A Little History

—

How the internet came to be, the media industry's transition to digital, and the evolution of digital storytelling

Internet & The Web

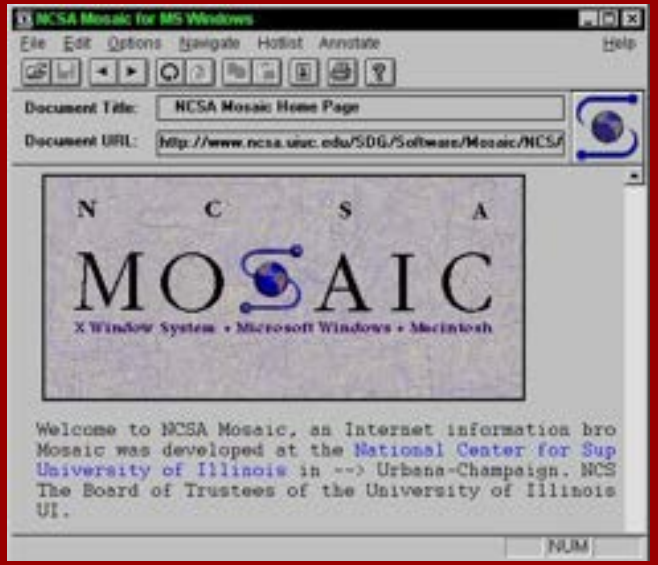
Internet & The Web

- The internet began in 1969 as ARPANET, an academic research network that was funded by the military's Advanced Research Projects Agency (ARPA, now DARPA). The network was developed at the height of the Cold War to create a more secure communication system.
- The internet became a global commercial network in the 1990s. In 1991, Timothy Berners-Lee, an English computer scientist, created the World Wide Web, which allows for publishing of information over the internet.
- The web has become so popular that many people now regard it as synonymous with the internet itself. But technically, the web is just one of many internet applications.
- Over time, the web became more sophisticated, supporting images, audio, video, and interactive content. In the mid-1990s, companies such as Amazon began building profitable businesses based on the web.

Sources: The Internet, Explained (Timothy B. Lee, Vox) & A Short History of the Internet (Science + Media Museum)

Web Browsers & Applications

- A web browser is an application used to access and view websites. The first widely used web browser, Mosaic, was released in 1993.
- Google Chrome, released in 2008, is now the most popular web browser across platforms. (And the one we will be using in class.)
- In the 2000s, full-featured web-based applications such as Yahoo Maps and Google Docs were created. In 2004, Mark Zuckerberg put the very first iteration of Facebook online. In 2005, YouTube was launched.
- The first iPhone was released in 2007, the App Store officially launched in 2008.



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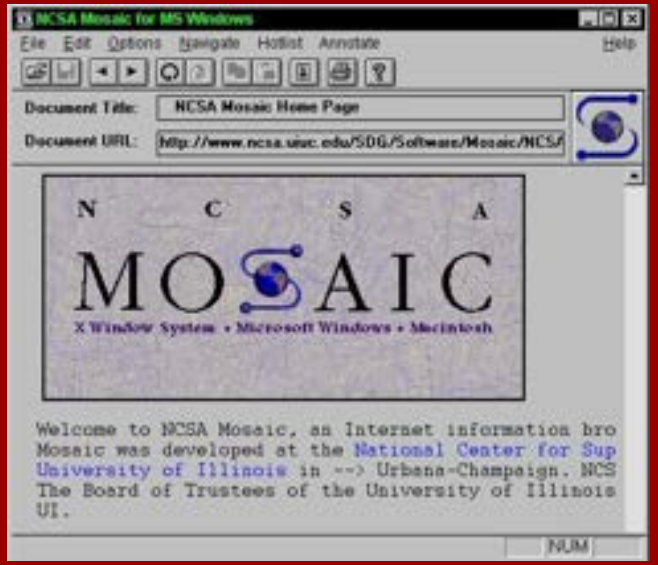

Quiz Time!

