

# ACCESSIBILITY IS NOT HARD

---

Intro to digital accessibility for UX Designers

Wiktor Początek

# Hi! 🖐️

I'm **Wiktor**

Senior UX Designer

Accessibility Specialist



# Agenda

1

---

**What**  
accessibility  
is

2

---

**Why**  
make accessible  
products

3

---

**How to**  
make accessible  
products

**Accessibility** is the design of products, devices, services, vehicles, or environments so as to be usable by people with [disabilities](#).<sup>[1]</sup> The concept of accessible design and practice of accessible development ensures both "direct access" (i.e. unassisted) and "indirect access" meaning compatibility with a person's [assistive technology](#)<sup>[2]</sup> (for example, computer [screen readers](#)).



CHATGPT

Accessibility refers to the design of products, devices, services, or environments for people with disabilities. It aims to ensure that everyone, regardless of their abilities or limitations, can access and use them effectively. This includes considerations for physical, cognitive, and sensory impairments, as well as other factors like age and temporary disabilities.

# ACCESSIBILITY

Giving equal access to things for everybody.

# About accessibility

## **Accessibility** (ally, ally)

Giving equal access to things for everybody.

## **Accessibility in IT**

Ensuring that the product supports the needs of every user – that it is **accessible** to everyone.

# About accessibility

## **WCAG** (Web Content Accessibility Guidelines)

Document containing recommendations for creating web content accessible to people with disabilities.

### **WCAG 2.0**

2008

### **WCAG 2.1**

2018

A, AA, AAA levels



### **WCAG 2.2**

Currently as a recommendation

#### **Useful links:**

[WCAG documentation](#)

[WCAG 101: Understanding the Web Content Accessibility Guidelines](#)

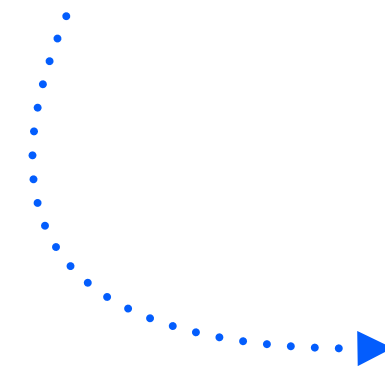
# About accessibility

## 1. Perceivable

## 2. Operable

## 3. Understandable

## 4. Robust



**1.1** Text alternatives

**1.2** Time-based media

**1.3** Adaptable

**1.4 Distinguishable**

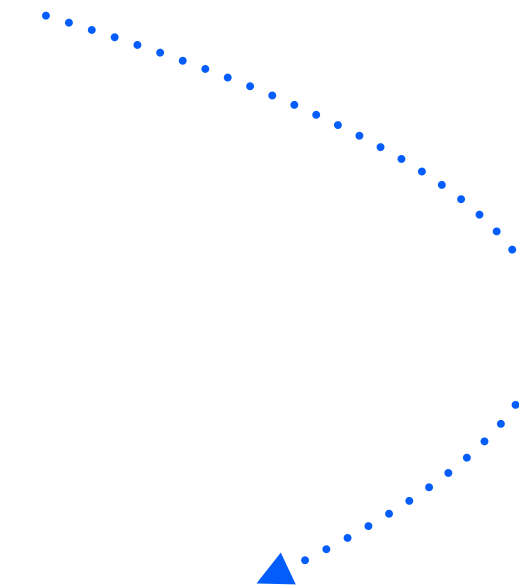
**1.4.1.** Use of color (A)

**1.4.2.** Audio control (A)

**1.4.3.** Contrast (minimum) (A)

**1.4.4. Resize text (AA)**

*Text can be resized without assistive technology  
up to 200% without loss of content or functionality.*



### Useful links:

[WCAG documentation](#)

[WCAG 101: Understanding the Web Content Accessibility Guidelines](#)



# People with disabilities

Estimates



**61 million**

26% of the population

USA



**112 million**

15% of the population

Europe



**5 million**

13% of the population

Poland

However!

**ACCESSIBILITY IS NOT ABOUT MAKING PRODUCTS FOR PEOPLE WITH DISABILITIES**

# About disabilities

”

*Disability is not just a health problem. It is a complex phenomenon, reflecting the **interaction** between features of a person's body and features of the society in which he or she lives*

Source:

World Health Organization

”

*ICF is not a classification of people, but a classification of the **characteristics** of a person's health **in the context** of his or her individual life situation and the influences of the surrounding environment.*

Source:

International classification of functioning, disability and health (ICF)

# About disabilities

”

*Disability is not just a health problem. It is a complex phenomenon, reflecting the interaction between features of a person's body and features of the society in which he or she lives*

Source:

*World Health Organization*

”

*ICF is not a classification of people, but a classification of the characteristics of a person's health **in the context** of his or her individual life situation and the influences of the surrounding environment.*

Source:

*International classification of functioning, disability and health (ICF)*

# About incompatibility

## PERMANENT



One arm

## TEMPORARY



Hand injury

## SITUATIONAL



Parent

# About incompatibility

## PERMANENT



Blind

## TEMPORARY



Cataract

## SITUATIONAL



Distracted driver

# About incompatibility

## PERMANENT



Deaf

## TEMPORARY



Ear infection

## SITUATIONAL



Bartender



# About incompatibility

## PERMANENT



Mute

## TEMPORARY



Sore throat

## SITUATIONAL



Strong accent



One arm



Hand injury



Parent



Blind



Cataract



Distracted driver



Deaf



Ear infection



Bartender



Mute



Sore throat



Strong accent

Accessibility is not about making products for people with disabilities.

Accessibility is not about making products for **everyone.**

In any circumstance.

1

What  
accessibility  
is

2

**Why**  
make accessible  
products

3

How to  
make accessible  
products

# Why we should make accessible products



## More users

Better accessibility = more users with access to our product. More users = more revenue. Plain and simple.



## Legal regulations

Many countries (and EU itself) have regulations regarding digital accessibility for both public and private sectors.



## Better usability

Accessibility guidelines like WCAG and good UX practices often go hand in hand. Increasing A11y increases UX.



## Better SEO

Accessible websites tend to have a better SEO performance, thanks to increased UX, lower bounce rates and increased engagement.



## Better code standards

WCAG guidelines ensure proper HTML semantics and correct tags & elements usage. Overall quality of the code increases.



## Better PR

Accessibility boosts PR by showcasing a commitment to inclusivity and user-friendly experiences for everybody.

