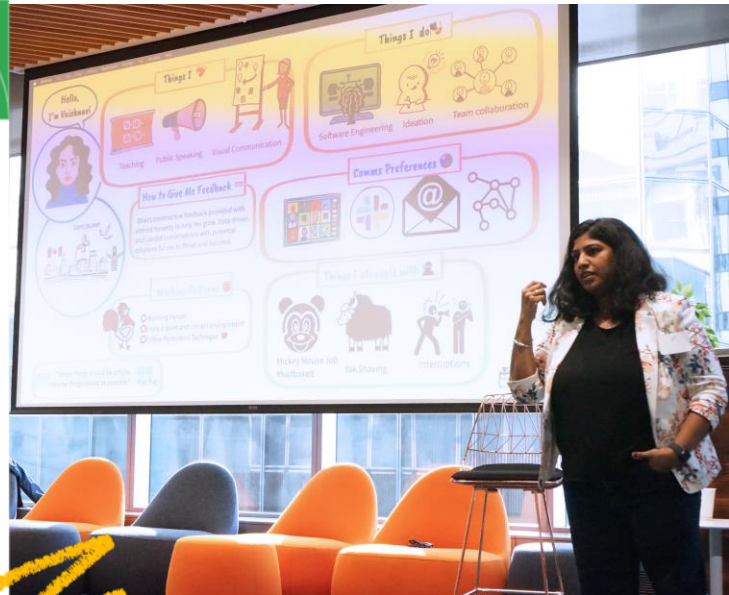


```
// You'll need  
// com.google.  
listRef.listAll  
.addOn  
prefixes.  
// All  
// You  
}  
}  
it  
ach { item  
the items  
}  
}
```

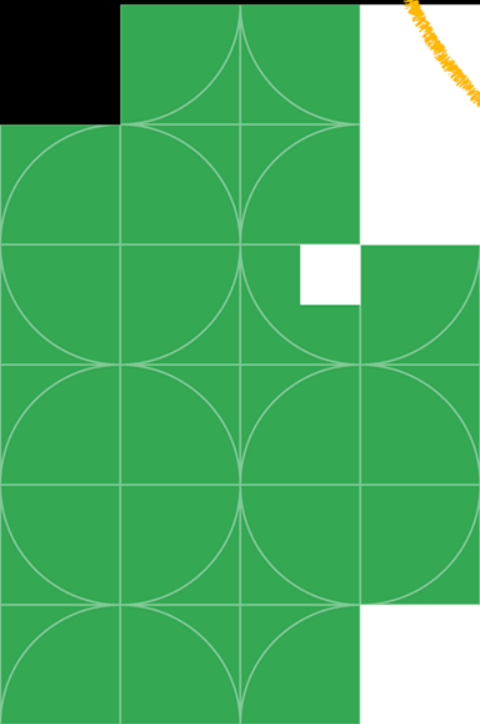
devfest

Bring swagger and A11yship to API documentation

 Google Developer Groups
Discord

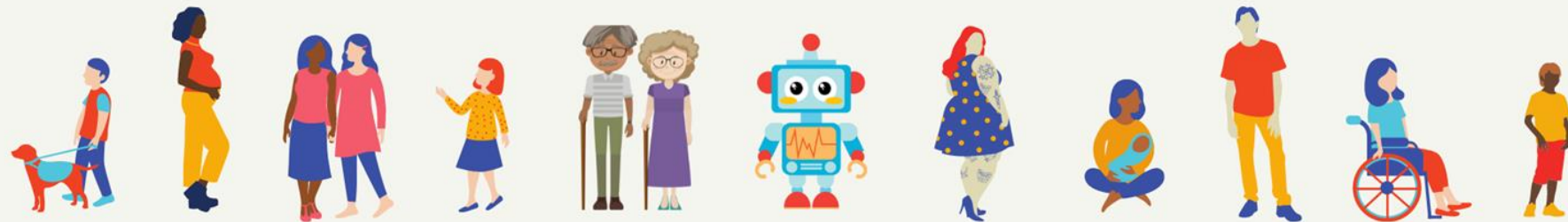


devfest



A 3x3 grid of weather icons representing different feelings. The icons are as follows:

- Row 1: A bright yellow sun with rays (labeled 'HAPPY'), a sun partially covered by a white cloud with a blue outline (labeled 'OKAY'), and a white cloud with a blue outline raining (labeled 'MEH').
- Row 2: A white cloud with a grey outline raining (labeled 'WHERE'S MY COFFEE'), a white cloud with a green outline and wavy lines below it (labeled 'YAWN'), and a white cloud with a pink outline raining and lightning (labeled 'SNOOZE').
- Row 3: A thermometer with a pink liquid level and a sun behind it (labeled 'THIRSTY'), and a thermometer with a blue liquid level and a sun behind it (labeled 'HUNGRY').



```
Text('Section Title',  
style: TextStyle(  
color: Colors.green[200],  
),  
),  
),  
s.star,  
r: Colors.green[500],  
Text('23'),
```

devfest




SOME DISABILITIES LOOK LIKE THIS









OTHERS LOOK LIKE THIS






NOT ALL DISABILITIES ARE VISIBLE

	Permanent	Temporary	Situational
Touch			
	One arm	Arm injury	New parent

See			
	Blind	Cataract	Distracted driver

	Permanent	Temporary	Situational
Hear			
	Deaf	Ear infection	Bartender

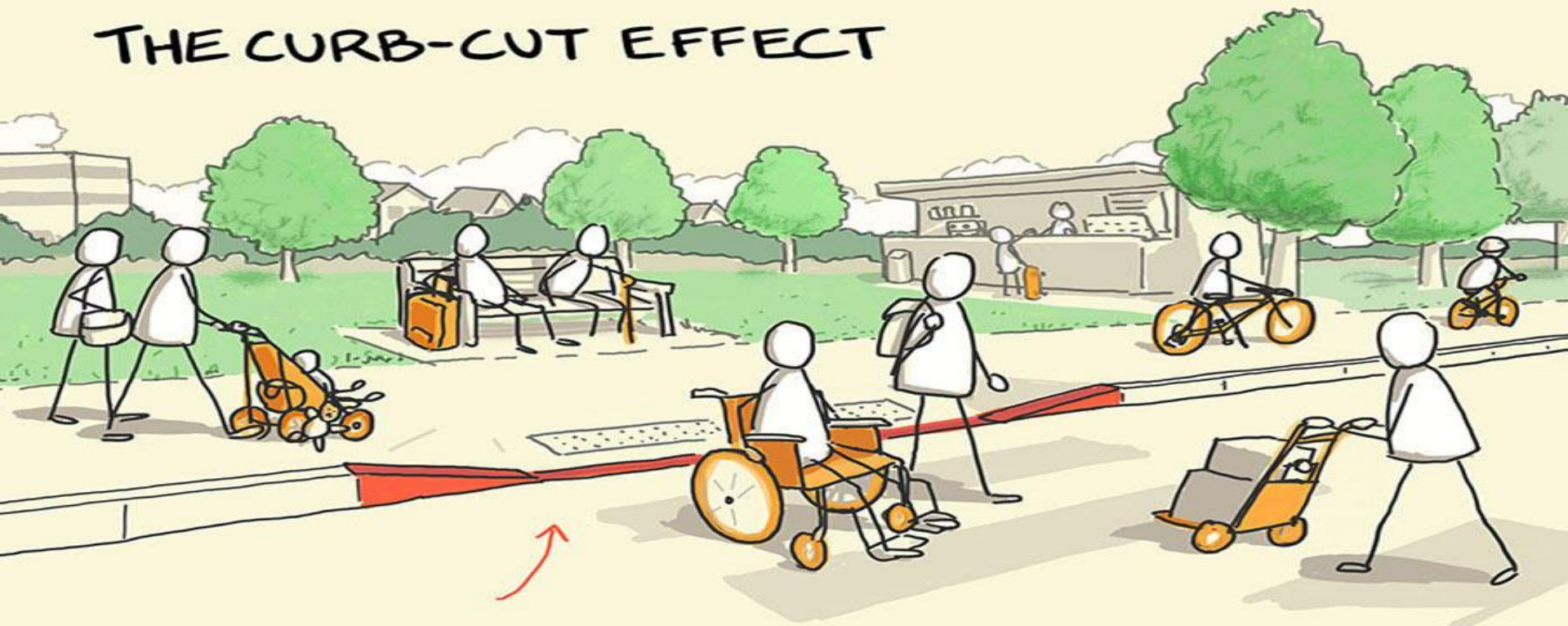
Speak			
	Non-verbal	Laryngitis	Heavy accent

devfest

If we include temporary and situational disabilities then the number is ~20 million.

We go from benefitting less than 0.01% of users to around 7% of users.

