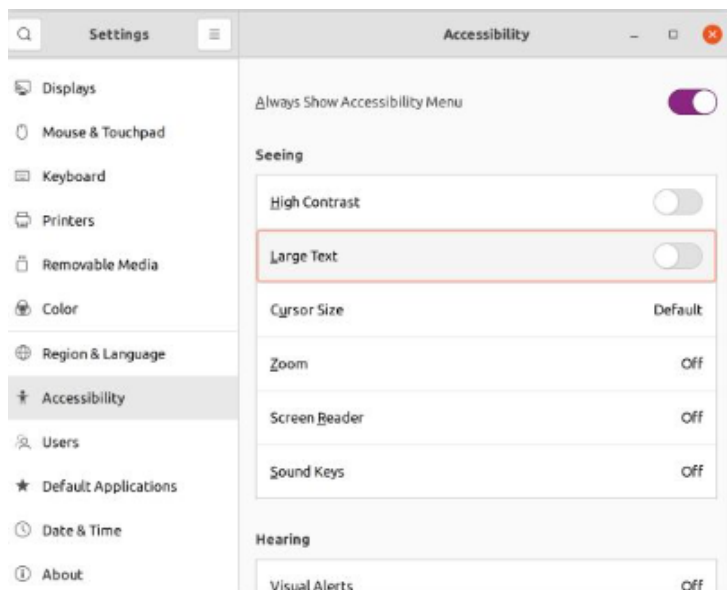
3.3.1.1 Accessibility for Cognitive Impairments

While Linux may not have specific built-in features labeled as "cognitive features," it embraces a philosophy of customization and flexibility. This allows users to adapt their computing experience to better suit cognitive preferences and requirements. The Linux ecosystem offers a range of tools and settings that users can leverage to enhance cognitive accessibility.

Accessibility Features

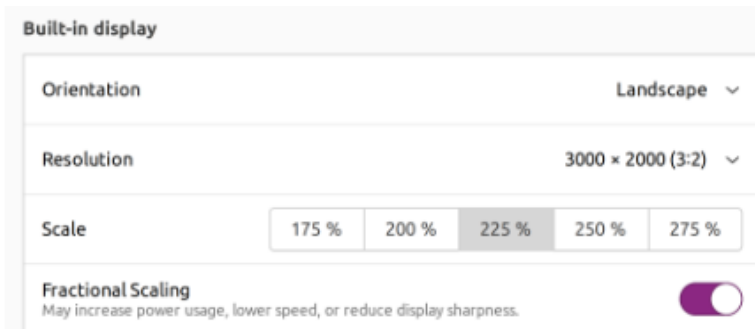
Enlarge the size of text, icons, and the pointer

- Increase the font size of the text
 1. Settings > Accessibility > Seeing
 2. Large Text
 3. Adjust the toggle to on

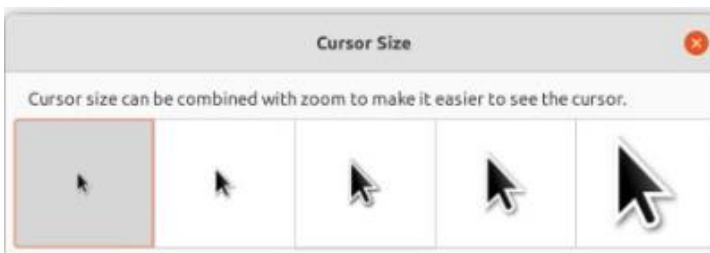


- Enlarge all visual elements on the screen
 1. Settings > Displays > Built-in Display
 2. Scale

3. Select from the options available

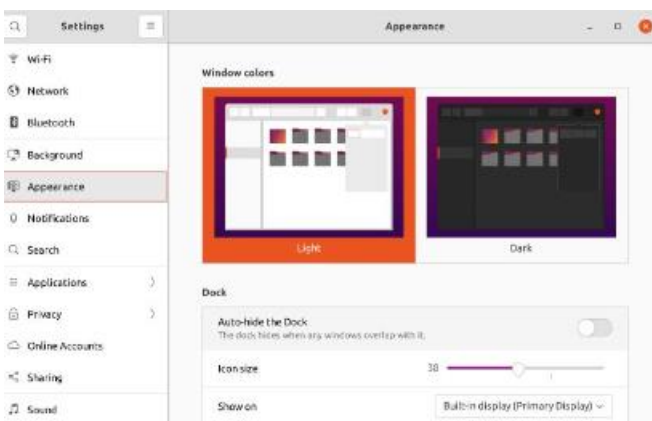


- Large Mouse Pointer
 1. Settings > Accessibility > Seeing
 2. Cursor Size
 3. Select a preferred size



