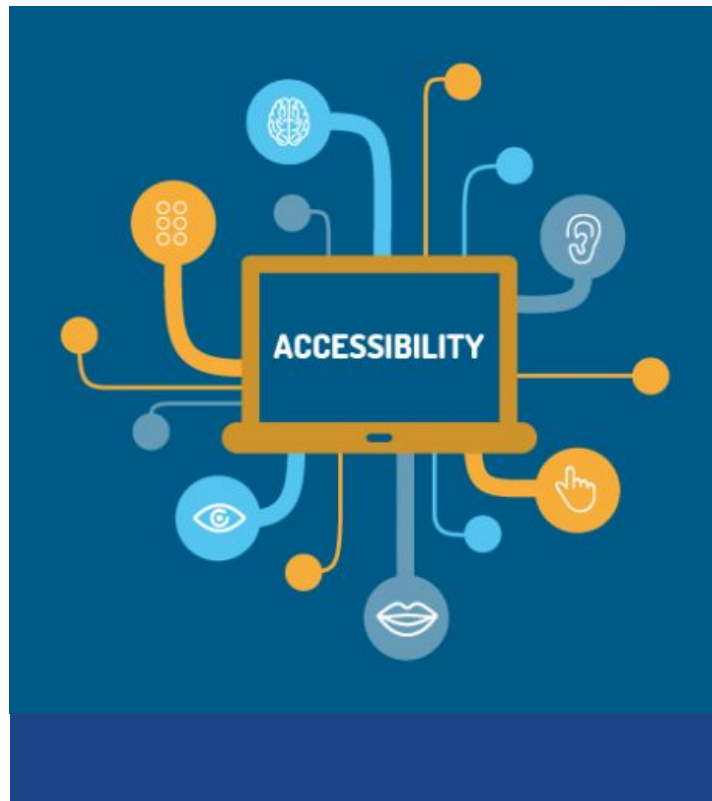# WCAG

Sachin Ghegade

WCAG

- Web Accessibility

- Principals

- Success Criteria

- Do's and Don'ts

- Tools

WCAG

Web Content Accessibility Guidelines

Published by the **W**eb **A**ccessibility **I**nitiative **(WAI)**

part of **W**orld **W**ide **W**eb **C**onsortium **(W3C)**,
An international organization for the Internet.

WCAG is the best and the easiest way
of making website usable.

What is Web Accessibility?

Web Accessibility is…

Website, Applications and technologies should be designed and developed in such a way that everyone can access - Navigate, Understand, Interact and Contribute with media… specifically user with disabilities, different location, and technology.

Accessible design improves overall user experience, satisfaction and it can enhance your brand with extending your market reach.

When disabilities are considered indirectly people without disabilities are also get covered. They are:

People using small screens such as Mobile, smart watches.

People with changing abilities due to ageing. Older People.

People with temporary disabilities such as broken arm, lost glasses.

People with situational limitations such as bright light, in the environment they cannot properly listen the audio.

People using slow or limited network. Ruler Area + developing Countries.

Principals

Basic Accessible Design Principles

- Provide appropriate alternative text

- Caption video, provide transcripts for audio

- Make file downloads (e.g., PDFs) accessible

- Do not rely on color alone to convey meaning

- Make sure content is structured, clearly written and easy to read

Equitable Use

- Useful and marketable to people of all abilities.

- **Example: Automatic doors**

Flexibility in Use

- Accommodates a wide range of preferences & abilities.

- **Example: Adjustable chair**

Simple and Intuitive Use

- Easy to understand, regardless of language knowledge, experience, or concentration level.

- **Example: Universal Symbols**

NO ✗

YES ✓

No mask, no entry.

Perceptible Information

- Clearly communicates regardless of sensory abilities or ambient conditions.

- **Example: Train Station Platform**

Tolerance for Error

- Minimizes hazards & consequences from accident or misuse.

- **Example: Car auto unlocks when driver exits but the key remains inside**

Low Physical Effort

- Effectively & easily used with minimum effort.

