

Course Overview and Licensing Information

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Targeted competencies:

- [[Mada ICT-AID Competency Framework](#)]
 - **D4.1, D4.2, D4.3, D4.4**
 - **D4.5.1, D4.5.2, D4.5.3, D4.5.4, D4.5.5**

General objectives

- Understanding key considerations for accessibility in common digital formats.
- Familiarity with fundamental principles of accessibility when creating digital content, such as word processing documents, presentations, PDF files, and various multimedia formats.
- Testing, evaluating, and reviewing accessibility requirements for inaccessible digital content.

Unit learning outcomes

- **By the end of this unit, you will be able to:**
 - Identify digital accessibility requirements in common digital formats.
 - Create accessible digital content.
 - Evaluate and review inaccessible digital content.

Unit Topics

- Accessibility considerations for common digital formats.
- Accessible word-processing documents.
- Accessible Presentation documents.
- Accessible PDF documents.
- Accessibility considerations for different multimedia formats.

2. Accessible word-processing documents

Section learning outcomes

By the end of this section, you will be able to:

- Identify and apply digital accessibility considerations to word processing documents.
- Evaluate and review the accessibility of word processing documents using automated verification tools and assistive technology.
- Correct non-accessible documents.
- Review the accessibility checklist for word processing documents and related best practices.

1. Creating a digitally accessible word processing document

a) Word processing software (1/2)

- Microsoft Word is considered one of the most widely used word processing programs.
- The Microsoft Word processing program will be used in the current course to present the basics of digital accessibility for word processing documents.
- Documents created with Microsoft Word are saved using the .docx format as the default format for text documents.
- This program can also be used to create PDF and HTML files.
- Microsoft Word includes many features and services related to digital accessibility.

1. Creating a digitally accessible word processing document

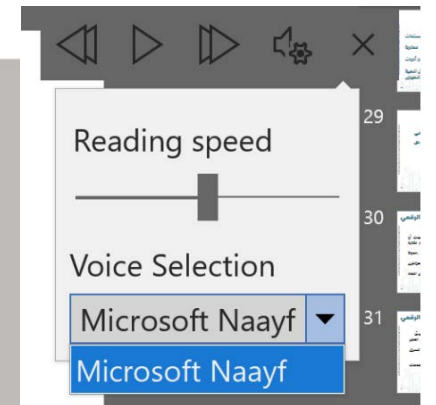
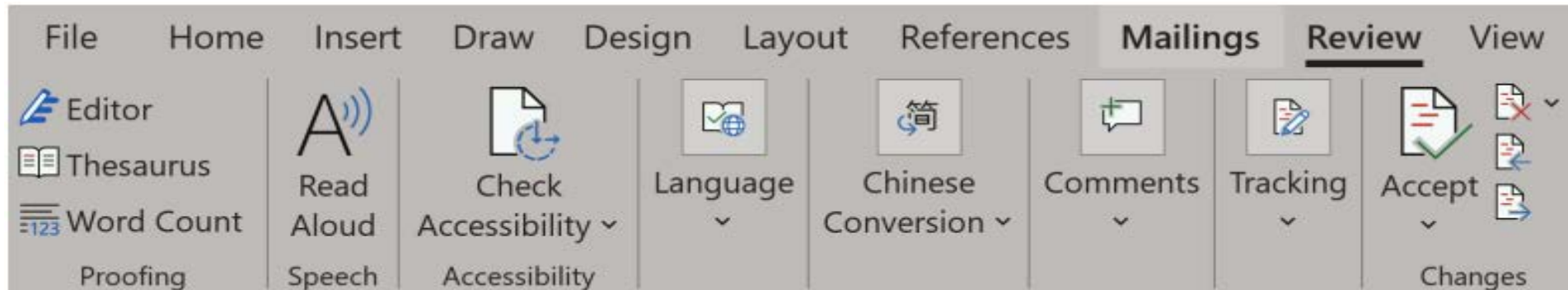
a) Word processing software (2/2)

- Word processing documents are created using word processing programs that provide a range of digital editing services for users to write, format, save, and print texts.
- Examples of word processing programs include Microsoft Word and Google Docs.
- These programs are commonly used by everyone, especially students, teachers, authors, writers, content creators, and publishing specialists, etc.
- It is essential for people with disabilities and different abilities to be able to access, read, and interact with the content.