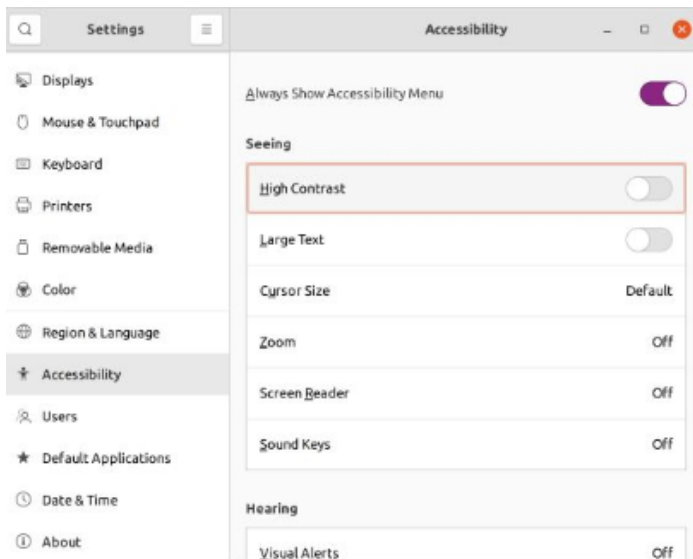
Adjust colour and contrast

- Enable Dark Mode
 1. Settings > Appearance > Window colours
 2. Dark

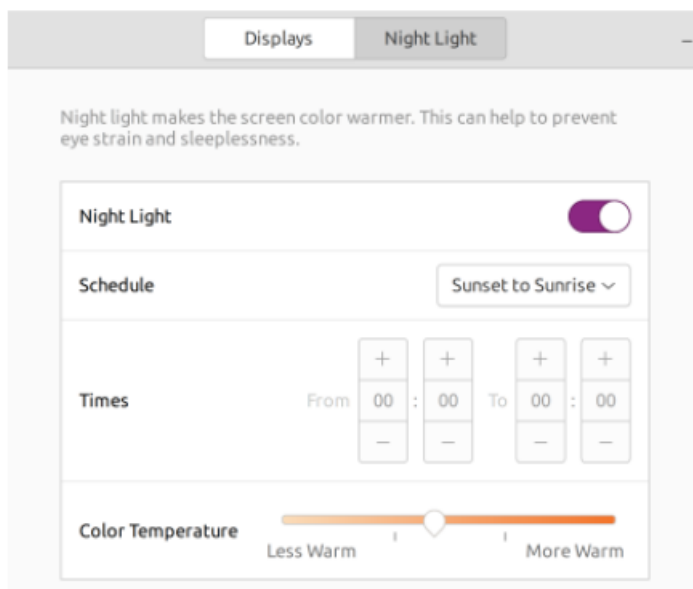


- High Contrast
 1. Settings > Accessibility > Seeing

2. Cursor Size
3. Select a preferred size



- For Night Light
 1. Settings > Accessibility > Seeing
 2. Cursor Size
 3. Select a preferred size



3.3.1.2 Exercises

Quiz 1

Choose if the sentence is True or False

1. The option to increase the font size of text in Linux is found in Settings > Accessibility > Seeing. (T/F)

Quiz 2

1. Where can the user find the settings to enlarge all visual elements on the screen in Linux?
 - a) Settings > Accessibility > Seeing
 - b) Settings > Displays > Built-in Display
 - c) Settings > Appearance > Window colours
 - d) Settings > Accessibility > Hearing

Quiz 3

1. Enabling Dark Mode in Linux is done through Settings > Appearance > Window colours.
 - a) True
 - b) False

Quiz 4

Where can the user enable High Contrast settings in Linux?