1. ***The internet began in ____ as ARPANET.***
2. *In 1991, Timothy Berners-Lee created the _____.*
3. *The first web browser, Mosaic, was released in 1993. The most popular web browser today is _____.*
4. *In 1994, _____ was the first thing ever purchased on the internet.*

Quiz Time!

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4. *In 1994, **a Pizza Hut** 🍕 was the first thing ever purchased on the internet.*

Media's Transition to Digital

News Websites

Newspapers began moving online in the early 1990s.

- In 1992, Chicago Online, the first newspaper service on America Online, was launched by the Chicago Tribune.
- In 1994, the Raleigh New & Observer launched Nando, an online newspaper, on the web.
- By 1996, many major news outlets also launched sites on the web (CNN, New York Times, USA Today, The Washington Post).

Print-First Persists

The move to online publishing has been painful for many newspapers due to inadequate tools, outdated staffing models, print-centric workflows, and struggles with strategies around digital revenue.

- For over a decade Washington Post had an online newsroom separate from its print newsroom. It was located in Arlington, Va. It wasn't until the end of the 2000s that they merged newsrooms.
- Around that time, digital start-ups without legacy print operations began to emerge as competitors. The Huffington Post was launched in 2005, Politico in 2007, Buzzfeed News in 2011, Vox in 2014.

Fun fact: When I graduated UMD in 2008, there was only 2 tracks, print or broadcast.

A Digital-First Reckoning

In 2014, the “Innovation Report,” an internal New York Times report was leaked. It was the result of a 6-month investigation into the paper’s digital strategy. The findings resonated with newsrooms nationwide and were very influential. A few highlights:

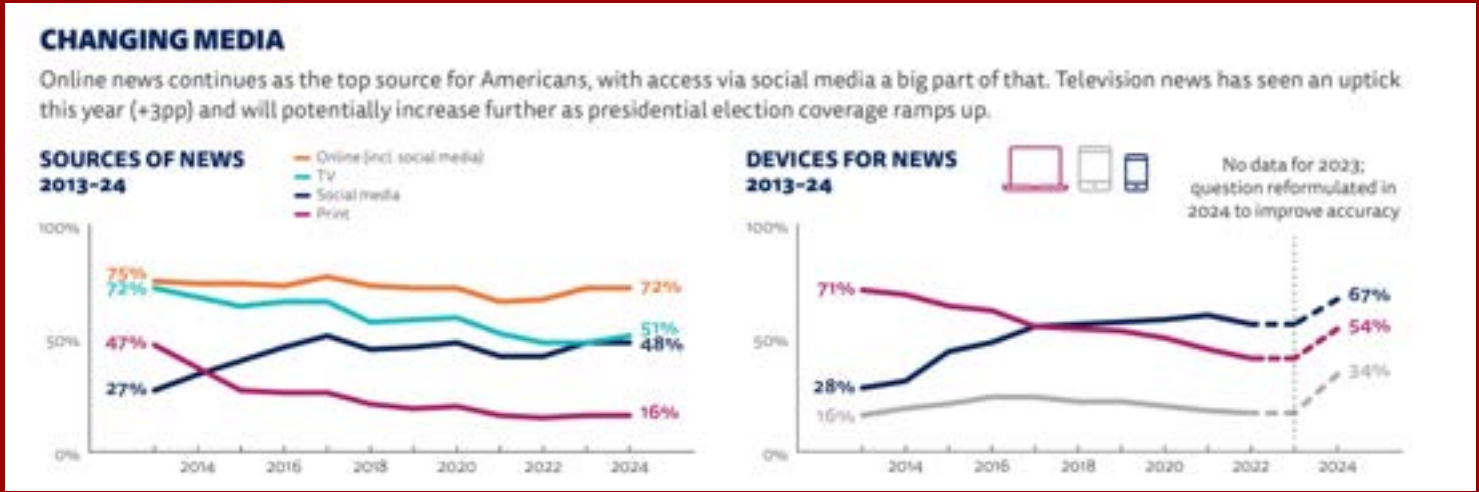
- Readers want to consume news in engaging and exciting formats (graphics, interactives), but that is not reflected internally (no clear workflows, not what’s valued)
- Call for increased collaboration between the newsroom and audience teams. (“Work doesn’t end when you hit publish.”)
- Technology is a barrier to adapting.
- Promotions were going to people with little digital experience.