# Why we should make accessible products

Why not? ✨

1



What  
accessibility  
is

2



Why  
make accessible  
products

3



How to  
make accessible  
products

## **8 SIMPLE TIPS FOR MAKING PRODUCTS MORE ACCESSIBLE**

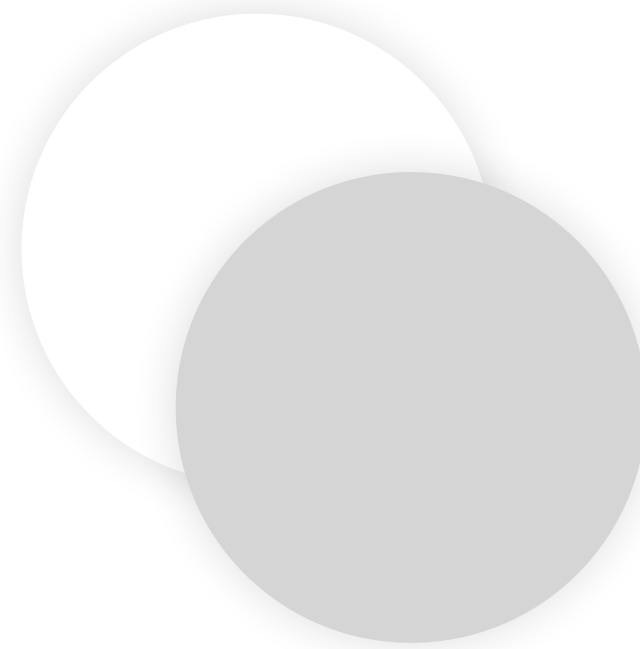


# 1. Minimal contrast

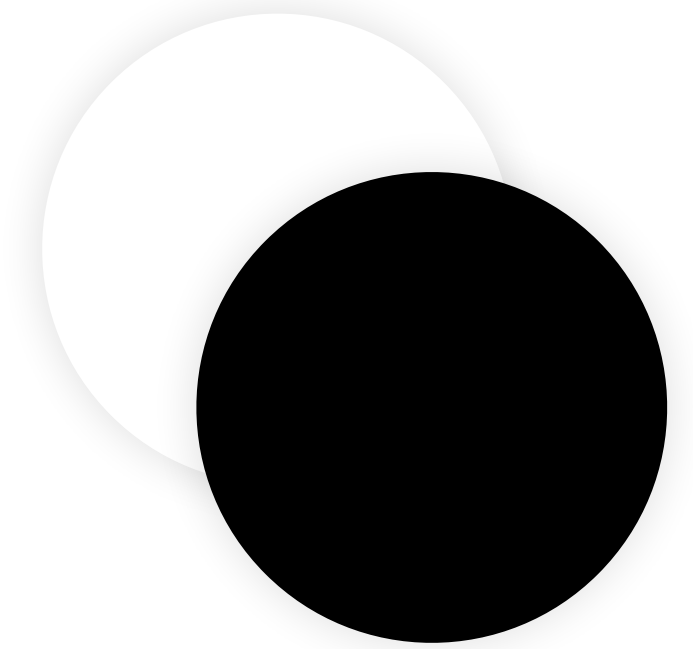
Contrast between foreground and background should be distinguishable.



1:1



2.3:1



21:1



Cluse plugin



Contrast plugin



Color Contrast Checker

# 1. Minimal contrast

For text – recommended 7 : 1 , minimum 4.5 : 1

*Lorem ipsum dolor sit amet,  
consectetur adipiscing elit.  
Donec vitae ipsum in odio  
interdum viverra ac at mauris.*

Kontrast  
**1.5 : 1**



*Lorem ipsum dolor sit amet,  
consectetur adipiscing elit.  
Donec vitae ipsum in odio  
interdum viverra ac at mauris.*

Kontrast  
**4.51 : 1**



*Lorem ipsum dolor sit amet,  
consectetur adipiscing elit.  
Donec vitae ipsum in odio  
interdum viverra ac at mauris.*

Kontrast  
**9 : 1**



Cluse plugin



Contrast plugin



Color Contrast Checker

# 1. Minimal contrast

For other elements (e.g. buttons) – minimum 3 : 1

Button Link button

Kontrast  
**2 : 1**



Button Link button

Kontrast  
**3.13 : 1**



Button Link button

Kontrast  
**10 : 1**



Cluse plugin



Contrast plugin

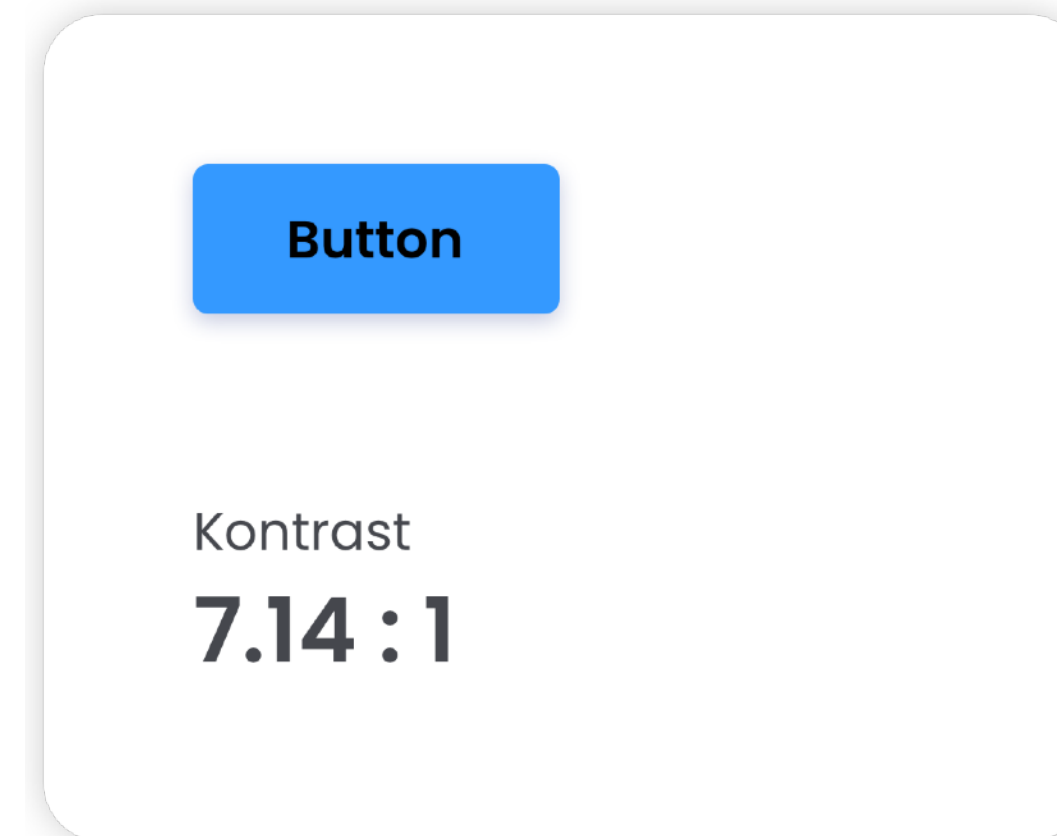
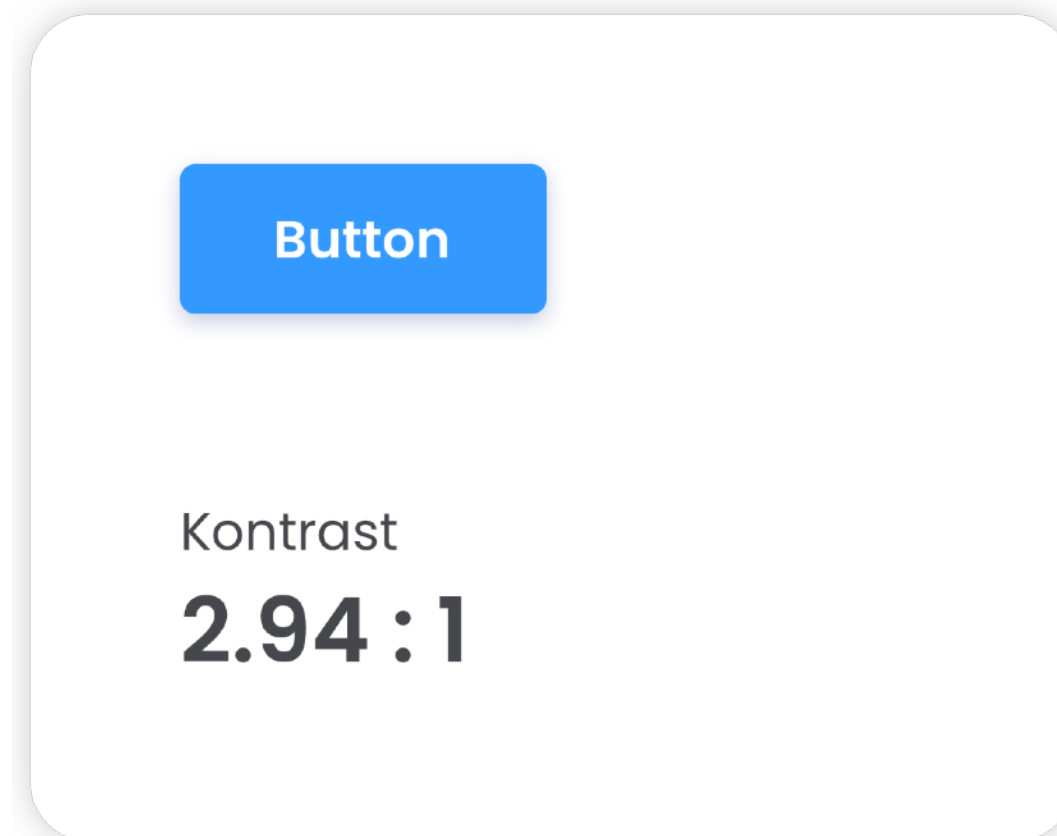


