

BOGOTÁ TESTING NIGHTS





Agenda

1. DEFINITION OF ACCESSIBILITY - OVERVIEW
2. CONDITIONS FOR AN ACCESIBLE SITE
3. PRINCIPLES
4. BASIC DISABILITIES
5. ADVANTAGES OF ACCESSIBILITY
6. MANUAL TESTING PROCEDURES
7. ASSISTIVE TECHNOLOGY
8. TOOLS – PRACTICAL EXERCISES

Team



Stefania Vargas
TEST CONSULTANT



Angela Zuluaga
TEST CONSULTANT

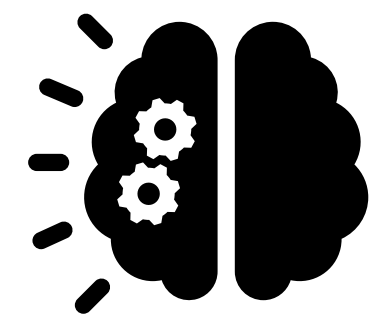


DEFINITION OF ACCESSIBILITY - OVERVIEW



What is Accessibility?

- Practices to build software systems which are usable and understandable by users with disabilities
- Development of information systems flexible enough to accommodate the needs of the broadest range of users regardless of age or disability.



What is Accessibility?

ACCESSIBILITY IN THE REAL WORLD

These are regular situations that could help you understand how accessibility works in the digital world. That is what **accessibility** is about, making web content compatible with those assistive technologies.



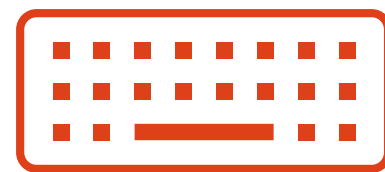


CONDITIONS FOR AN ACCESSIBLE SITE



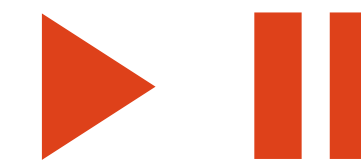
CLEAN HTML

A solid HTML structure makes sites more accessible, using right header tags, alt tags, title tags and meta descriptions is going to be easier for the visitors with visual disabilities to navigate through and use the page



KEYBOARD SUPPORT

The key for keyboard support is the HTML. The site can't be entirely accessible by mouse, should be navigated by the keyboard if the user wants to do it.



FULL MEDIA CONTROLS

Being able to play/pause/etc. all media. Nothing on the site automatically plays.





AVOID SEIZURE-INDUCING GRAPHICS

Flashing lights and flash moving images give big visualizing problems, but if the site needs some with flashes, ensure it meets the accessible criteria related to (Guideline 2.3 – Seizures)



NO TIME LIMITS

If in the site must be something time-sensitive like a test, provide the way for persons with disabilities.





PRINCIPLES

4 Principles

WCAG (Web Content Accessibility Guidelines) includes four sections often called by the mnemonic **POUR**



Perceivable: Information and user interface components must be presentable to users in ways they can perceive.

Operable: User interface components and navigation must be operable.

Understandable: Information and the operation of user interface must be understandable.

Robust: Content must be robust enough that it can be interpreted by a wide variety of user agents, including assistive technologies.



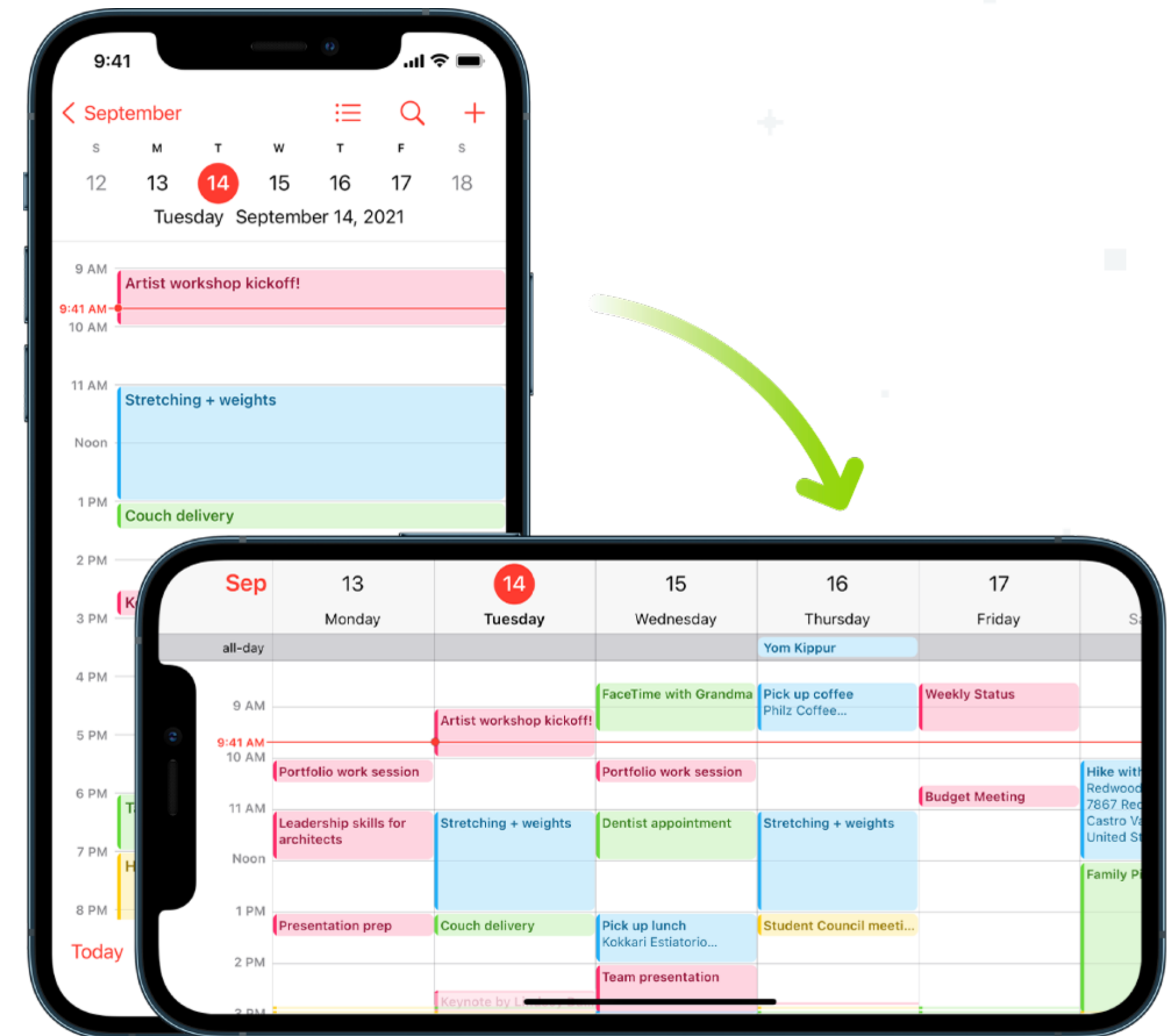
Perceivable

Information and user interface components must be presentable to users in ways they can perceive, it can't be invisible to all their senses.