- **Example: Ramp to building**

Size & Space for Approach and Use

- Appropriate size & space is provided for approach, reach, manipulate, and use for all body sizes, postures, or mobility.
- **Example: Multi-level service desk, or automatic sinks**

There are four main guiding principles of accessibility, known by the acronym POUR.

Perceivable, **Operable**, **Understandable** and **Robust**.

Way of approaching functional accessibility.

Perceivable

The content must be available to users via sight, hearing, and/or touch.

- Provide **text alternatives** for non-text content
- Provide **captions and other alternatives** for multimedia
- Create content that can be **presented in different ways**, including by assistive technologies, without losing meaning
- Make it easier for users to **see and hear content**

Operable

A Product must be keyboard-accessible, navigable, and compatible with different input methods.

- User interface components and navigation must be operable.
- Make all functionality available from a **keyboard**
- Give users **enough time** to read and use content
- Do not use content that causes **seizures**
- Help users **navigate and find content**
- **Make it easier to use inputs other than keyboard**

Understandable

The content must be readable and predictable, with clear labels and instructions.

- Information and the operation of user interface must be understandable.
- Make text **readable and understandable**
- Make content appear and operate in **predictable** ways
- Help users **avoid and correct mistakes**

Robust

The product must work with a variety of technologies, browsers and devices.

Water
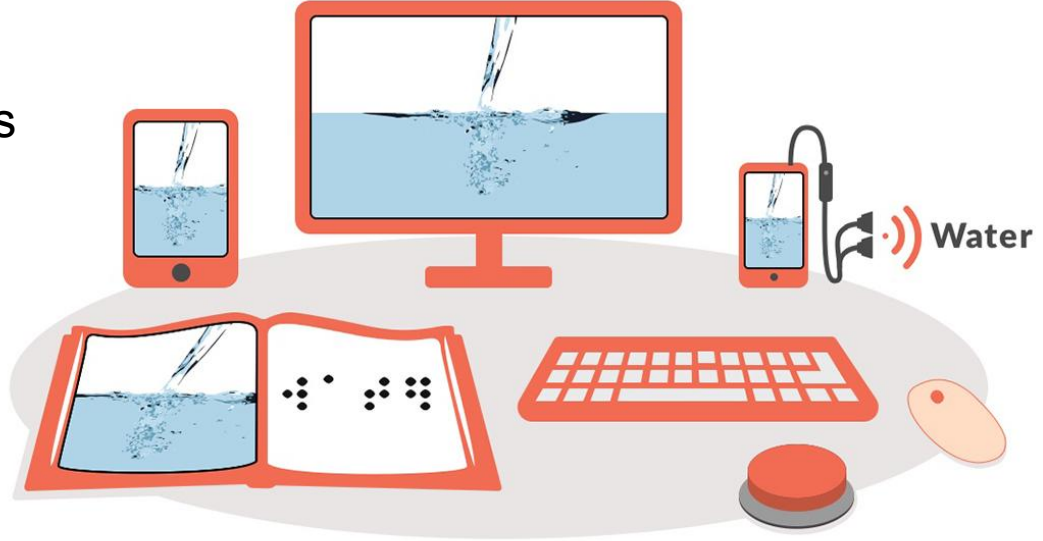
- Content must be robust enough that it can be interpreted reliable by a wide variety or users, including assistive technologies.
- Maximize **compatibility** with browsers and user tools.

WCAG Checklist

https://theappbusiness.github.io/accessibility-guidelines/index.html

Credit: Github

https://www.wuhcag.com/wcag-checklist/

Credit: Wuhcag

Success Criteria

- **Sufficient techniques**
- **Advisory techniques**
- **Failures**

The **sufficient criteria** are things that will reliably help make a website more accessible. These include screen reader compatibility, allowing users to enlarge font sizes, and using clear colors and contrasts when designing pages.

The **advisories**, as the name suggests, are more like recommendations. These are suggested ways that you could improve your website but they might not be deemed as sufficient for a variety of reasons. This includes lack of testability or being based on technology that isn't yet stable enough – for example, VR or Virtual Reality, as of writing.