The Rise of Social

Today, almost half of Americans get their news from social media.

Social platforms present a some big challenges to traditional media, including:

- Lack of control
- Algorithm changes
- Uncertainty
- Staffing
- Billionaires in charge



Source: 2024 Digital News Report (Page 114) , June 2024

Where Are We Now?

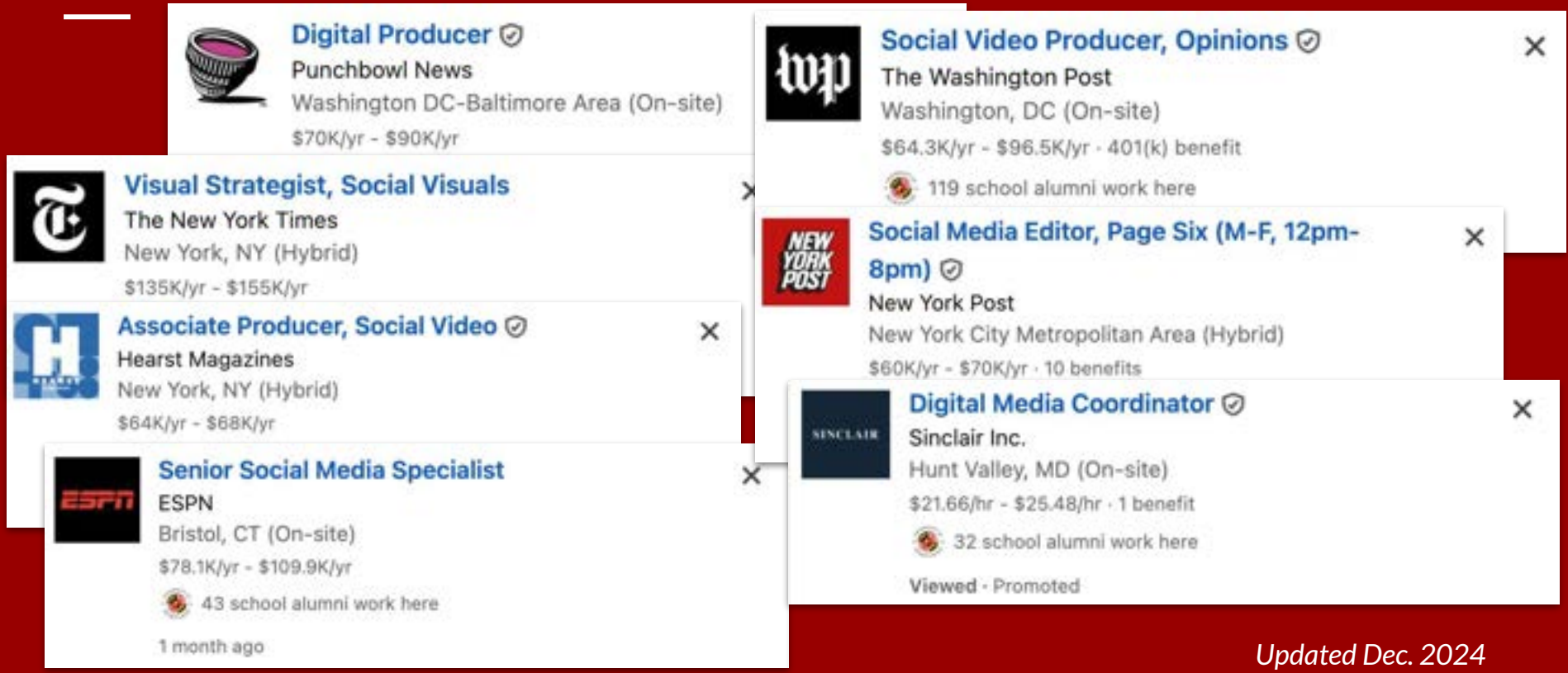
- Small, local newspapers and legacy print publications and TV news programs have struggled to adapt to digital advances and generate enough digital revenue. That's a contributing factor to the decline of newspapers, the emergence of news deserts, and layoffs.
    - *CNN Job Cuts Are A Painful Reminder Of Where TV News Is Heading* (Forbes)
- But the landscape of news publications and offerings available digitally continues to evolve.
- The New York Times remains strong by being innovative and nimble.
- Nonprofit news organizations and news startups that serve local or specific audiences are emerging and thriving (19th News, Baltimore Banner, Block Club Chicago, Grist, San Francisco Standard).
    - *Baltimore Banner to Top $13 Million in Revenue* (AdWeek)