1. Creating a digitally accessible word processing document

b) Accessibility features in Word (1/4)

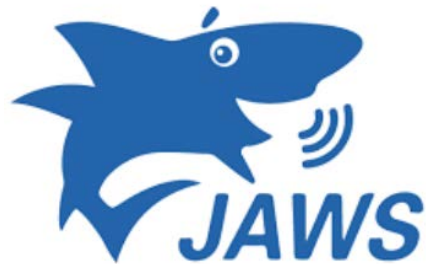
- Text-to-Speech Reader “Read Aloud”.
- Text-to-Speech can be used to read the document automatically.
- Pre-installing Arabic voices in the operating system settings is required beforehand.



1. Creating a digitally accessible word processing document

b) Accessibility features in Word (2/4)

- Keyboard shortcuts and screen readers can be used for navigating, exploring documents, and accessing different display modes
- Screen readers like Narrator, JAWS, or NVDA can be used.
- Other screen reader programs can also be used as long as they comply with digital accessibility standards.



1. Creating a digitally accessible word processing document

b) Accessibility features in Word (3/4)

- External keyboards with keyboard shortcuts for Word can be used to enhance efficiency, especially for users with motor and visual impairments.
- Keyboards and shortcuts are considered essential alternatives to using a mouse.
- Keyboard shortcuts can be easier to use than touchscreens.

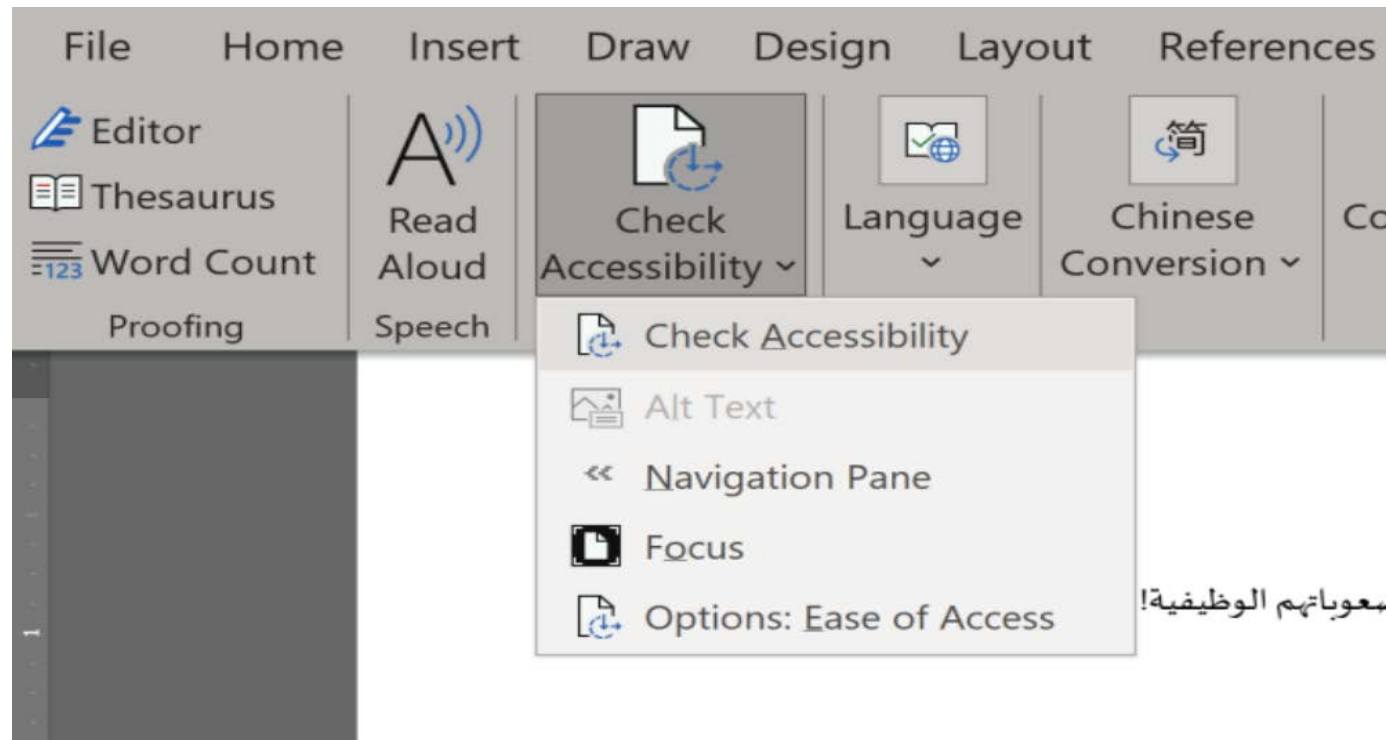
To do this	Press
Open a document.	Ctrl+O
Create a new document.	Ctrl+N
Save the document.	Ctrl+S
Close the document.	Ctrl+W
Cut the selected content to the Clipboard.	Ctrl+X
Copy the selected content to the Clipboard.	Ctrl+C
Paste the contents of the Clipboard.	Ctrl+V
Select all document content.	Ctrl+A
Apply bold formatting to text.	Ctrl+B