- Provide text alternatives for non-text content
- Provide captions, controls, etc. for multimedia
- Provide semantic markup to convey meaning
- Do not convey meaning through color
- Contrast ratio considerations
- Text size considerations
- Screen Size considerations

First Name	<input type="text" value="John"/>	✓
Last Name	<input type="text" value="Doe"/>	✓
Email	<input type="text" value="john@email"/> please enter a valid email	✗
Password	<input type="password" value="****"/>	✓
	<input type="submit" value="Submit"/>	

First Name	<input type="text" value="John"/>	✓
Last Name	<input type="text" value="Doe"/>	✓
Email	<input type="text" value="john@email"/> please enter a valid email	✗
Password	<input type="password" value="****"/>	✓
	<input type="submit" value="Submit"/>	



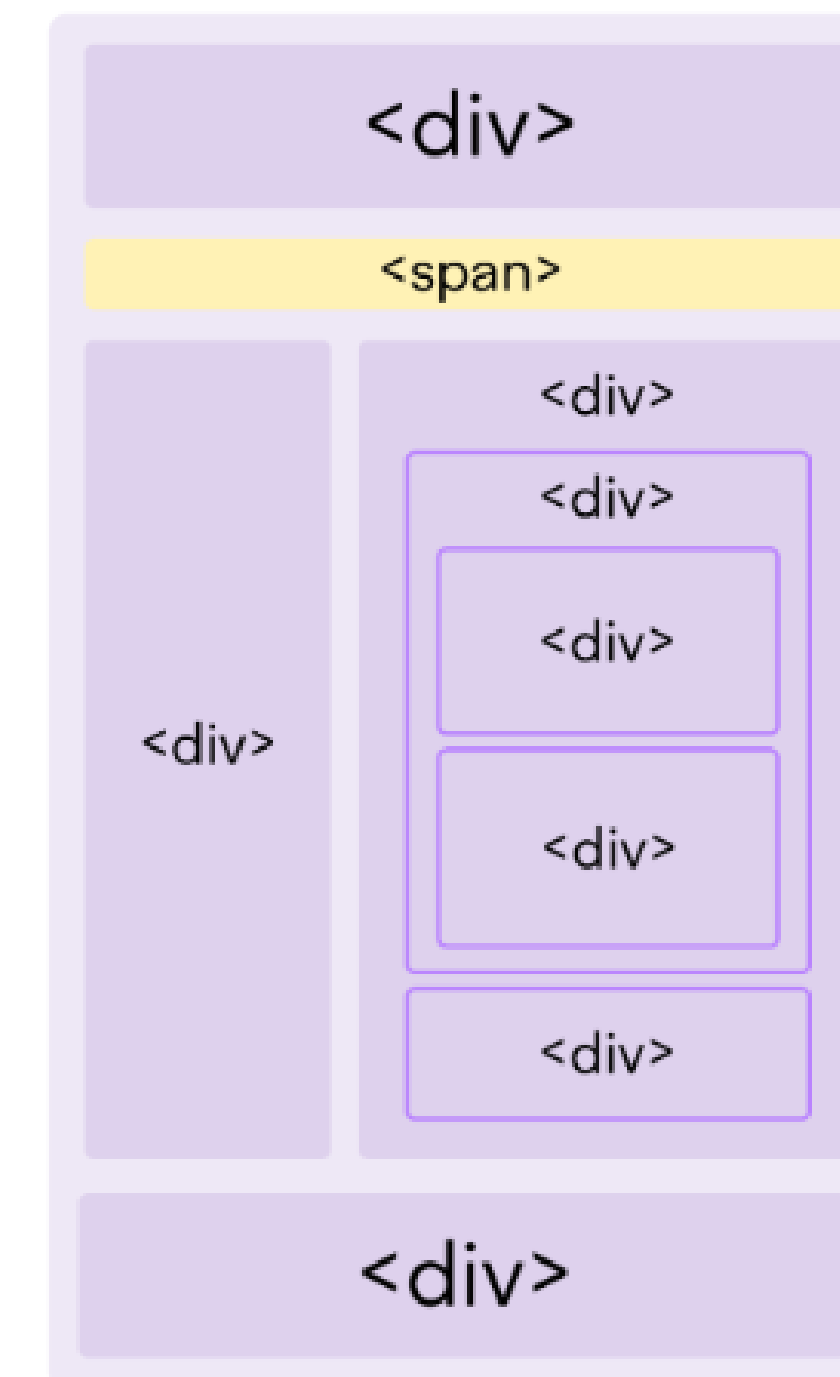
Operable

The site should be designed and developed to work on devices and browsers so the interface components and navigation elements can be operated for everyone.

