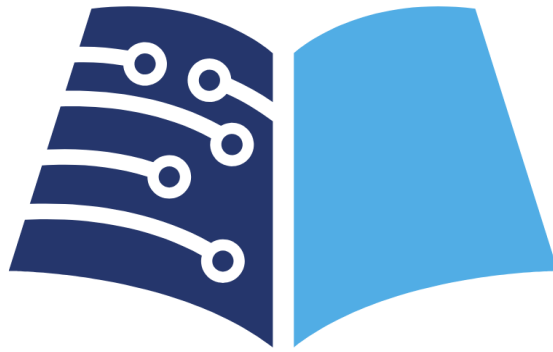




DIGITABILITY

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

BASIC KNOWLEDGE OF DEVICES

HEARING ACCESSIBILITY

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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 hearing 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 Hearing Impairments

Windows offers compatibility with a range of audio devices, including hearing aids, cochlear implants, and assistive listening devices, enhancing the digital experience for users with hearing impairments. These devices can often be seamlessly integrated, allowing users to tailor their settings and preferences for a more accessible and personalized experience.

Some devices that can be connected to Windows OS:

Audio Devices

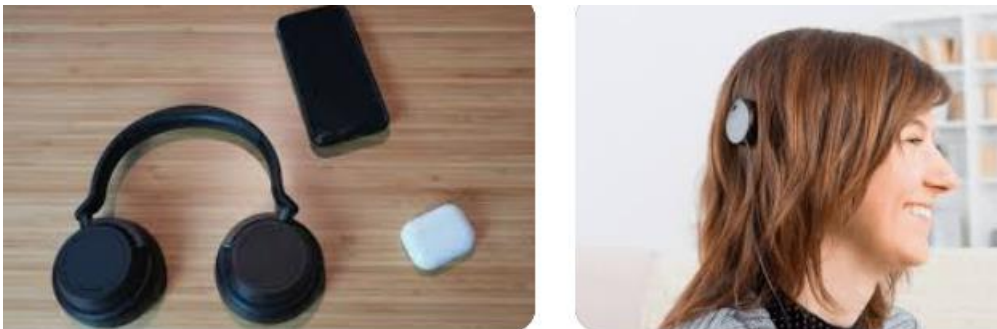


Figure 1. Different types of Audio Devices

Windows is compatible with a wide range of audio devices, including hearing aids, cochlear implants, and assistive listening devices. Users can connect and configure these devices to suit their needs.

- **Hearing Aids:** Many modern hearing aids are equipped with Bluetooth technology and can be paired with Windows computers or smartphones without the need for additional drivers. Windows typically includes built-in support for Bluetooth hearing aids. To set up the hearing aids, the user will generally follow the standard Bluetooth pairing process. Check the user manual provided with the hearing aids for device-specific instructions. The user should ensure that your Windows version has Bluetooth functionality, which is commonly available in Windows 7, 8, 8.1, 10, and 11. Popular hearing aid brands that offer Bluetooth connectivity include Widex, Phonak, Oticon, and ReSound.
- **Cochlear Implants:** Cochlear implants may require specific drivers or software provided by the manufacturer. These drivers or software are typically available on the manufacturer's website or through the product packaging. It's important for the user to follow the manufacturer's instructions for installation and setup. Cochlear, Advanced Bionics, and MED-EL are some of the major manufacturers. Users should check the

official websites of these manufacturers or consult with their audiologists for specific compatibility information and software downloads.

- **Assistive Listening Devices:** The requirements for assistive listening devices can vary depending on the type and brand of the device. Some may require specialized drivers or software, while others may work as standard audio output devices. To use these devices effectively, the user should check the manufacturer's documentation and their official website for information on driver installation and compatibility with Windows. Brands like Phonak, Williams Sound, and Sennheiser offer various assistive listening devices.

These can be seamlessly integrated into the Windows ecosystem. Users have the flexibility to connect and configure these devices according to their specific requirements, thereby enhancing their overall digital experience.

For instance, Windows provides Bluetooth connectivity support for hearing aids, allowing users to pair their devices effortlessly with their windows computers or smartphones. This connection empowers users to stream audio content directly to their hearing aids, reducing background noise and improving audio clarity.

Furthermore, Windows offers customizable audio settings, enabling individuals to fine-tune their listening experience to suit their preferences. These configurations can include adjusting volume levels, applying equalization settings, or prioritizing certain audio sources.

2.1.2 Exercises

Quiz 1

Choose the correct term that corresponds to the described audio devices.

- A.** Visual Aids
- B.** Hearing Aids
- C.** Assistive Reading Devices

- A.** Optical Implants
- B.** Cochlear Implants
- C.** Audio Enhancers

- A. Visual Assistance Devices
- B. Assistive Listening Devices
- C. Speech Recognition Devices

Quiz 2

Select the most appropriate option for each question.

1. What type of technology is often integrated into modern hearing aids for connectivity with Windows devices?

- A. Infrared technology
- B. Bluetooth technology
- C. Wi-Fi technology

2. What may cochlear implants require for compatibility with Windows?

- A. Specific drivers or software
- B. General audio cables
- C. USB connectivity

3. How do users typically set up Bluetooth hearing aids with Windows computers or smartphones?

- A. Through an optical cable
- B. Following the standard Bluetooth pairing process
- C. Using specialized hearing aid software

Quiz 3

Indicate whether the following statements are True or False.

- A.** Windows typically includes built-in support for Bluetooth hearing aids.
- B.** Cochlear implants always work as standard audio output devices without the need for additional drivers.
- C.** Assistive listening devices require only Bluetooth to be connected to Windows.