1. Creating a digitally accessible word processing document

b) Accessibility features in Word (4/4)

- Accessibility checker in Microsoft Word



1. Creating a digitally accessible word processing document

c) Considerations for Structure and Layout (1/2)

- To ensure compatibility with accessibility requirements for assistive technologies, particularly for screen readers and Braille displays, the following considerations must be addressed:
 - Clarity of document structure and consistency across its textual and non-textual elements such as images and diagrams.
 - Accurate and proper arrangement of headings to facilitate reading and navigation using keyboard shortcuts.
 - Using header, paragraph, and list templates.
 - Adding a table of contents for headings, as well as for images, diagrams, and tables..

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c) Considerations for Structure and Layout (2/2)

- Using embedded heading style.
- Minimizing spacing between content elements.
- Ensuring consistent formatting, content, and document structure throughout.



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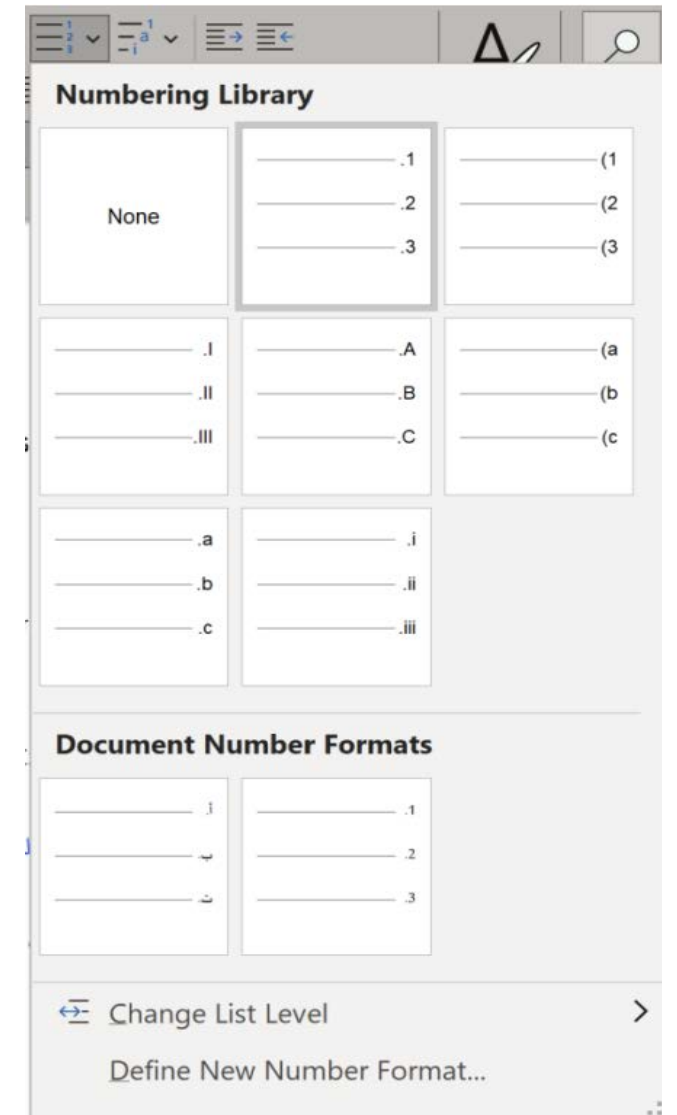
d) Visual Design Considerations