THE CURB-CUT EFFECT



WHEN WE DESIGN
FOR DISABILITIES

... WE MAKE THINGS
BETTER FOR EVERYONE

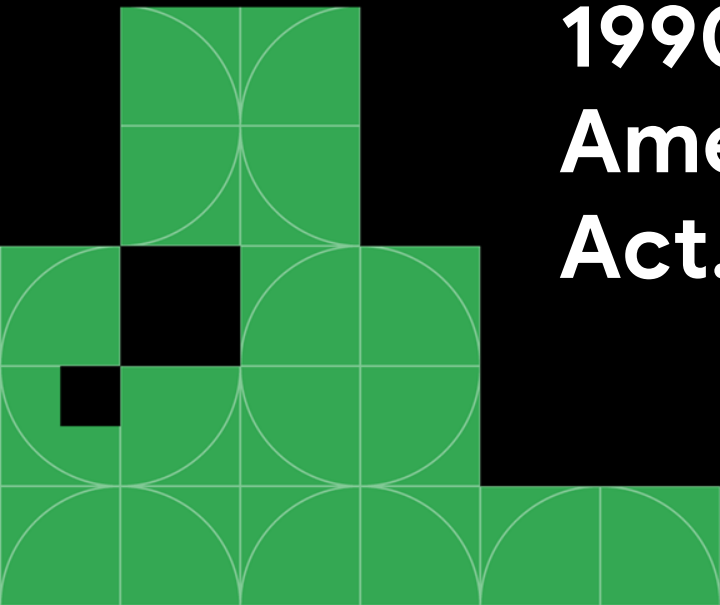
sketchplanations

```
Text(  
  'Simple Statement or URL',  
  style: TextStyle(  
    color: Colors.green[200],  
  ),  
),  
),  
s.star,  
r: Colors.green[500],  
Text('23'),
```

devfest



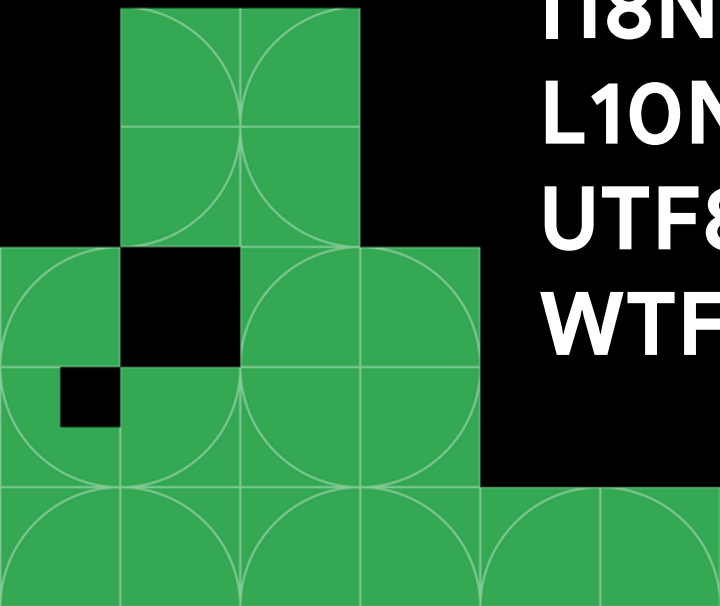
**Not legally required until
1990 with the signing of
Americans with Disabilities
Act.**




```
Text(  
  'Simple Statement or URL',  
  style: TextStyle(  
    color: Colors.green[200],  
  ),  
),  
),  
s.star,  
r: Colors.green[500],  
Text('23'),
```

devfest

A11Y?
I18N?
L10N?
UTF8?
WTF?



```
Text(  
  'Section Title',  
  style: TextStyle(  
    color: Colors.green[200],  
  ),  
),  
),  
s.star,  
r: Colors.green[500],  
Text('23'),
```

devfest



**A11y is a Movement,
Not Just an
Abbreviation!**

```
Text(  
  'Section Title',  
  style: TextStyle(  
    color: Colors.green[200],  
  ),  
),  
),  
  
s.star,  
r: Colors.green[500],  
Text('23'),
```

devfest



Accessibility ≠ Disability

```
Text('Section Title',  
  style: TextStyle(  
    color: Colors.green[200],  
  ),  
,  
s.star,  
r: Colors.green[500],  
Text('23'),
```

devfest

...and i should care,
why?

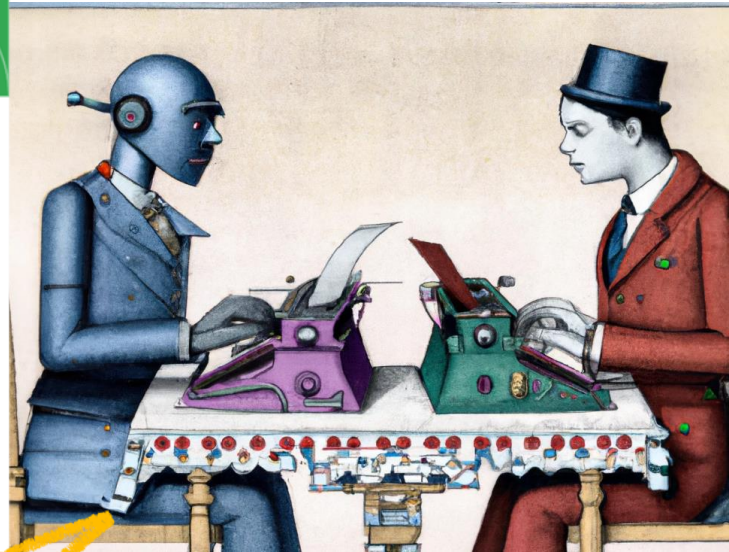
- Low bandwidth or older tech/devices
- Low literacy or not being fluent
- New or infrequent users
- Difficulty clicking small targets
- Elderly people, People with Disabilities

```
// You'll need  
// com.google.  
listRef.listAll  
.addOn  
prefixes.  
// All  
// You  
}  
  
it  
each { item  
the items  
}  
}
```

devfest

Mind who you're
writing for.