2.1.3 Resources

Audio Devices: Video Supplies

- <https://www.youtube.com/watch?v=74njYT6a1Lw>
- <https://www.youtube.com/watch?v=ciEG0dRsEAo>

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 Dockers include:

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



Figure 2. 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 3. 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 4. 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 5. 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 Hearing Impairments

Imagine a world where everyone can hear and be heard. Thanks to special hearing aids that can connect to Mac computers, people with hearing difficulties can join in conversations, attend meetings, and enjoy the sounds of daily life. These clever devices not only make things louder but also help cut out unwanted noises. With them, everyone gets to be part of the conversation, making the digital world a more inclusive place for all.

Some devices that can be connected to Mac OS:

Bluetooth Hearing Aids



Figure 6. Images of Bluetooth Hearing Aids

Bluetooth hearing aids are designed to provide a seamless and convenient connection between the user's macOS laptop and their hearing aids. To use Bluetooth hearing aids with a macOS laptop, the user needs to ensure that their laptop has the necessary hardware and software support. This includes checking for Bluetooth compatibility, supporting Bluetooth Low Energy (BLE), and ensuring accessibility features are enabled on macOS. Additionally, the user should be aware of any specific drivers or software provided by their hearing aid manufacturer and whether their hearing aids can be adjusted via the macOS laptop. Keeping both the macOS operating system and hearing aid firmware up to date is essential, and the user should be mindful of their laptop's battery life when using Bluetooth for extended periods. In most cases, Bluetooth hearing aids should work efficiently with a macOS laptop, but following the manufacturer's guidance and staying updated with software and firmware can ensure a smoother experience.

MacOS generally supports standard Bluetooth profiles that most hearing aids use. However, to ensure seamless compatibility and functionality, the user should follow these steps:

Step 1: The user should start by pairing their Bluetooth hearing aids with their macOS laptop. To do this, go to the Bluetooth settings on the Mac, make sure Bluetooth is turned on, and follow the pairing instructions provided with the hearing aids. The macOS should detect and pair with the hearing aids without the need for additional drivers.

Step 2: The user should make sure their hearing aids have the latest firmware updates. Hearing aid manufacturers often release firmware updates to enhance compatibility and performance with various devices, including macOS. The user may need to connect their hearing aids to a smartphone or a dedicated app to update their firmware.

Step 3: macOS offers several accessibility features that can be used to optimize the user's experience with hearing aids. These include options for adjusting sound balance, enabling mono audio, and turning on closed captions.

Step 4: The user should check the official website of their hearing aid manufacturer or contact their customer support to see if they offer any specific software or guidance for macOS users. Some manufacturers provide custom applications that allow users to fine-tune their hearing aids using a Mac.

In general, macOS should work with standard Bluetooth hearing aids without requiring additional drivers. However, it's essential for the user to ensure that both their macOS operating system and hearing aids have the latest updates to maintain compatibility and optimize their hearing aid experience.

Assistive Listening Systems (ALS)



Figure 7. Images of a variety of ALS

Assistive Listening Systems can be used with macOS laptops or desktop computers to improve audio clarity. These systems include various components like personal amplifiers, induction loop systems, and FM systems.

- **Induction Loop Systems:** If the user has a hearing aid with a T-coil (telecoil) feature, they can use induction loop systems. These systems transmit audio signals wirelessly to the user's hearing aid when they're within the loop's range.



Figure 8. Image of Induction Loop Systems

- **FM Systems:** These systems use wireless signals to transmit audio to a receiver that can be connected to the user's hearing aids. They are often used in classrooms, theaters, and other public places.



Figure 9. Image of FM Systems

- **Personal Amplifiers:** Personal amplifiers are portable devices that amplify sound. They can be connected to the user's macOS laptop or other devices via a compatible cable.



Figure 10. Image of Personal Amplifiers

Assistive Listening Systems (ALS) typically do not require specific drivers for macOS compatibility. Most ALS are designed to work with standard audio output options available on macOS devices. However, some ALS accessories may require additional software, and the user should check the manufacturer's recommendations for specific instructions.

Steps to ensure compatibility:

- Step 1: The user should ensure that their hearing aids are compatible with ALS. If their hearing aids have a telecoil (T-coil) or Bluetooth capabilities, it can make the connection process more straightforward.
- Step 2: Depending on the user's hearing aids' compatibility and their specific needs, they should choose an ALS that suits their situation. For example, if the user often attends public events, induction loop systems or FM/infrared systems may be suitable. For personal use, personal amplifiers can be a good choice.
- Step 3: Connect the ALS to the user's macOS laptop or desktop using the appropriate cables or wireless connections. Ensure that the ALS is powered and functioning correctly.
- Step 4: If the user's ALS has adjustable settings, they should configure them according to their preferences. Some ALS allow the user to control the volume, tone, and other audio settings.

- Step 5: On the user's macOS device, go to the sound settings and select the ALS as the audio output source. This will route the audio from the macOS device to the ALS and, subsequently, to the user's hearing aids or receivers.
- Step 6: Test the system by playing audio on the user's macOS device and adjusting the volume and settings on both the macOS device and the ALS to achieve the best audio quality and clarity.

2.2.2 Exercises

Quiz 1

Select the correct word

1. Bluetooth hearing aids provide a seamless connection between the user's macOS laptop and their hearing aids, enhancing _____.

- A.** accountability
- B.** accessibility
- C.** electricity

2. The user should ensure that their laptop supports Bluetooth Low Energy (BLE) and has _____ features enabled on macOS.

- A.** accessibility
- B.** collaboration
- C.** security

3. To use Bluetooth hearing aids efficiently, it's crucial to keep both the macOS operating system and hearing aid _____ up to date.

- A. firmware
- B. box
- C. mask

Quiz 2

Select the correct sentence if it is True or False.

- 1. ALS typically requires specific drivers for macOS compatibility.
- 2. Personal amplifiers are often used in public places like classrooms and theaters.
- 3. To connect ALS to a macOS laptop, the user should select the ALS as the audio output source in the display settings.