Color Contrast Checker

# 1. Minimal contrast

For other elements (e.g. buttons) – minimum 3 : 1

but...



Cluse plugin



Contrast plugin



Color Contrast Checker

# 1. Minimal contrast

SO...

**Use your eyes** 👁️👁️



Cluse plugin



Contrast plugin



Color Contrast Checker

# 2. Not just color

Don't convey information  
only through colors

Not everyone can see them

Label

Text

Label

Text

Label

Text

Label

Text

Label

Text

Label

Text

Label

Text

Label

Text



# 2. Not just color

**Don't convey information  
only through colors**

Not everyone can see them

Label

Text

Label

Text

Label

Text

Label

Text

Label

Text

Label

Text

Label

Text

Label

Text



# 2. Not just color

Don't convey information  
only through colors

Not everyone can see them

Label  
Text

Label  
Text

Label  
Text

Label  
Text

Label  
Text

Label  
Text

Label  
Text

Label  
Text



Label  
Text

Label  
Text

Label  
Text

Label  
Text

Label  
Text  

! Error text

Label  
Text

Label  
Text

Label  
Text






# 3. Good forms

**Don't use placeholders.**

Put labels above textfields.



A diagram of a form with a rounded rectangular container. Inside the container is a rectangular text field. The text field contains the word "Label" in a light gray font, serving as a placeholder. This represents a bad design practice.



A diagram of a form with a rounded rectangular container. Above the container, the word "Label" is written. Inside the container is a rectangular text field that is empty. This represents a good design practice.



# 3. Good forms

**Add a visible outline.**

No levitating labels.

Label



Label



# 3. Good forms

**Report any errors**  
(or better yet, prevent them)

**Suggest a solution**  
if you have one

**Don't just use colors**  
Not everyone can see them

Email address



Email address

! You're missing a '@' sign!



# 3. Good forms

Don't change the context of the page automatically

Let it be the user's decision

Step 1

Name

Surname



Step 2

Favourite dog breed

Your nephew's zodiac sign



Step 1

Name

Surname

Next



# 3. Good forms

SO...