- Ensuring sufficient contrast for all foreground and background elements, with a minimum contrast ratio of 4.5:1
- Avoiding the use of color alone to convey emphasis or messages.
- For Arabic text:
 - Use accessible font like MS Sans Comic, Cursive, Arial, or Tahoma as alternative options.
 - Minimum font size for Arabic text should be 13 points.
 - Applying the right to left text direction.
 - Avoiding decorative fonts.
 - Using text underlining appropriately for hyperlinks only.

1. Creating a digitally accessible word processing document

e) List Considerations

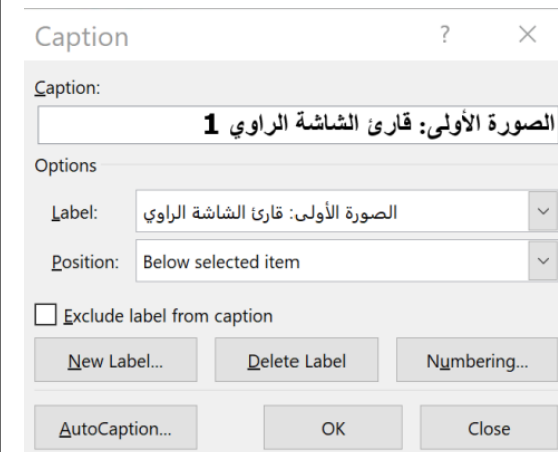
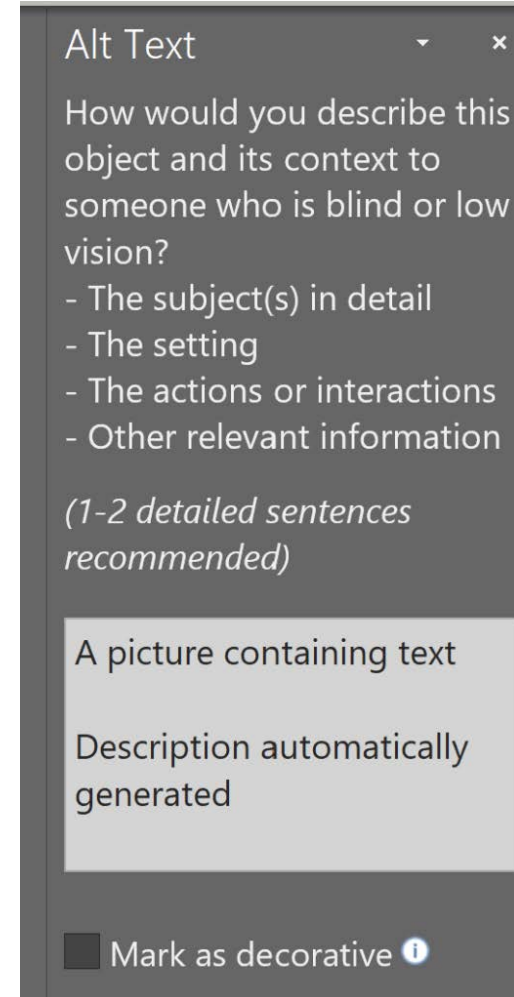
- Lists should be created using structured list tools (ordered and unordered) to ensure they are properly recognized as lists, making content easier for screen reader users to understand.
- Without using these tools, the list is not technically a list, which can make the content more challenging for screen reader users to fully comprehend.
- Ordered and unordered list tools are highly customizable.
- Lists can be designed as needed for specific requirements.