Quiz 3

Multiply Choice:

- 1. How can the user optimize their experience with Bluetooth hearing aids on a macOS laptop?
 - A. Adjusting the laptop's screen brightness
 - B. Keeping the laptop in sleep mode
 - C. Ensuring the hearing aids have the latest firmware updates
- 2. What should the user check for in their hearing aids to use induction loop systems?
 - A. Bluetooth capabilities
 - B. T-coil (telecoil) feature
 - C. USB connectivity

Quiz 4

True/False:

1. Bluetooth hearing aids should work efficiently with a macOS laptop without the need for additional drivers.
2. macOS generally supports standard Bluetooth profiles that most hearing aids use

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 Hearing Impairments

Linux, an open-source operating system renowned for its versatility, has made significant strides in developing and supporting assistive technologies. Whether through the creation of specialized assistive devices designed to seamlessly integrate with Linux or the implementation of accessibility features within the operating system itself, Linux strives to empower users with hearing impairments by fostering an inclusive and adaptive computing environment. In this

realm, Linux continues to contribute to the evolution of assistive technologies, aiming to bridge gaps and facilitate a more accessible digital experience for all users.

Below are some of the devices that can be connected to Linux systems:

Bluetooth Hearing Aids → ReSound ONE



Figure 11. ReSound-Hearing Aids

ReSound ONE, a state-of-the-art hearing aid, seamlessly integrates with Linux devices through Bluetooth connectivity. For activation, ensure Bluetooth is enabled on both the hearing aid and the Linux device.

Connect by navigating to the Bluetooth settings on your Linux device and pairing it with ReSound ONE. Visit the ReSound website to download any required drivers or firmware updates, optimizing performance for a personalized hearing experience.

Vibrating Alarm Clocks → ClearSounds SHAKER Digital Vibrating Alarm Clock



Figure 12. ClearSounds-Alarm Clock

The ClearSounds SHAKER Digital Vibrating Alarm Clock connects to Linux systems via USB or Bluetooth. To set it up, plug it into your Linux workstation using the provided USB or enable

Bluetooth pairing. Ensure the necessary drivers are installed for seamless integration.
Customize alarm settings through the ClearSounds app on your Linux device.

Regularly check for software updates on the manufacturer's website to guarantee the latest features and compatibility.

Visual Alerting Systems → Silent Alert SA3000



Figure 13. Silent Alert System

Silent Alert SA3000 seamlessly integrates with Linux-based smart home hubs. Follow the provided instructions to connect the SA3000 to your Linux smart home hub.

Check for compatibility and ensure the system's firmware is up-to-date. Visit the Silent Alert website to download any required Linux-specific drivers or updates. Customize alert preferences using the SA3000 app on your Linux device for enhanced accessibility at home or work.

2.3.2 Exercises

Quiz 1

Chose if the sentence is True or False.

- 1.ReSound ONE hearing aids support Bluetooth connectivity for integration with Linux devices.
- 2.The ClearSounds SHAKER Digital Vibrating Alarm Clock connects to Linux systems exclusively through USB.
- 3.The Silent Alert SA3000 visual alerting system is designed for compatibility with Linux-based smart home hubs.

Quiz 2

Find the correct answer.

1. How can individuals customize ReSound ONE hearing aids?

- A. Through USB connections
- B. Using the ReSound Smart 3D app
- C. Via Bluetooth settings
- D. Through closed captioning controls

2. What is a notable feature of the ClearSounds SHAKER Digital Vibrating Alarm Clock?

- A. Direct audio streaming
- B. High-resolution display
- C. Bed shaker for alerts
- D. Amplified sound

Quiz 3

Choose the suitable word.

1. The Silent Alert SA3000 visual alerting system enhances _____ in the home or workplace for individuals with hearing impairments.

- A. Integration
- B. Accessibility
- C. Customization
- D. Time management

2.3.3 Resources

Below are resources for audio assistive technologies:

- https://www.youtube.com/watch?v=P_oyFblvMY
- Webinar for Resound hearing aids:
<https://www.youtube.com/watch?v=S8bwUP1uvOo&list=PLeu5EFk0WAOIA8Zs3J0XaPq51xpPdWvRX&index=1>

3. Operating System Accessibility Management for Computers

3.1 MS Windows OS

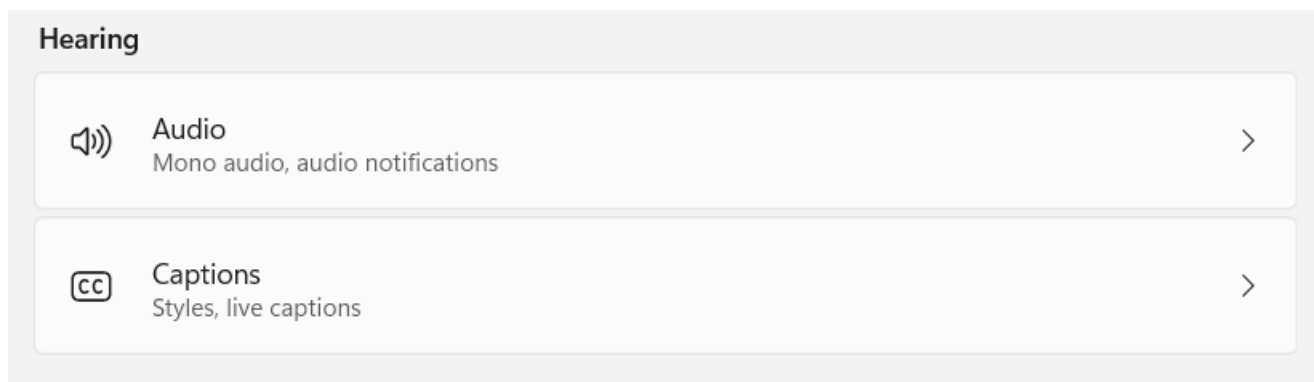
3.1.1 Built in features & Settings

3.1.1.1 Hearing Accessibility

Microsoft Windows offers a suite of built-in accessibility features designed to enhance the user experience for individuals with visual and hearing impairments. These features aim to make the operating system more inclusive by providing tools for managing captions and subtitles, sound notifications, and audio settings. Whether it's customizing the display of captions or adjusting audio output for users with hearing loss, these features ensure that Windows is accessible to a broader range of users.