Where Are We Now?

Despite some struggles to adapt, most modern media outlets have done the following (or are working to) …

- Adopt a digital-first approach to publishing
- View social platforms as important for reach and engagement
- Use metrics and analytics to make smart decisions
- Generate revenue from digital subscriptions and have diversified revenue streams (advertising, events, job boards, etc.)
- Have modern, sophisticated publishing tools that allow them to publish stories in various formats
- Have a staff and workflows that reflect a digital-first approach (*see next slide*)
- Anticipate, rather than scramble to react to, the influences of technology on news production and consumption (*see next next slide*)

Digital Roles in Newsrooms



Updated Dec. 2024

Exploring AI's Promise and Pitfalls

- Will AI replace human journalists as publishers look for more cost-effective and speedy ways to produce content?
- Will AI never be good enough (accurate, reliable, articulate) to replace humans?
- Or is it **something in between**? Can AI be used in a support role in newsrooms? (Ex. eliminating mundane tasks, translation, complex data analysis, generating graphics.)

"I think it is also a **vote of confidence for good journalism** … high quality investigative journalism is going to become that much more worthwhile."

- Dalia Hashim, Partnership on AI

"AI aggregates knowledge, and it does that relatively well. But **we still have plenty of knowledge to *generate* about the human condition**."

- Daniel Trielli

Source: Nieman Lab

What About Design and Coding?

What About Design and Coding?

- Part of better serving readers and staying relevant is producing rich, immersive and interactive stories that …
  - Incorporate video, audio, data, and more to tell stories more deeply
  - Are informative and impactful but also compelling and engaging
- This is achieved by considering:
  - The digital components (how they will be produced)
  - The design of the story (how it will be presented)
  - The “why” (what is the purpose of the story, what impact do you want it to have)
- Goal of this class is to give you some foundational knowledge and skills to do that work or effectively participate in it
- *Example: A lonely struggle: Nine mothers share the mental health challenges they faced during ‘the happiest time of their lives’ (CNN)*

How Webpages Work

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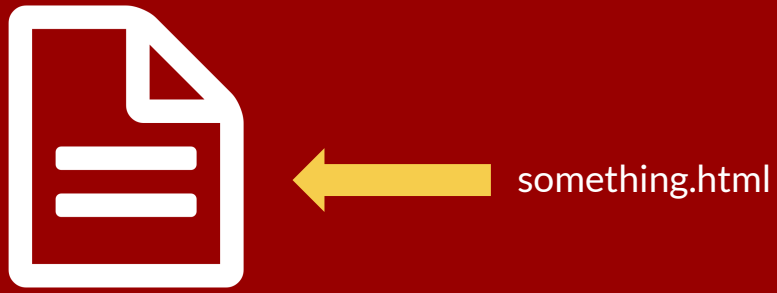
(For the most part)

