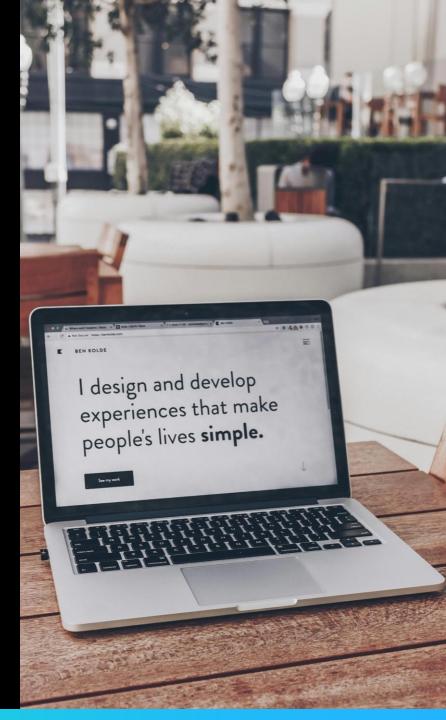
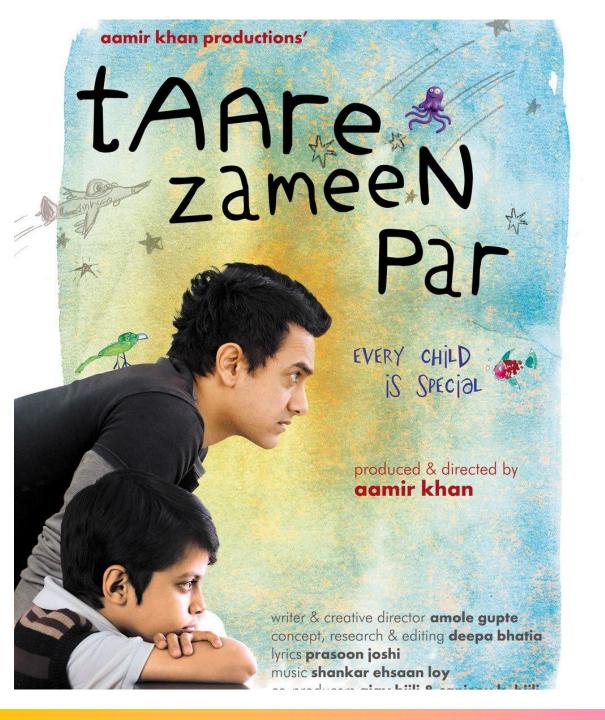


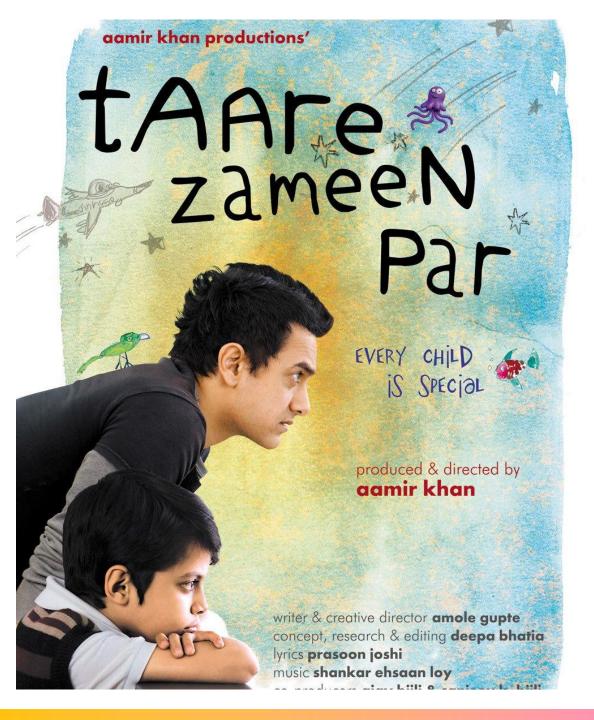
Building Accessible Products in Modern UI Development

How Scrum Teams Can Add Accessibility to their Definition of Done



Let's Test Our Awareness!





What challenge does the character face?

Dyslexia

A boy struggles with reading and writing.

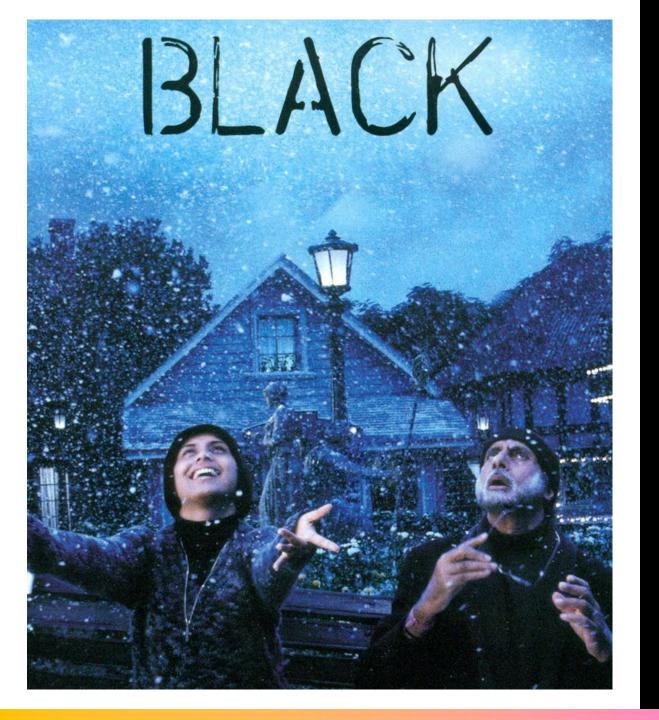
How can we make our product more inclusive?