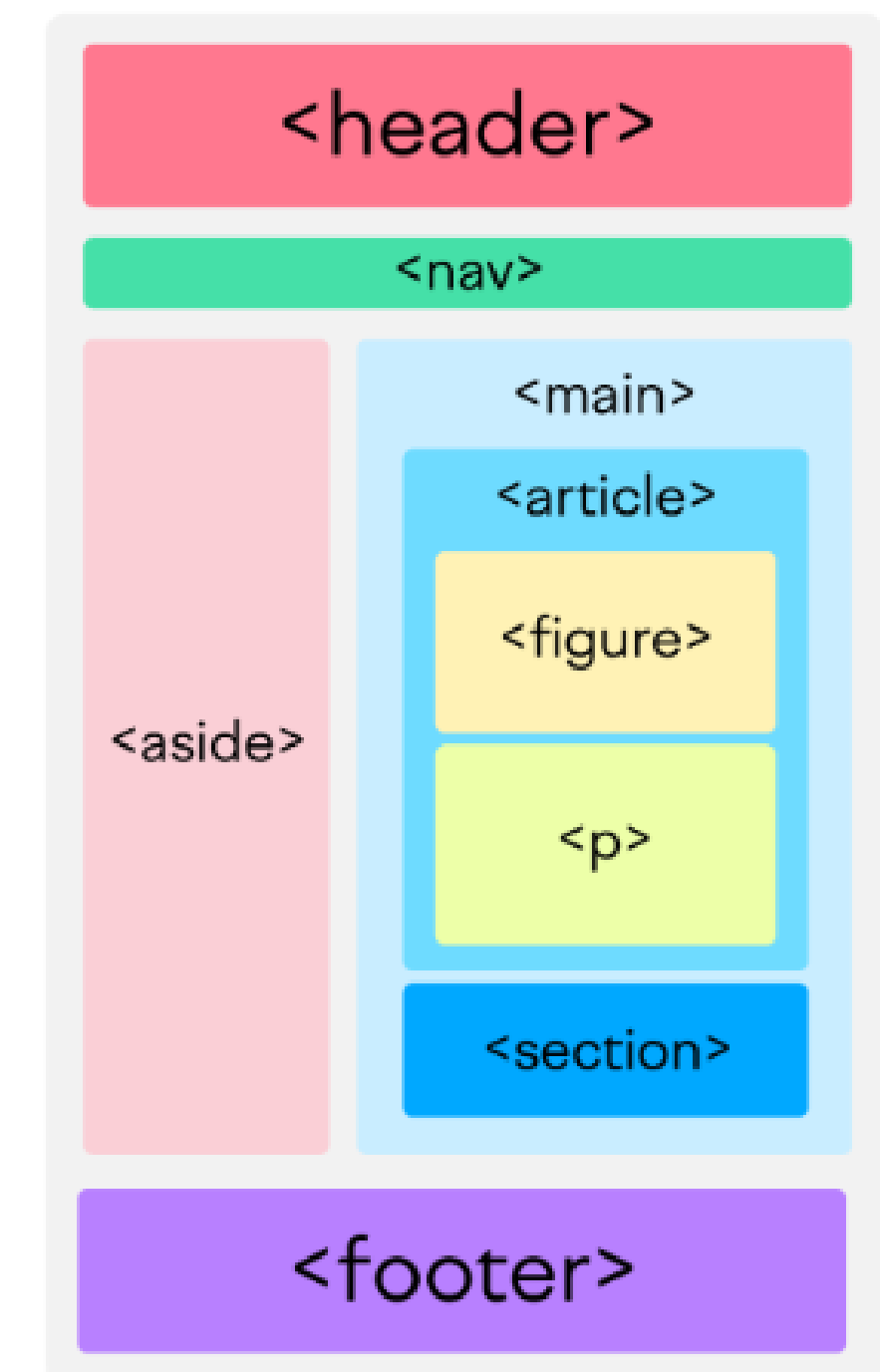
- All functionality available from a keyboard
- Give sufficient time and control of timed events
- Do not design content that may cause seizures or physical reactions
- Use semantic markup to reinforce meaning of content
- Provide ways to help users navigate, find content, and determine where they are.



Non-Semantic HTML



Semantic HTML



Understandable

Website's design must be friendly, so the user understand the whole site and is comfortable using it.

- Define the language of the page
- Provide a predictable User Interface
- Help minimize mistakes (error validation, labels, etc.)
- Support multiple screen orientations
- Make text content readable and understandable.



Robust

Content must be robust enough that it can be interpreted by a variety of user agents as browsers, media players and plugins, including assistive technologies as pointers or magnifiers.

- Maximize compatibility with current and future user agents, including assistive technologies
- Announce UI status changes (Loading, etc.)
- Keyboard type

1	2 ABC	3 DEF
4 GHI	5 JKL	6 MNO
7 PQRS	8 TUV	9 WXYZ
ABC	0	⌫

This image shows a numeric keypad on iOS designed for number and PIN entry.



BASIC DISABILITES

Basic Disabilities

When coding your web project, always have in mind the following basic disabilities. Although there are some standards to follow when coding, your project can be technically accessible but functionally inaccessible.



AUDITORY DISABILITIES

- Deafness
- Decreased hearing capabilities



VISUAL DISABILITIES

- Blindness
- Low vision
- Color deficiency



MOTOR DISABILITIES

- Motor skill disorder
- Parkinson



COGNITIVE DISABILITIES

- Brain Injury
- Stroke
- Intellectual disability
- Epilepsy



5

ADVANTAGES OF ACCESSIBILITY



THE RIGHT THING TO DO

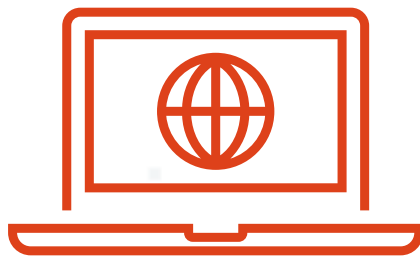
Everyone deserves an equal opportunity and equal access.

Improve brand image by showing your organizations culture.



SOCIAL INCLUSION

Accessibility supports social inclusion for people with disabilities as well as others, such as older people, people in rural areas, and people in developing countries.



TECHNICAL FACTORS

Addresses interoperability, quality, reducing site development and maintenance time, reducing server load, enabling content on different configurations, and being prepared for advanced web technologies.



FINANCIAL FACTORS

Addresses the financial benefits of increased website use. Case studies show that accessible websites have better search results, reduced maintenance costs, and increased audience reach.



LEGAL AND POLICY

Addresses requirements for Web accessibility from governments and other organizations in the form of laws, policies, regulations, standards, guidelines, directives, communications, orders, or other types of documents.