Failures are barriers that come between a disadvantaged user and your website. As such, they stop you from becoming WCAG compliant unless an alternative is provided. Along with the successes, these are documented to give evaluators examples of what not to do.

It's recommended that you aim to be at AA conformance level. Although AAA is the highest rating you can get, it's tricky to make an entire website that conforms to that level throughout. The level of WCAG compliance you should aim for also depends on your audience.

Principles	Guidelines	Level A	Level AA	Level AAA
Perceivable	Text Alternatives	✓		
	Time-based Media	✓	✓	✓
	Adaptable	✓		
	Distinguishable	✓	✓	✓
Operable	Keyboard Accessible	✓		✓
	Enough Time	✓		✓
	Seizures	✓		✓
	Navigable	✓	✓	✓
Understandable	Readable	✓	✓	✓
	Predictable	✓	✓	✓
	Input	✓	✓	✓
Robust	Compatible	✓		

Do's and Don'ts

Design for Everyone

Design for the diverse set of users who will interact with your products.

Use Colors Precisely

How many Fields are in error state?

**Turning on Color reveals
a different story altogether.**

Balance between the text and background

According to the WCAG, the contrast ratio between text and a text's background should be at least 4.5 to 1. If your font is 24 px or 19 px bold, the minimum drops to 3 to 1.
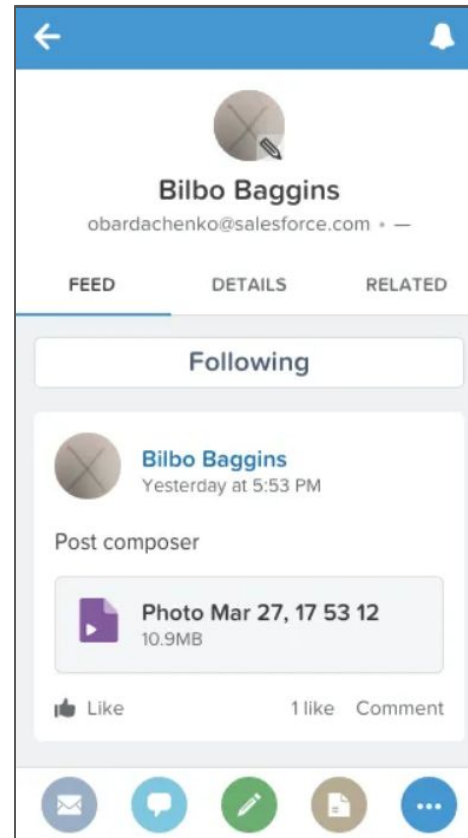
Only the letter M meets minimum contrast standards.

Passing Colors

http://colorsafe.co/

https://webaim.org/resources/contrastchecker/

Provide visual focus indication for keyboard focus.

Visual focus states in browser

Be careful with Forms

Label [   ]

A modest text input field

Title
(+) [Tell your story...]

If you click outside of the blue box,
nothing will happen.

search notes

searching in your notebooks

Where would I click
if I want to enter in a search term?

Left form (ungrouped):

First Name:
Last Name:
Email:
(Your email address will be your username)
Re-type Email:
Password:
(Min. 8 characters, 1 number, case-sensitive)
Re-type Password:
Address:
City:
State: Choose a state
Zip Code: Optional
Phone: Mobile
No spaces or dashes
Date of Birth: Month Day Year
Gender: Choose a gender
Security Question: Choose a security question
Security Answer:
(Not case-sensitive)

Right form (grouped):

Personal Information

First Name:
Last Name:
Date of Birth: Month Day Year
Gender: Choose a gender

Account Information

Email:
(Your email address will be your username)
Re-type Email:
Password:
(Min. 8 characters, 1 number, case-sensitive)
Re-type Password:
Security Question: Choose a security question
Security Answer:
(Not case-sensitive)