Windows software has several features that a person with a disability can choose to make it easier for them to work on the computer.

The user can in the first way write/search the **menu of Accessibility**, otherwise in shortcut keyboard mode can press: **Windows logo key + U**.



- The options and settings provided in the Accessibility menu for low hearing are:

Audio:

- **Volume Control:** Windows allows users to adjust the volume of their audio output. The users can control the volume of individual applications as well as system-wide volume settings.
- **Mono Audio:** This feature combines the left and right audio channels into a single channel, which can be helpful for users with hearing loss in one ear.

Captions: Windows provides system wide caption settings in the "Accessibility menu" of the settings app. Users can adjust caption appearance, including text size, font, color, and background to make captions more readable.

Closed Caption and Subtitles**1. Turn on live captions:**

To enable live captions, do one of the following:

- Enable the Live Captions toggle in the Accessibility quick settings drop-down. (To open the quick settings, select the battery, network, or volume icon in the taskbar).
- Press the Windows logo key + Ctrl + L.
- Select Start > All apps > Accessibility > Accessibility > Live captions.
- Go to Settings > Accessibility > Accessibility > Captions and turn on the Live Captions toggle.

When first enabled, Live Captions will prompt you to download live caption language files to be used by the device's speech recognition. If your language is not available, you can use another language during installation.

2. Personalize how captions are displayed

To choose where captions are displayed on your desktop:

- Select the Settings button in the live captions window.
- Select Position.
- Choose either Top, Bottom, or Floating on screen.
- When you choose Top or Bottom, the captions window will appear as docked to the top or bottom screen edges in reserved space on your desktop, and other apps will not be blocked by the captions window. When docked to the top, you might find that live

captions work well while sharing video in a virtual meeting or conversation, whereas in other cases, such as viewing videos, docking to bottom might work best.

- When you choose Floating on screen, the live captions will appear in an overlay window which you can reposition as needed to avoid obscuring other apps in use.

To show more lines of text in the captions window, increase the window size by using the mouse, touch, or keyboard.

3. Make captions easier to read

- Select the Settings button in the live captions window.
- Select Preferences.
- Select Caption style. The Accessibility settings for Captions opens.
- Under Caption style, do one of the following:
 - Select a built-in style from the dropdown menu. Use the Default built-in style to have captions displayed with colors appropriate to your device's dark or light mode setting in Settings > Personalization > Colors > Choose your mode.
 - Select the Edit button to create a custom style that works best for you.

Sounds Notifications

Windows audio alerts provide audio feedback and notifications to inform users about events, actions, or changes to the operating system or applications.

To change the Notification Sounds in Windows 10 the user can follow the steps below:

1. Right click the Start button.
2. Go to Control Panel.
3. Change the View into Small icons.
4. Click Sound.
5. Then select Sounds.
6. Under the Program Events, look for Notification then click it.
7. From the drop-down menu, choose the Notification sound then click Apply.

Mono Audio

Mono audio in Windows is a mode that combines sound from the left and right audio channels and plays it through a single audio channel (usually the center speaker or the left and right speakers equally). This mode is designed primarily for accessibility purposes and is useful for people with hearing problems in one ear. By combining both audio channels into one, users with hearing loss in one ear can hear audio content more clearly and without losing information that may be present in either the left or right audio channel.

See how to enable monaural audio in Windows 10 and 11:

1. Right-click the speaker icon in the Windows taskbar (system tray) or open the "Sound" settings from Control Panel.
2. Select "Open Sound Settings" or "Sounds".
3. In the sound settings, scroll down to the "Advanced sound options" section.
4. Under the "Mono audio" section, turn on the switch to enable mono audio.

Enabling mono audio will ensure that all audio outputs from your computer are played in mono mode, combining the left and right audio channels into one.

3.1.1.2 Exercises

Quiz 1

Select if the sentence is True or False:

1. Windows software offers features for individuals with disabilities to make computer use more accessible. (T/F)
2. The Accessibility menu in Windows can be found by searching or writing in the menu. (T/F)

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-aeeb-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>

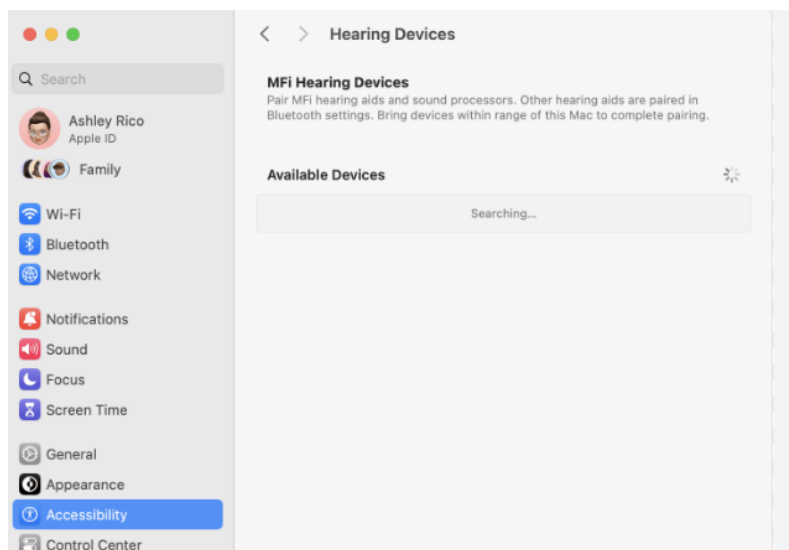
3.2 Mac OS

3.2.1 Built in features & Settings

3.2.1.1 Hearing Accessibility

On macOS, Apple provides several built-in accessibility features and applications that can be beneficial for individuals with hearing impairments. These features aim to enhance the overall user experience and make the Mac platform more accessible.