1. Creating a digitally accessible word processing document

f) Image and Graphic Considerations

- Adding captions for images can be done by right-clicking on the image and selecting “Insert Caption”.
- Adding alternative texts for images can be done by right-clicking on the image and selecting “View Alt Text,” and entering the information in the description field.



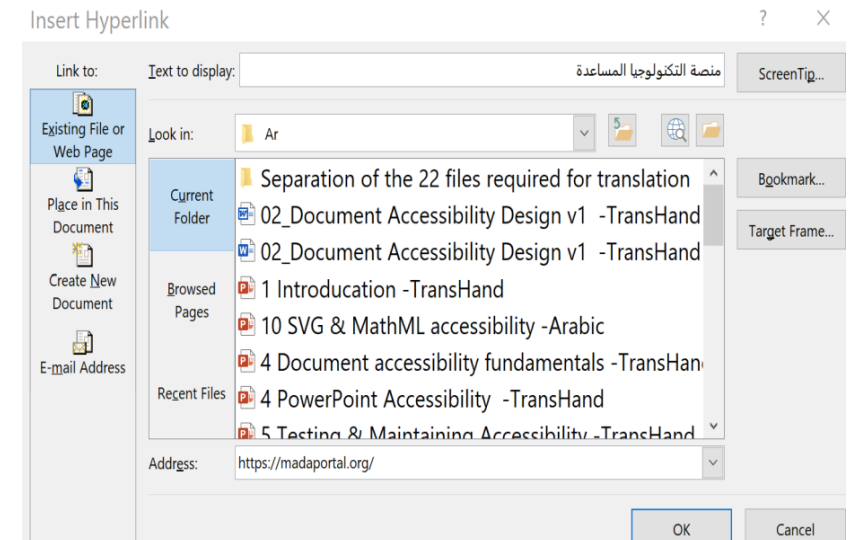
1. Creating a digitally accessible word processing document

g) Considerations for Hyperlinks (2/1)

- Hyperlinks in Word documents allow users to visit web pages, send emails, and navigate to addresses or bookmarks within the same document.
- It is important to ensure that the link text helps users understand what the link refers to, so they can easily determine whether they want to visit that site.
- Avoid writing vague descriptions like "click here."

1. Creating a digitally accessible word processing document g) Considerations for Hyperlinks (2/2)

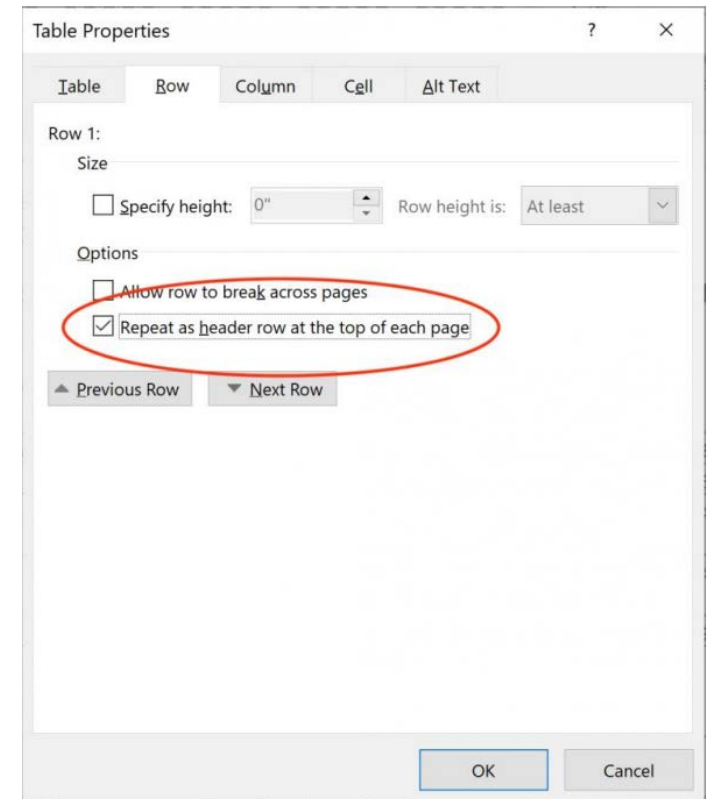
- When using a screen reader, the link description is read aloud, so meaningful link descriptions must be used, following these steps:
 - Copy the link you want to work with into a Word document and turn it into a hyperlink.
 - Select the whole URL, including the "http" at the beginning and the domain at the end.
 - Right-click to open the context menu, then find and select Edit Hyperlink.
 - In the dialog box, look for a text box labeled Text to display. Type in the description text you want.