6

MANUAL TESTING PROCEDURES

Manual Testing Procedures

- You should be able to Tab across all clickable elements, that you can control/access them with the enter key.
- For mobile devices compatible with accessibility features, you can turn the on from the configuration settings and try to browse the site.
- Use the Play/Pause buttons for animations.
- Review that each single page has only a H1 element and the rest of the heading structure is well defined (Do not jump from H2 to H5)

<h1>Heading 1</h1>

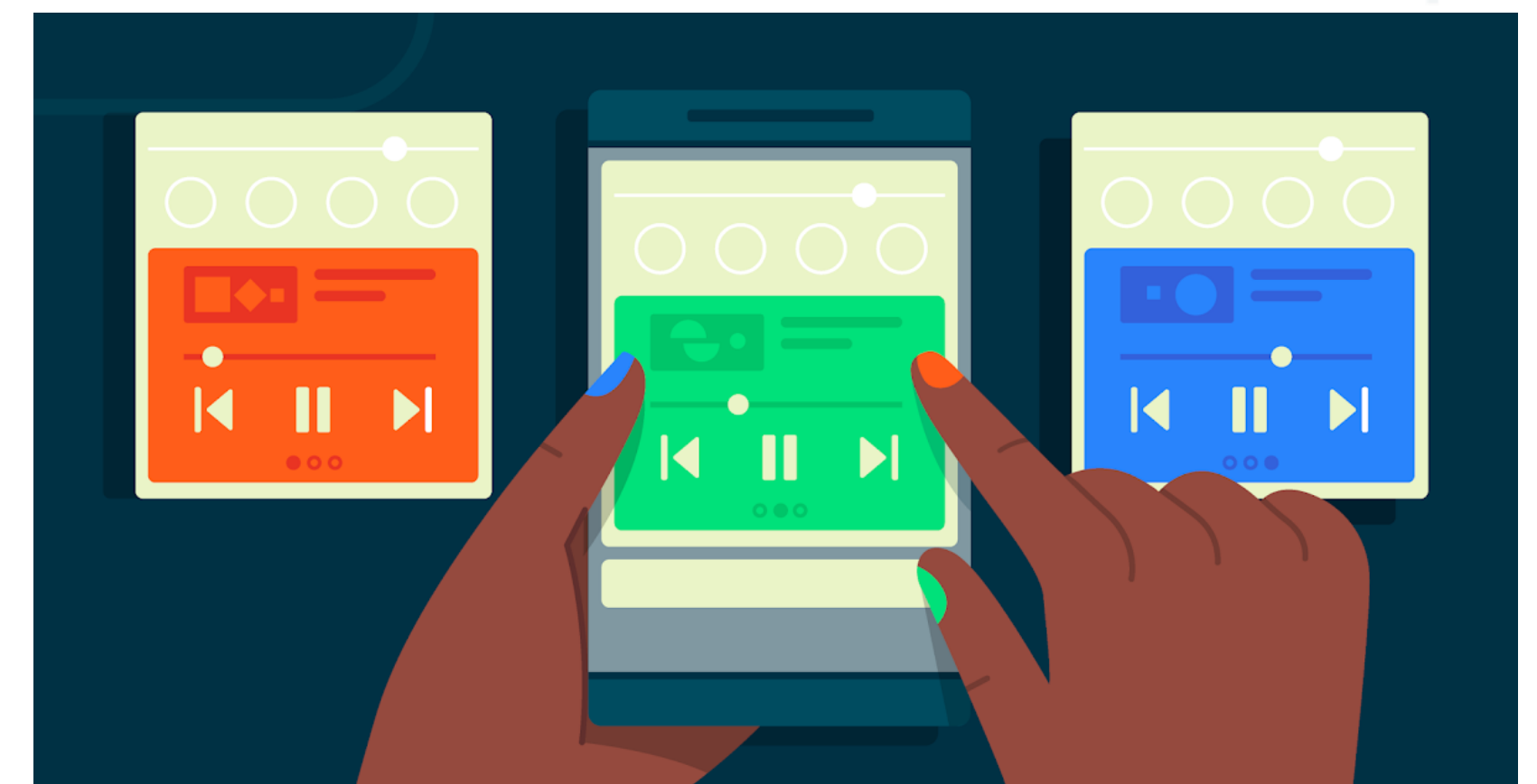