Hearing Devices Setup



Hearing Devices Setup on Apple Mac computers involves configuring and connecting compatible hearing devices, such as hearing aids or cochlear implants, to enhance the audio experience for individuals with hearing impairments.

Key Aspects:

Features	Description
----------	-------------

Accessibility Settings	Users can access Hearing Devices Setup through the "System Preferences" on their Mac. Navigate to "System Preferences > Accessibility > Hearing" to configure hearing devices.
Bluetooth Connectivity	Hearing devices that support Bluetooth connectivity can be paired with the Mac for a seamless wireless audio experience. The user can ensure that the hearing device is in pairing mode, then select it from the list of available devices in the Bluetooth settings.
Hearing Devices in Accessibility Menu	Once configured, users can access essential hearing device settings directly from the Accessibility menu in the menu bar. This provides quick access to adjust settings on the fly.

Closed Captions



MacOS on Apple computers supports closed captions, providing an inclusive experience for users who are deaf or hard of hearing. Closed captions enhance accessibility by displaying text on the screen to represent spoken dialogue and other audio content.

Key Aspects:

Features	Description
Accessibility Settings	Closed captions settings can be accessed through the "System Preferences" on a Mac. Navigate to "System Preferences > Accessibility > Captions" to configure caption preferences.
Customization Options	Users can customize closed caption appearance, including text size, font style, and background color, to suit their preferences and enhance readability.
Accessibility Shortcut	Mac users can set up accessibility shortcuts to quickly enable or disable closed captions. This provides a convenient way to access caption settings on the fly.

Visual Alerts



MacOS on Apple computers does not have a specific feature known as "Visual Alerts." However, macOS includes a range of accessibility features that aim to provide visual alerts and notifications for users with various needs. Users can enable visual alerts in "System Preferences > Accessibility > Audio."

Key Aspects:

Features	Description
Notification Center	The Notification Center on macOS aggregates alerts, notifications, and widgets, providing a centralized location for users to view and manage

Features	Description
	notifications from various applications. Users can access the Notification Center by clicking on the menu bar icon or swiping to the right with two fingers on the trackpad.
Banner Notifications	MacOS supports banner notifications that briefly appear in the upper-right corner of the screen, providing information about incoming messages, emails, or other app-specific alerts. Users can customize notification preferences for each application in the System Preferences.
Do Not Disturb	The Do Not Disturb feature allows users to silence notifications temporarily. When enabled, notifications won't appear on the screen, providing a focused and uninterrupted experience. Users can manually activate Do Not Disturb or schedule it for specific times.
Flash Screen for Alerts	Users can configure macOS to flash the screen when an alert or notification occurs. This visual cue can attract attention and is useful for users who may not rely on audible alerts.
Notification Options	Users can choose to receive notifications in different forms, such as a banner on the screen, a notification in the Notification Center, or a flash on the screen. These options cater to individual preferences and the urgency of the detected sound.

Sound Recognition



Apple's macOS includes a feature known as "Sound Recognition." Sound Recognition is an accessibility feature designed to alert users to certain sounds in their environment. This feature is particularly beneficial for individuals with hearing impairments or those who may have difficulty hearing specific sounds.

Key Aspects:

Features	Description
Activation and Settings	Users can find the Sound Recognition feature in the Accessibility settings. Once activated, it can detect and notify users about various sounds.
Supported Sounds	Sound Recognition is capable of identifying a range of sounds, including but not limited to doorbells, fire alarms, sirens, appliances, and specific animal sounds. Users can customize the types of sounds they want the system to recognize.
Visual Alerts	When Sound Recognition detects a recognized sound, it provides a visual notification on the screen. This visual alert ensures that users

Features	Description
	are informed of important sounds even if they might not hear them audibly.
Integration with Other Accessibility Features	Sound Recognition can complement other accessibility features on macOS, such as VoiceOver. The combination of features enhances the overall accessibility experience for users with different needs.

3.2.1.2 Exercises

Quiz 1

Choose if the sentence is True or False

1. Hearing Devices Setup can be accessed through "System Preferences > Accessibility > Hearing" on a Mac.
2. Hearing devices with Bluetooth connectivity can be seamlessly paired with a Mac.
3. Once configured, users can access hearing device settings from the Accessibility menu in the menu bar.

Quiz 2

Choose the correct answers

1. How can users access closed caption settings on a Mac?
 - a) Siri voice command
 - b) System Preferences > Accessibility > Captions
 - c) Control Panel > Sound
 - d) Applications > Utilities
2. What customization options are available for closed captions?
 - a) Background music control

- b) Text size, font style, and background color
- c) Screen brightness adjustment
- d) Internet speed optimization

3. What is the purpose of the accessibility shortcut for closed captions?

- a) Enable/disable screen recording
- b) Quickly access and manage closed caption settings
- c) Activate dark mode
- d) Adjust screen resolution

Quiz 3

Match the numbers with the letters

- 1. Notification Center aggregates alerts, notifications, and widgets.
- 2. MacOS supports banner notifications that appear in the upper-right corner.
- 3. Users can configure macOS to flash the screen when an alert occurs.