A Webpage is an HTML file

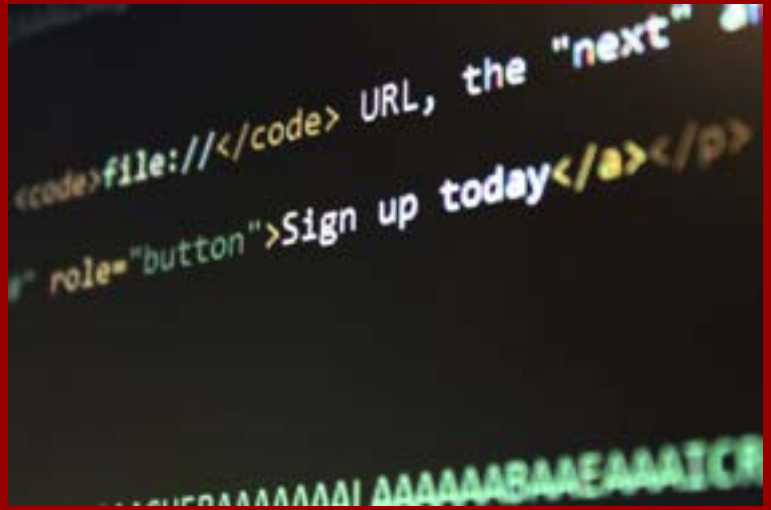


A Webpage is an HTML file

something.html

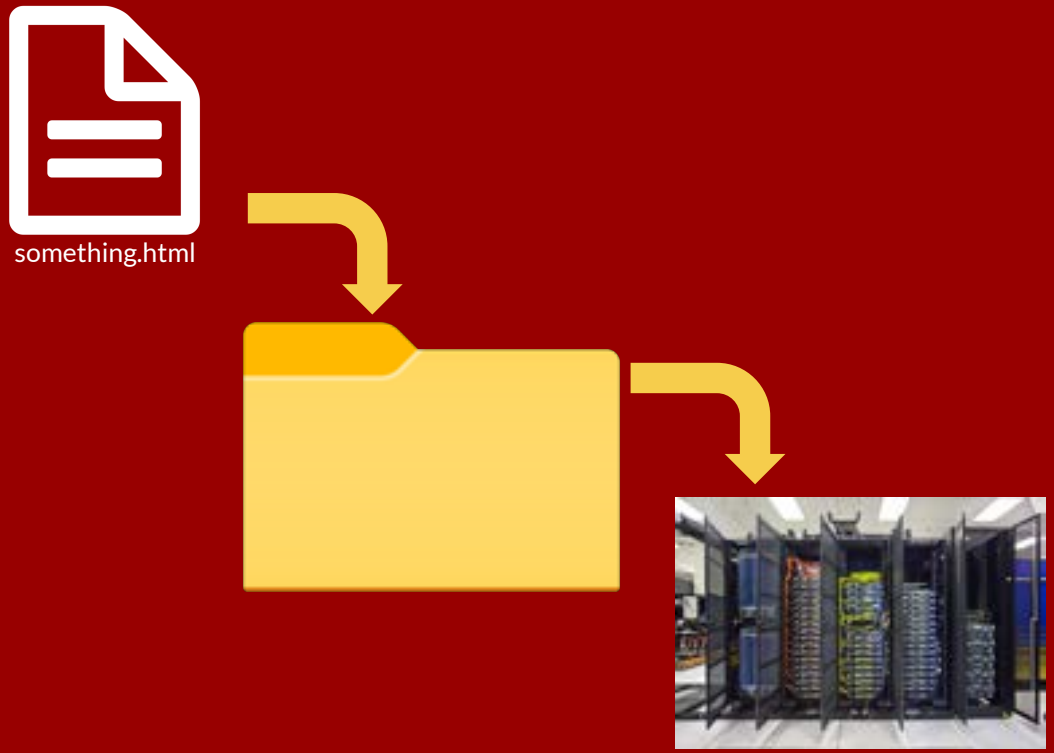
IMPORTANT: The file extension of an HTML file is .html

Inside the HTML file is HTML code



HTML (HyperText Markup Language) is a system of “tagging” that is used to give content to a webpage and instructs web browsers on how to structure that content.