**make the forms user friendly 🧶**



# 4. Visual hierarchy

## Add a page title.

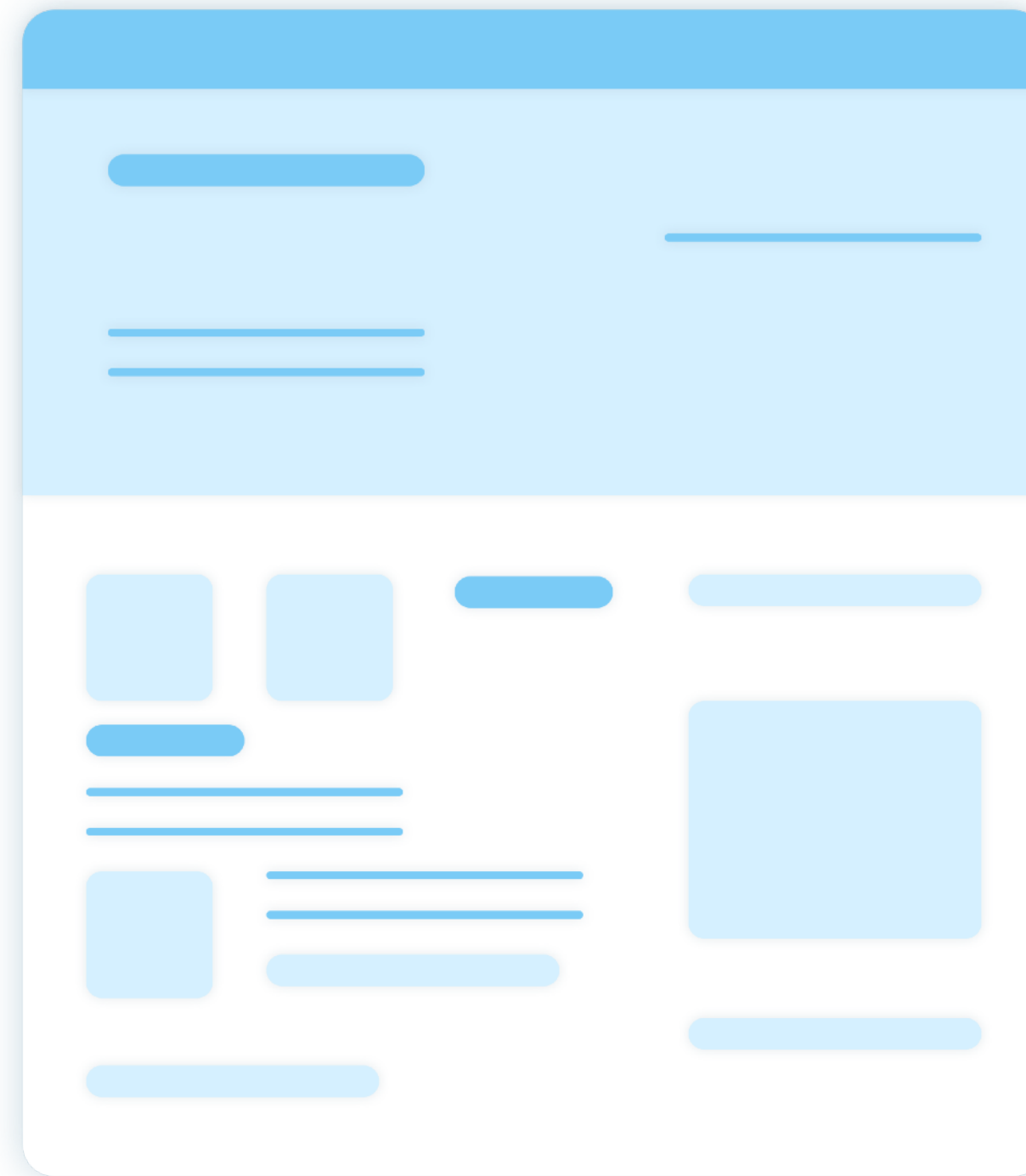
Let the user know where they are

## Group elements on the page

#gestalt

## Use headers

<h1, h2, h3>



# 5. Keyboard

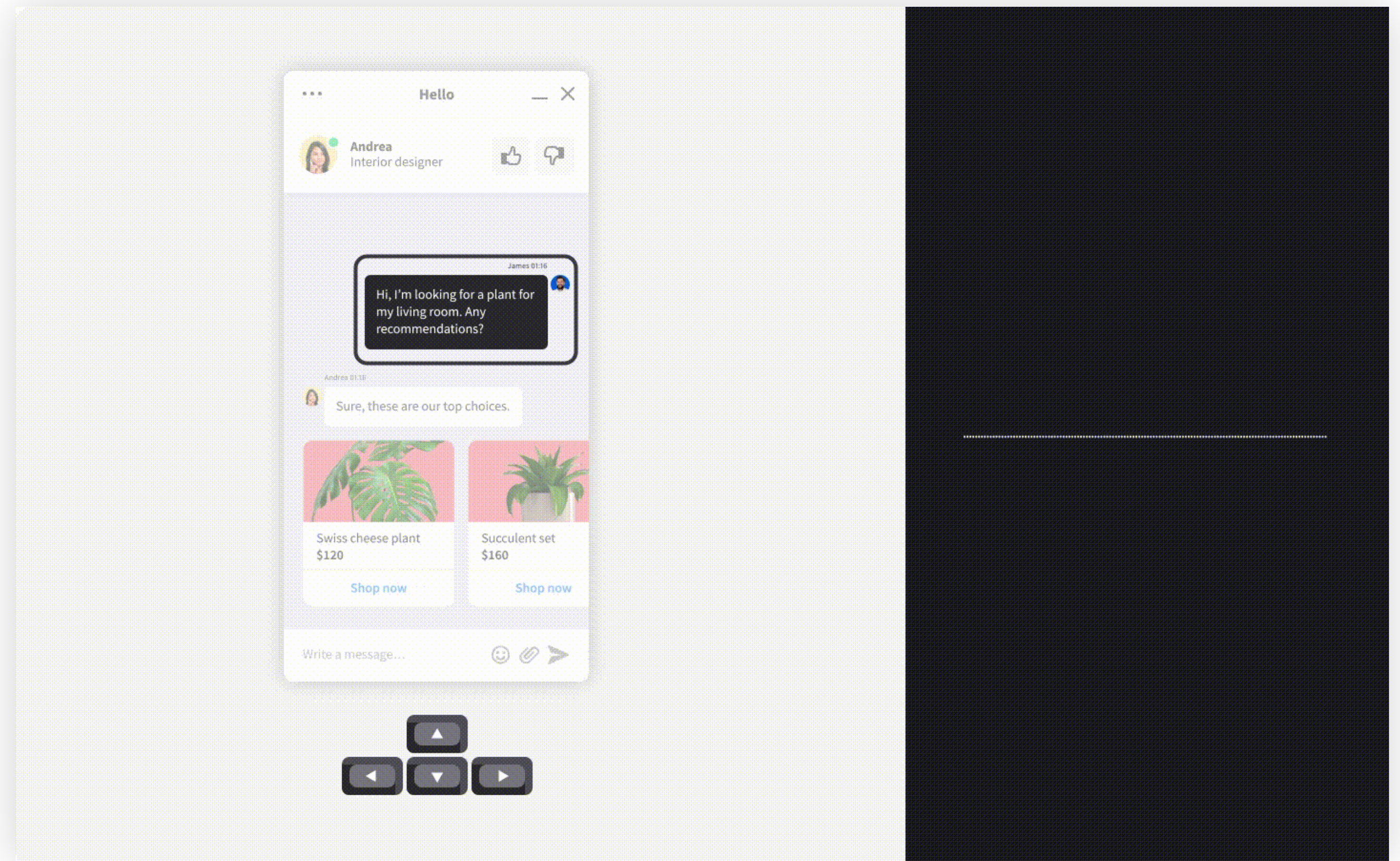
All page elements, content and functions should be **keyboard accessible**