Match them with the sentence:

- a. Flash screen for alerts
- b. Banner notifications
- c. Notification Center

Quiz 4

- 1. Where can users find the Sound Recognition feature in macOS?
 - a) Accessibility settings
 - b) System Preferences > Display
 - c) Applications > Utilities

d) Siri voice command

2. What types of sounds can Sound Recognition identify?

- a) Only human voices
- b) Animal sounds only
- c) A range of sounds including doorbells and fire alarms
- d) Music genres

3. How does Sound Recognition notify users when it detects a recognized sound?

- a) Audible alert
- b) Visual notification on the screen
- c) Send a notification to the user's phone
- d) Change system wallpaper

3.2.1.3 Resources

Hearing Accessibility

Accessibility settings – click some informative videos:

- Closed live captions: <https://www.youtube.com/watch?v=nfJ22oQFhao>
- Adjusting Hearing Alarms: https://www.youtube.com/watch?v=Uzp2GVIM_LA

Official Apple channel:

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

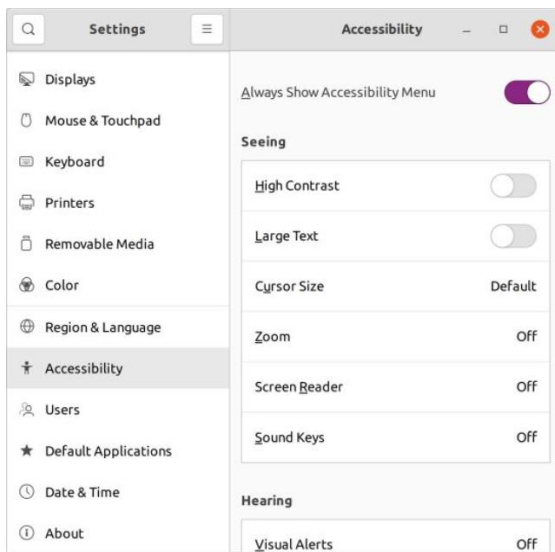
3.3 Linux OS

3.3.1 Built in features & Settings

3.3.1.1 Accessibility for Hearing Impairments

Linux incorporates built-in features designed to enhance hearing accessibility, ensuring a seamless and accommodating computing experience for individuals who are deaf or hard of hearing. These features encompass various aspects, including auditory feedback, visual notifications, and customizable settings that empower users to tailor their Linux environment according to their unique auditory requirements. Whether it's the integration of visual cues in system alerts or options for adjusting sound preferences, Linux strives to create an environment where users with hearing impairments can fully participate in the digital realm with confidence and ease.

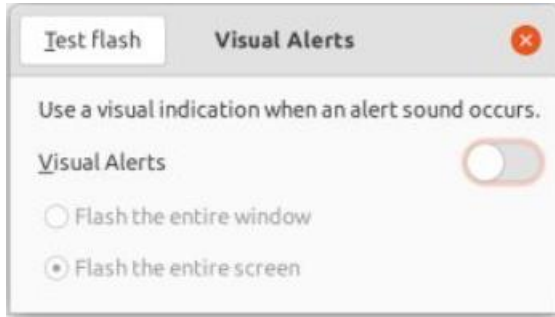
To Access Accessibility Settings



The following instructions pertain to Ubuntu 21.10 but should be applicable to most Linux versions based on the GNOME desktop.

1. Initiate the Applications Menu: Click the Show Applications Button or use the shortcut Windows + A (found on most keyboards)
2. Select the Settings gear icon
3. Navigate to Accessibility

For hearing features



1. Turn on Visual Alerts
2. Settings → Accessibility ▢ Hearing
3. Visual Alerts

NOTES

The visual alerts functionality allows the configuration of either flashing the active window or the entire screen in response to an alert sound. This proves beneficial for individuals who may not have the ability to hear the alert.

3.3.1.2 Exercises

Quiz 1

Choose if the sentence is True or False

1. Visual alerts in Linux can only be configured to flash the entire screen.

True / False:

2. The accessibility settings in Ubuntu 21.10 can be accessed through the shortcut Windows + A.
3. Visual Alerts can be beneficial for individuals with hearing impairments.

Quiz 2

Select the correct answer

1. Which keyboard shortcut opens the Applications Menu in Ubuntu 21.10?

A) Ctrl + A

- B) Windows + A
- C) Alt + A
- D) Shift + A

2) Where can you find the accessibility settings in Linux based on the GNOME desktop environment?

- A) Display
- B) Appearance
- C) Accessibility
- D) System

3) What is the purpose of Visual Alerts in the context of hearing features?

- A) Adjust screen brightness
- B) Flash the entire screen or active window in response to an alert sound
- C) Change system language
- D) Enable touchpad gestures

Quiz 3

Match the following sentences with the correct action:

1. Turn on Visual Alerts.

Action:

- A) Click Show Applications Button
- B) Navigate to Accessibility
- C) Settings → Accessibility → Hearing → Visual Alerts

2. Access the accessibility settings in Ubuntu 21.10.

Action:

- A) Click the Settings gear icon
- B) Use shortcut Windows + A
- C) Turn on Visual Alerts

3. Configure visual alerts to flash the entire screen.

Action:

- A) Navigate to Accessibility
- B) Flash the active window
- C) Settings → Accessibility → Hearing → Visual Alerts

Quiz 4

1. In Linux, where can the user find the option to turn on Visual Alerts for hearing features?

- a) Accessibility → Sound
- b) Settings → Display
- c) Settings → Accessibility → Hearing
- d) Applications Menu → Hearing

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 Hearing Accessibility

For users with hearing impairments, Android devices incorporate accessibility features designed to ensure a seamless and inclusive mobile experience. Live Transcribe, for instance, converts spoken words into real-time, readable text, facilitating communication. Furthermore, users can rely on vibration alerts, visual notifications, and LED flash notifications to stay informed about incoming calls, messages, and other alerts, making Android devices accessible and accommodating to diverse auditory needs.

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

- **Captions**

The user has the option to enable captions on their device and customize settings such as language, text, and style for closed captioning.