The HTML file lives in a folder, the folder lives on a server



When you open a webpage, you are opening an HTML file

something.html

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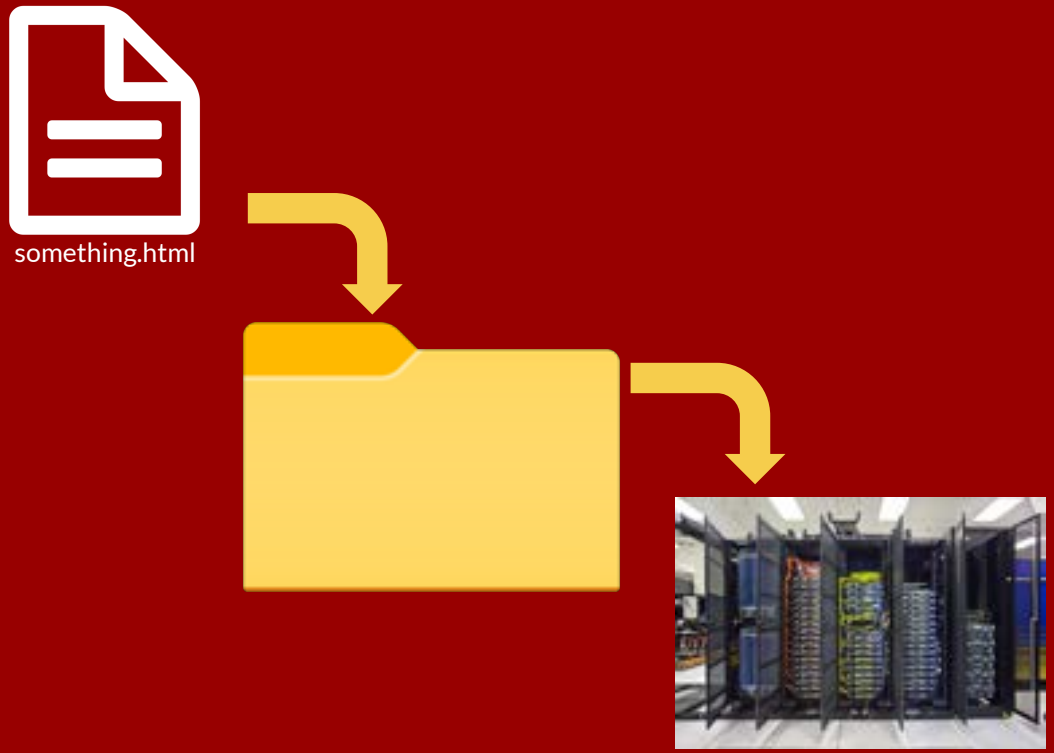
Your **web browser** (Google Chrome, for instance) will read the HTML code and display the webpage.