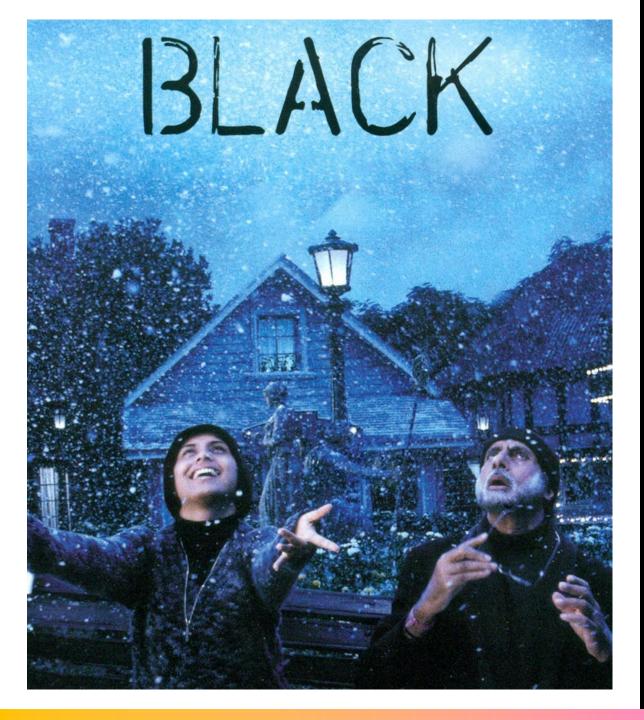
Use readable fonts like OpenDyslexic or avoid overly decorative fonts.

Keep layout clean, with proper spacing and high contrast.

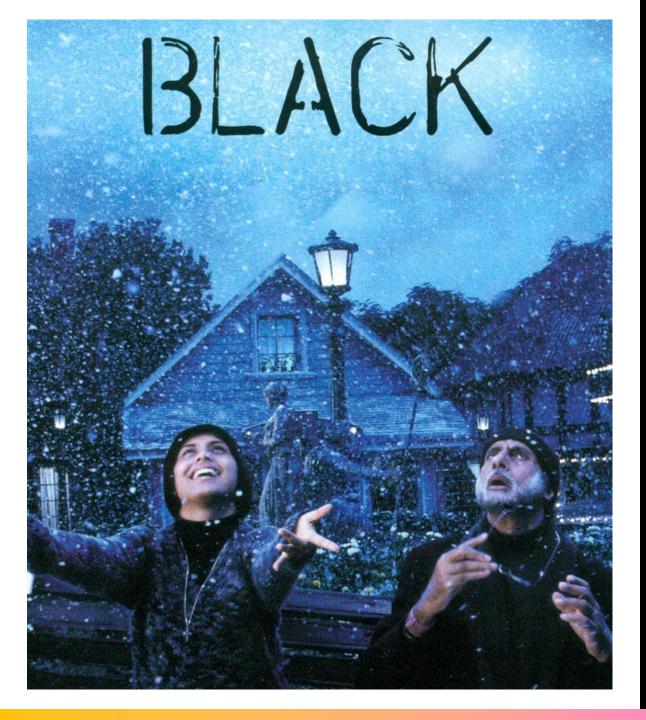
Use simple language and short paragraphs.

Avoid flashing animations or confusing navigation.





Deaf and Blind A girl who cannot see or hear. What challenge does the character face? Story of how support and empathy can transform a life. Provide multi-sensory feedback (haptic/tactile cues) Ensure keyboard navigation and consistent layout for assistive How can we make our devices product more inclusive? Add transcripts or captions for all media. Use ALT text for all images. Ensure buttons, links, and headings are clearly defined.

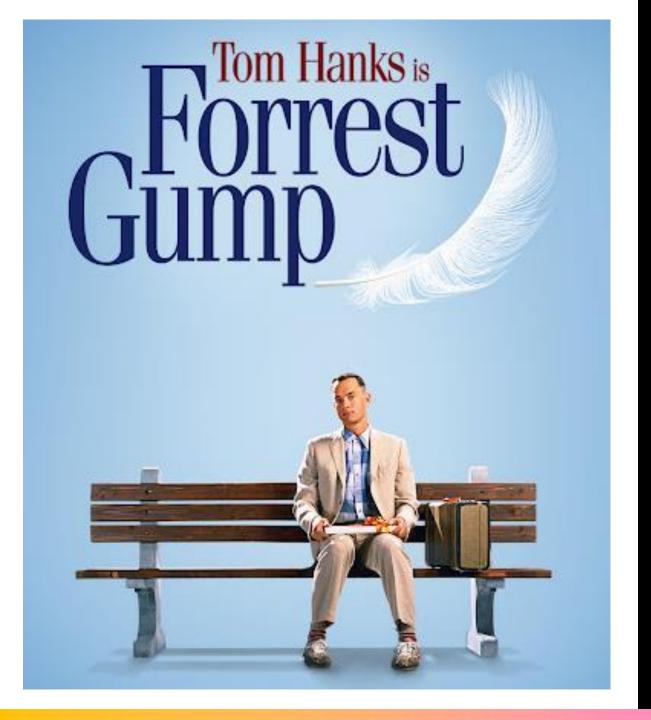




Braille

For Hanks is FORTEST GUND





What challenge does the character face?

Mild intellectual disability (low IQ).

Story about a simple man with big life experiences.

How can we make our product more inclusive?

Use simple, plain language for content.