# 5. Keyboard

## SCREEN READER

Software that allows you to navigate a website using only your keyboard



Source: Screen readers: hearing the unseen – Maciej Walaszczyk



NVDA

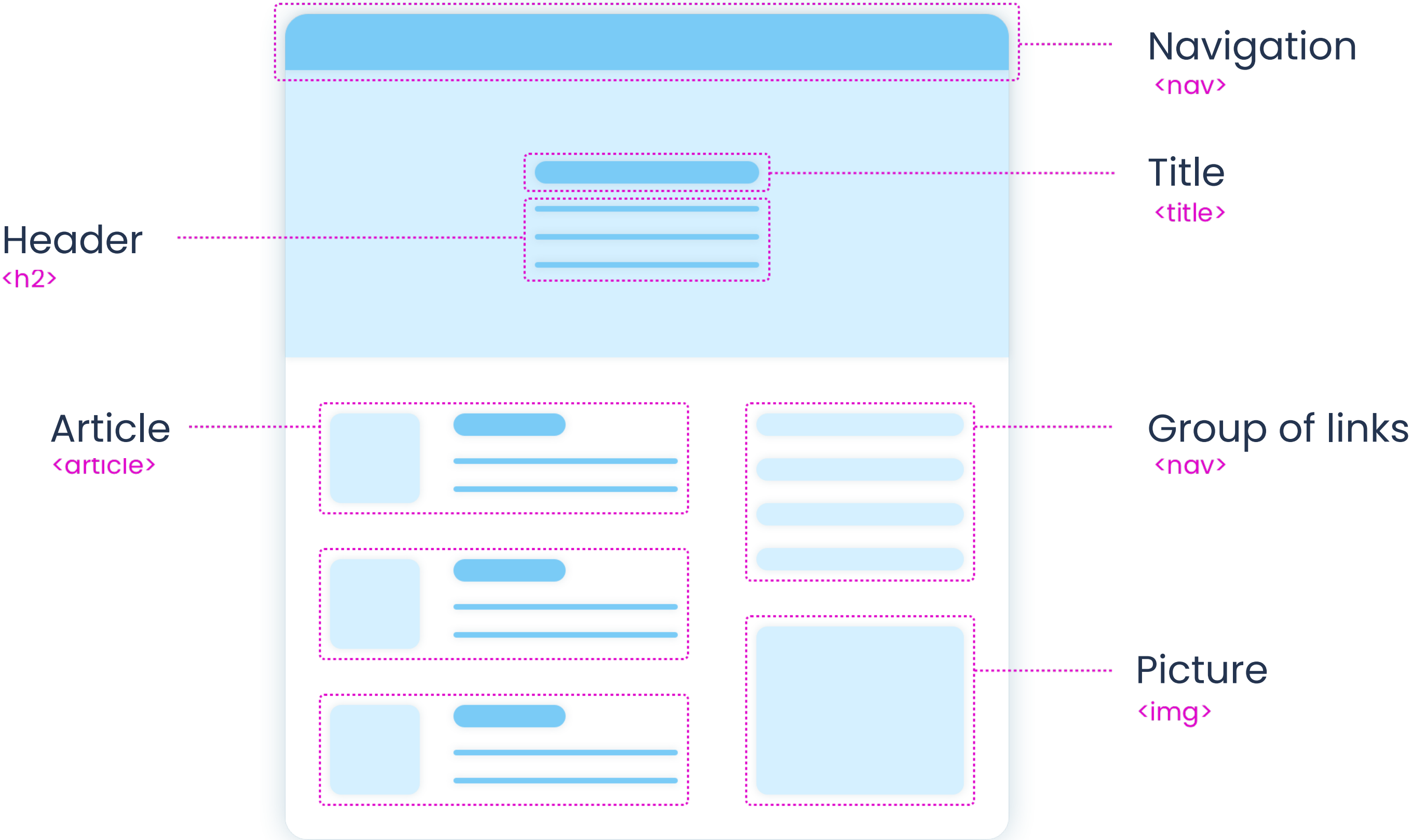


VoiceOver



# 5. Keyboard

All page elements, content and functions should be **keyboard accessible**



NVDA



VoiceOver

# 5. Keyboard

For developers – **use ARIA.**

But also **don't use ARIA.**

*"ARIA roles, states, and properties are like CSS for assistive technologies"*

– W3C

## ARIA Roles:

1. `role="alert"` : To announce important messages or errors to screen readers.
2. `role="status"` : To provide live updates or dynamic content changes.
3. `role="dialog"` : To indicate that a modal dialog or popup is presented.
4. `role="menu"` and related roles: For custom menus and menu items.
5. `role="tablist"` and related roles: For custom tabbed interfaces.
6. `role="tooltip"` : To describe additional information related to an element.
7. `role="application"` : For complex web applications when standard HTML semantics are not sufficient.
8. `role="region"` : To define custom regions or landmarks in the document.

## ARIA States and Properties:

1. `aria-label` or `aria-labelledby` : To provide alternative accessible labels for elements.
2. `aria-describedby` : To reference additional descriptions or instructions.
3. `aria-hidden="true"` : To hide content from screen readers when necessary (use with caution).
4. `aria-disabled="true"` : To indicate that an interactive element is disabled.
5. `aria-pressed`, `aria-checked`, and related states: For custom toggle buttons, checkboxes, and radio buttons.
6. `aria-expanded`, `aria-selected`, and related states: For custom accordions, tabs, and expandable content.
7. `aria-live` : To set the live region mode for dynamic content updates.
8. `aria-haspopup` : To indicate that an element triggers a popup or submenu.
9. `aria-describedby` : To associate an element with its descriptive content.
10. `aria-owns` : To establish a relationship between parent and child elements in custom widgets.



NVDA



VoiceOver

# 5. Keyboard

An amazing **video intro to ARIA:**

[What is ARIA even for](#) by Webbed Briefs



Other useful links:

[ARIA Authoring Practices Guide \(APG\)](#)

[Complete List of WAI ARIA Roles and Their Uses](#)



NVDA



VoiceOver

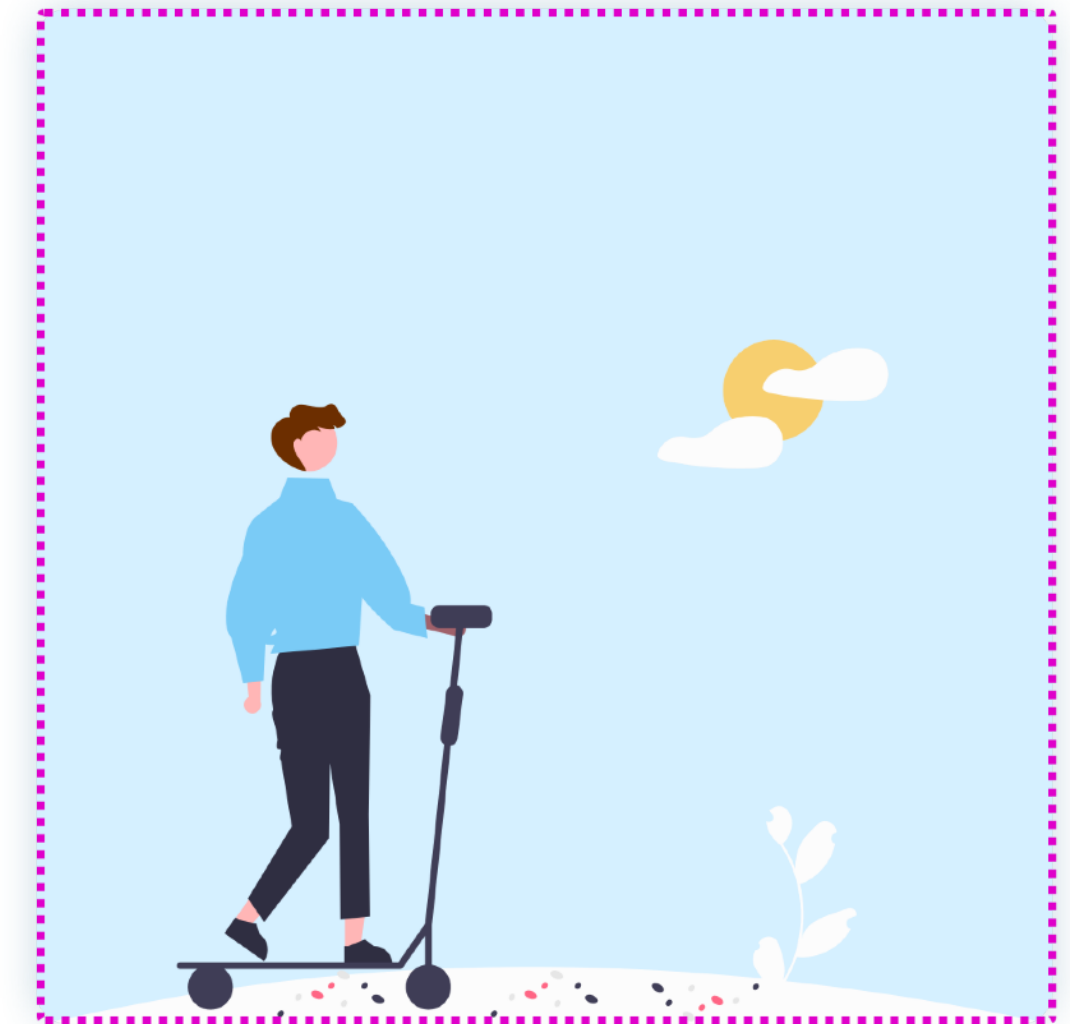
# 6. Add text to non-text things.

## Add alternative text **<alt>**

to pictures, maps, videos, and any other non-text elements.



**<img>**



**<img alt="Photo of a man on a hill standing on a scooter">**



# 6. Add text to non-text things.

## Add alternative text `<alt>`

to pictures, maps, videos, and any other non-text elements.

Don't overdo it though.



`<img alt="The photographic composition unveils the silhouette of a gentleman gracefully poised in lateral repose. An intrepid wayfarer, resolute in his stance, conjoins with his motorized conveyance atop an elevated crag, wherein he casts his gaze, suffused with the mellifluous tendrils of reverie, upon the ethereal ballet of mist and vaporous cumulus that pirouette above the chasm beneath. The chromatic palette adorning this tableau is imbued with an extraordinary translucence, where hues of cerulean, alabaster, and the gentle luminosity of a sunlit amber conspire to dominate the visual tapestry..">`