The HTML file lives in a folder, the folder lives on a server



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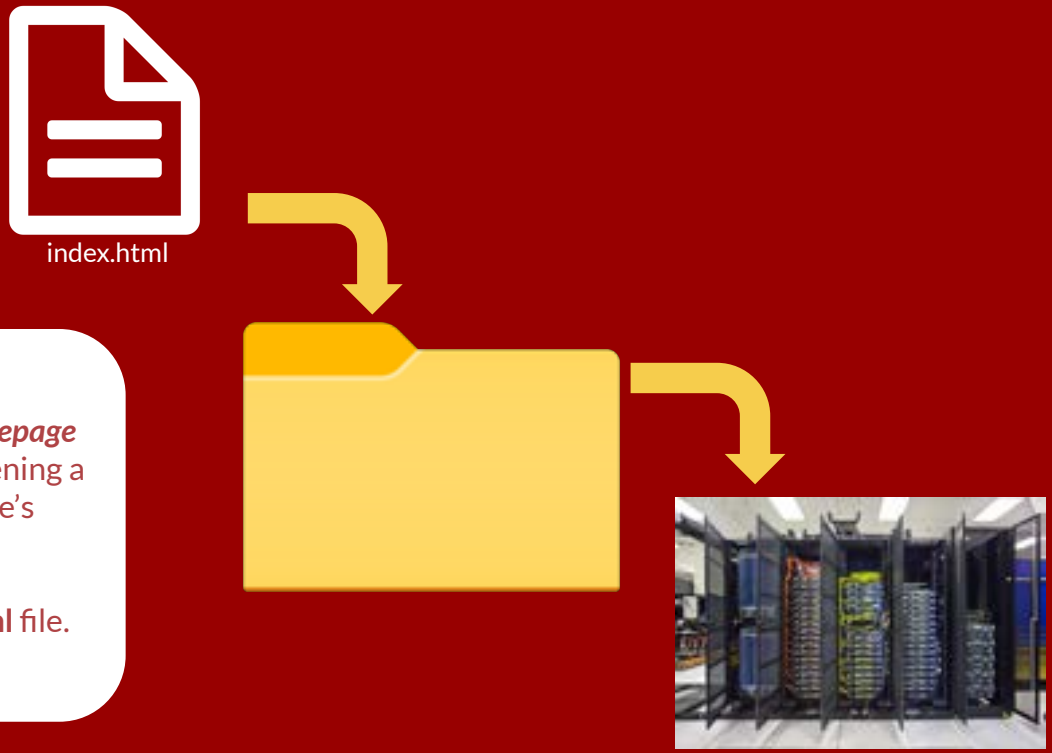


When you open the ***homepage*** of a website, you are opening a specific file in the website's main folder.

That file is the **index.html** file.

What About CSS?

The HTML provides the content and structure of the page, *CSS* styles the page

something.css

IMPORTANT: The file extension of a CSS file is .css

Inside the CSS file is CSS code

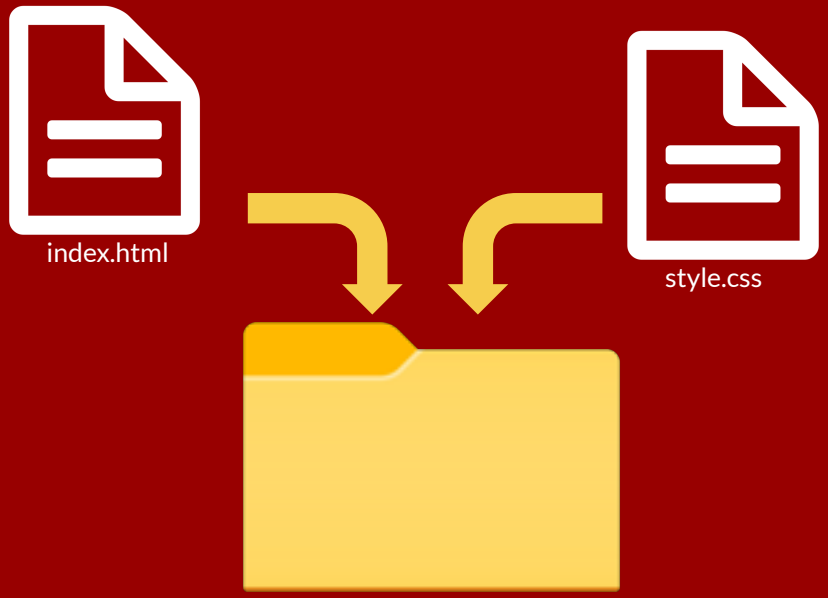
```
.screen-reader-text:hover,
.screen-reader-text:active,
.screen-reader-text:focus {
    background-color: #f1f1f1;
    border-radius: 3px;
    box-shadow: 0 0 2px 2px rgba(0, 0, 0, 0.6);
    clip: auto !important;
    color: #21759b;
    display: block;
    font-size: 14px;
    font-size: 0.875rem;
    font-weight: bold;
    height: auto;
    left: 5px;
    line-height: normal;
    padding: 15px 23px 14px;
    text-decoration: none;
    top: 5px;
    width: auto;
    z-index: 100000; /* Above WP toolbar. */
}
```

CSS (Cascading Style Sheets) is used to style and layout webpages — for example, to alter the font, color, size, and spacing of your content.