Provide audio or visual guidance instead of text-heavy instructions.

Design with clear navigation and large, easy-to-click elements.

Support text-to-speech features.

Avoid time-based actions or complex user flows.

What We'll Cover

We'll explore what accessibility really means, why it matters, and how Scrum teams can use simple practice (and a little Al help) to make their products usable by everyone.

- **01.** What is Accessibility?
- 02. Why it Matters
- **03.** Common Delivery Pitfalls
- 04. Tools & Al Helpers
- **05.** Practical Examples & Quick Demo
- 06. Tips & Resources
- 07. Thank You!

About Me...



Himanshu Goel

Architect @ SBS, Noida









Experience

- 13+ years in web development, BFSI & enterprise apps (Wells Fargo Bank, Deutsche Bank, Citibank)
- Angular Expert Certified, 10+ years with Angular
- Currently building low-code/no-code UI frameworks at SBS
- Focused on modern UI, accessibility, and product quality



Community & Interests

- Attending tech meetups and conferences
- Blogger & open-source contributor
- Love to build side projects, travel, and explore new food.

Before We Start...

Everything I'm sharing today reflects **my own experience and learnings** — **not** the official view of **my employer** or **Scrum Day India**.

This session is purely for learning and knowledge-sharing.

Some tools or frameworks mentioned may have alternatives — feel free to explore what works best for you!

Also, any **logos** or **screenshots** are used for illustration only and belong to their respective owners.

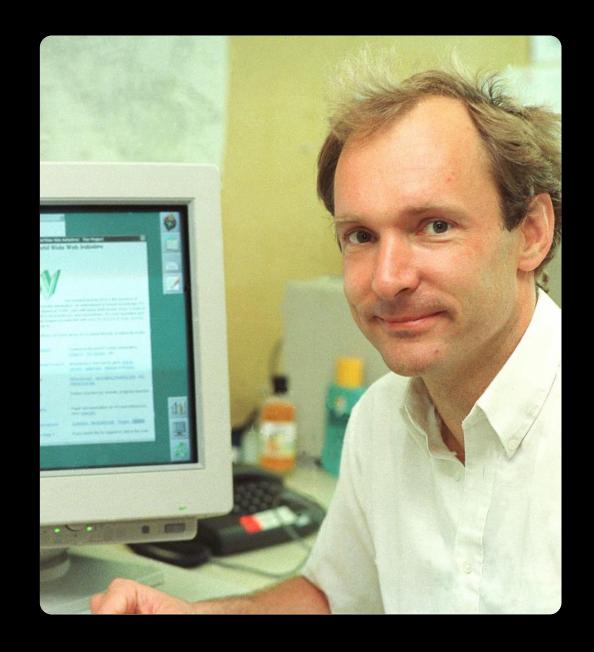
What is Accessibility?

(abbreviated as a11y)



The power of the Web is in its universality. Accessibility for everyone, regardless of disability, is an essential aspect.

Tim Berners-Lee → Web Developer



Accessibility means making products that work for everyone, including people with different disabilities.



Accessibility means making products that work for everyone, including people with different disabilities.

Vision

Example: A blind user browsing your app with a screen reader.



Accessibility means making products that work for everyone, including people with different disabilities.

Vision

Example: A blind user browsing your app with a screen reader.

Hearing

Example: A user who relies on captions to watch your tutorial video.



Accessibility means making products that work for everyone, including people with different disabilities.

Vision

Example: A blind user browsing your app with a screen reader.

Hearing

Example: A user who relies on captions to watch your tutorial video.

Understanding

Example: A person with learning difficulty needing clear and simple content.



Accessibility means making products that work for everyone, including people with different disabilities.

Vision

Example: A blind user browsing your app with a screen reader.

Hearing

Example: A user who relies on captions to watch your tutorial video

Understanding

Example: A person with learning difficulty needing clear and simple content.

Mobility

Example: A user who can't use a mouse and uses only a keyboard.



Accessibility also helps people in a variety of situations – not just with long-term disabilities.

Types of Accessibility Needs

Permanent

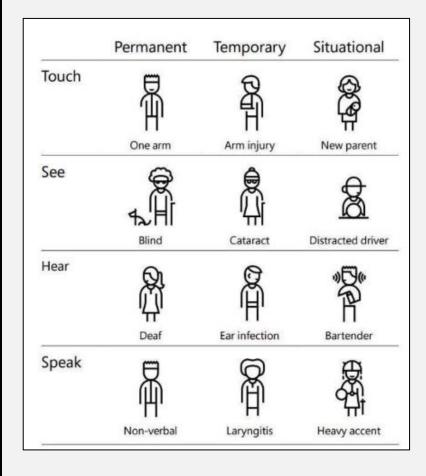
A person born blind or with a missing limb

Temporary

A broken arm, eye surgery, or ear infection

Situational

Using a phone in bright sunlight
Watching a video in a noisy train
Holding a baby with one hand



Why Accessibility Matters



Digital Equality



The web is a public space — everyone deserves full access.

It's not just good tech, it's digital justice.

Reason #1

Digital Equality



The web is a public space — everyone deserves full access.

It's not just good tech, it's digital justice.

Reason #2

Legal Requirement



Required by laws like Section 508 in US, European Accessibility Act 2025 (EAA), and similar laws exists worldwide.

Based on global standards like WCAG (Web Content Accessibility Guidelines).

Avoids legal risks and promotes ethical responsibility.

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Digital Equality



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Better Business Outcomes

More users = more reach = more impact.

Improves SEO through semantic HTML and better content structure.

Competitive advantage.