 Google Developer Groups
Discord





devfest



SCULPT Framework

1. Structure (use headings and styles)
2. Colour and contrast
3. Use of images
4. Links
5. Plain English
6. Tables

Structure

- Structure is the way content within documents is organized.
- Screen readers or keyboard navigation

Structure

- Sighted users can scan a page for large or bold text to identify headings,
- Non-sighted users who rely on screen readers miss these visual cues. Adding section heading styles to your documents provides important semantic structure that screen readers can access.
- Don't use text size or emphasis (bold, underline, italic) as the sole means of identifying a heading.

Structure

- Assign headings based on their hierarchy in the document.
- The main title or description of the document should be assigned Heading 1.

There should only be one Heading 1 element in your document.

Sub-headings of equal importance should follow as Heading 2.

These can be thought of as the main chapters of the document.

Headings at level 3 would break off from a Heading 2 element.

Any further sub-headings should continue this pattern (Heading 4, etc.).

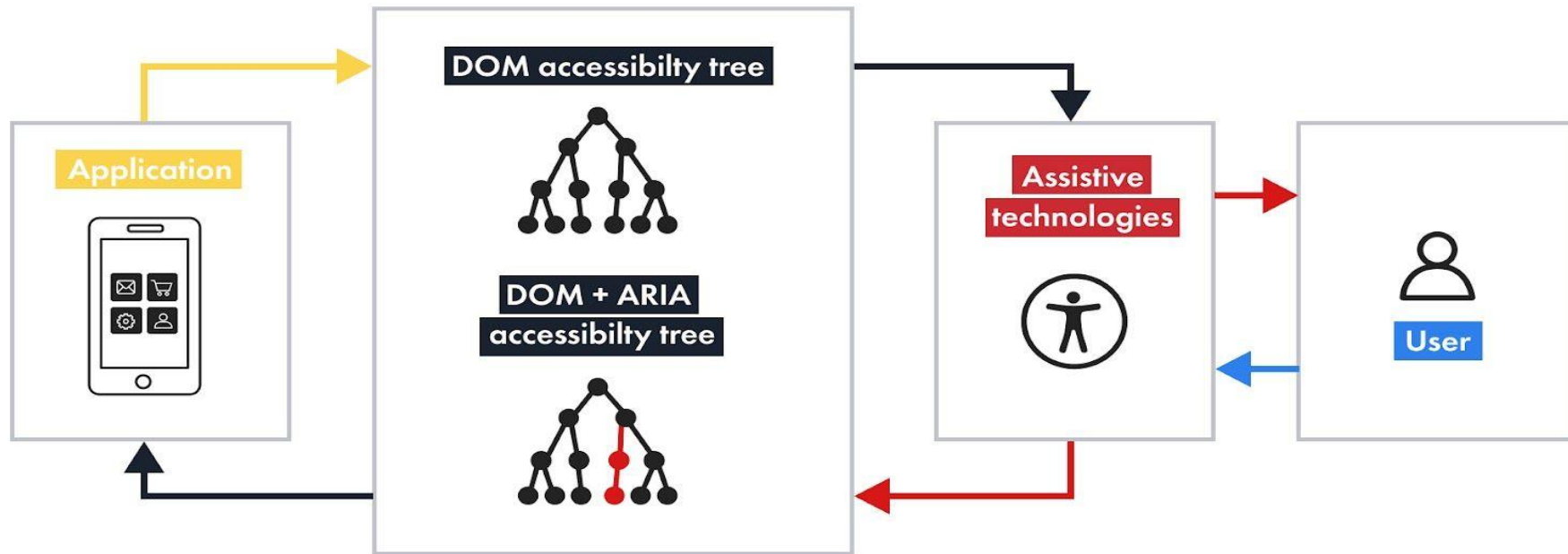
Never skip a heading level (e.g., don't go directly from a Heading 1 to a Heading 3).