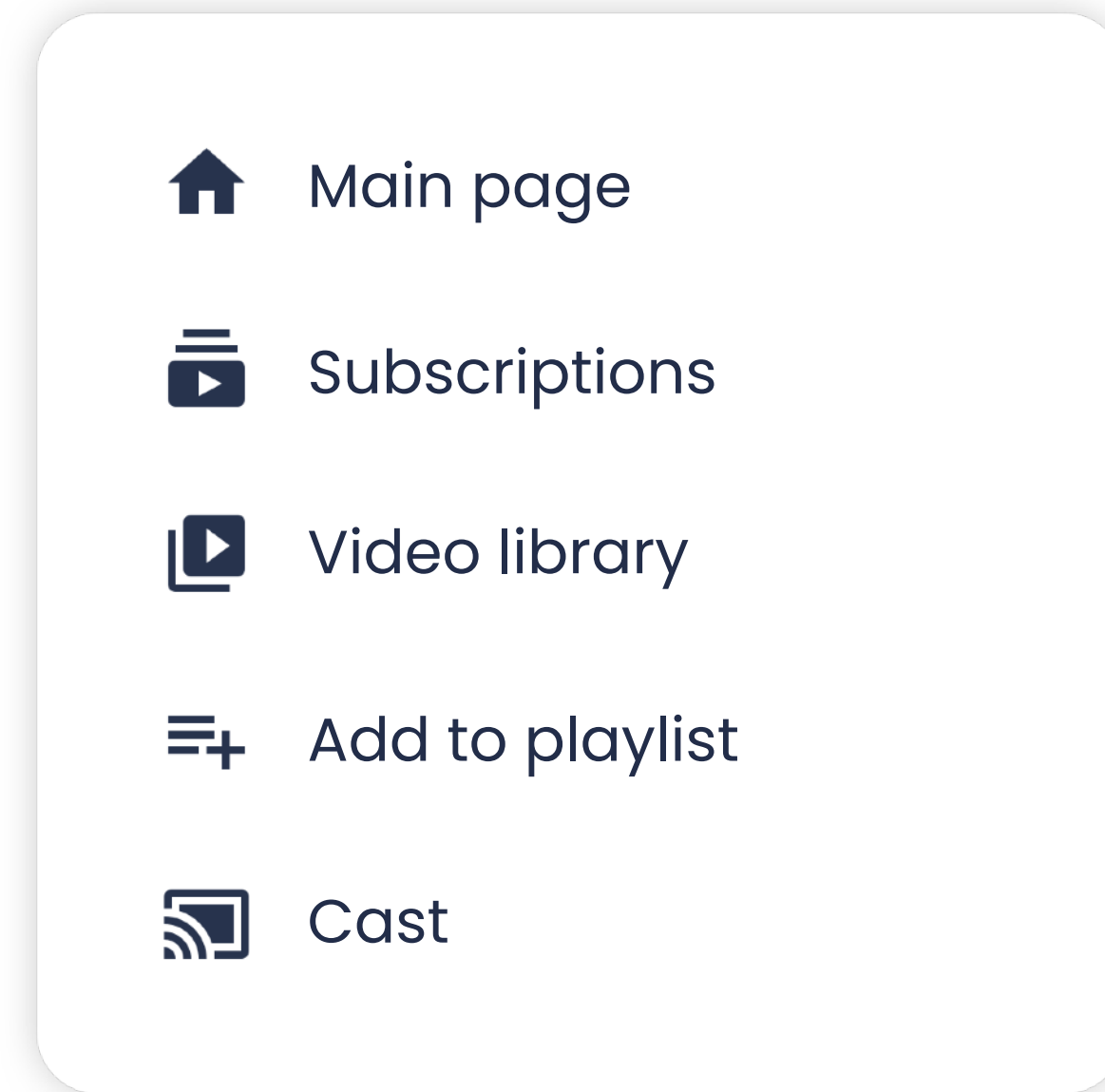
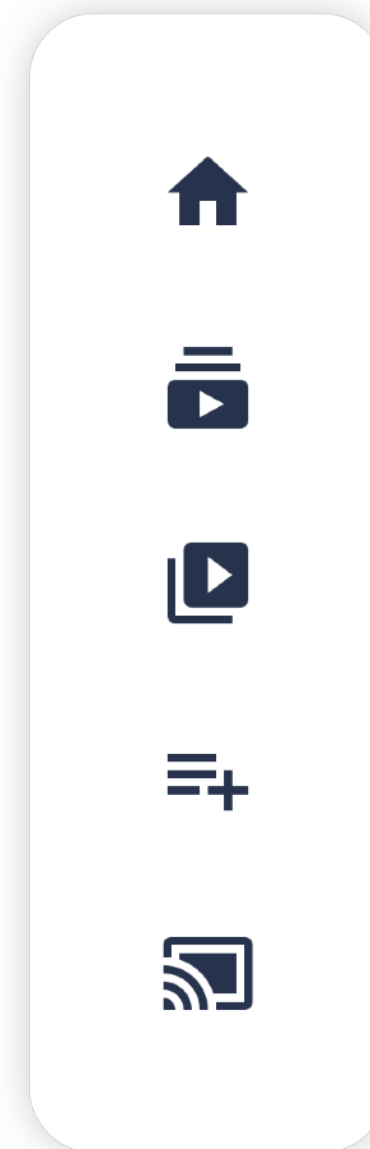
`<img alt="Photo of a man on a hill standing on a scooter">`



# 6. Add text to non-text things.

## Label your icons

Screen readers (and people) don't know icons.



# 7. Language

Convey information with **clear and simple language**.

*Henceforth, I am unable to can*



*I can't*





# 7. Language

Name your links appropriately.

Engaging in activities like walking, jogging, or cycling can improve cardiovascular health, boost mood, and reduce stress levels. However, there's so much more to discover about the positive effects of exercise. If you're interested in exploring the topic further, check out [this article](#) on the benefits of exercise to gain a deeper understanding of how staying active can enhance your overall well-being.



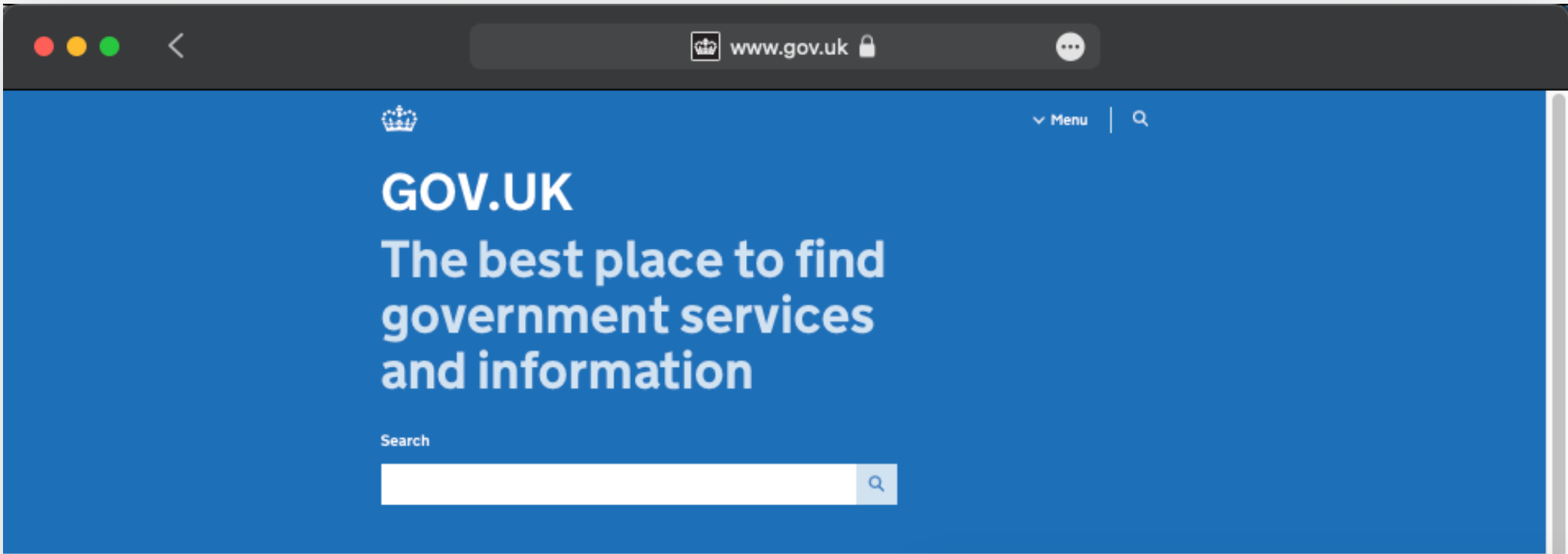
Engaging in activities like walking, jogging, or cycling can improve cardiovascular health, boost mood, and reduce stress levels. However, there's so much more to discover about the positive effects of exercise. If you're interested in exploring the topic further, check out this [article on the benefits of exercise](#) to gain a deeper understanding of how staying active can enhance your overall well-being.