<h2>Heading 2</h2>

<h3>Heading 3</h3>

<h4>Heading 4</h4>

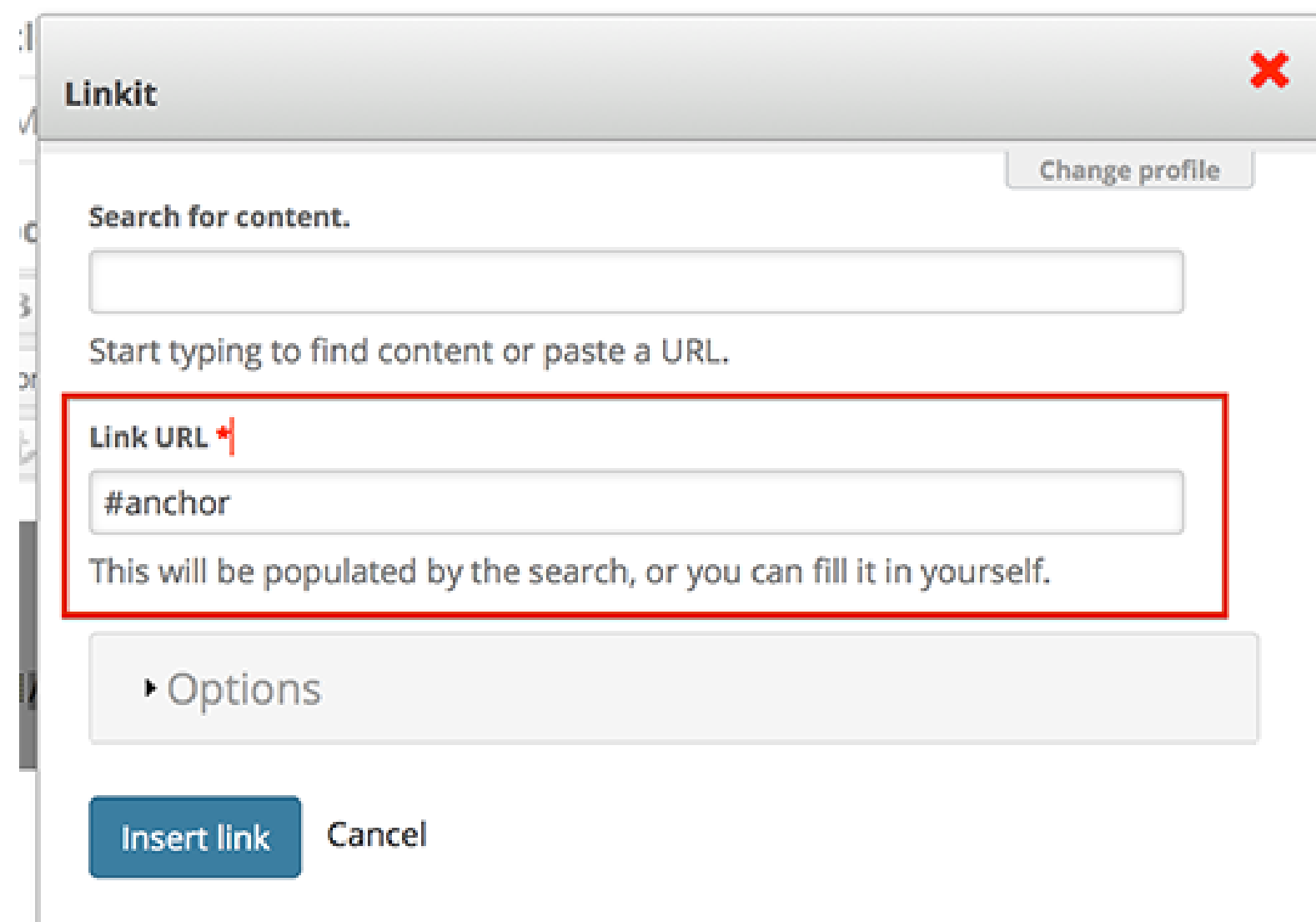
<h5>Heading 5</h5>

<h6>Heading 6</h6>



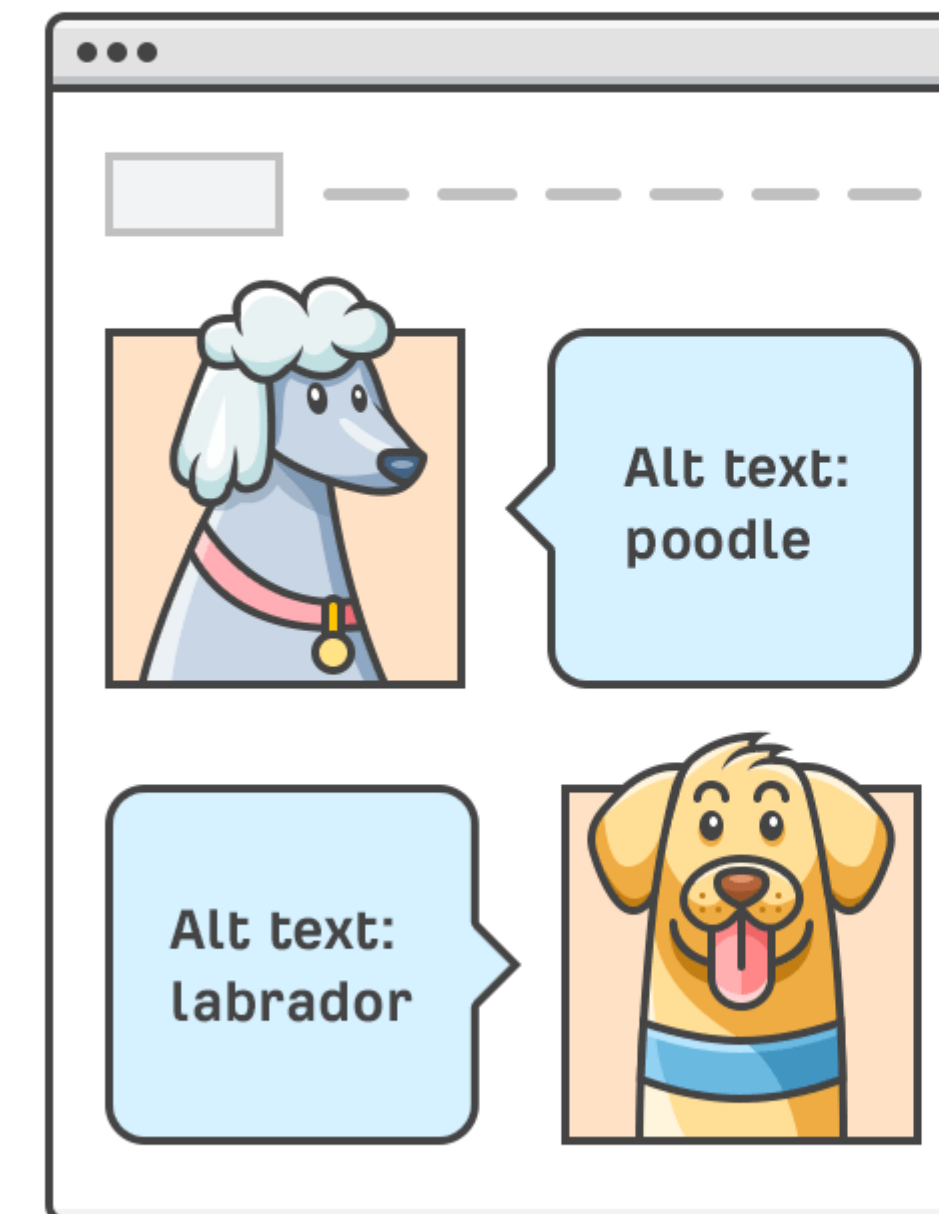
Manual Testing Procedures

- Review that links have an anchor, title and images have alt text and when needed this should be editable through the CMS.
- On design stage, review that all contrast and font sizes achieve Accessibility Standards according to your test plan.
- Make sure you can control any special interaction (carousels, videos...) with the keyboard