Basic settings:

Captions Activation

- 1) Launch the Settings app on your device
- 2) Navigate to Accessibility, then select Captions (For Samsung devices: Settings > Accessibility > Hearing)
- 3) Toggle the On/Off switch at the top (For Samsung devices: Samsung subtitles (CC) or Google subtitles (CC))

Customize caption preferences

Once captions are enabled, you can modify the following settings in Settings > Accessibility > Captions.

- Language: Choose the language for captions
- Text size: Adjust the size of your caption text
- Caption style: Customize the style and color of your caption text and background

The user may note that their caption settings may not affect specific applications.

• **Mono Audio**

Simultaneously plays audio from both the left and right channels through any currently active sound output.

Activate Mono Audio

- 1) Launch your device's Settings app
- 2) Access Accessibility, then toggle the On/Off switch.

• **Vibration**

The phone will produce vibrations for incoming calls, alarms, and notifications.

Activate Call-Only Vibration

- 1) Open your device's Settings app
- 2) Navigate to Sound and toggle the On/Off switch for "Also vibrate for calls."

Activate Continuous Vibration

When your device's ring volume is set to Vibrate:

- Notifications configured for sound will vibrate.
- Notifications configured for vibration will continue to vibrate.

- Your phone will vibrate for incoming calls.

Enable Vibration for Emails or Text Messages

Certain apps provide options for customizing vibration settings. Explore the settings menu within each app, such as Gmail, Microsoft Outlook, and Google Messenger, to select vibration preferences.

4.1.2 Exercises

Select if the sentences are True or False

1. Captions on an Android tablet can be customized for language, text size, and style. (T/F)
2. Mono Audio on an Android device plays audio separately from the left and right channels. (T/F)
3. Vibration on an Android phone can be activated for incoming calls, alarms, and notifications. (T/F)

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 Hearing Accessibility

In a professional setting, effective communication is paramount. iPad's Live Listen feature, compatible with hearing aids, becomes a valuable asset during meetings, conferences, and collaborative work. This ensures that individuals with hearing impairments can actively participate in discussions, enhancing their engagement and contribution to diverse job positions.

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

Sound to Text

- **Sound recognition**

Activate Sound Recognition on your iPad to enable continuous monitoring for specific sounds, such as doorbells, sirens, or a crying baby, with instant notifications when identified.

To set up Sound Recognition:

- 1) Navigate to Settings > Accessibility > Sound Recognition.
- 2) Toggle the Sound Recognition switch to turn it on.
- 3) Tap "Sounds" and enable recognition for the specific sounds you want your iPad to detect.

For custom sounds like alarms, appliances, or doorbells:

- 1) In Settings, go to Accessibility > Sound Recognition > Sounds.
- 2) Choose "Custom Alarm," "Custom Appliance," or "Custom Doorbell" and assign a name.
- 3) Ensure your iPad is close to the sound source with minimal background noise.
- 4) Tap "Start Listening" and follow the onscreen instructions to train your iPad to recognize the custom sound.

- **Live Captions**

Configure and personalize Live Captions on your device with the following steps:

- 1) Access Settings > Accessibility > Live Captions and activate Live Captions (Beta).
- 2) Customize the appearance of captions by tapping on "Appearance." Adjust settings such as text style, size, and color according to your preferences.
- 3) By default, Live Captions are displayed across all applications. If you prefer to enable live captions exclusively for specific apps like FaceTime or RTT, switch on the option for In-App Live Captions.

- **RTT**

Establishing RTT on your iPad involves the following steps:

- 1) Ensure Wi-Fi calling is set up for both making and receiving calls on your iPad.
- 2) Navigate to Settings > Accessibility > RTT.
- 3) Activate Software RTT and perform any of the subsequent actions:
 - Specify a Relay Number by tapping on "Relay Number" and entering the phone number for relay calls through Software RTT/TTY.
 - Enable or disable "Send Immediately" to send characters as you type or complete messages before sending.
- 4) Once RTT is enabled, the RTT icon will be visible in the status bar at the top of the screen.

Initiating an RTT call is done as follows:

- 1) Open the FaceTime app on your iPad.
- 2) Tap "New FaceTime," input the desired name or number, or select contacts using the Add button.
- 3) Press the Call button, then choose "RTT Call" or "RTT Relay Call."

During an RTT call, you can type text by following these steps:

- 1) After accepting or starting an RTT call in the FaceTime app, tap "Use RTT" and select the RTT button.
- 2) Enter your message in the provided text field.
- 3) If "Send Immediately" is activated, your recipient sees each character as you type. Otherwise, press the Send button to transmit the complete message.
- 4) For audio transmission, tap the Microphone Off Muted button in the top-right corner if needed.

Other features that can be explored by the user through their device or on apples website are:

- **Homepod intercom transcriptions**
- **Audio messages transcriptions**
- **Subtitles and captions**

Enhance Hearing

- **MFi hearing devices**

Use hearing devices with iPad

If your hearing devices are already paired to another nearby device, such as a Mac or iPad, make sure Bluetooth® is turned off on those devices. (When you finish pairing your hearing devices to your iPad, you can turn Bluetooth on again on those devices.)

- 1) On iPad, go to Settings > Bluetooth, then make sure Bluetooth is turned on.
- 2) Go to Settings > Accessibility > Hearing Devices.
- 3) Turn your hearing devices off and back on again.

If you're unsure how to turn them off, refer to the instructions that came with them, or check with the audiologist who helped you set them up.

- 4) When their name appears below MFi Hearing Devices (this could take a minute), tap the name and respond to the pairing requests.

- **AirPods**

If you have AirPods (3rd generation), AirPods Pro, or AirPods Max, you can adjust the accessibility settings to suit your mobility or hearing needs.