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Reason #4

Promotes Good Design

Many "accessibility features" became everyday features (think dark mode, captions, skip links).

It forces you to design with intention, not assumption.

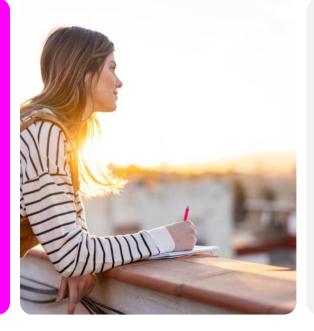




Accessibility in Numbers

97.4%

Websites fail at least one WCAG 2.1 AA requirement



71%

Users leave if a product isn't accessible – that's wasted sprint effort and lost customer value.

5,500

Accessibility lawsuits filed in the U.S. in 2023 alone

\$8T

Combined global disposable income of people with disabilities and their families

86%

Accessibility issues are detectable through automation testing – but still ignored. It can be part of Definition of Done.

Most Common Accessibility Issues

96% of issues fall into these 6 categories

Hard-to-read text (low-contrast colors)	79.1%
Images without descriptions (no alt text)	55.5%
Forms without instructions (missing labels)	48.2%
Links that go nowhere (empty links)	45.4%
Buttons with no meaning (empty buttons)	29.6%
Pages without a set language (screen readers can't read properly)	15.8%



General Misconception...

"We are making the web accessible for disabled people — actually, we are making the web accessible for our future selves."

Common Delivery Pitfalls



Small misses that quietly create big barriers!

No Accessibility Acceptance Criteria

Accessibility Seen as Later Work

Not in
Definition of
Done

Reviews Skip

Accessibility Checks

Rely Only on Visuals

Dynamic Content not Explained

No Keyboard **Testing**

Auto-Playing Content

Unclear Error Messages

Available Tools and Al Helpers

Tools That Make Accessibility Easier

For Developers



Framework Support

UI Components & ARIA Helpers

Built-in Form Validators

Axe-core & Cypress-axe

Screen Readers (NVDA, VoiceOver)

For POs / Scrum Masters



Lighthouse Reports & Accessibility Insights

Browser Tools (Wave, Web Toolbar)

Checklists & toolkits (WCAG, Inclusive Design Toolkit)

Collaboration & feedback (UserZoom)

Making accessibility easier, faster, and smarter for your team.



Sign Language to Voice/Chat

Google's Project Relate, MS AI for Accessibility

Making accessibility easier, faster, and smarter for your team.



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Google's Project Relate, MS AI for Accessibility



Personal Reading Helper

Microsoft Immersive Reader, Read&Write, GPT paraphrase prompts

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Auto Audit + Fix Suggestions

axe-core + GPT workflows, Evinced, Accessibility Insights

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Smart Screen Readers / Scene Description

Microsoft Seeing AI, Google Lookout

Making accessibility easier, faster, and smarter for your team.



Voice Control Instead of Mouse or Keyboard

Google Assistant, Alexa for Apps, iOS Voice Control

Al Helpers

Making accessibility easier, faster, and smarter for your team.



Voice Control Instead of Mouse or Keyboard

Google Assistant, Alexa for Apps, iOS Voice Control



Smart Captions & Audio
Understanding

Not just words people say, but also sounds or moods

Google auto-captions and Sound Notifications

Al Helpers

Making accessibility easier, faster, and smarter for your team.



Voice Control Instead of Mouse or Keyboard

Google Assistant, Alexa for Apps, iOS Voice Control



Smart Captions & Audio Understanding

Not just words people say, but also sounds or moods

Google auto-captions and Sound Notifications



Emotion-Aware Interface

UI adapts when AI senses frustration, stress or fatigue

Affectiva, MS Emotion APIs

Al Helpers

Making accessibility easier, faster, and smarter for your team.



Voice Control Instead of Mouse or Keyboard

Google Assistant, Alexa for Apps, iOS Voice Control



Smart Captions & Audio Understanding

Not just words people say, but also sounds or moods

Google auto-captions and Sound Notifications



Emotion-Aware Interface

UI adapts when AI senses frustration, stress or fatigue

Affectiva,
MS Emotion APIs



Auto-translate + Localize
Accessibility

Al produces translated captions and alt-text for global users

DeepL, Google Translate

Practical Examples



colour contrast ratio 21:1

High contrast

colour contrast ratio 17.6:1

Low contrast

Low contrast

AA (4.5:1) - Fail AAA (7:1) - Fail

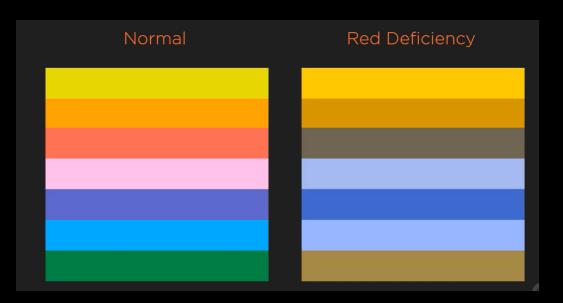
AA (3:1) - Fail AAA (4.5:1) - Fail Normal Text