- a) Settings > Accessibility > Seeing
- b) Settings > Displays > Built-in Display
- c) Settings > Accessibility > Hearing
- d) Settings > Appearance > Window colours

Quiz 5

Match the correct sentence to the given statement.

1. Statement: "Linux provides settings to adjust screen contrast, brightness, and color schemes."

Matching Sentence:

- a) Adjust the Sticky Keys toggle
- b) Adjust colour and contrast

c) Increase the font size of the text

3.3.1.3 Resources

Available resources for Linux Accessibility features:

- General Accessibility features: <https://www.youtube.com/watch?v=UycAnCaB8lc>
- Ubuntu Desktop - a popular and user-friendly Linux distribution:
<https://www.youtube.com/watch?v=Eq2fJFVixtg>
- Orca Screen Reader: <https://www.youtube.com/watch?v=mDVG0DfwuxQ>
- Ubuntu and GNOME Orca screen reader:
https://www.youtube.com/watch?v=3krdly2_sZs

3.3.2 File Management

Linux offers a variety of desktop environments, which are graphical user interfaces (GUIs) that provide users with a way to interact with their operating system. Each desktop environment has its own look, feel, and set of features. Some of the popular Linux desktop environments include:

- GNOME: Known for its simplicity and modern design, GNOME is the default desktop environment for several Linux distributions, including Ubuntu.
- KDE Plasma: KDE is known for its feature-rich and customizable environment. KDE Plasma is the desktop environment associated with the KDE project.
- Xfce: Designed to be lightweight and fast, Xfce is suitable for systems with lower hardware specifications. It provides a balance between performance and features.
- LXQt: Another lightweight desktop environment, LXQt is the successor to LXDE. It aims to provide a clean and easy-to-use interface.
- Cinnamon: Developed by the Linux Mint team, Cinnamon provides a traditional desktop environment with a familiar layout for users transitioning from other operating systems.
- MATE: A continuation of the GNOME 2 desktop environment, MATE offers a classic desktop experience and is designed to be a stable and reliable choice.
- Unity: Originally developed by Canonical for Ubuntu, Unity offers a unique interface with a launcher on the left side of the screen. While no longer the default for Ubuntu, Unity can still be used.

File managers are an integral part of the desktop environment, and their choice often aligns with the design principles and goals of the desktop environment and the Linux distribution. Users have the flexibility to choose file managers based on their preferences and requirements, and they can customize their Linux experience accordingly.

The desktop environment on a Linux PC is contingent on the chosen distribution (distro). Different Linux distributions are equipped with distinct default desktop environments. GNOME stands out as a prevalent desktop environment and serves as the default for several prominent Linux distributions, though it is not the sole option.

Other of Linux distributions include:

- **Ubuntu:** In the standard version, Ubuntu, a well-known Linux distribution, utilizes GNOME as its default desktop environment. However, Ubuntu also offers official flavors with different desktop environments such as Kubuntu (KDE), Xubuntu (Xfce), and Lubuntu (LXQt).
- **Fedora:** Fedora Workstation, sponsored by Red Hat, adopts GNOME as its default desktop environment. Fedora provides spins featuring alternative desktop environments.
- **Debian:** Debian presents various installation options, allowing users to opt for a minimal installation devoid of a desktop environment. If a desktop environment is chosen during installation, GNOME and other options are available.
- **openSUSE:** openSUSE caters to both the GNOME and KDE Plasma desktop environments. Users can select their preferred desktop environment during the installation process.
- **Arch Linux:** Arch Linux empowers users to construct their system from scratch. Users enjoy the flexibility to install and configure their preferred desktop environment, including GNOME.

3.3.2.1 Exercises

Exercise 1:

What is the default desktop environment for Ubuntu?

- a) KDE
- b) GNOME
- c) Xfce

Exercise 2:

What is GNOME?

