

# **Assistive Technology**

EXSM 3929: Module 3

# Learning Outcomes

What is the purpose of this module?

- List various popular **assistive technology** types
- Practice using a **screen reader** to **navigate** the web
- Consider the **usability** of **assistive technology**
- Evaluate and compare to two **screen readers**

# Assignment Prompt

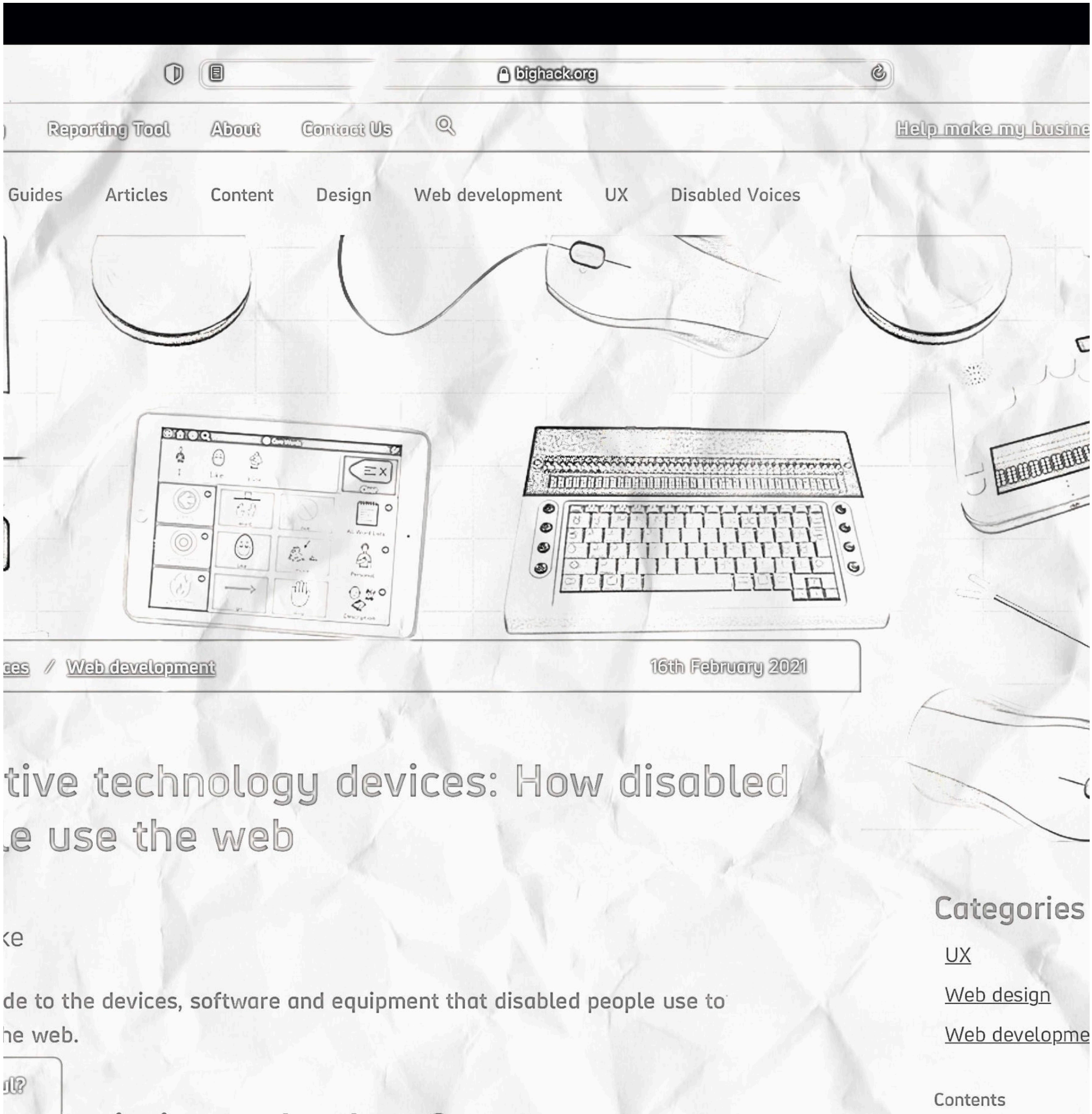
## Assignment 1: Screen Reader Assistive Technology Research