Accessible Rich Internet Applications (ARIA) tags

- What kind of element it is by checking its role, e.g., checkbox;
- What state the element is in, e.g., checked/not checked;
- The name of the element, e.g., “Sign up for our newsletter
- If you can use HTML a native HTML element or attribute, then do so

[Demo](#)

Using ARIA to Increase Digital Accessibility



Colour and contrast

- Colours on a screen can seem less vibrant in bright light, or sunshine.
- Contrast and resolution can vary greatly between screen and projectors.
- Ensure that colour is not your only means of conveying information.
- A very good contrast ratio (foreground text=black, background=white, ratio=21:1)
- A satisfactory contrast ratio (foreground text=#6C6C83, background=white, ratio=5.1:1)
- A failing contrast ratio (foreground text=#A6A6A6, background=white, ratio=2.4:1)

Colour and contrast

- Colours on a screen can seem less vibrant in bright light, or sunshine.
- Red-green
- Contrast and resolution can vary greatly between screen and projectors.
- Ensure that colour is not your only means of conveying information.
- Incorporate alternate means of communication—use labels, texture, shapes, and patterns—to prevent confusion among people with color blindness.

Colors alone

Inaccessible



Course #	Name
Algo 101	Introduction to Algorithms
Networking 101	Topology and Networking
Gardening 101	Soil therapy for beginners

Red-green color blind?

Colors alone

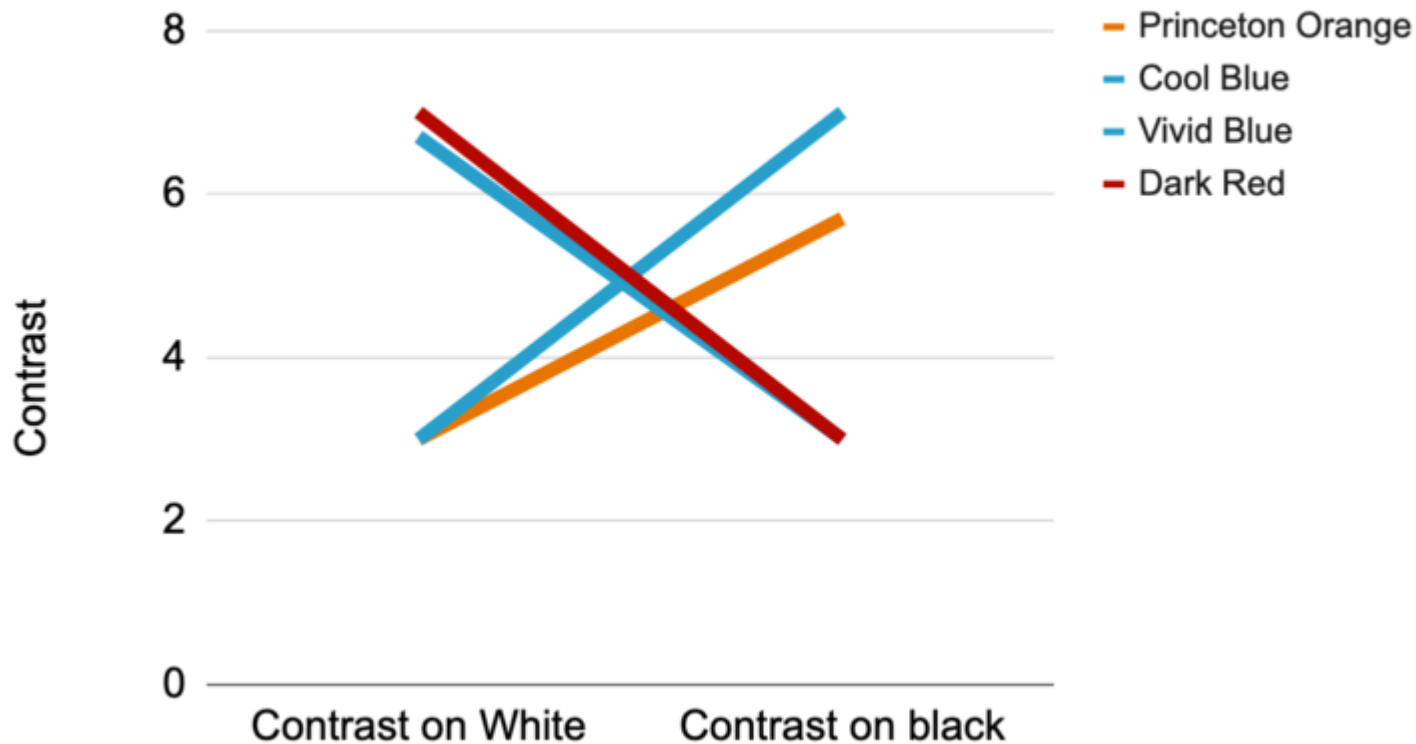
Course #	Name
Algo 101	Introduction to Algorithms
Networking 101	Topology and Networking
Gardening 101	Gardening for beginners

