Accessibility in Documents

(Overview and Best Practices)

Intro and Background

Digital accessibility means making sure our websites, apps, and online content work for everyone, including people with disabilities.

June 9, 2025 – PPM 74 was revised based on the final rule issued by U.S. Department of Justice (DOJ), which establishes technical standards for web and mobile app accessibility under Title II of the Americans with Disabilities Act (ADA).

- **PPM 74 refers to the Policy and Procedure Memorandum created to** ensure people with disabilities can access online government services.
- **Title II of the Americans with Disabilities Act (ADA)** prohibits discrimination based on disability by state and local governments in all their **services, programs, and activities.**

Accessibility Standards

The Web Content Accessibility Guidelines (WCAG) 2.1 provide standards to define how to make web content more accessible to people with disabilities.

Accessibility involves a wide range of disabilities, including:

Vision

- Cataracts
- Sun glare
- Color Blind
- Low vision
- Blind

Hearing

- Noise
- Ear Infection
- Hard of Hearing
- Deaf

Mobility

- Hands full
- Broken arm
- Spinal cord injury
- Amelia

Speech

- Ambient noise
- Speech impediment
- Unable to speak

Cognitive

- Sleepy
- Distraction
- Migraine
- Learning disabilities
- Autism

Neurological

- Depression
- PTSD
- Bipolar
- Anxiety

Why Accessibility Matters

Ensures **equal access** for people with disabilities

Impacts 28% of your residents

It is a legal & ethical best practice

Benefits all users

- Clearer Structure, Better Navigation, Mobile-Friendly

Four Principles

WCAG 2.1 is built around four key principles that which lay the foundation necessary for anyone to access and use web content

- **Perceivable –** Information must be presented in ways users can perceive
- **Operable –** Users must be able to navigate and interact with content
- **Understandable –** Information and operation of the document must be clear and predictable
- **Robust –** Content must be compatible with current and future assistive technologies

If a document fails any one of these principles, it is not fully accessible.

Perceivable

Text Alternatives: Alt text for all images, mark decorative ones

Adaptable: Use semantic structure (headings, lists, tables, bookmarks)

Use of Color: Don’t rely on color alone to convey meaning

Contrast: Normal text 4.5:1, large text 3:1

Reflow & Resize: Content reflows, text readable at 200% zoom

Non-Text Contrast: Icons and graphics must meet contrast requirements

Text Spacing: Document remains readable with adjusted spacing

Operable

Keyboard Accessible: Navigation works with keyboard only

No Keyboard Trap: Users can move focus freely (A text box in a form should let users tab out to the next field)

Navigable: Use page titles, descriptive links, bookmarks

Focus Visible: Ensure forms/buttons show visible focus

Understandable

Language: Set document language in properties

Readable: Use clear, plain language

Predictable: Navigation consistent (TOC matches headings)

Input Assistance: Label form fields, identify errors clearly

Robust

Compatible: Use proper tagging and document standards

Parsing: Ensure no broken/corrupted tags

Metadata: Title, author, and subject fields filled

OCR: Image-only PDFs converted with OCR (Optical Character Recognition)

How Headings, Bookmarks, and Tags Work

Headers

- Create the outline of a document (H1, H2, H3).
- Screen readers let users “jump” by heading.
- Example: Heading 1 = Title of Section; Heading 2 = Subtopic.

Bookmarks

- Digital navigation markers.
- Act like a clickable Table of Contents.
- Example: Bookmark → Introduction, Methods, Results, Conclusion.

Tags

- Invisible labels that define structure (heading, paragraph, list, table, image).
- Establish the reading order and preserve relationships.
- Examples:
  - <H1> = Heading 1
  - <P> = Paragraph
  - <L> = List
  - <Figure> = Image (with alt text)
  - <Table> = Table with headers

Together, these elements are the blueprint for an accessible document. They give it structure, navigation, and meaning.

Headers, Bookmarks, and Tags

Word

- Uses built-in styles (Heading 1, Heading 2, Lists, Tables).
- These become tags when exported to PDF.
- Bookmarks can be added for navigation.

PowerPoint

- Relies on slide titles as headings.
- Reading order pane controls tag order.
- Tags and bookmarks are created on export to PDF.

Excel

- Uses header rows, column titles, and sheet names as structure.
- If exported to PDF, these map into tags.

PDFs

- Contain a full tag tree (headings, paragraphs, lists, tables, images).
- Bookmarks act as a clickable table of contents.
- Without tags or OCR, PDFs are unreadable to screen readers.