- Research screen readers
- How do you expect to use them?
- How would you choose a favourite screen reader?
- Assignment is available for download on eClass

# Module Resources

# Assistive technology devices: How disabled people use the web

Tuke, H. (2021). [bighack.org](https://bighack.org)



Screenshot of web resource in a black and white sketch style

**“Assistive technology (AT) describes the devices, equipment and software that help disabled people live more independently.”**

**- Tuke, H., (2021)**

# Summary

- Adaptive keyboards
- Alternative input devices
- Augmentative and Alternative Communication (AAC) tools
- Braille display
- Braille notetaker
- Dictation software
- Electronic magnifiers
- Optical Character Recognition software (OCR)
- Screen magnification software
- Screen reader software
- Text to Speech Software (TTS)

# Your Thoughts

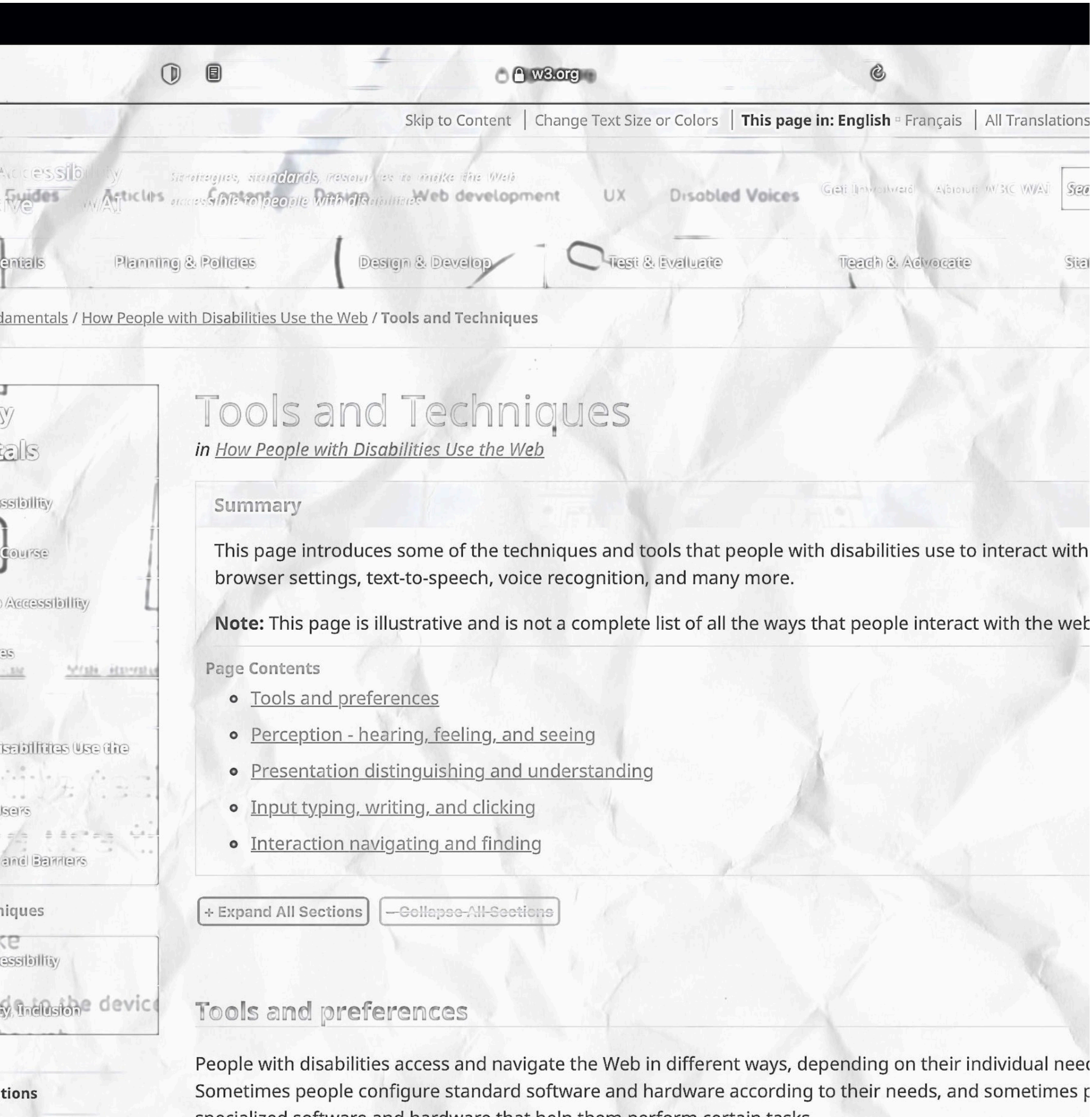
Consider the following questions for our group discussion