Alternate means of communication

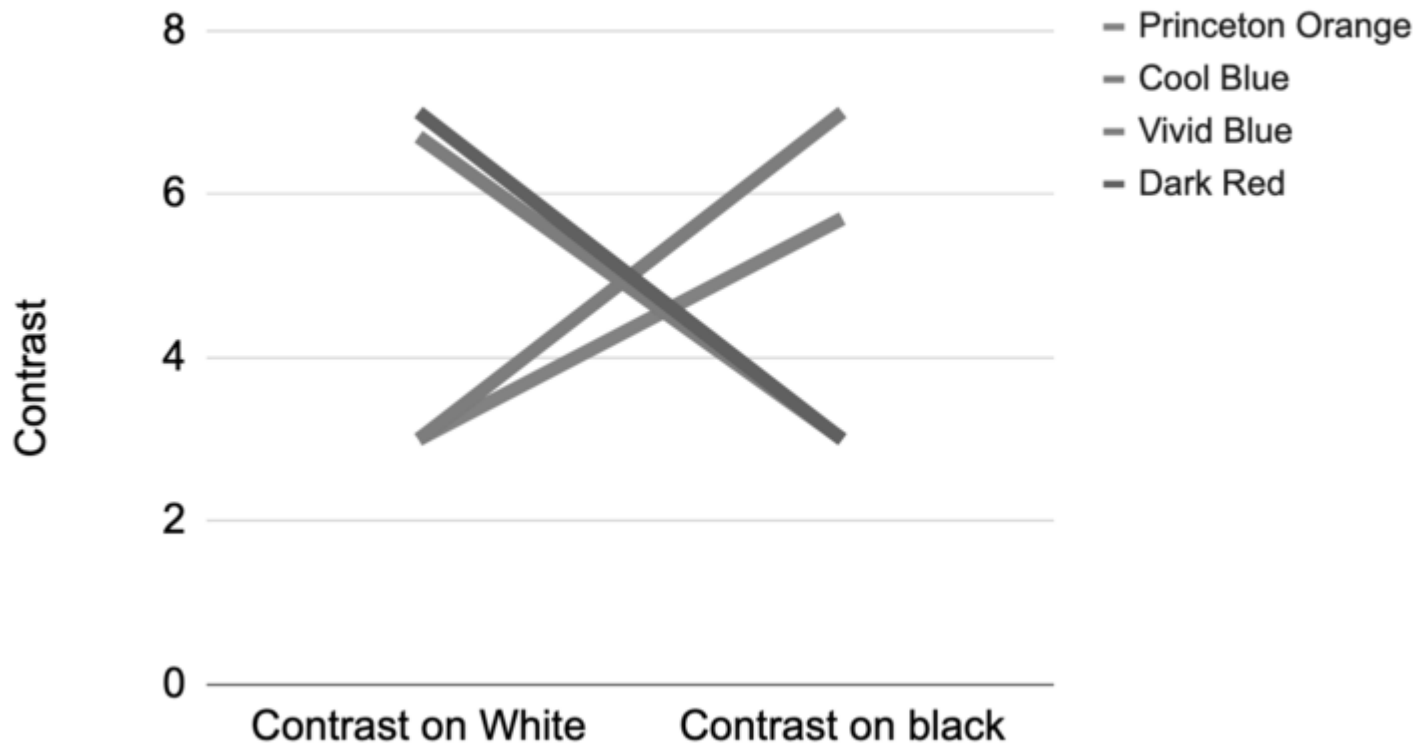
Accessible Example ✓

Course #	Name	Required
Algo 101	Introduction to Algorithms	Yes
Networking 101	Topology and Networking	No
Gardening 101	Gardening for beginners	No

