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نفاذ رقمي للجميع
digital access for all

Program: Introduction to Information and Communication Technology Accessibility and Inclusive Design
Course: Accessible Digital Content
First Section: Accessibility considerations for common digital formats

Inclusive Smart City

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.

1. **Accessibility considerations for common digital formats**

Section learning outcomes

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

- Gain knowledge of some key considerations related to accessibility of digital content.

- Identify common mistakes made during the creation of digital content that render it inaccessible.

- Explore some alternatives to eliminate barriers to accessing digital content.

1. **Digital Content Accessibility**
    a) **Common Digital Formats**

    ▪ **Digital content can be presented in various formats and layouts, such as:**

        ▪ Text processing like Microsoft Word documents

        ▪ Presentations like Microsoft PowerPoint documents

        ▪ Portable Document Format (PDF) documents

        ▪ Multimedia files

        ▪ Web pages

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1. **Digital Content Accessibility**
   b) **Importance of Digital Accessibility (1/2)**

   ▪ Digital accessibility is defined by the degree of accessibility provided by websites, mobile applications, or electronic documents so that they can be easily browsed and understood by a wide range of users, including users with disabilities.

   ▪ When designing and creating digital content, often the accessibility and usability for people with disabilities are overlooked.

   ▪ Many digital contents include barriers that make it difficult or impossible for some individuals to use.

   ▪ Achieving accessibility to digital content in its various formats is essential for content creators, educators, developers, and institutions to ensure that specific groups are not excluded from accessing and using these contents, products, and services.

1. **Digital Content Accessibility**
   b) **Importance of Digital Accessibility (2/2)**

   ▪ Access to digital content includes all disabilities, including auditory, visual, physical, and intellectual disabilities.

   ▪ Many individuals can benefit from digital accessibility, for example:

      ▪ Language learners

      ▪ Users of mobile devices such as phones, smartwatches, tablets, and other devices with small screens

      ▪ Individuals in environments where they cannot listen to loud sounds

      ▪ Individuals who prefer dim lighting or high contrast

      ▪ Individuals with slow internet connections, limited bandwidth, or expensive data plans, etc.

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1. **Digital Content Accessibility**
   c) **Principles of Accessibility**

   - The POUR principles establish the essential foundations for accessibility to digital content and

     web usage.

     - Perceivable

     - Operable

     - Understandable

     - Robust

1. **Digital Content Accessibility**
    c)   **Principles of Accessibility – Perceivable Principle**

    ▪ The information presented in content and all its components must be perceivable to users through the user interface in ways that they can easily understand.

    ▪ This means that users, according to their sensory abilities, should have access to and be able to recognize sensory information presented to represent and understand meanings and implications.

    ▪ This can include:

        ▪ Text alternatives for non-text content

        ▪ Descriptive labels and other alternatives for multimedia

        ▪ Presenting content in different ways

        ▪ Ease of access to content, whether through viewing or listening

1. **Digital Content Accessibility**
   c) **Principles of Accessibility – Operable Principle**

   - User interface components and navigation must be operable, allowing users to operate the interface and navigate its components without requiring actions that are difficult or impossible to perform. This includes:

     - Keyboard navigation availability

     - Providing enough time for users to read and use content

     - Avoiding content that could cause physical reactions or seizures (such as flashing or animated content)

     - Ease of access, navigation, and finding content and determining location

     - Using various input methods and interactions beyond keyboard (touch, gestures)

1. **Digital Content Accessibility**
   c) **Principles of Accessibility – Understandable Principle**

   ▪ Information and the user interface must be simplified and understandable to the greatest extent possible.

   ▪ This means that all users should be able to read and comprehend the displayed information, as well as operate the user interface without requiring additional knowledge or skills.

   ▪ Technology aids such as screen readers should facilitate ease of use. This can include:

      ▪ Readability and comprehensibility of textual content

      ▪ Displaying content in a predictable manner to facilitate navigation and interaction

      ▪ Assisting users in avoiding and correcting errors

1. **Digital Content Accessibility**
   c) **Principles of Accessibility – Robust Principle**

   - Content must be robust enough to meet accessibility requirements, allowing a diverse range of software, user agents, and assistive technologies to process, render, or operate it in various ways.

   - Content should be compatible with current and future user tools and technologies.

   - Meeting this principle enhances compatibility with current and future user agents, software, and assistive technologies.

2. **Considerations for Digital Content Accessibility**

- Some fundamental and common considerations to make documents, in their various forms and formats, accessible and usable for people with disabilities include:

  - Language

  - Structure and formatting

  - Layout and design

  - Color contrast

  - Images and graphics

  - Tables and links

  - Forms and navigation

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3.   Common Errors (1/2)

- Often, digital content creators, developers, designers, authors, teachers, etc., overlook verifying the accessibility of digital content across its various formats. Several considerations such as awareness gaps, capabilities, training, time constraints, and costs contribute to this oversight.

- There are numerous accessibility issues that make digital content and websites difficult or impossible to use, especially for people with disabilities.

- Some of these issues can be identified and addressed either automatically through specialized software or manually by digital accessibility experts.

3. Common Errors (2/2)

- **The most common errors that cause accessibility issues include:**

  - **Color Contrast**: Typically, low contrast on text.

  - **Alternative Text:** Failure to add descriptive text for images, graphics, and tables.

  - **Link Descriptions:** Missing descriptive links entirely, using repetitive generic phrases for multiple links, vague terms, and meaningless text.

  - **Text Structure**: Lack of proper formatting, use of paragraphs and headings, and empty form labels.

  - **Fonts and Designs:** Use of inaccessible font sizes, types, and inconsistent designs.

  - **Language:** Use of complex language and expressions.

4.   Removing Accessibility Barriers to Content (1/6)

- **Descriptive Data and Language:**

  - Providing necessary descriptive data for the document

  - Creating separate documents according to the languages used

  - Specifying the language used in settings

  - Using appropriate language specifications in all components and pages

  - Using simple, easy-to-understand expressions

  - Ensuring compatibility with assistive technology requirements

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4. Removing Accessibility Barriers to Content (2/6)

- **Structure and Formatting:**

  - Adopting a clear and organized structure for the entire document

  - Ensuring proper reading order and keyboard accessibility

  - Using main headings, subheadings, paragraphs, and lists

  - Maintaining consistency between structure and content

  - Using a linked and concise table of contents for easy navigation within the document

4. Removing Accessibility Barriers to Content (3/6)

- **Written Content Fonts and Color Contrast:**

  - Adopting appropriate font sizes

  - Avoiding decorative fonts like italics, underlined text, and background shading

  - Ensuring sufficient color contrast, especially between foreground and background elements

  - Avoiding using color alone to convey a message or indicate an urgent action

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4. **Removing Accessibility Barriers to Content (4/6)**

- **Images and Graphics:**

    - Providing alternative text for all non-text content, such as alternative descriptive texts for images and graphics.

    - When using images as links, describing the destination of the link rather than the context of the image itself.

4. **Removing Accessibility Barriers to Content (5/6)**

- **Tables and Links:**

    - Use tables only for displaying tabular data.

    - Use header rows in tables.

    - Add titles and captions to tables.

    - Use meaningful descriptive phrases for all hyperlinks.

    - Avoid using the same link text for different sources.

4. Removing Accessibility Barriers to Content (6/6)

- **Fields and Navigation:**

  - Avoid creating forms without appropriate form controls; for example, don't replace form fields with underlines or borders.

  - Define form fields correctly.

  - The reading order of form fields should be logical and follow a natural reading order.

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