- 1) Go to Settings > Accessibility > AirPods.
- 2) If you have multiple AirPods, select one.
- 3) Set any of the following options:
 - **Press Speed:** Adjust how quickly you must press two or three times before an action occurs.
 - **Press and Hold Duration:** Adjust the duration required to press and hold on your AirPods.

- Noise Cancellation with One AirPods: (AirPods Pro) Turn on noise cancellation even when you're using only one of your AirPods.
- Spatial Audio Head Tracking: When you turn on Follow iPad, the audio adjusts based on your head movement (for supported audio and video content).

4) To customize your audio, tap Audio Accessibility Settings.

- **Live Listen**

Here's how to enable Live Listen and configure the settings:

- For AirPods Users:

1) Ensure your AirPods are in your ears.

2) If they don't connect automatically, access the Control Center or Lock Screen and tap the Playback Destination button. Choose your AirPods from the options.

- Activate or Deactivate Live Listen:

1) Open the Control Center, tap the Hearing Devices button, select your hearing device or AirPods, and toggle Live Listen.

2) If the Hearing Devices button isn't visible, add it to the Control Center via Settings > Control Center and use the Insert button next to Hearing.

3) If you've set up the Accessibility Shortcut, triple-click a designated button, tap Hearing Devices, and then enable or disable Live Listen.

- For Hearing Aid Users:

Navigate to Settings > Accessibility > Hearing Devices and switch on Live Listen.

- Optimal Placement:

Position your iPad in proximity to the sound source for optimal results.

Other features that can be explored by the user through their device or on apples website are:

- **Audio settings**
- **Audio settings, including Conversation Boost**
- **Background sounds**

Alerts

- **LED flash for alerts**

This feature activates the LED flash (located next to the camera lens on the back of the iPad) when alerts occur, and it works specifically when the iPad is locked.

To enable this, navigate to Settings > Accessibility > Audio & Visual, and switch on LED Flash for Alerts. If you prefer not to have the LED flash during Silent mode, you can disable the Flash on Silent option. This feature is particularly useful in noisy environments where audible alerts may be easily missed.

- **Siri notifications announcements**

Adjust Siri's settings on your iPad by going to Settings > Accessibility > Siri.

You can set Siri's response time, speaking rate, and activation methods. Customize the duration Siri waits for input, adjust the speaking speed, and choose when Siri responds aloud or in text under Spoken Responses.

If you prefer typing to Siri, enable Type to Siri in Settings > Accessibility > Siri. For hands-free activation, turn on Always Listen for "Hey Siri."

Siri can also announce calls and notifications for specific apps. Enable this feature in Settings > Accessibility > Siri by activating Announce Notifications on Speaker. You can choose which notifications to announce for each app under Announce Notifications.

4.2.2 Exercises

Quiz 1

Select if the sentence is True or False

1. Sound Recognition continuously monitors sounds like doorbells or sirens on your iPad. (T/F)
2. In-App Live Captions are disabled by default. (T/F)
3. You can enable RTT on your iPad without setting up Wi-Fi calling. (T/F)

Quiz 2

Choose the correct answer.

1. What should you do if your hearing devices are already paired with another device nearby?

- a) Keep Bluetooth on those devices turned on.
- b) Turn on Bluetooth on both devices.
- c) Turn off Bluetooth on those devices.

2. Where is the LED flash located on the iPad for alerts?

- a) Next to the volume buttons
- b) Next to the camera lens on the back
- c) On the front display

Live Listen:

3. How can AirPods Pro users turn on noise cancellation with only one AirPods?

- a) In Control Center, tap the Hearing Devices button.
- b) Adjust Press Speed in AirPods settings.
- c) Enable Follow iPad in Spatial Audio settings.

Quiz 3

Fill in the Blank spaces with the given words.

1. Position your iPad in proximity to the _____ for optimal results.
2. If AirPods don't connect automatically, access the Control Center or Lock Screen and tap the _____ button.
3. To enable Siri announcing calls and notifications, go to Settings > Accessibility > Siri and activate _____.

Given words: a) Playback Destination b) Announce Notifications on Speaker c) sound source

Quiz 4

Match the Word with the Meaning

Match each feature or aspect with its corresponding description:

Features/Aspects:

1. Live Listen
2. LED Flash for Alerts
3. Sound Recognition

Descriptions:

- a. Monitors specific sounds and provides instant notifications.
- b. Activates the LED flash for alerts when the iPad is locked.
- c. Allows users to listen to their surroundings through AirPods or hearing aids.

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

Answers: B, B, B

Quiz 2

1. B

2. A

3. B

Quiz 3

A. True

B. False

C. False

2.2.2 Exercises

Quiz 1

1. B

2. A

3. A

Quiz 2

1. False

2. True

3. True

Quiz 3

1.C

2.B

Quiz 4

1. True

2. True

2.3.2 Exercises

Quiz 1

1. True
2. False
3. True

Quiz 2

- 1.B
- 2.C

Quiz 3

- 1.B

3.1.1.2 Exercises

Quiz 1

- 1.True
- 2.True

3.2.1.2 Exercises

Quiz 1

1. True
2. True
3. True

Quiz 2

1. b
2. b
3. b

Quiz 3

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

Quiz 4

1. a
2. c
3. b

3.3.1.2 Exercises

1. False
2. True
3. True

Quiz 2

1. B
2. C
3. B

Quiz 3

- 1.C
- 2.B
- 3.A

Quiz 4

1. C

3.3.2.1 Exercises

Exercise 1:

Answer: b) GNOME

Exercise 2:

Answer: b) A desktop environment

4.1.2 Exercises

1. True
2. False
3. True

4.2.2 Exercises

Quiz 1

1. True
2. False
3. False

Quiz 2

1. c
2. b
3. c

Quiz 3

1. c) sound source
2. a) Playback Destination
3. b) Announce Notifications on Speaker

Quiz 4

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