- Do you have any experience with assistive technologies?
- Were you surprised or intrigued by any assistive technology as described?
- Do you believe any assistive technologies may be adopted by able bodied individuals?



# Tools and Techniques

W3. (2017). w3.org



Screenshot of web resource in a black and white sketch style

**“Sometimes people configure standard software and hardware according to their needs, and sometimes people use specialized software and hardware that help them perform certain tasks.”**

**- W3, (2017)**

# Summary

- Perception (hearing, feeling, visual)
  - people use different senses
- Presentation (distinguishing and understanding) - people want adjust the content
- Input (typing, writing, clicking) - people use different approaches
- Interaction (navigating and finding)
  - people use different strategies

# Your Thoughts

Consider the following questions for our group discussion

- Do you have any adaptive strategies?
- Can you describe any favourite digital experiences?
- Can you describe any frustrating digital experiences?

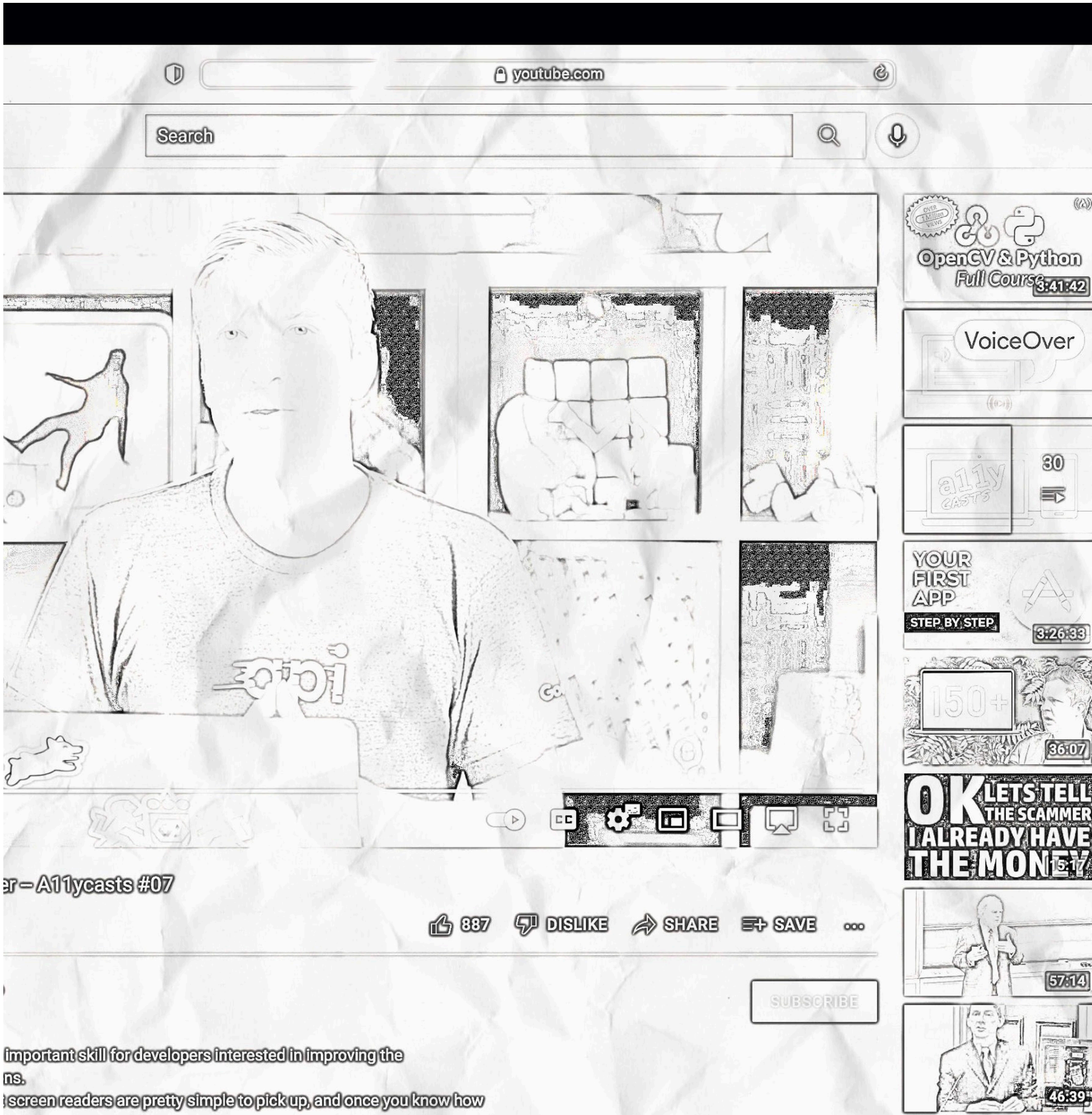


# Screen Reader Basics: VoiceOver - A11ycasts #07

Google Chrome Developers.  
(2016). youtube.com

important skill for developers interested in improving the  
ns.  
screen readers are pretty simple to pick up, and once you know how

Screenshot of web resource in a black and white sketch style



**“Learning a screen reader is an important skill for developers [and designers] interested in improving the accessibility of their applications.”**

**- Google Chrome Developers, (2016)**



# Summary

- On / off → command + F5
- Stop talking → control
- Modifier key → control + option
- Navigate page → control + option + arrow
- Navigate by heading → control + option + command + h
- Click → control + option + space
- ...see documentation for more