- a) A popular Linux distribution
- b) A desktop environment
- c) A web browser

3.3.2.2 Resources

Available resources for more interest:

- Top 5 File Managers for Linux:
<https://www.youtube.com/watch?v=9k5WGYzBv9U&t=215s>
- Nautilus: <https://www.youtube.com/watch?v=la2CaltxTEk>
- Servers with Gnome file manager: https://www.youtube.com/watch?v=Yek6tA_qomo
- Gnome version: https://www.youtube.com/watch?v=VRFZXx_Mmrl

4. Other Working Tools – Smart Devices

4.1 Accessibility features in Android Tablets

4.1.1 Cognitive Accessibility

Android devices incorporate features aimed at supporting individuals with cognitive impairments, promoting a more user-friendly and accommodating mobile environment. The use of communication aids, such as the Text-to-Speech engine, assists users in understanding and interacting with content. Additionally, simplified interface options, visual aids, and customizable settings contribute to a more straightforward and intuitive user experience, addressing the diverse cognitive needs of Android users.

Let's delve into the native features provided by the Android tablet:

- **Select to Speak**

If you prefer spoken feedback selectively, you can activate the Select to Speak option. Simply choose items on your screen, and the system will read or describe them aloud.

Basic Settings:

Step 1: Activate Select to Speak

- 1) Access your device's Settings app.
- 2) Navigate to Accessibility and select Select to Speak.
- 3) Toggle the On/Off switch located at the top.

Step 2: Utilize Select to Speak

- Tap the Select to Speak button, a permanent fixture on your screen. Follow the prompt to identify the specific portion you want to be read.
- To designate content for reading, either tap an item on your screen or swipe your finger across to hear multiple items.

NOTE

Select to Speak may not be compatible with all browsers.

For Android 8.0 Oreo Updates:

- Access Select to Speak by tapping Accessibility.

If you don't see this icon, you may be using an earlier version of TalkBack. Refer to the steps below.

- Select an item on your screen, such as text or an image.
- To listen to multiple items, swipe your finger across the screen.
- For a comprehensive reading, tap Play. Use the player's buttons to pause, play, skip forward or backward, and adjust speed.

NOTE

To halt spoken feedback, tap anywhere on the screen.

To reposition the Select to Speak button, touch and hold the button, then drag it.

4.1.2 Exercises

Exercise 1.

1. Select to Speak allows users to read or describe items on the Android tablet screen using touch gestures. (T/F)
2. In Android 8.0 Oreo, if the Select to Speak icon is not visible, users can access it by tapping on the Accessibility icon. (T/F)
3. To designate content for reading with Select to Speak, users can only tap items on the screen and not swipe. (T/F)
4. Select to Speak is guaranteed to be compatible with all web browsers on Android tablets. (T/F)
5. Users can reposition the Select to Speak button by tapping it once. (T/F)

Exercise 2.

How can users activate Select to Speak on their Android device?

- a. Shake the device
- b. Access Settings > Accessibility > Select to Speak
- c. Tap the home button
- d. Speak the command "Select to Speak"

4.1.3 Resources

For a better understanding of the chapter, the following resources are provided:

- Accessibility Features on an Android Tablet:
<https://www.youtube.com/watch?v=ls8NM21Jxb4>
- Talkback: https://www.youtube.com/watch?v=_1yRVwhEv5I
- Google assistant: <https://www.youtube.com/watch?v=hpAEVaA4ajc>
- All Accessibility features explained:
<https://www.youtube.com/watch?v=X47mjVa81pg>

4.2 Accessibility features on I-Pad

4.2.1 Cognitive Accessibility

In today's dynamic workplaces, the iPad's cognitive accessibility features, such as Guided Access and Speak Selection, offer essential support for individuals with diverse cognitive

needs. Guided Access helps maintain focus on specific tasks, contributing to increased productivity across job positions. Speak Selection aids in comprehension, making the iPad a versatile tool for professionals with varying cognitive requirements. Apple's commitment to accessibility ensures that every job position can benefit from an inclusive and supportive work environment.

Let's look at the features of this product that make it easy to use and work with:

Minimize disruptions and sensory input

- **Background sounds**

Create a peaceful environment by playing soothing sounds, like ocean or rain, to mask external noise and reduce distractions.

- 1) Simply go to Settings > Accessibility > Audio & Visual > Background Sounds and turn on Background Sounds.
- 2) Choose your preferred sound, adjust the volume, and customize settings such as using it when media is playing or stopping sounds when the iPad is locked.