Each format handles accessibility differently, but the goal is the same: clear structure, logical navigation, and usable reading order.

Descriptive Links

What they are

- Links should clearly describe the destination or action.
- Screen readers can pull up a list of all links in a document, so context must be clear without surrounding text.
  - **“Click here“ or "Read more"** are meaningless out of context

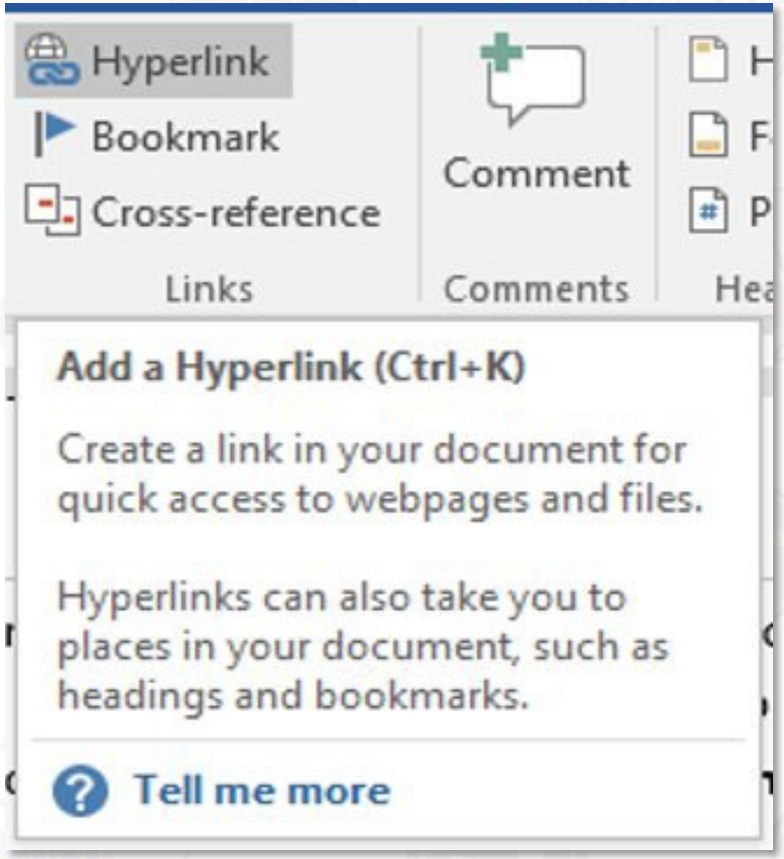
Best Practices

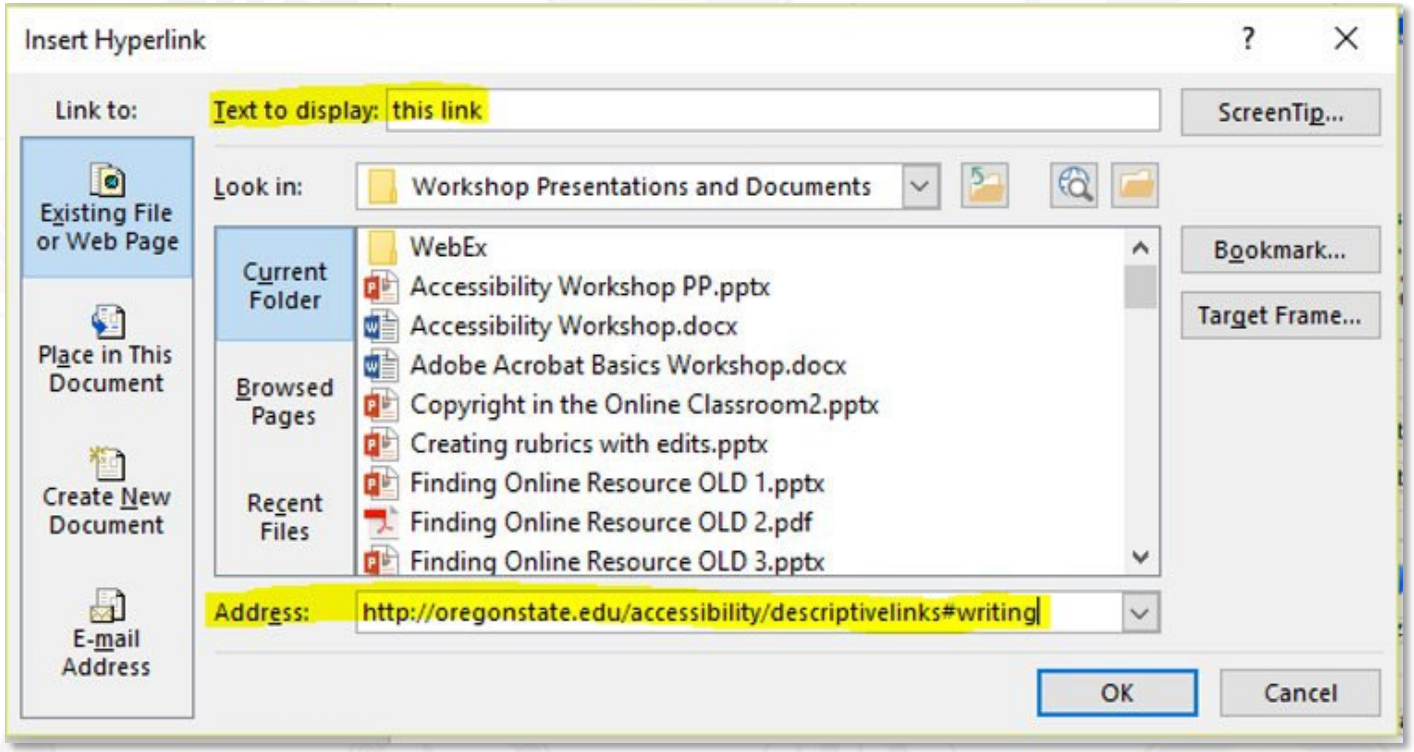
- Make link text **descriptive and specific**.
- Avoid vague phrases.
- Ensure links are underlined or otherwise visually distinct (not just color).
- Accessibility checkers often do not check for descriptive links so check your work carefully!

Examples:

- **Non-descriptive link:** https://www.uno.edu/cti/teaching-learning/accessibility
- **Non-descriptive link:** Looking for UNO’s faculty accessibility website? Click here!
- **Descriptive link:** Check out UNO’s faculty accessibility website.

