

Accessibility testing and my journey to it

RUSH STREET
I N T E R A C T I V E

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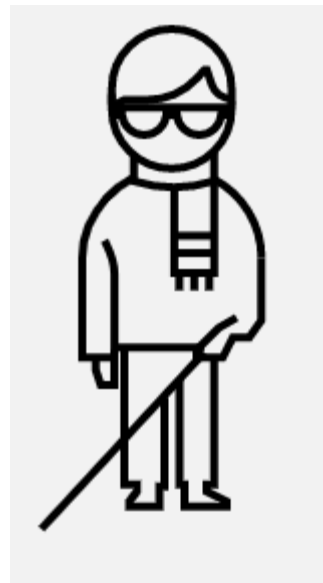
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What is accessibility testing?

Accessibility Testing is defined as a type of Software **Testing** performed to ensure that the application being tested is **usable by people with disabilities like hearing, color blindness, old age** and other disadvantaged groups. It is a subset of Usability **Testing**.

- <https://www.guru99.com/accessibility-testing.html>

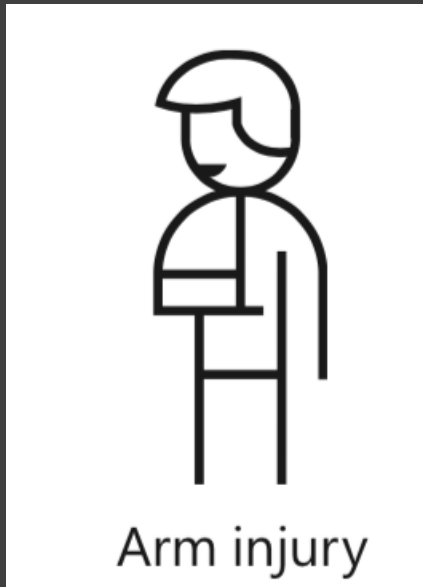


One arm



An example of a persona spectrum from Microsoft Design's Inclusive Design toolkit.

How about these cases?



- “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.” – World Health Organization

An example of a persona spectrum from Microsoft Design’s Inclusive Design toolkit.

Accessibility testing, in the context of software, is a process to evaluate usability of software by people who are facing some type of restriction. These restrictions can either be permanent, like a disability, temporary like a broken finger, or situational, like using said software while holding a child.

WCAG

The Web Content Accessibility Guidelines are part of a series of web accessibility guidelines published by the Web Accessibility Initiative of the World Wide Web Consortium, the main international standards organization for the Internet.

Context

- To analyze our product in context of WCAG 2.1
- 5 working days.
- A to AA (or above)

Research

Oracle(s)

Accessibility needs

Testing methodology

Nearly **100** oracles
Over **20** programs and apps
6 different kinds of accessibility needs
Endless amount of combinations to use
our portal

How do I
cover it all?

Oracles:

Perceivable

Operable

Understandable

Robust

User lifecycle

Most popular
programs

Oracles

Perceivable

Information and user interface components must be presentable to users in ways they can perceive. This means that users must be able to perceive the information being presented (it can't be invisible to all of their senses)

Oracles

Operable

User interface components and navigation must be operable. This means that users must be able to operate the interface (the interface cannot require interaction that a user cannot perform)

Oracles

Understandable

Information and the operation of user interface must be understandable. This means that users must be able to understand the information as well as the operation of the user interface (the content or operation cannot be beyond their understanding).

Oracles

Robust

Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies. This means that users must be able to access the content as technologies advance (as technologies and user agents evolve, the content should remain accessible).

Testing

User lifecycle

- Register
- Login
- Deposit
- Withdraw
- Usage
- Promotions

Testing

What did I test with

- 3 Most popular screen readers
- Keyboard only
- High contrast
- Large text

Bug reporting

Principle 1– Perceivable

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

	<u>Guidelines</u>	Level	Notes
1.1	Text Alternatives Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.		
1.1.1	Non-text Content All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below: Controls, Input: If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Guideline 4.1 for additional requirements for controls and content that accepts user input.) Test: If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content. CAPTCHA: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities. Decoration, Formatting, Invisible: If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.	A	1) Bug A 2) Bug B 3) Bug C
1.2	Time-based Media		

Bug
advocacy

IT'S THE RIGHT THING TO
DO!

This already is or will be made mandatory

It is profitable

Bug
advocacy

IT'S THE RIGHT THING TO
DO!

Bug advocacy

Laws are catching up

In 2017, plaintiffs filed at least 814 federal lawsuits about allegedly inaccessible websites, including a number of putative class actions.

Supreme Court allows blind people to sue retailers if their websites are not accessible
October 7, 2019

Bug advocacy

It is also profitable.

Annual Earnings: In 2016, the median annual earnings of working-age people with disabilities working full-time/full-year in the US was \$40,300 vs the U.S Bureau of the Census has the **annual median personal income** at \$31,099 in 2016.
Employment rate only differs around 5%

In 2016 in the U.S., in the age group of 21-64, 10.9% of people were reported to be affected by some kind of disability.

Reputational benefits to your company

Work will
never end

1. Automated testing
2. Guidelines for developers
3. Regression testing
4. Inform inform inform

Examples of guidelines

- 1) Always add an element describing the feature you are adding.
- 2) Check if your added element is usable by keyboard only.
- 3) Add new elements into a logical path compared to other software elements.
- 4) Texts and images need to be readable with contrast ratio 3:1

Future

FOUR - We care deeply about the quality culture of our team, and we coach, lead and nurture the team towards a more mature quality culture.

FIVE - We believe that the customer is the only one capable to judge and evaluate the quality of our product.

SIX - We use data extensively to deeply understand customer usage and then close the gaps between product hypotheses and business impact.

Useful URLs

Web accessibility in mind

<https://webaim.org/>

Microsoft inclusive design:

<https://www.microsoft.com/design/inclusive/>

WCAG 2.1:

<https://www.w3.org/TR/WCAG21/>

Me:

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<https://www.linkedin.com/in/martin-tiitmaa-4279a635/>

Questions

In a fair society, all individuals would have equal opportunity to participate in, or benefit from, the use of computer resources regardless of race, sex, religion, age, disability, national origin or other such similar factors.

-Code of Ethics
Association of Software Testers
<https://www.associationforsoftwaretesting.org/code-of-ethics/>