Contact Information

Address:
City:
State: Choose a state
Zip Code: Optional
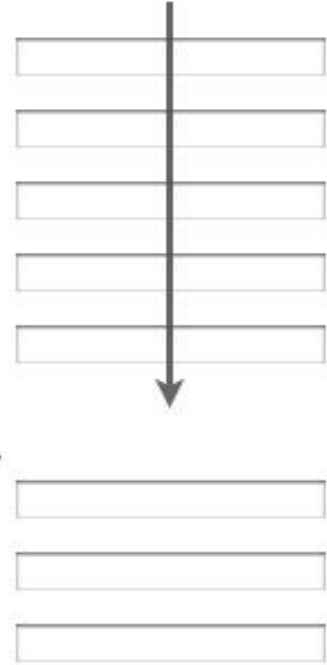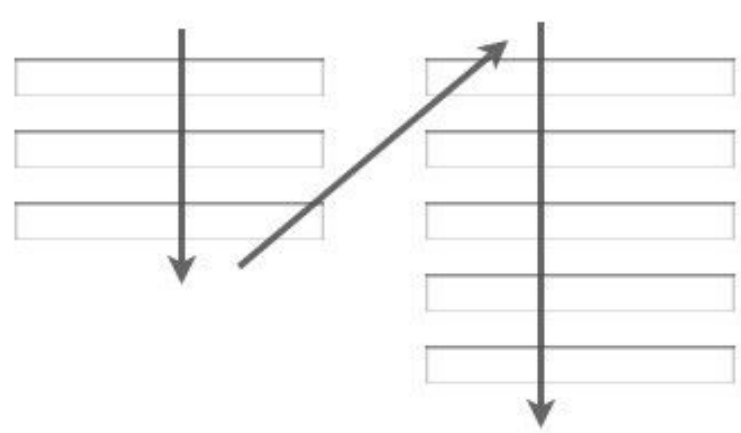Phone: Mobile
No spaces or dashes

Group together related fields
(Image: Nielsen Norman Group)

Right Order

Right Order

Label

Label

Label

Label

Label

Create   ~~Reset~~

Label

Label

Label

Label

Label

Create

United States

Payment Info →

Garlic.js ×

garlicjs.org
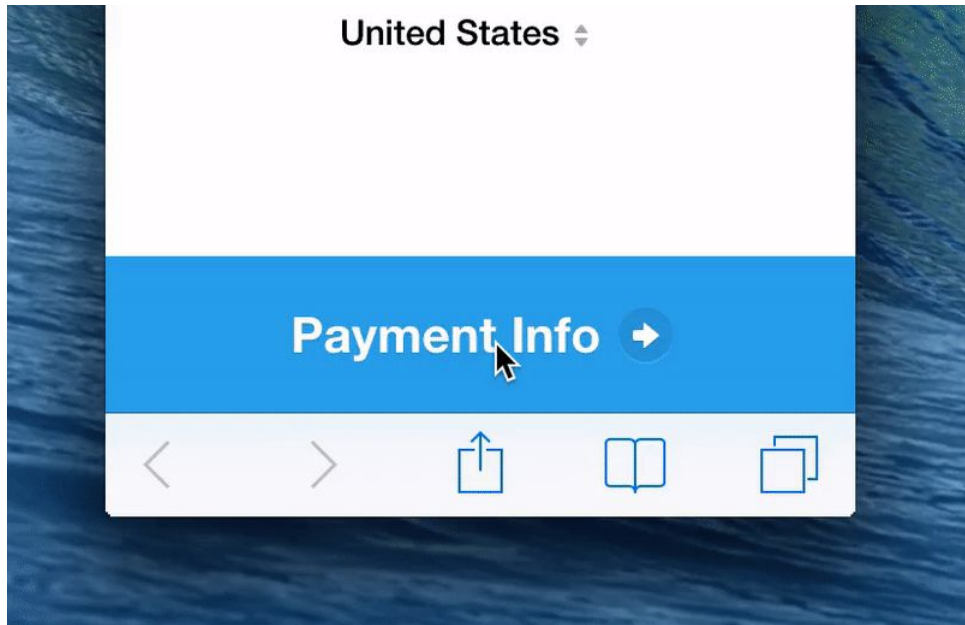
1 - Simple form

Forms are independent. All text data is locally persisted thanks to localStorage if browser supports it. If you reload this page, quit and go back here, your data will still be there. On simple validation, if you press the submit button the persisted data will be destroyed, considering it has properly been submitted

