# Introduction to Web Accessibility

## CA-GRD-5.1A

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## What is Web Accessibility?

Web accessibility is the inclusive practice of designing and developing websites that can be used and understood by people of all abilities and disabilities.

This includes individuals with visual, hearing, mental, and physical disabilities. Ensuring web accessibility allows everyone to navigate, interact, and contribute to the web, providing equal opportunities for all users.

To achieve this, web accessibility follows a set of core principles known as **POUR**: **Perceivable, Operable, Understandable, and Robust**.

## The Four Accessibility Principles (POUR)

### 1) Perceivable

This principle ensures that users can process and interpret web content, regardless of their sensory abilities.

**Key Guidelines:**

- **Text Alternatives:** Images, icons, and multimedia should have **alt text** so that screen readers can describe them to visually impaired users.
- **Time-Based Media:** Videos should include **captions, subtitles, and transcripts** for those who are deaf or hard of hearing.
- **Adaptability:** Content should be structured so users can **adjust font sizes, change colours, or use assistive technologies** without losing information.

### 2) Operable

This principle ensures that users can navigate and interact with a website, regardless of their physical abilities.

- **Keyboard Accessibility:** All functions should be usable with a keyboard, without requiring a mouse.
- **Enough Time:** Users should be able to adjust or **disable time limits** on content.
- **Seizure Prevention:** Avoid flashing content (more than **three flashes per second**) that may trigger seizures in users with photosensitivity.

## 3) Understandable

This principle ensures that website content and navigation are clear, predictable, and easy to understand for all users.

**Key Guidelines:**

- **Readable Text:** Use **clear language, logical structure, and consistent formatting** to improve readability.
- **Predictable Navigation:** Maintain **consistent menus, buttons, and layouts** to help users navigate with ease.
- **Input Assistance:** Provide **error messages and validation hints** to help users correct mistakes in forms.

## 4) Robust

This principle ensures that content remains accessible across different devices, browsers, and assistive technologies.

**Key Guidelines:**

- **Compatibility:** Use **semantic HTML and standard coding practices** to ensure compatibility with screen readers and future technologies.

# Additional Web Accessibility Principles

Apart from POUR, other key accessibility considerations include:

## 5) Colour Accessibility

Colour is essential in design but should never be the **only** way to convey information.

**Key Guidelines:**

- **Colour Contrast:** Ensure high contrast between text and background for better readability.
- **Avoid Colour-Only Indicators:** Use text labels or symbols alongside colour to differentiate elements.

## 6) Responsive Design & Mobile Accessibility

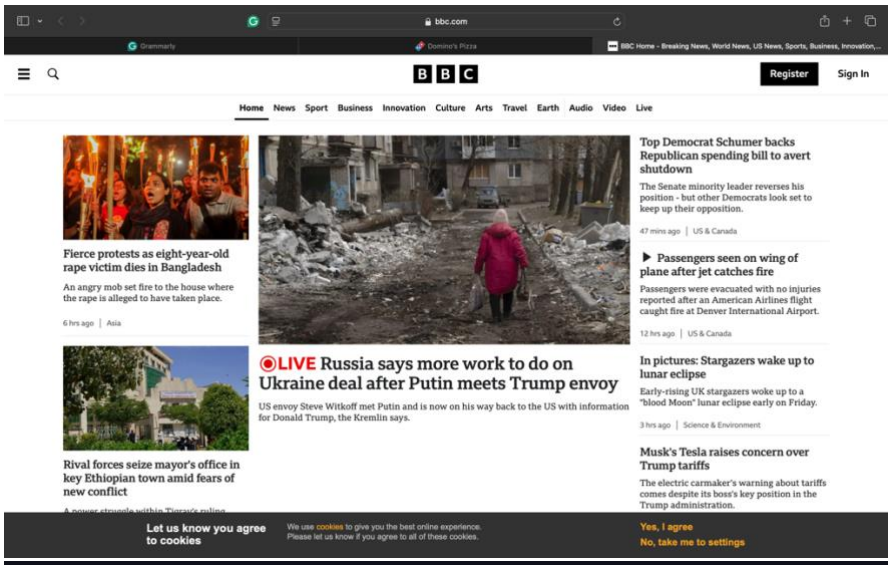
Websites should be usable on **all screen sizes**, including mobile phones and tablets.