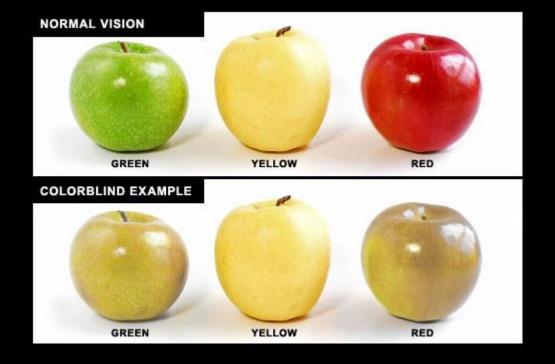
AA (4.5:1) - Pass AAA (7:1) - Pass

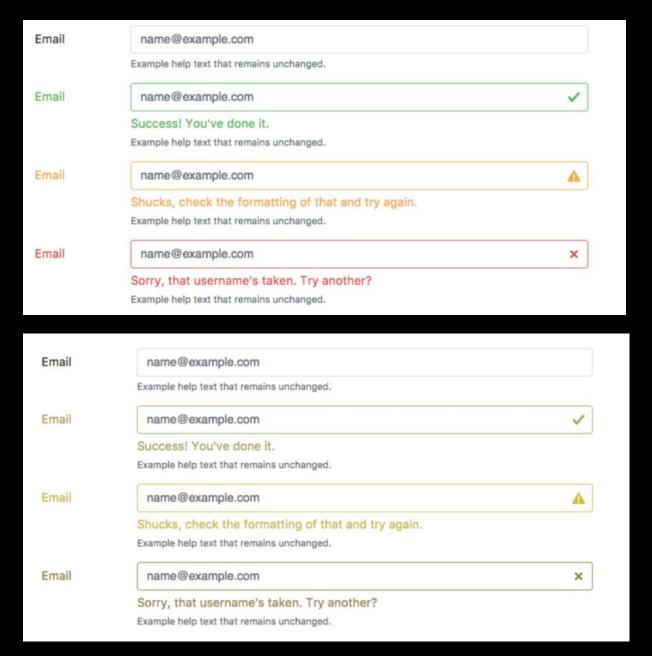
Large Text

AA (3:1) - **Pass** AAA (4.5:1) - Pass

(18 point or 14 point bold)







Types of Visual Dyslexia



Blurry Effect



Rivers Effect

"Me all fact theiry the Sitems wing.
"Me we restan to groups on pleasure,
The paint is more should write their the
box Kip want. They paint is known the
samellament. "They paint is their the
samellament." They paint is their their same
wanters with the "Black" paint with
which is paint given the best tension on
their groups given the best tension
for twentyment. Which has keywork
takes in khir.

Could white, the carry years, the new thing the carry years or pleasant, the me news to, years or pleasant, the paid of season, the paid of season, the paid of the paid of the things of the paid of

We see some it groups on phones. The point is some almost the some the second than the

Halo Effect



Seasaw Effect

PROMISES
PROMISES
PROMISES
PROMISES
PROMISES
PROMISES
PROMISES

Shaky Effect

PROMISES



Washout Effect

Englasses and C. Unevery (* YPE). Versich is the property of the property of

Swirl Effect



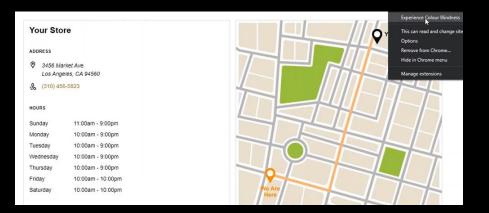
Overlapping Writing

Arial font

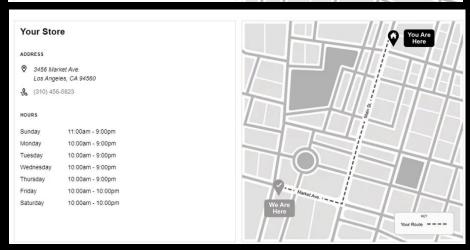
Davey Warner gripped the worn red cricket ball in his hand. His thumb traced the rough seam in the cracked leather before he found the right grip. He gave his shoulders a stretch and jogged lightly on the spot.

Open Dyslexic font

Davey Warner gripped the worn red cricket ball in his hand. His thumb traced the rough seam in the cracked leather before he found the right grip. He gave his shoulders a stretch and jogged lightly on the spot.



Your Store You Are Here ADDRESS 3456 Market Ave. Los Angeles, CA 94560 **(**310) 456-5823 HOURS Sunday 11:00am - 9:00pm 10:00am - 9:00pm Monday 10:00am - 9:00pm Tuesday Wednesday 10:00am - 9:00pm 10:00am - 9:00pm Thursday 10:00am - 10:00pm Friday Saturday 10:00am - 10:00pm



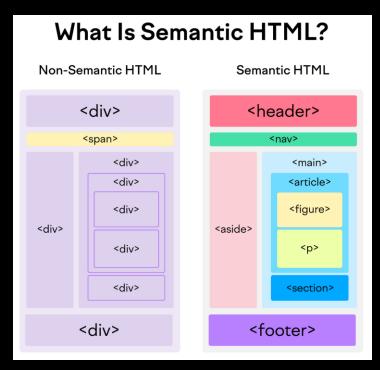
Or it is preferred to use aria-describedby attribute like below:

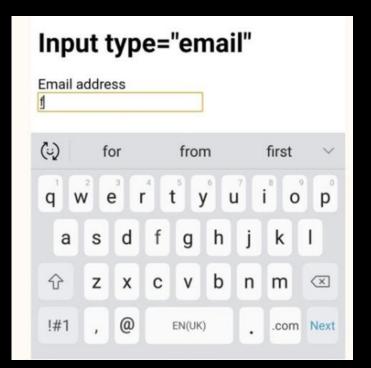
```
<img src="graph.jpg" aria-describedby="desc" alt="Graph" />
<a href="GraphDesc.html" id="desc">
   Get Graph Details
</a>
```