How to add Descriptive Links





Alt Text

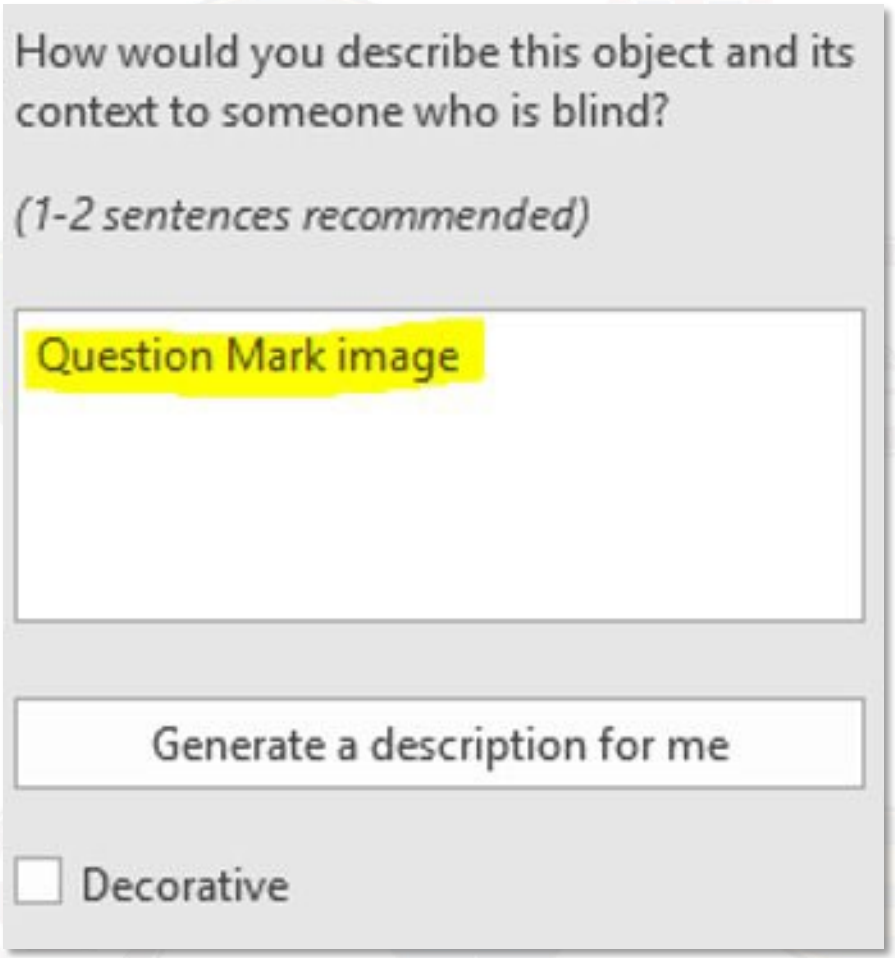
What is it

- Alternative text (“alt text”) is a short description that conveys the meaning of an image to users who cannot see it.
- Screen readers read this description aloud in place of the image.

Best Practices

- Be concise but descriptive: explain the purpose, not every detail.
  - Example: “Bar chart showing enrollment rising from 2020 to 2025.”
- Avoid redundancy: don’t say “Image of” or “Picture of.”
- Mark decorative images as decorative (null alt text).
- For complex images (charts, diagrams), include a longer text explanation in the body or appendix.

How to add Alt Text



Do tables need Alt text?

Simple Tables

- Tables usually don't need alt text if they are properly tagged and interactive.
- Screen readers announce the structure: *"Table with 3 columns and 4 rows … Column 1 header … Row 2 …"*
- The most important thing is to define header rows/columns correctly.

Complex Tables

- If a table conveys complex information (e.g., multi-level headers, nested rows), provide a summary or description in the surrounding text.
- Example: "This table shows student enrollment trends by year and program."

Images of Tables

- If a table is included as an image, then it needs alt text or a text version provided elsewhere in the document.

Color Contrast

What it is

- The difference in brightness between text (or graphics) and its background.
- Ensures readability for people with low vision or color blindness.