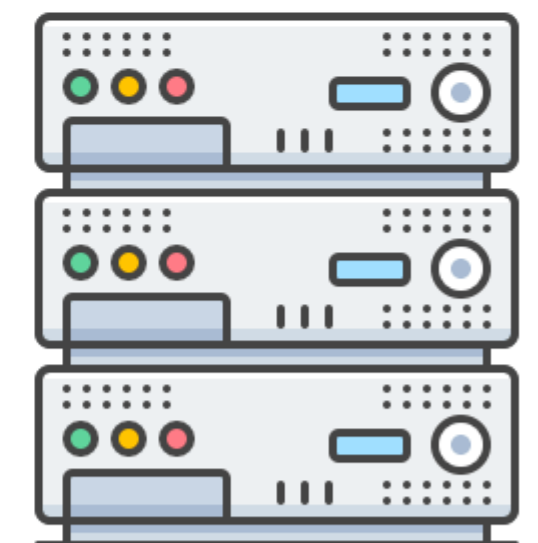


The screenshot shows the Linkit CMS interface. At the top is a 'Linkit' header with a close button. Below it is a 'Change profile' button. The main section is 'Search for content.' with a search bar and the instruction 'Start typing to find content or paste a URL.' Below the search bar is a 'Link URL' field with a red asterisk, which is highlighted by a red box. The field contains the text '#anchor'. Below the field is the text 'This will be populated by the search, or you can fill it in yourself.' At the bottom is an 'Options' button and 'Insert link' and 'Cancel' buttons.

Alt Text Reveals Important Content to Google



Looks like the
two photos are
of dog breeds.



©  <https://ahrefs.com/blog/alt-text/>

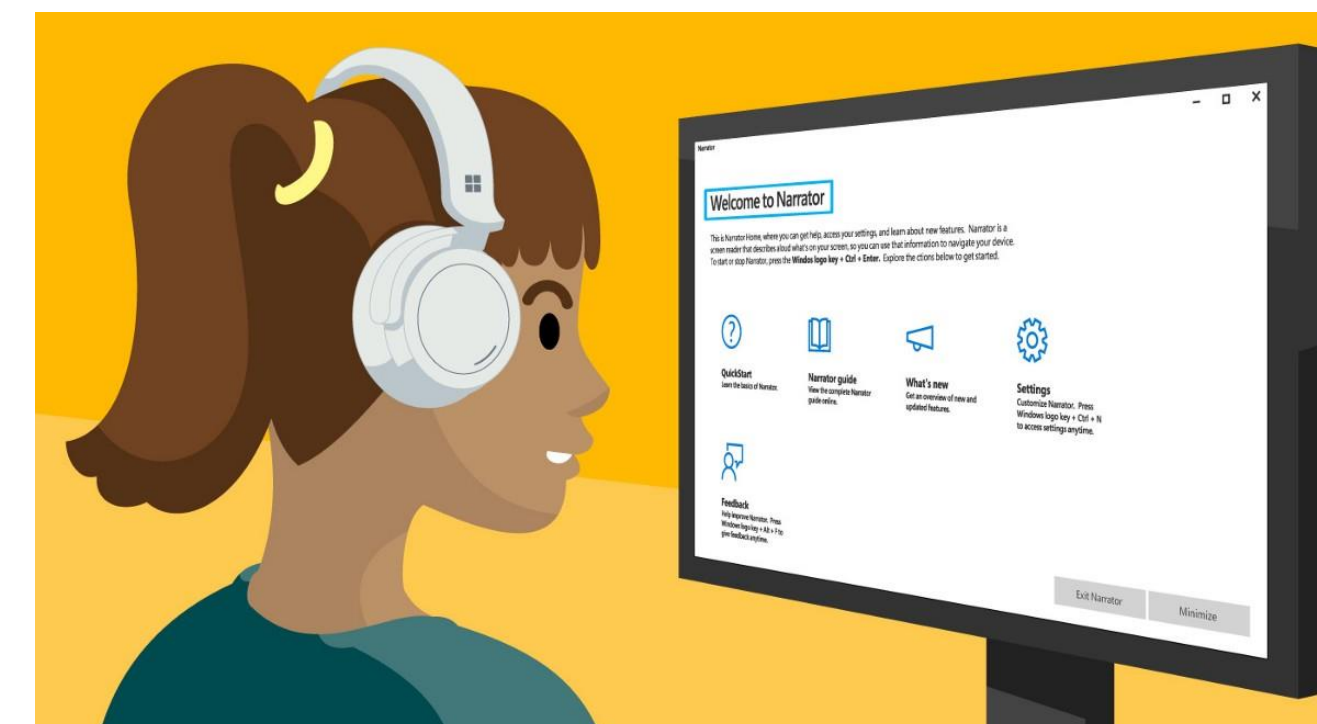
ahrefs

7

ASSISTIVE TECHNOLOGY

Screen Readers

- Screen readers are a form of assistive technology (AT) used by blind or visually impaired users that render content as speech or Braille output.
- They provide a rich set of keyboard navigation commands to efficiently traverse page or screen hierarchy.
- Supporting screen readers will cover approximately 80% of WCAG 2.1 requirements. These include text alternatives, keyboard navigation, and semantic structure.



Alternative input Devices

The typical software system implemented for keyboard, mouse and/or touch-screen input device. Disable users use a wide range of alternative input devices such as:

- Keyboard
- Braille board
- Bluetooth Keyboard
- Cheek switch device
- Head pointers
- Speech input software