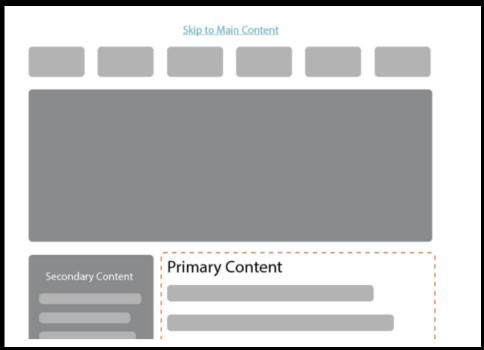


Pos	Team	Р	w	D	L	F	A	GD	Pts	Last 5 games
1 -	Manchester City	38	32	4	2	106	27	79	100	
2 -	Manchester United	38	25	6	7	68	28	40	81	
3 -	Tottenham Hotspur	38	23	8	7	74	36	38	77	
4 -	Liverpool	38	21	12	5	84	38	46	75	

	Team	Played	Won	Drawn	Lost	For	Against	GD	Points	Form
1 -	Manchester City	38	32	4	2	106	27	79	100	WWDWW
2 -	Manchester United	38	25	6	7	68	28	40	81	W W L D W
3 -	Tottenham Hotspur	38	23	8	7	74	36	38	77	D W L W W
4 -	Liverpool	38	21	12	5	84	38	46	75	WDDLW

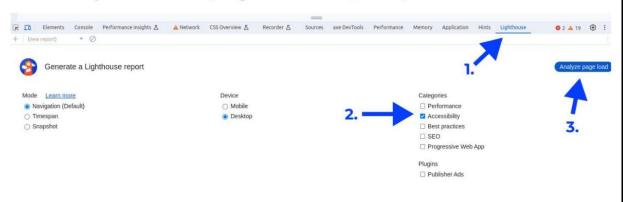




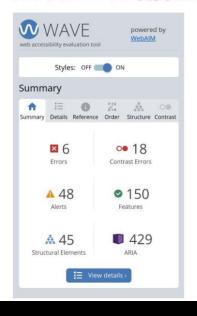


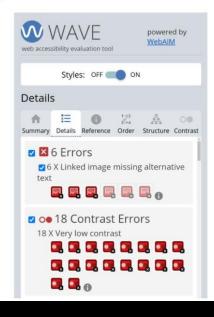


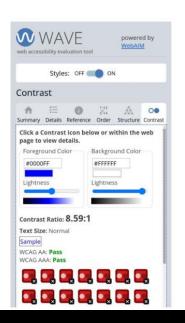
Developer Tools (Lighthouse, axe)



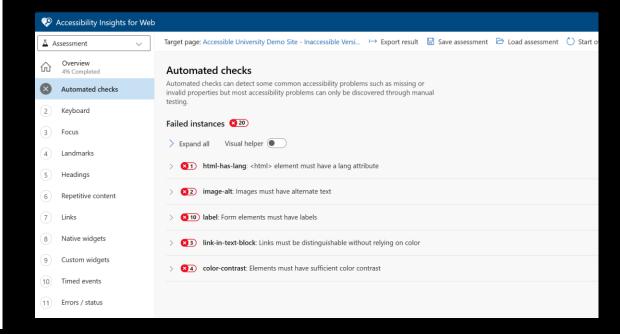
WAVE - Webaim



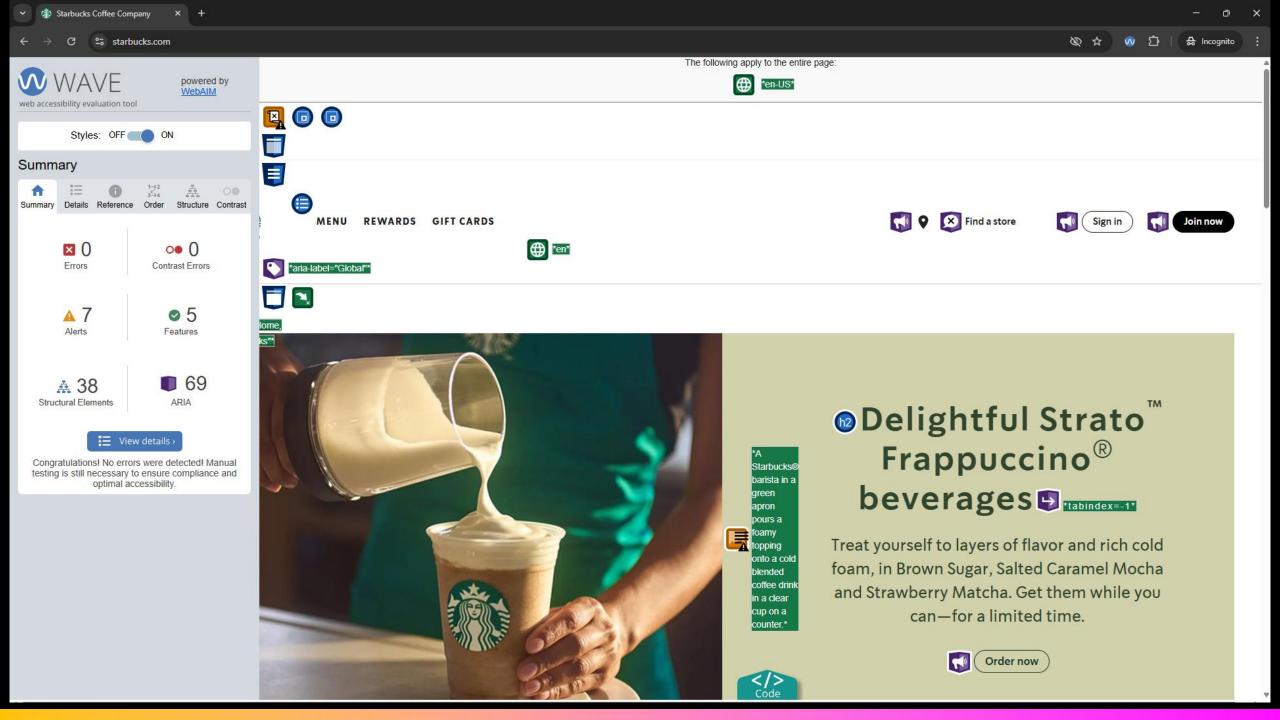




```
// in eslint.json
...
"rules": {
    "@angular-eslint/template/accessibility-alt-text": 2,
    "@angular-eslint/template/accessibility-elements-content": 2,
    "@angular-eslint/template/accessibility-label-for": 2,
    "@angular-eslint/template/no-positive-tabindex": 2,
    "@angular-eslint/template/accessibility-table-scope": 2,
    "@angular-eslint/template/accessibility-valid-aria": 2,
    "@angular-eslint/template/click-events-have-key-events": 2,
    "@angular-eslint/template/mouse-events-have-key-events": 2,
    "@angular-eslint/template/no-autofocus": 2,
    "@angular-eslint/template/no-distracting-elements": 2
}
```