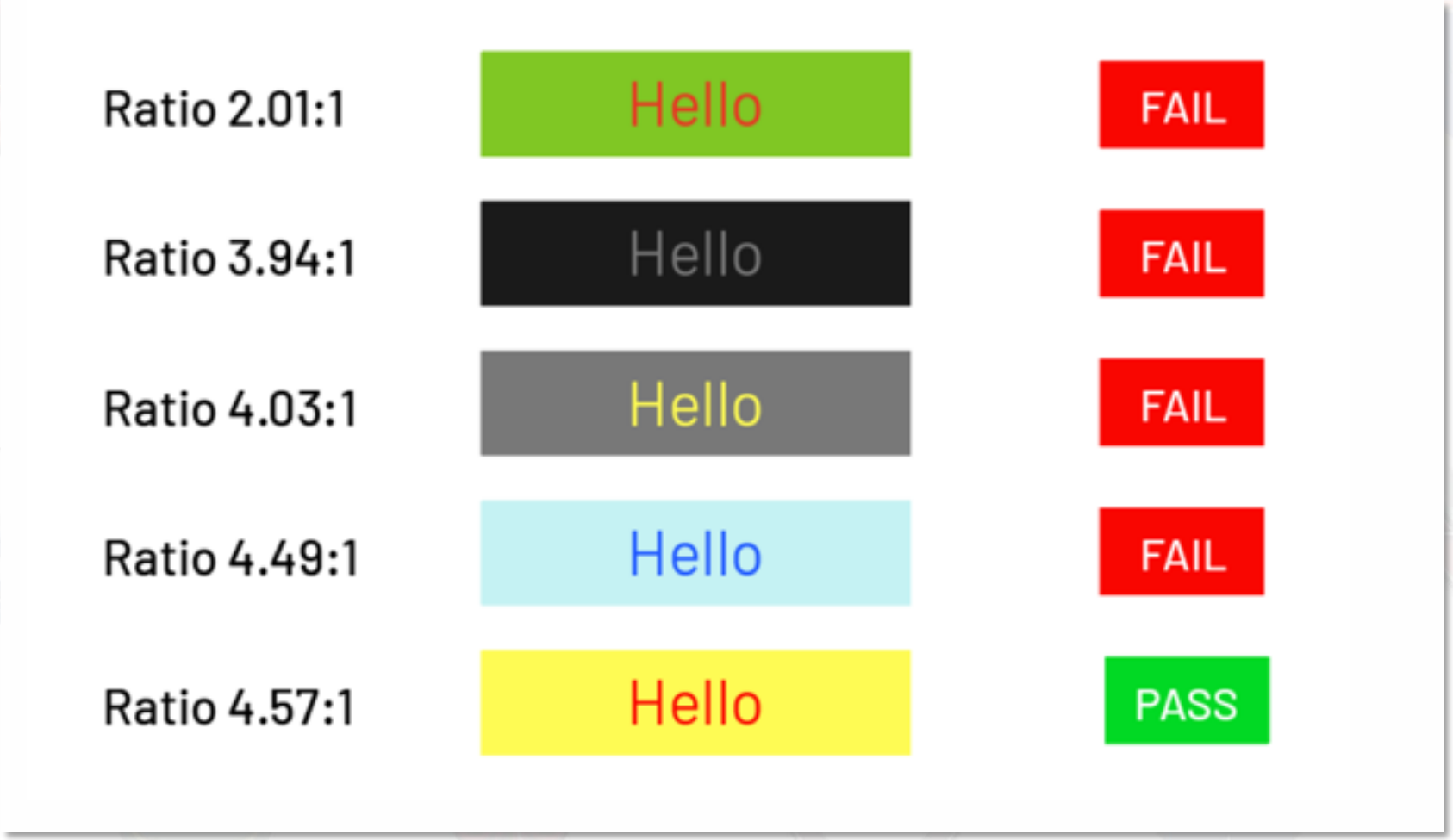
WCAG 2.1 AA Requirements

- Normal text: **4.5:1** contrast ratio.
- Large text (18pt+, or 14pt bold): **3:1** ratio.
- Non-text elements (icons, controls): must also meet contrast requirements.

Best Practices

- Don’t use **color alone** to show meaning (e.g., “items in red are required”).
- Test with free tools: **WebAIM Contrast Checker, Color Contrast Analyzer (CCA).**
- Use high-contrast color combinations (e.g., dark text on light background).

Examples of Color Contrast



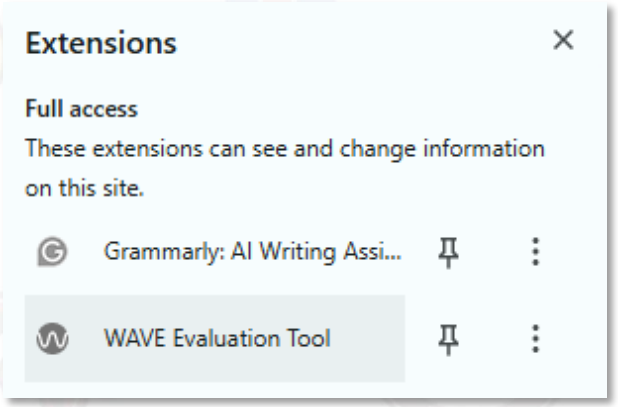