Braille Keyboard



Cheek switch device



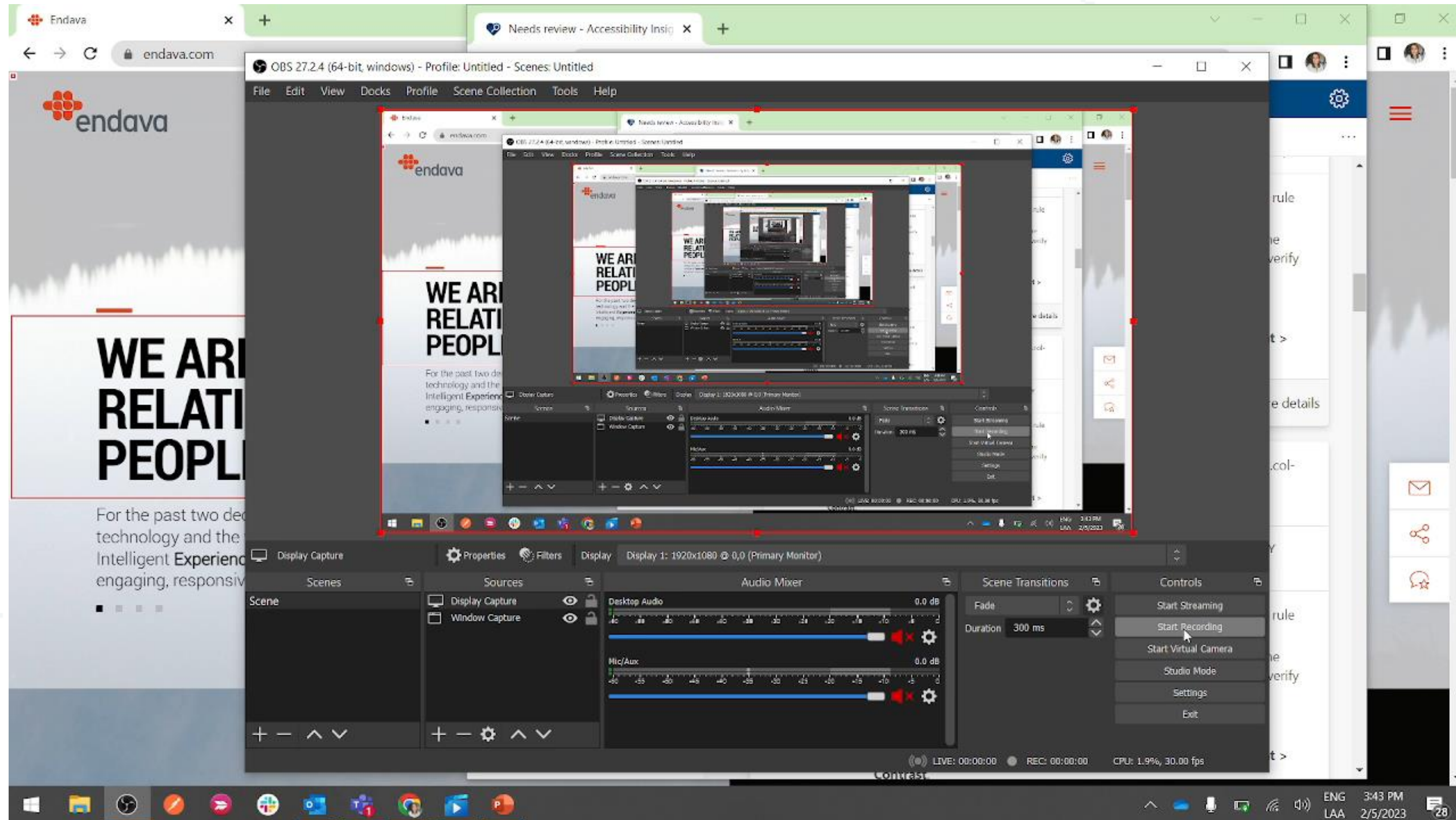
TOOLS – PRACTICAL EXERCISES

Desktop - Axe

The screenshot shows a web browser window displaying the Endava website. The website's header includes the Endava logo, a language selector set to "English", and a menu icon. The main content area features a large headline: "WE ARE REIMAGINING THE RELATIONSHIP BETWEEN PEOPLE AND TECHNOLOGY". Below this headline, a paragraph states: "For the past two decades, Endava has been redefining how humans interacted with technology and the world around them, by combining Product & Technology **Strategies**, Intelligent **Experiences**, and World Class **Engineering** to help our clients become more engaging, responsive, and efficient." To the right of the text, there are three social media icons: email, share, and a feedback icon.

Overlaid on the right side of the browser window is the Axe DevTools extension interface. The interface has a title bar that says "DevTools axe-core 4.6.3" and includes "Sign up" and "Sign in" links. Below the title bar is a blue banner with the text: "Catch more issues with Pro. Try for free, no payment required!". The main section of the interface is titled "Let's get started" and contains the text: "You're **one click away** from scanning your site with the most widely used and **trusted accessibility tool in the world**." There are two blue buttons: "Scan ALL of my page" and "Scan PART of my page". Below these buttons is the text "OR" and a section titled "Start an Intelligent Guided Test" with the text: "Select an IGT, we'll scan your entire page, and then you can start testing! Learn [more about IGTs!](#)". At the bottom of the interface, there are three white buttons with icons: "Table", "Keyboard", and "Modal Dialog". The bottom of the browser window shows the "Console" tab with the text "What's New" and "Issues", and a section titled "Highlights from the Chrome 109 update".