1. Creating a digitally accessible word processing document

h) Table Considerations

- Screen readers find tables difficult to interpret unless they include clear coding that defines the relationships between all parts of the table (such as titles, columns, rows, and data cells).
- Use tables to present data and avoid complex, nested content tables.
- Complex tables can be simplified by dividing them into several simple tables and adding meaningful headers above each.
- For simple tables, specify the row containing column headers and add a meaningful title.



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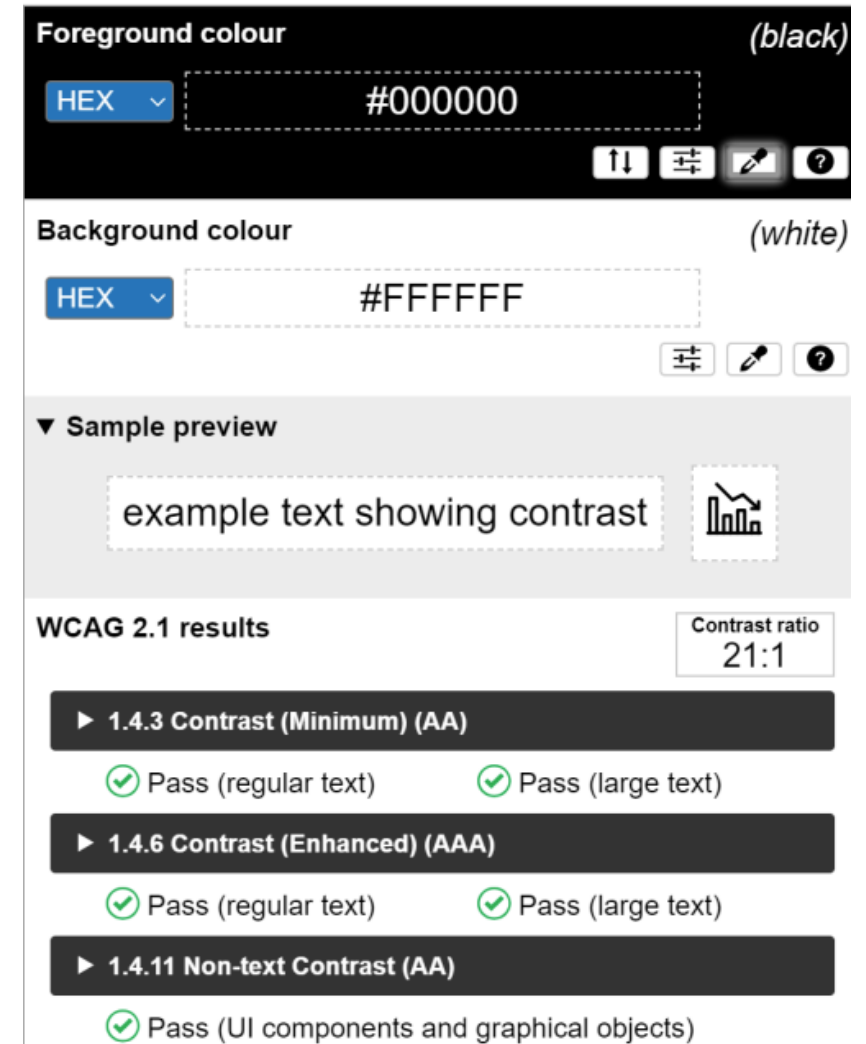
i) Other Considerations (1/2)