Free tools for testing Accessibility

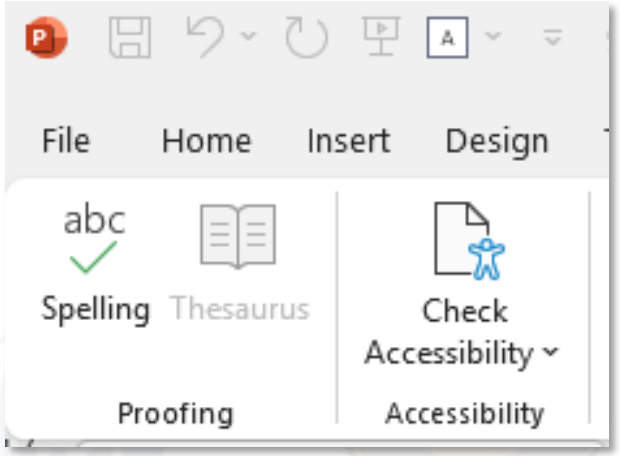
Free Screen Readers:

- NVDA (Windows) – nvaccess.org
- VoiceOver (built into macOS/iOS)
- Narrator (built into Windows)

Free Accessibility Checkers:

- Microsoft Office Accessibility Checkers
- WAVE (for online docs)
- PDF Accessibility Checker – PAC (Windows only)





WCAG 2.1 AA Document Accessibility Checklist

✓ **Headings:** Built-in H1, H2, H3 styles

✓ **Alt Text:** All images, charts, figures

✓ **Links:** Descriptive (not 'click here')