# 7. Language

Name your links appropriately.



Łączna

Skip to main content

Go to the GOV.UK homepage

Get support with the cost of living

Find out about help you can get with your energy bi...

Find a job

Universal Credit account: sign in

Check your National Insurance record

Check MOT history of a vehicle

Benefits

Births, deaths, marriages and care

Business and self-employed

Childcare and parenting

Citizenship and living in the UK

Crime, justice and the law

Disabled people

Driving and transport

Education and learning

Employing people

Environment and countryside

Housing and local services

Money and tax

Passports, travel and living abroad

Visas and immigration

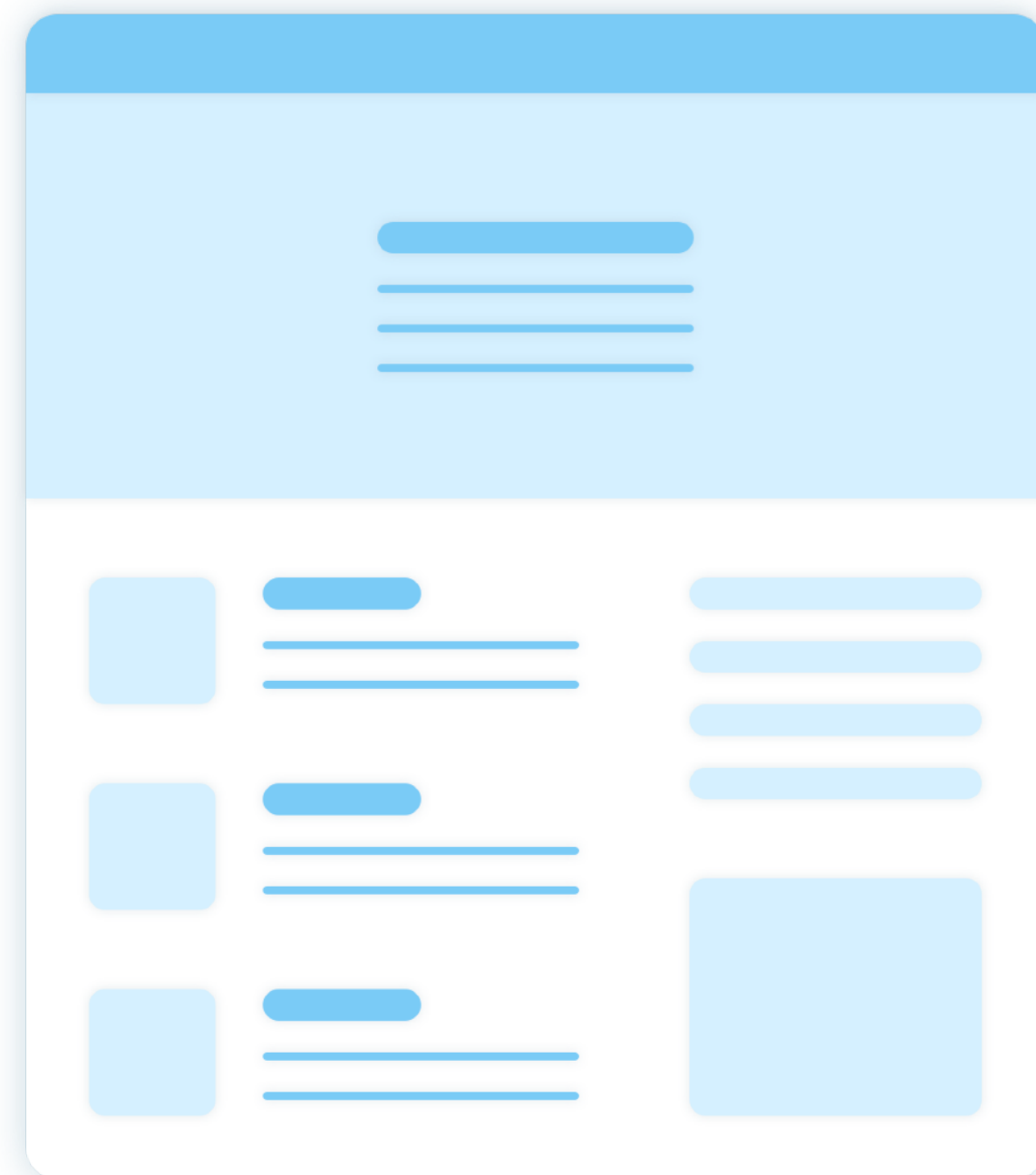
Working, jobs and pensions

Cost of Living Payment

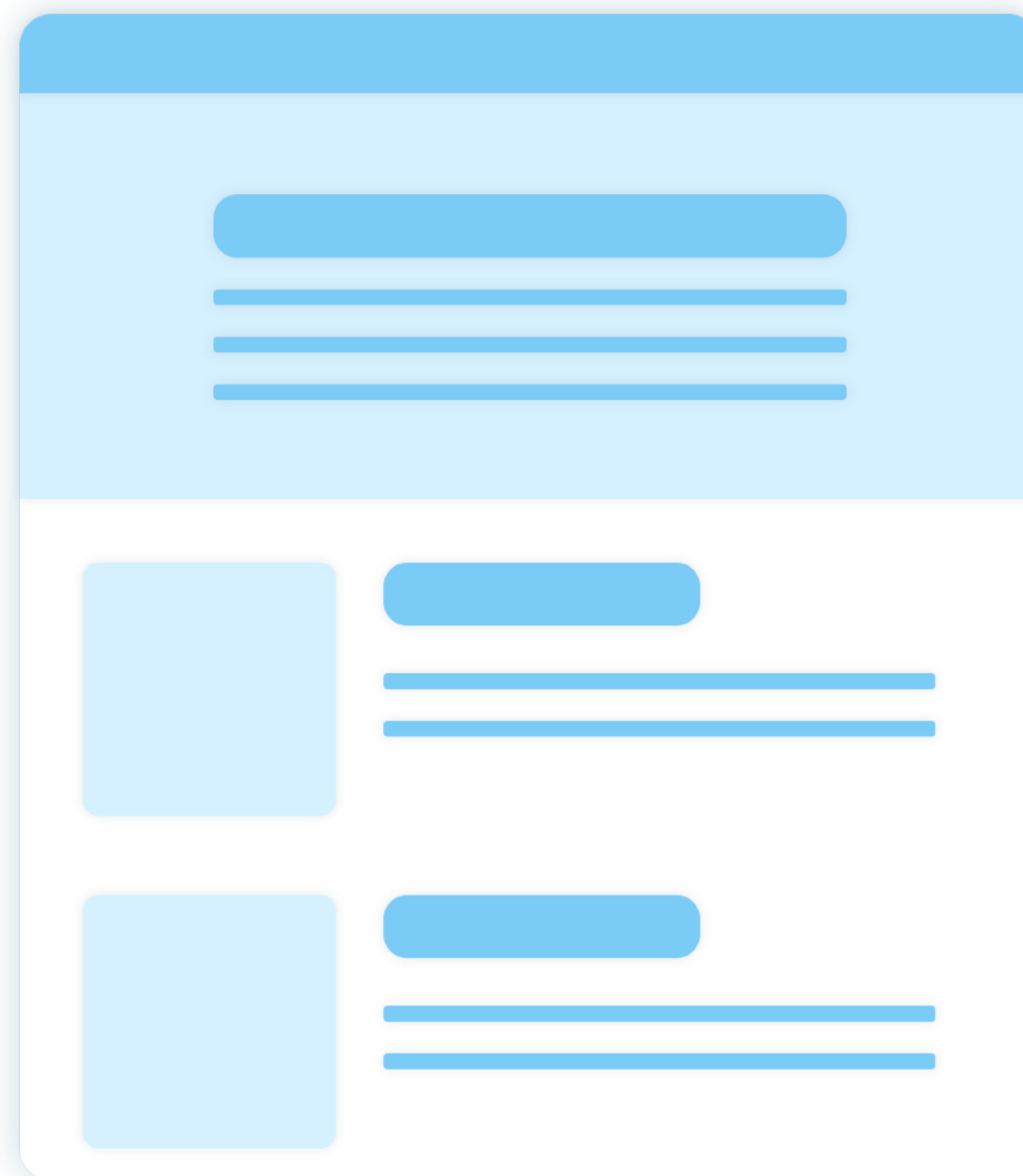
Self Assessment

# 8. Responsive web design (RWD)

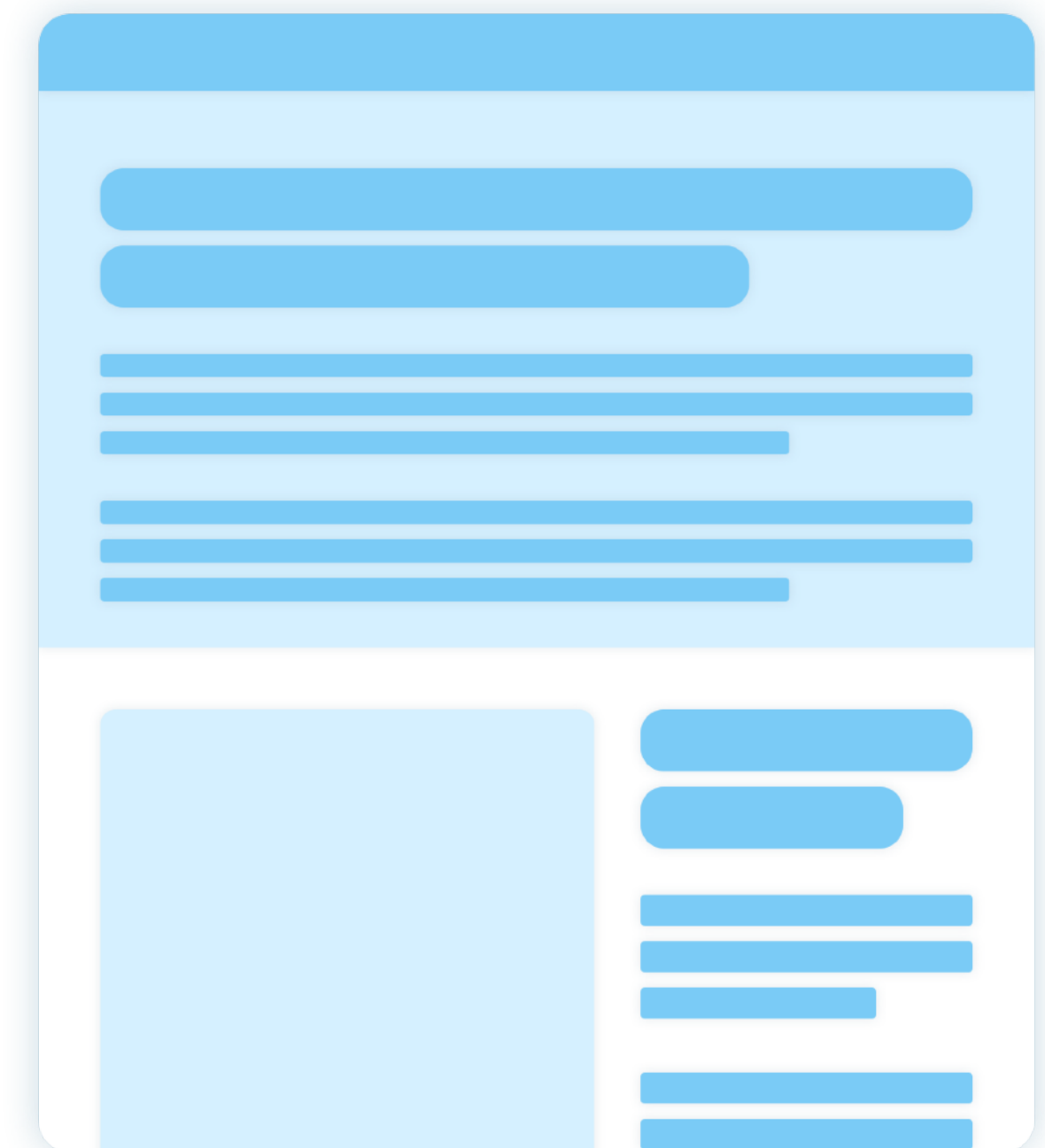
Make sure your app or website is usable when you **zoom in** 200%, 300% or even 400%.



100%



200%



400%



⌘ - ⌘ +

That's it!