Quick Demo





Delightful Strato™ **Frappuccino**[®] beverages

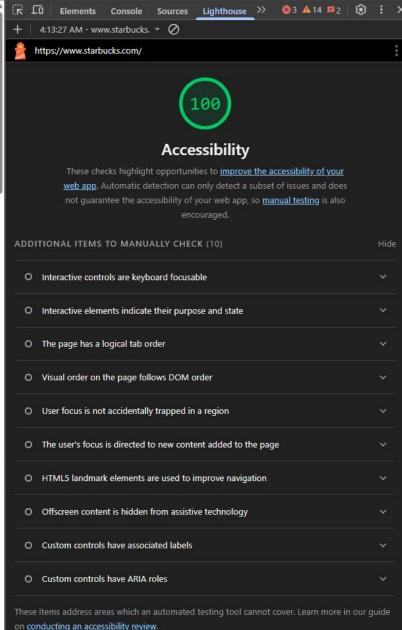
Treat yourself to layers of flavor and rich cold foam, in Brown Sugar, Salted Caramel Mocha and Strawberry Matcha. Get them while you can-for a limited time.

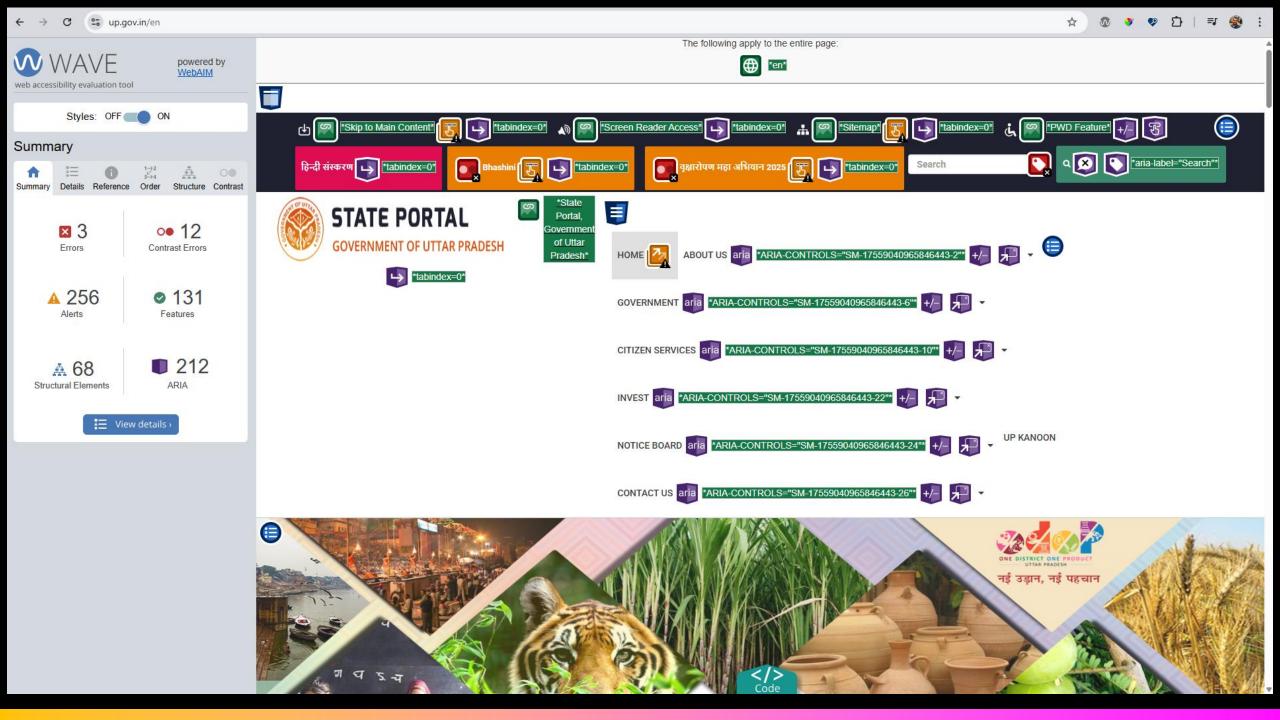
Order now

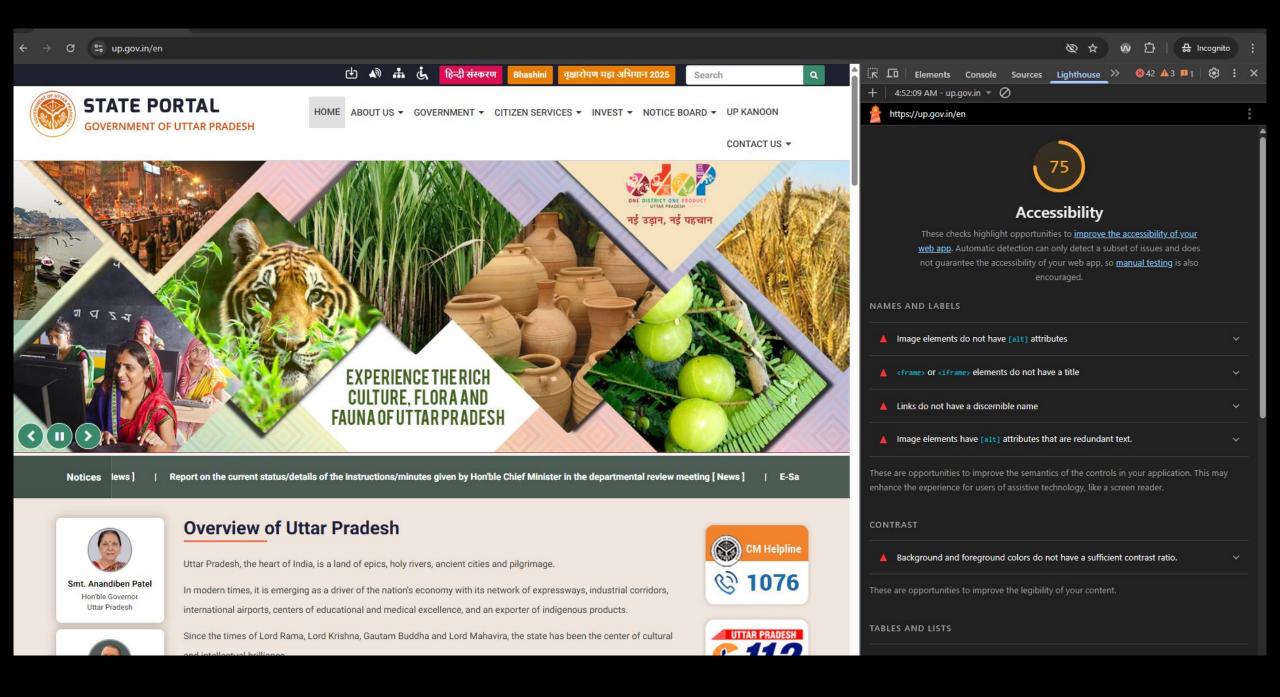
It starts with free

Enjoy a free handcrafted drink when you make a qualifying purchase during your first week as a Starbucks® Rewards member.*









You should add a meaningful alt (or use aria-label on the link). For example:

```
html

div class="tweter-icn xx">

da href="https://x.com/UPGovt?ref_src=twsrc%5Etfw" class="external">

dimg src="downloadmedia/siteContent/202506151609556936tewr4.jpg"

alt="UP Government on X (Twitter)">

dass="uP Government on X (Twitter)">

dass="https://twitter.com/CMOfficeUP?ref_src=twsrc%5Etfw">

dass="https://twitter.com/CMOfficeUP?ref_src=twsrc%5Etfw">

dass="uP CM Office on X (Twitter)">

dass="uP CM
```

Rules of thumb