**Key Guidelines:**

- **Responsive Layouts:** Ensure text resizes properly and menus are accessible on touchscreens.
- **Touch-Friendly Elements:** Buttons should be large enough to tap without difficulty.

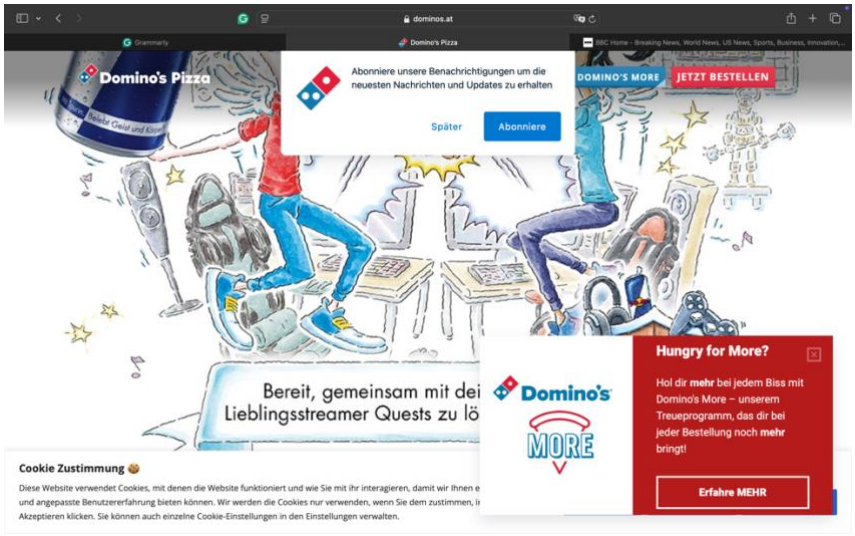
## 2 Real-World Examples Websites

1. **Good Example: BBC** (www.bbc.co.uk)




- **Keyboard Navigation** – Users can fully navigate the site using only a keyboard.
- **High Contrast Mode** – Ensures text readability for users with visual disability.
- **Alt Text for Images** – All images have descriptive alt text for screen readers.
- **Captions and Transcripts** – Videos come with captions and transcripts for those with hearing impairments.

2. **Bad Example: Domino's Pizza** (www.dominos.com)




- **Missing Alt Text** – Screen readers couldn't describe images.
- **Inaccessible Forms** – No proper labels for input fields, making it difficult for assistive technologies.
- **Legal Consequences** – Faced a lawsuit in 2019 due to accessibility failures.

## How I Will Implement Web Accessibility In My Project

In my own project, I will ensure web accessibility by using the following principles:

- **Use Semantic HTML** (e.g., <main>, <section>, <footer>) to improve content structure for assistive technologies.
- **Provide Alt Text for Images** so screen reader users can understand visuals, while decorative images should have empty alt attributes.
- **Enable Keyboard Navigation** by making all interactive elements accessible, using focus indicators and a logical tab order.
- **Implement Responsive Design** to ensure the website adapts to different screen sizes.

By applying these principles in my project will be **inclusive** and **usable by all users**, regardless of ability.

## References Links


1. Allyant (2023). **What Are the 4 Principles of Web Accessibility?** Available at: https://allyant.com/4-principles-of-web-accessibility/
2. World Wide Web Consortium (W3C) (2019). **Accessibility Principles.** Available at: https://www.w3.org/WAI/fundamentals/accessibility-principles/


## The End