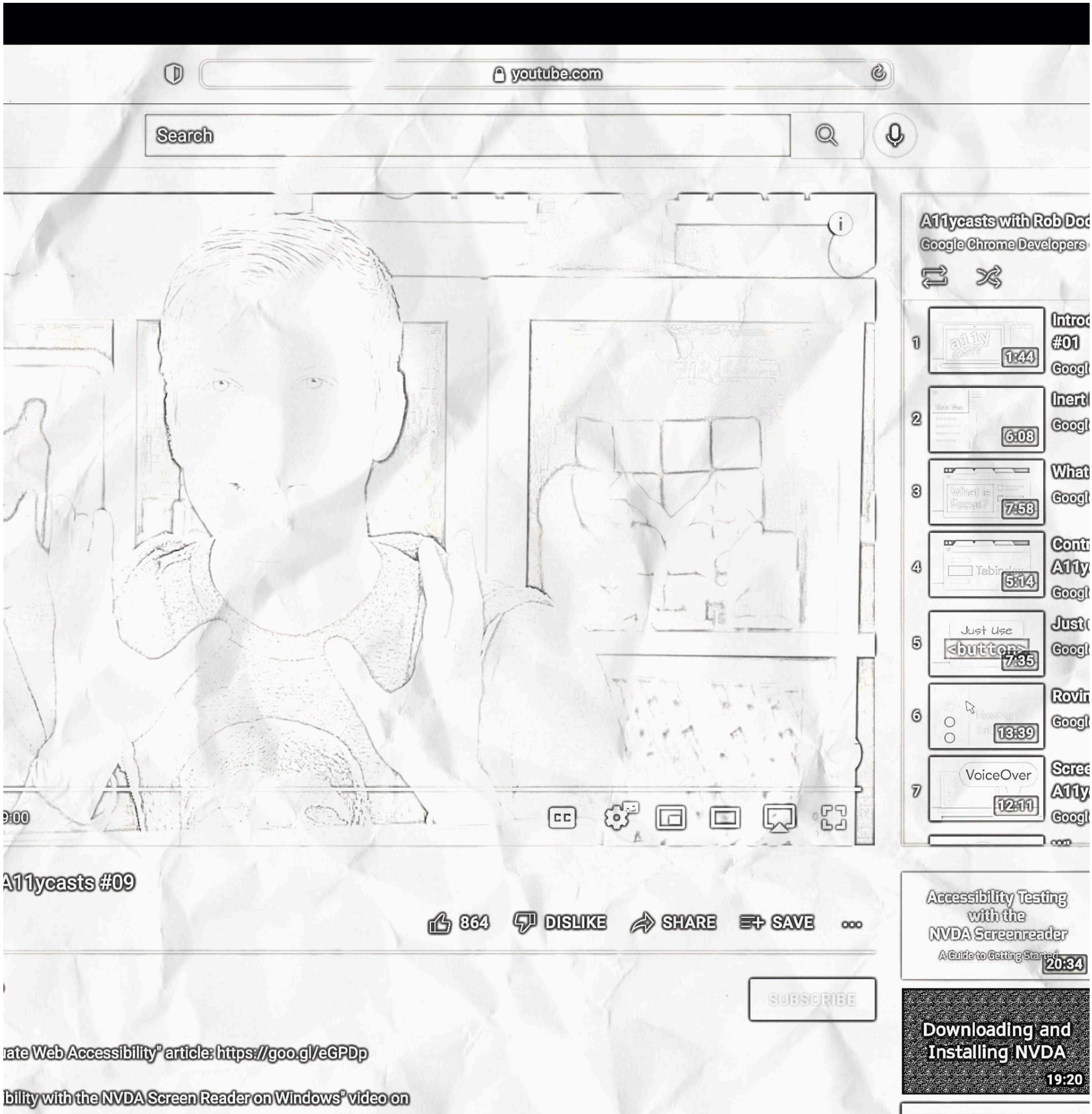
# Your Thoughts

Consider the following questions for our group discussion

- Do you have any prior experience with screen readers?
- Did you try a screen reader after watching this video?
- How important is it for designers to consider voice?



**Screen Reader Basics:  
NVDA - A11ycasts #09**  
Google Chrome Developers.  
(2016). youtube.com



Screenshot of web resource in a black and white sketch style

**“If you're on a Windows machine and would like to get started with screen readers, NVDA is a great [free] option.”**

**- Google Chrome Developers, (2016)**

# Summary

- Launch → control + alt + N
- Stop talking → caps lock
- Navigate by heading → H
- Navigate by heading (backwards) → shift + H
- Move by line → (up or down) arrow
- ...see documentation for more

# Your Thoughts

Consider the following questions for our group discussion

- Do you have any prior experience with screen readers?
- Did you try a screen reader after watching this video?
- How important is it for designers to consider voice?