- If the image is the only thing inside the link → its alt must describe the purpose of the link (e.g., "UP Government on X (Twitter)").
- If you don't want to clutter the alt → you can use alt="" on the image and give the <a> an aria-label:

```
html

display the first form of the first form o
```

Tips and Resources

Tips That Help

Start Early

Design with Empathy

Think
Keyboard
First

Test with Real Users

Automate & Audit

Logs
Bugs
with a11y
in Mind



Learning Resources

The Accessibility Best Practices in Angular

https://angular.dev/best-practices/a11y

The Accessibility Best Practices in React

https://legacy.reactjs.org/docs/accessibility.html

Web Content Accessibility Guidelines (WCAG)

https://www.w3.org/WAI/standards-guidelines/wcag

Google Lighthouse

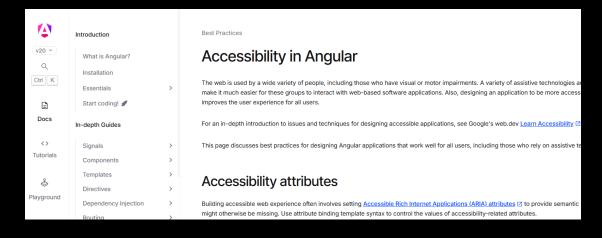
https://developer.chrome.com/docs/lighthouse/overview

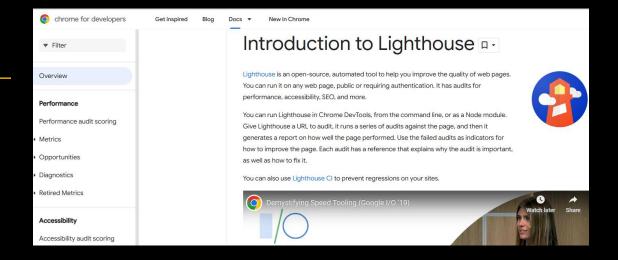
The A11y Project

https://www.a11yproject.com

Microsoft Inclusive Design Toolkit

https://inclusive.microsoft.design











Linked in Himanshu Goel



Everyone Here &