Thi

Hello

○ yes
○ no
○ maybe

☐ I
☐ will
☐ be
☐ persisted

Demonstration ›

Requirements / Compatibility ›

Download ›

Usage ›

Documentation ›

They use Garlic.js ! ›

Other stuff ›

Version / Licence ›

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Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	**18**	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12

Keyboard navigation on days that are not included the currently displayed month should move to the month automatically and lead to the day in the next or previous month.

- Tab - Like other widgets, the date picker widget receives focus by tabbing into it. Once focus is received, focus is repositioned on today's date in a grid of days and weeks. A second tab will take the user out of the date picker widget. Focus initially is placed on today's date.
- Shift+Tab - reverses the direction of the tab order. Once in the widget, a Shift+Tab will take the user to the previous focusable element in the tab order.
- Up Arrow and Down Arrow - goes to the same day of the week in the previous or next week respectively. If the user advances past the end of the month they continue into the next or previous month as appropriate.
- Left Arrow and Right Arrow - advances one day to the next, also in a continuum. Visually focus is moved from day to day and wraps from row to row in a grid of days and weeks.
- Control+Page Up - Moves to the same date in the previous year.
- Control+Page Down - Moves to the same date in the next year.
- Space -
  - Singleton Mode: acts as a toggle either selecting or deselecting the date.
  - Contiguous Mode: Similar to selecting a range of text. Space selects the first date. Shift+Arrows add to the selection. Pressing Space again deselects the

amazon

Sign In

What is your e-mail address?

My e-mail address is: [_____]

Do you have an Amazon.com password?

○ No, I am a new customer.

● Yes, I have a password: [_____]

Forgot your password?

[Sign in using our secure server ▶]

Sign In Help

Forgot your password? Get password help.

Has your e-mail address changed? Update it here.

---

amazon

Sign in

Email

[_____]

Password   Forgot Password

[_____]

[Sign in]

By signing in you are agreeing to our Conditions of Use and Sale and our Privacy Notice

[I am a new customer]

Has your email address changed? Update it here

Tools

http://colorsafe.co/

https://webaim.org/resources/contrastchecker/

https://www.accessibilitychecker.org/

https://wave.webaim.org/

https://usabilitygeek.com/10-free-web-based-web-site-accessibility-evaluation-tools/

Simple Things Writers can do to Improve Web Accessibility

- **Give your content a unique title**
  Using a strong, unique and meaningful title that will clearly describe the purpose your content. This will not only assist screen readers, but also search engines.

- **Use headings to organise content**
  Make use of the heading structures in your content management system using the correct heading level and structure your content using meaningful headings.

- **Use plain English**
  Keep your language simple, at a high school reading level. If acronyms, jargon or technical language is required, provide plain English alternatives or a glossary.

- **Make your text easy to read**
  Choose left aligned text, rather than justified to improve readability and use the ordered lists provided in your content management system to present appropriate content.

- **Make links descriptive**
  Avoid using catchalls like 'Click here', 'More info' and 'here'. Give your link a meaningful description to assist scan reading and screen readers.

Simple Things Writers can do to Improve Web Accessibility

- **Use meaningful alt-text on images**
  If an image is purely decorative set alt text to null (i.e. alt="") otherwise use a description that would help a visually impaired person understand what is being represented.

- **Provide text alternatives for audio/video**
  Add synchronised captions to your video and provide a full transcript for both audio and video.

- **Use tables appropriately**
  When presenting tabular information, use an actual table, not an image and ensure headings are used.

- **Pay attention to colour contrast**
  Before overriding the default colours of your content management system, consider the colour contrast. If in doubt use a colour contrast analyser to check.

- **Images of text are bad**
  Avoid using images of text except for purely decorative purposes. Instead, use real text or ensure there is a text alternative (like an alt tag) available.

Thank you