# How to make products more accessible – summary

## 1. MINIMAL CONTRAST

4:51 for text 3:1 for other elements. Use your eyes too.

## 2. NOT JUST COLOR

Don't convey information only through colors. Not everyone can see colors.

## 3. GOOD FORMS

Labels instead of placeholders, visible textfield outlines, error validation, solution suggestions, no weird context changes.

## 4. VISUAL HIERARCHY

Add a page title, group page elements. Use headers.

## 5. KEYBOARD

All page elements, content and functions should be keyboard accessible. Write proper HTML.

## 6. NON-TEXT THINGS

Add alternative text <alt> to pictures and other non-text elements. Label your icons.

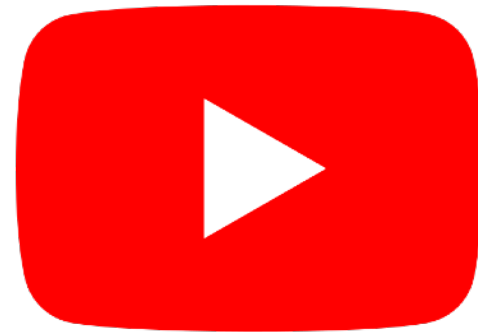
## 7. LANGUAGE

Convey information with clear and simple language. Name your links properly.

## 8. RESPONSIVE WEB DESIGN (RWD)

Make sure your app or website is usable when you zoom in 200%, 300% or even 400%.

# Learning more about a11y



Accessibility

***Any questions?***

# Thank you! 🙌

If you have any accessibility related needs or questions in the future, feel free to contact me here



[in/wiktor-poczatek](https://www.linkedin.com/in/wiktor-poczatek)