- Choose language carefully, proofread text, and use simple language.
- Use appropriate and accessible font types and sizes, typically no smaller than 12 points for English and no smaller than 13 points for Arabic.
- Avoid relying solely on color, underlining, or bold fonts to convey information.
- Ensure that watermarks do not affect readability and achieve the required contrast.
- Use headings with formatting styles to add a table of contents for long documents.

1. Creating a digitally accessible word processing document

i) Other Considerations (2/2)

- Provide sufficient contrast between text and background colors. You can use the **colour contrast analyzer** tool to measure color contrast in the submitted document. Take multiple samples from the document and verify that the color contrast ratio is at least 4.5:1 or higher.



The screenshot shows a color contrast analyzer tool interface. It features two color selection sections: 'Foreground colour' (black) with a HEX value of #000000 and 'Background colour' (white) with a HEX value of #FFFFFF. Below these is a 'Sample preview' section showing the text 'example text showing contrast' on a white background. The 'WCAG 2.1 results' section displays a 'Contrast ratio' of 21:1 and lists three criteria: 1.4.3 Contrast (Minimum) (AA), 1.4.6 Contrast (Enhanced) (AAA), and 1.4.11 Non-text Contrast (AA), all of which are marked as 'Pass' for both regular and large text.

Foreground colour (black)
HEX #000000

Background colour (white)
HEX #FFFFFF

▼ Sample preview
example text showing contrast

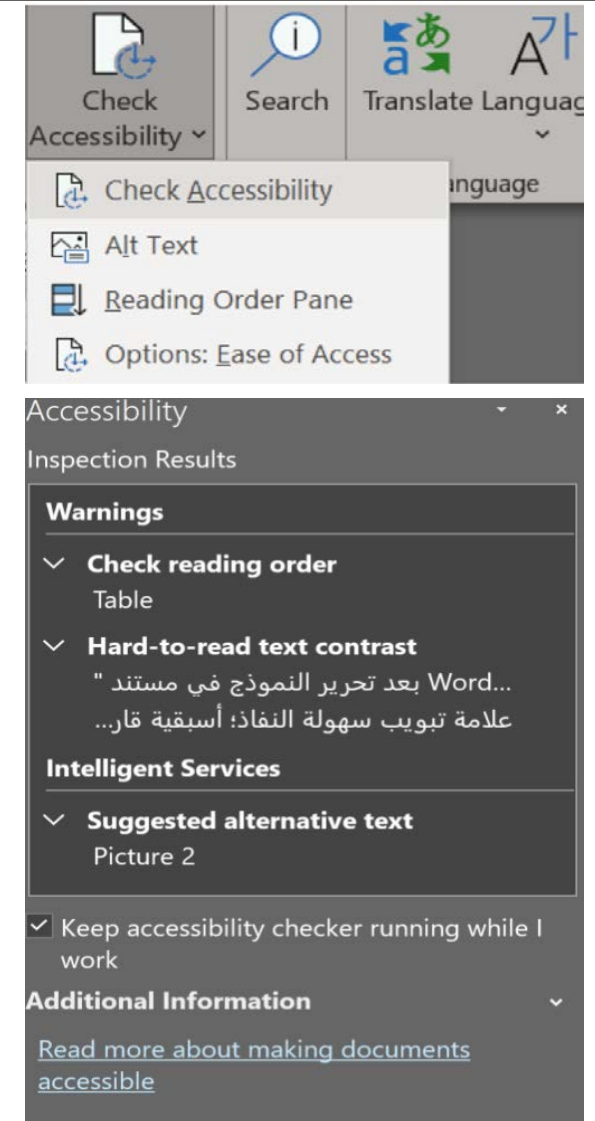
WCAG 2.1 results
Contrast ratio 21:1

- ▶ 1.4.3 Contrast (Minimum) (AA)
 - ✓ Pass (regular text)
 - ✓ Pass (large text)
- ▶ 1.4.6 Contrast (Enhanced) (AAA)
 - ✓ Pass (regular text)
 - ✓ Pass (large text)
- ▶ 1.4.11 Non-text Contrast (AA)
 - ✓ Pass (UI components and graphical objects)