- **Onscreen motion**

Reduce or eliminate onscreen motion on your iPad to create a more visually comfortable experience. Navigate to Settings > Accessibility > Motion to access various motion-related settings:

- **Reduce Motion:** Turn on to minimize animation, like the parallax effect of icons. When off, more items in the user interface animate.
- **Auto-Play Message Effects:** Turn off to prevent the Messages app from automatically playing full-screen effects. You can still manually play effects by tapping "Replay" below the message bubble.
- **Auto-Play Video Previews:** Turn off to disable automatic video previews, such as those in the App Store.
- **Auto-Play Animated Images:** Turn off to stop automatic playback of rapid animated images and GIFs in Messages and Safari.
- **Dim Flashing Lights:** Turn on to automatically dim the display when flashes or strobe effects are detected.

- **Limit Frame Rate:** Turn on to restrict the maximum frame rate of the display to 60 frames per second on models with ProMotion display technology.

- **Focus**

Establishing a Focus on your device allows you to manage notifications based on specific contexts such as Work, Personal, or Sleep. To create a Focus, follow these steps in Settings > Focus:

Select a Focus

- 1) Navigate to Settings > Focus.
- 2) Choose a Focus type, such as Personal, Sleep, or Work.

Customize Focus Settings

- 1) Define which apps and contacts can send notifications during this Focus.
- 2) Tap "Options" to access additional settings:
 - Toggle "Show On Lock Screen" to display silenced notifications on the Lock Screen or in Notification Center.
 - Enable "Dim Lock Screen" to darken the Lock Screen during this Focus.
 - Turn on "Hide Notification Badges" to conceal notification badges on Home Screen apps.
- 3) Once configured, tap the Back button.

Choose Home Screen Page

- 1) Select a Home Screen page for this Focus.
- 2) Tap the miniature Home Screen under "Customize Screens," choose the screen, tap Done, and then Back.

Share Across Devices

Optionally, enable "Share Across Devices" to synchronize Focus settings across all your Apple devices linked to the same Apple ID.

Finalizing and Adjusting

After setting up a Focus, revisit Settings > Focus anytime to modify or refine the selected options.

By organizing your Focus settings, you can tailor your device's notifications to align with different aspects of your daily life.

- **Guided Access**

Configure Guided Access by following these steps:

1) Access Guided Access Settings:

- Navigate to Settings > Accessibility > Guided Access.
- Toggle the Guided Access switch to turn it on.

2) Passcode Settings:

- Tap "Set Guided Access Passcode" and input a passcode for added security.
- Optionally, enable Face ID or Touch ID to conclude a Guided Access session.

- **Hide ads and distractions in Safari**

Automatically use Reader for a website

1) On a supported website, tap the Page Settings button, then tap Website Settings.

2) Turn on Use Reader Automatically.

Block pop-ups

Go to Settings > Safari, then turn on Block Pop-ups.

Pair audio and text

- **Live Captions (beta)**

Set up and customize Live Captions

1. Go to Settings > Accessibility > Live Captions, then turn on Live Captions (Beta).

2. Tap Appearance to customize the text, size, and color of the captions.

3. By default, Live Captions are shown across all apps. To get live captions only for certain apps such as FaceTime or RTT, turn them on below In-App Live Captions.

- **Spoken content**

Even if VoiceOver is turned off, you can have iPad speak selected text or the entire screen. iPad can also provide feedback and speak text corrections and suggestions as you type.

Choose modes for Spoken Content

1. Go to Settings > Accessibility > Spoken Content.
2. Turn on any of the following:
 - **Speak Selection:** Select what you want spoken.
 - **Speak Screen:** Have iPad read everything onscreen.
 - **Speech Controller:** Quickly access Speak Screen and Speak on Touch when Speak Screen is on.
 - **Highlight Content:** Move a cursor over words or sentences as you listen.
 - **Typing Feedback:** Have iPad speak each character, entire words, autocorrections, autocapitalizations, and typing predictions.

- **Audio message transcripts**

You can use the Messages app to record and send audio messages, along with transcripts of what's said in the message. Audio messages are automatically deleted to save space on your iPad, but if you want to save them, you can.