✓ **Lists:** Properly tagged

✓ **Tables:** Tagged headers, simple layout

✓ **Bookmarks/TOC:** For navigation

✓ **Color Contrast**: Meets 4.5:1 or 3:1

✓ **Language:** Declared in properties

✓ **Metadata:** Title, author, subject set

✓ **Forms:** Labels and instructions clear

✓ **OCR**: No image-only PDFs

✓ **Accessibility Check:** Microsoft/Adobe/WAVE

ADA Resources

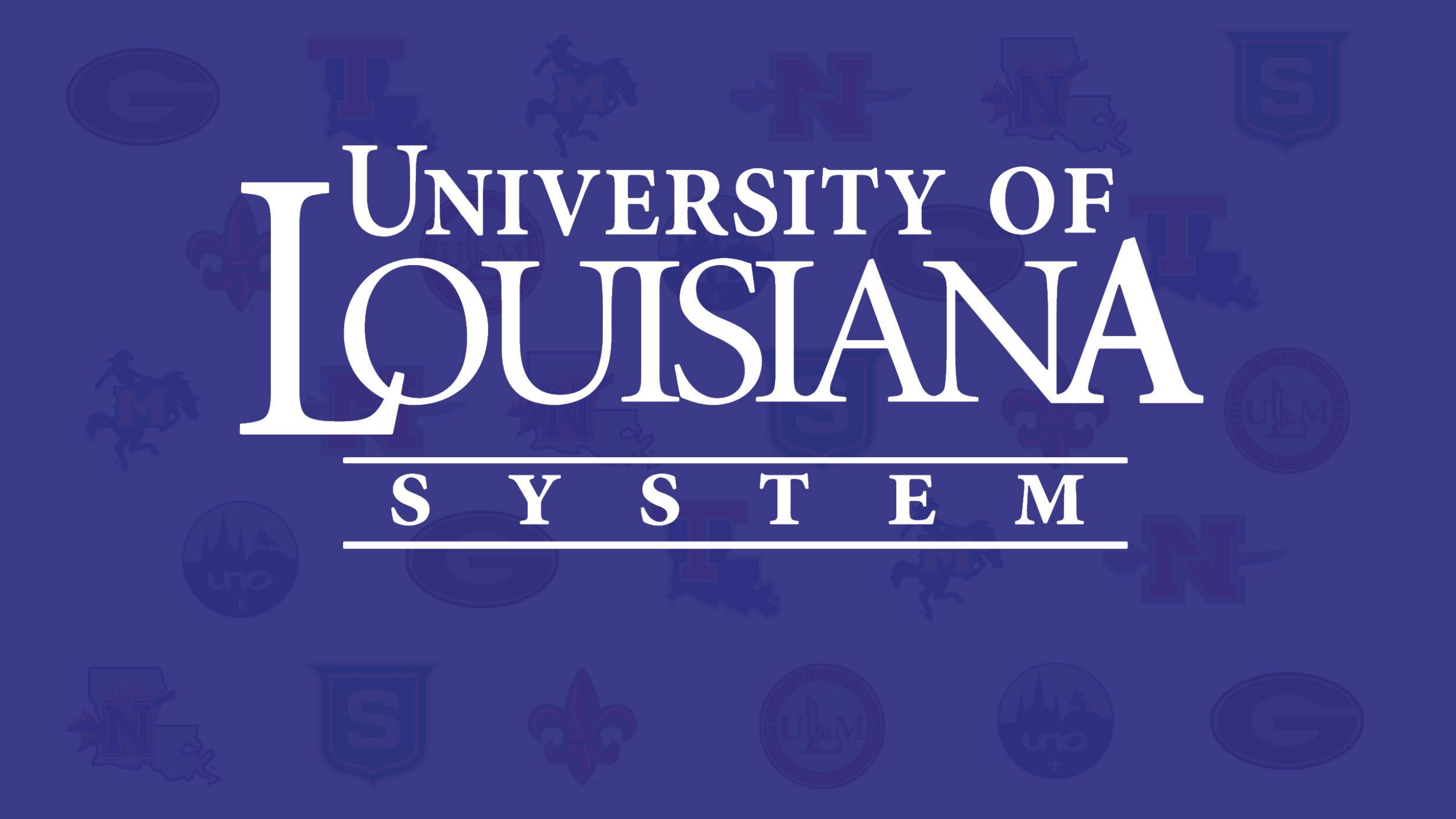
Accessibility Checker

WebAIM Color Contrast Checker

Free AI Image Alt Text Generator

Office of Technology Service Guide to Accessible Web Services

Pelican: Louisiana’s Design System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Questions?

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