1. Creating a digitally accessible word processing document

j) Check Accessibility

- Microsoft Word includes an accessibility checker to verify document accessibility.
- The checker can identify various accessibility issues and suggest fixes.
- Results from the checker are classified into three categories:
 - **Errors:** Content that makes the document inaccessible, e.g., an image without alternative text.
 - **Warnings:** Content that limits accessibility, e.g., a link without meaningful descriptive text.
 - **Tips:** Content that is accessible but could be organized or presented better, e.g., skipping from a first-level heading to a third-level heading.



1. Creating a digitally accessible word processing document

k) Best Practices

- Include alternative text for all visual elements (images, graphics, shapes, charts, embedded items, textual content, videos, etc.).
- Add meaningful hyperlink texts.
- Colors are not the only means to highlight and convey information.
- Use sufficient contrast between text and background colors.
- Utilize headings at different levels using formatting styles.
- Use simple tables with headings and column headers specified.

1. Creating a digitally accessible word processing document

l) Accessibility Checklist (1/4)

▪ **Accessibility Checklist for Documents:**

- Create separate documents in both Arabic and English languages, whenever possible.
- Use simple language with linguistic checks.
- Content in English: Arial font, minimum font size 12 points. Content in Arabic: Arial font, minimum font size 13 points.
- Avoid using underlining for formatting effects.
- Use italics when necessary; use bold font concurrently.
- Consistently use styles to define document structure elements, for example: "Heading" 1 Page Title, "Heading" 2 All Main Headings, "Heading" 3 All Subheadings

1. Creating a digitally accessible word processing document

l) Accessibility Checklist (2/4)

- Use actual bullet points for all bullet lists or numbered lists.
- Create a "Table of Contents" for quick navigation based on the heading structure.
- Use tables only for tabular data.
- Use column headers in tables to give meaning to data cells.
- Align all English content to the left and align all Arabic content to the right.
- Avoid center-aligning content.

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l) Accessibility Checklist (3/4)

- Ensure sufficient contrast between foreground (text) and background elements, with a minimum contrast ratio of 4.5:1.
- Avoid using color alone to convey a message.
- Reduce spacing between all content, up to a maximum of 2 spaces or two characters.
- When using images that contain text, ensure the alternative text accurately describes the text within the image.
- Do not add descriptions or alternative texts for decorative images.
- If images are used as links, add a description of the link destination in alternative text.
- Use meaningful descriptive phrases in all links; for example, avoid limiting use to just "read more".

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l) Accessibility Checklist (4/4)

- Save the file as a PDF from Word.
- Never scan to PDF under any circumstances as it produces a flat image that is not easily accessible; use OCR software such as Adobe Acrobat Professional XX to repair, select the language, and specify the document title.

1. Creating a digitally accessible word processing document

m) Useful Links:

- Detailed information about digital accessibility to Microsoft Word text processing files in the following links:
 - [Microsoft Word Accessibility](#)
 - [Microsoft: Make your Word Documents Accessible to People with Disabilities](#)
 - [OpenOffice: Styles on Apache OpenOffice Writer](#)
 - [WebAIM: Microsoft Word: Creating Accessible Documents](#)

Digital Accessibility - Digital Files (3/6)

- **Creating Accessible Multimedia / Video Content:**
 - Use closed captioning (CC) and audio descriptions (AD).
 - Ensure easy access to captioning and audio descriptions through dedicated icons.
 - Make video content accessible.
 - Avoid complex backgrounds, excessive images, long texts, and animated images.
 - Add sign language interpretation.

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