Desktop - Accessibility Insights for Web



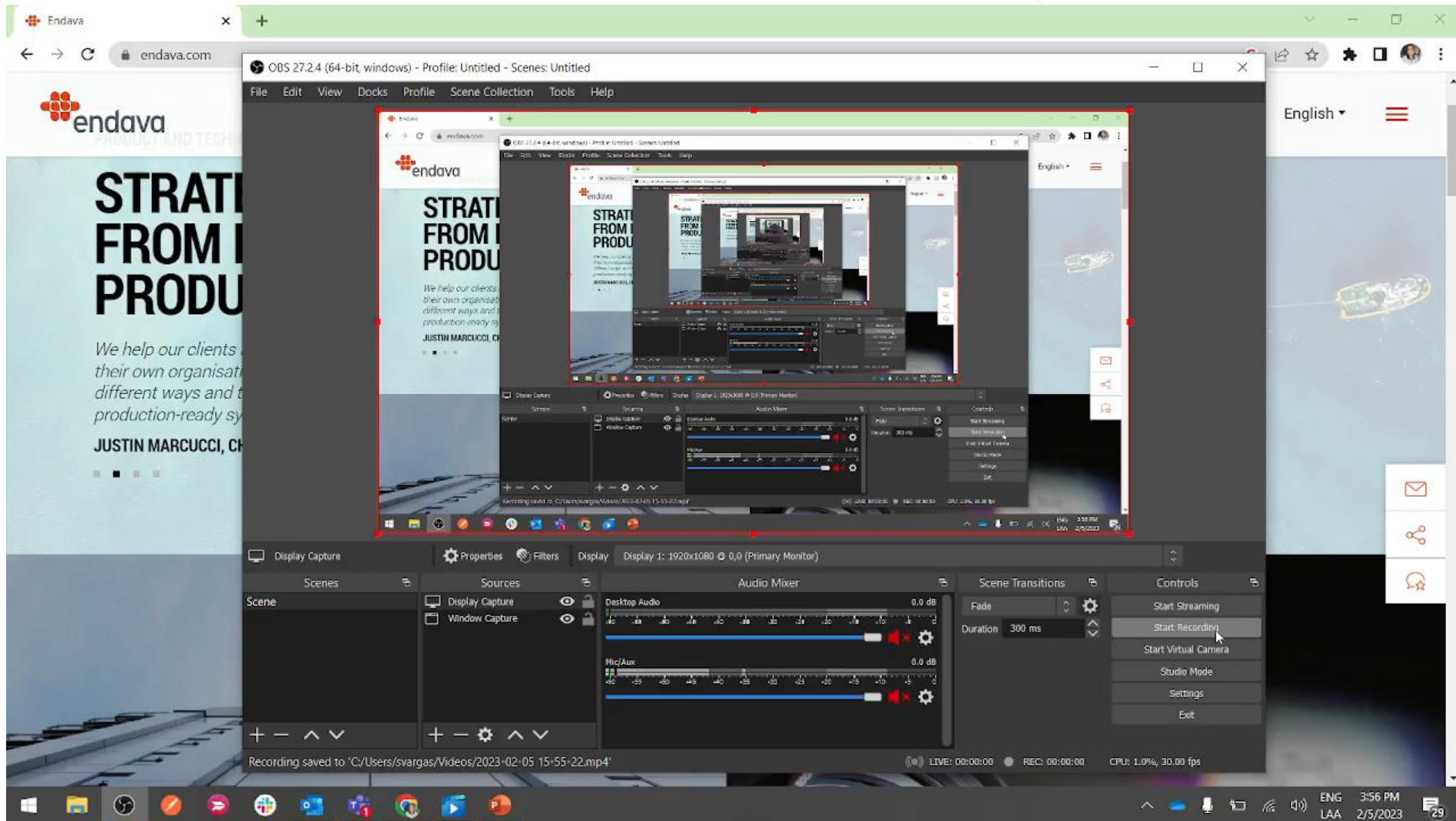
VoiceOver - iOS



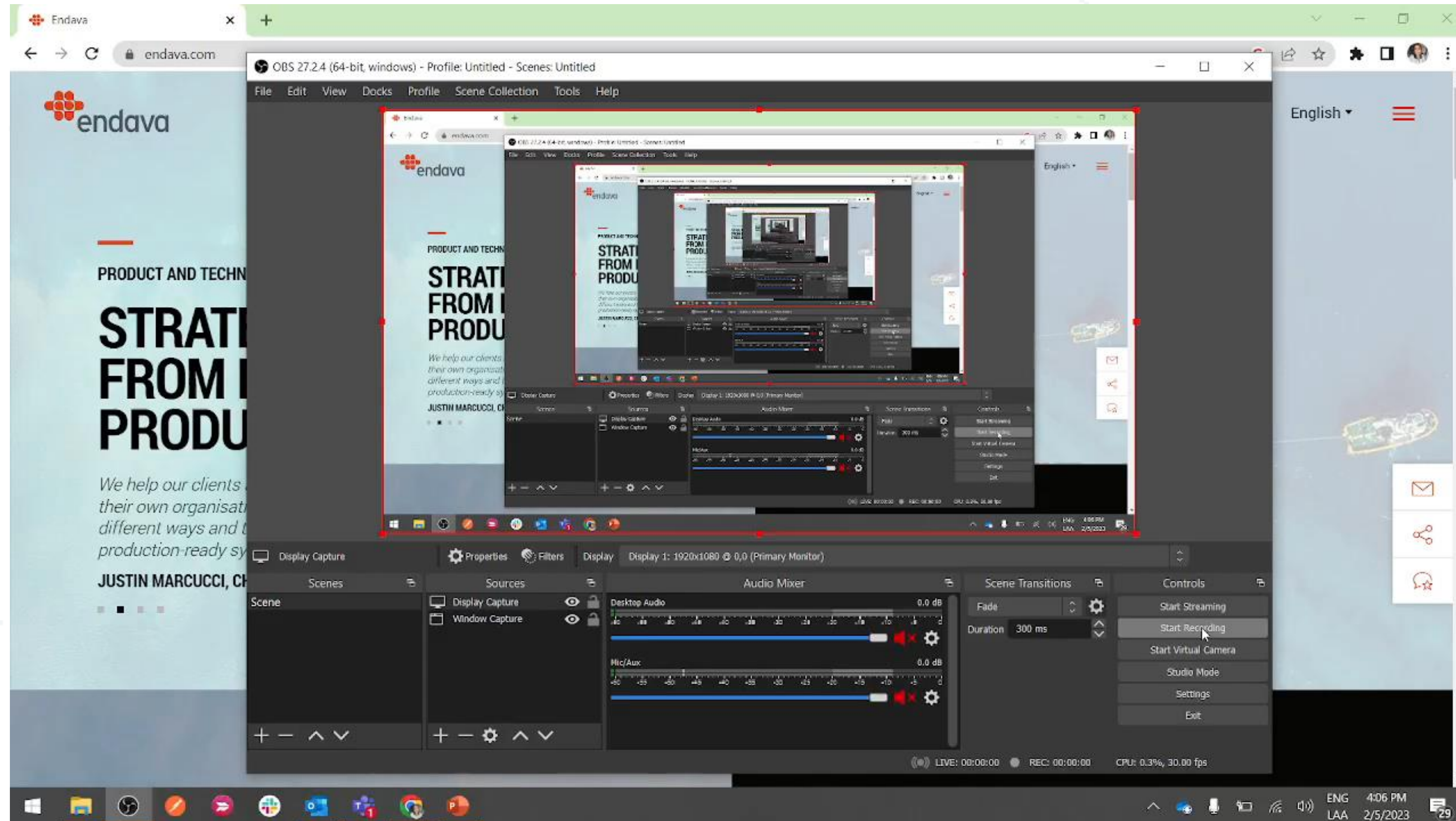
Accessibility Scanner - Android



UI/UX – Color Contrast Analyzer



UI/UX – WCAG Contrast checker



Exercise

REQUERIMOS DE TU AYUDA PARA ESTE EJERCICIO PRÁCTICO

Quién quiere ser voluntario/a?