There are other options for the user such as:

- **Siri**
- **Keychain**
- **Face ID**
- **Touch ID**
- **Facial recognition**
- **People detection**
- **Image descriptions**
- **Text detection**
- **Point and Speak**
- **Door detection**

4.2.2 Exercises

Quiz 1

Select if the sentence is True or False

1. Background Sounds require an internet connection for operation.
2. A Focus can only be configured for Work-related contexts.
3. Audio messages in the Messages app are not automatically deleted.

Quiz 2

Choose the correct answer.

1. What does "Auto-Play Message Effects" control?
 - a) Background sounds in messages
 - b) Automatic playback of message effects
 - c) Reducing motion in messages
2. How can you customize the appearance of Live Captions?
 - a) In Siri settings
 - b) In Live Captions settings under Accessibility
 - c) In FaceTime settings
3. What does Guided Access allow you to do?
 - a) Customize Focus settings
 - b) Configure Live Captions
 - c) Restrict your iPad to a single app

Quiz 3

Fill in the Blank with the given words.

1. To access motion-related settings, navigate to Settings > Accessibility > _____.

2. Turn on Use Reader Automatically to automatically use Reader for a website in _____.

3. Go to Settings > Accessibility > _____ to choose modes for Spoken Content.

Given words: a) Safari, b) Spoken content, c) Motion

Quiz 4

Match each feature or aspect with its corresponding description:

Features/Aspects:

1. Background Sounds
2. Focus
3. Guided Access

Descriptions:

- a. Customize notifications based on contexts like Work, Personal, or Sleep.
- b. Play soothing sounds to mask external noise and reduce distractions.
- c. Restrict iPad to a single app, useful for controlled access.

4.2.3 Resources

Available resources for more interest:

- VoiceOver — Apple Support: <https://www.youtube.com/watch?v=qDm7GiKra28>
- Speak Selection: https://www.youtube.com/watch?v=cRdUFvL1I_8
- Accessibility features: https://www.youtube.com/watch?v=Ai5iO_boRR8

5. Annex – Exercise Answers

2.1.2 Exercises

Quiz 1

1. a) Labels
2. b) Color-coded

Quiz 2:

1. b) Memory, attention, and motor skills

Quiz 3

1. True

2.2.2 Exercises

Quiz 1

Answers: True, True

Quiz 2

1. B
2. C

Quiz 3

1. B
2. C

Quiz 4

1. B
2. A

3.1.1.2 Exercises

Exercise 1

1. True
2. False
3. True

Exercise 2

Answers: 1-b, 2-c, 3-a, 4-d, 5-e

Exercise 3

Answer: c) Adjust the color palette of the entire screen

Exercise 4

Answers: 1-e-d, 2-c, 3-b, 4-a

3.1.2.2 Exercises

Quiz 1

1. False
2. True
3. True

Quiz 2

Select the correct answer

1. A
2. C
3. A

Quiz 3

Answers: 1-a, 2-b, 3-c

Quiz 4

Answers: 1-a, 2-b, 3-c

3.2.1.2 Exercises

Quiz 1

1. True
2. False
3. False

Quiz 2

Answers: 1-a, 2-b, 3-c

Quiz 3

Select the correct answer

1. B
2. C
3. B

3.3.1.2 Exercises

Quiz 1

1. True

Quiz 2

1. b

Quiz 3

1. a

Quiz 4

Answer: a) Settings > Accessibility > Seeing

Quiz 5

Match the correct sentence to the given statement.

1. b

3.3.2.1 Exercises

Exercise 1:

Answer: b) GNOME

Exercise 2:

Answer: b) A desktop environment

4.1.2 Exercises

Exercise 1.

1. False
2. True
3. False
4. False
5. False

Exercise 2.

Answer: b. Access Settings > Accessibility > Select to Speak

4.2.2 Exercises

Quiz 1

1. False
2. False
3. False

Quiz 2

Choose the correct answer.

1. b

2. b

3. c

Quiz 3

1. c) Motion

2. a) Safari

3. b) Spoken Content

Quiz 4

Answers: 1-b, 2-a, 3-c