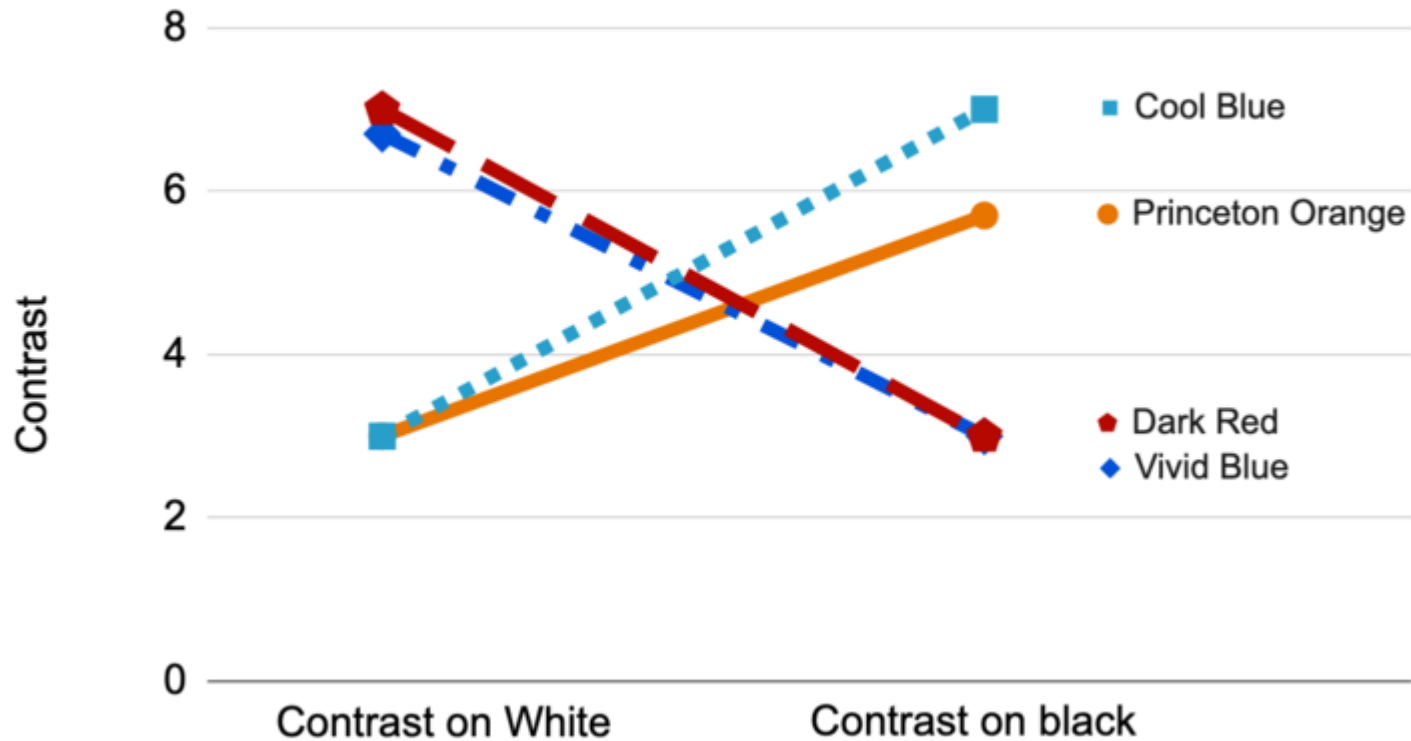
Contrast on White vs. Color



Contrast on White vs. Color



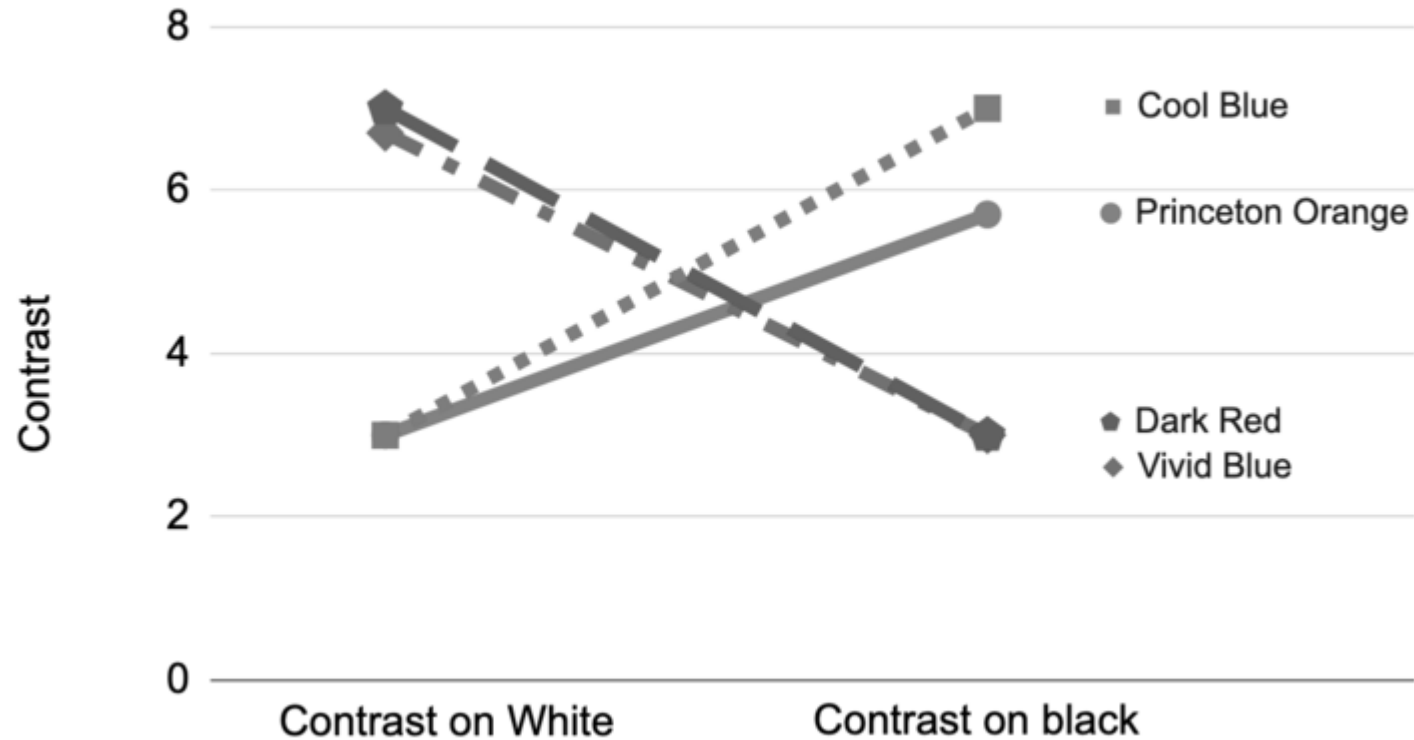
Contrast on White vs. Background Color



Colors and Contrast - Recommendation

- Flipping your design or website into grayscale.
- Reviewing the design in grayscale will allow you to identify any elements that become more challenging to understand when color is stripped away.

Contrast on White vs. Background Color



Swagger Petstore API

pet Everything about your Pets

[Find out more](#) ^

POST `/pet/{petId}/uploadImage` uploads an image



POST `/pet` Add a new pet to the store



PUT `/pet` Update an existing pet



GET `/pet/findByStatus` Finds Pets by status



GET `/pet/findByTags` Finds Pets by tags



GET `/pet/{petId}` Find pet by ID



POST `/pet/{petId}` Updates a pet in the store with form data



DELETE `/pet/{petId}` Deletes a pet



DELETE `/pet/{petId}` Deletes a pet

Parameters

Cancel

Name	Description
api_key string (header)	<input type="text" value="discord"/>
petId * required integer(int64) (path)	<input type="text" value="petId"/>

Please correct the following validation errors and try again.

- Required field is not provided

Execute

Use of images

- Use images that support the text
- Never use an image instead of text
- Use correct image sizes (on the web it is best to have images around 150kb)
- Use alt text on images
- When text that is intended to be read is presented as an image, screen readers and other assistive technologies cannot read text that's contained inside an image. They will instead read the alt text provide!

Links (hyperlinks)

- Stop me if you have heard this before in your eLearning courses:

“See below for...”.

“Look back at...”.

“Click here for more information...”.

“Refer to the blue box for...”.

Links (hyperlinks)

- Do not use repeated link titles such as 'click here' or 'find out more'
- A full website address written like this:
"https://www.worcestershire.gov.uk/digital-worcestershire/sculpt-accessibility"
Would be read out by a screen reader like this:
h t t p s colon forward slash forward slash w w w dot

● Use more descriptive display text like **Sculpt Accessibility page**.

Plain English

- Try to aim for an average reading age of 12.
- Plain English helps as many users as possible to understand your content.
- Plain English means avoiding using hard to understand language, such as jargon, unexplained acronyms and long words.
- Use exact measurements when appropriate, such as “three” instead of “a few”.
- Use nouns instead of pronouns for third person references, even if it means being repetitive.
- Avoid assuming that users already know how to do things.

Table Structure

- Tables really should be used for data and **not** used to facilitate page or document layouts.
- When using tables to present data or information make sure you use a simple table structure with column headers, making sure that the tables don't contain split cells, merged cells, or nested tables (tables within tables).
- Poorly formatted table make it very difficult for screen readers to navigate.
- Just imagine if you could only use the arrow keys on your keyboard to tab through the table, could you logically tab up, down and left to right to get to every single cell logically and easily? If not, it's not accessible.

The basic six things to consider when creating accessible information

Structure (heading styles)



S

Use heading styles in your document such as H1, H2, H3

Colour & contrast



C

The colours you use and the contrast between text and background

Use of images



U

Use alternative (alt) text on your images

Links (hyperlinks)



L

Describe your link, never use click here

Plain English



P

Use clear uncomplicated language with no jargon

Table structure



T

Use simple tables without merged or split cells

INSPIRED BY A PUBLIC SCHOOL STUDENT WITH DISABILITIES



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CLEARING A PATH
FOR PEOPLE WITH SPECIAL NEEDS
CLEARS THE PATH FOR EVERYONE!


```
Text('Simple Statement or URL',  
style: TextStyle(  
  color: Colors.green[200],  
),  
),  
),
```

devfest

```
s.star,  
r: Colors.green[500],  
Text('23'),
```