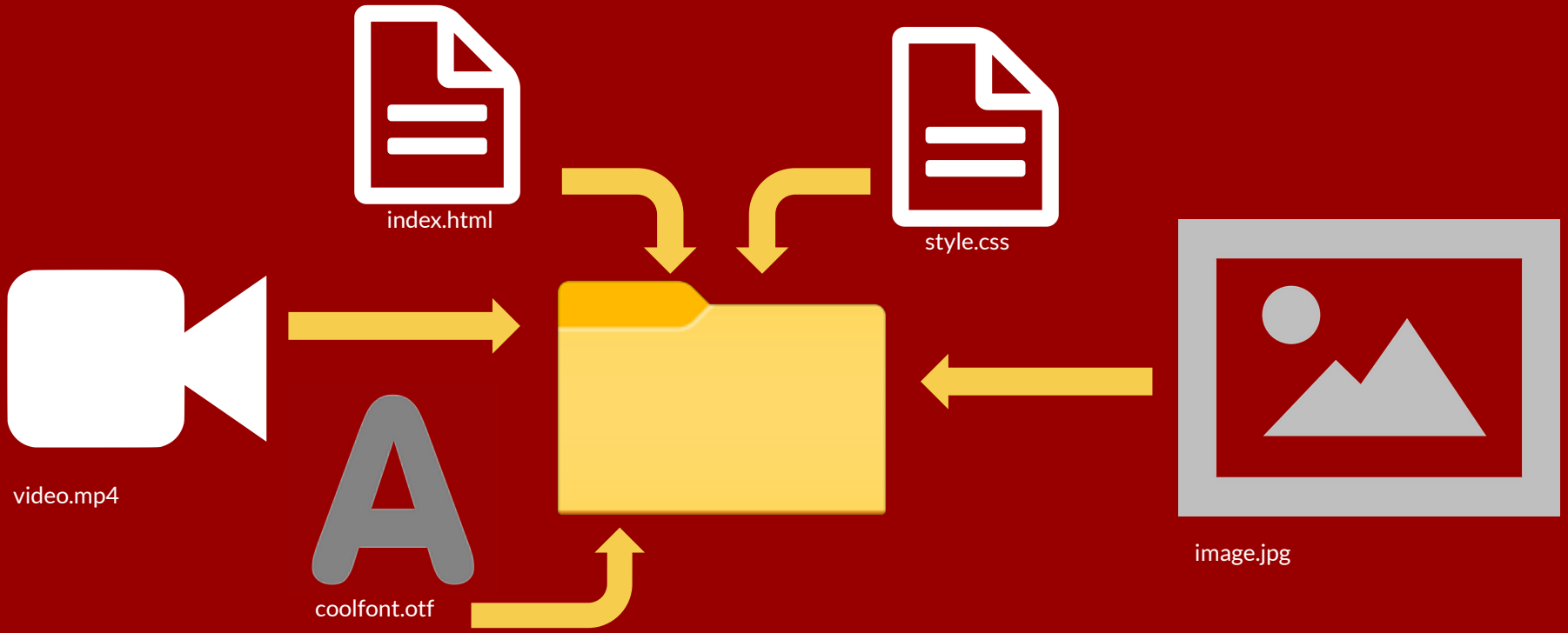
HTML and CSS files are linked

IMPORTANT: There is a **line of code** in the HTML file that links the HTML file to the CSS file.

Both files should also be in the same folder



Eventually all assets needed for the webpage should be in that folder, too



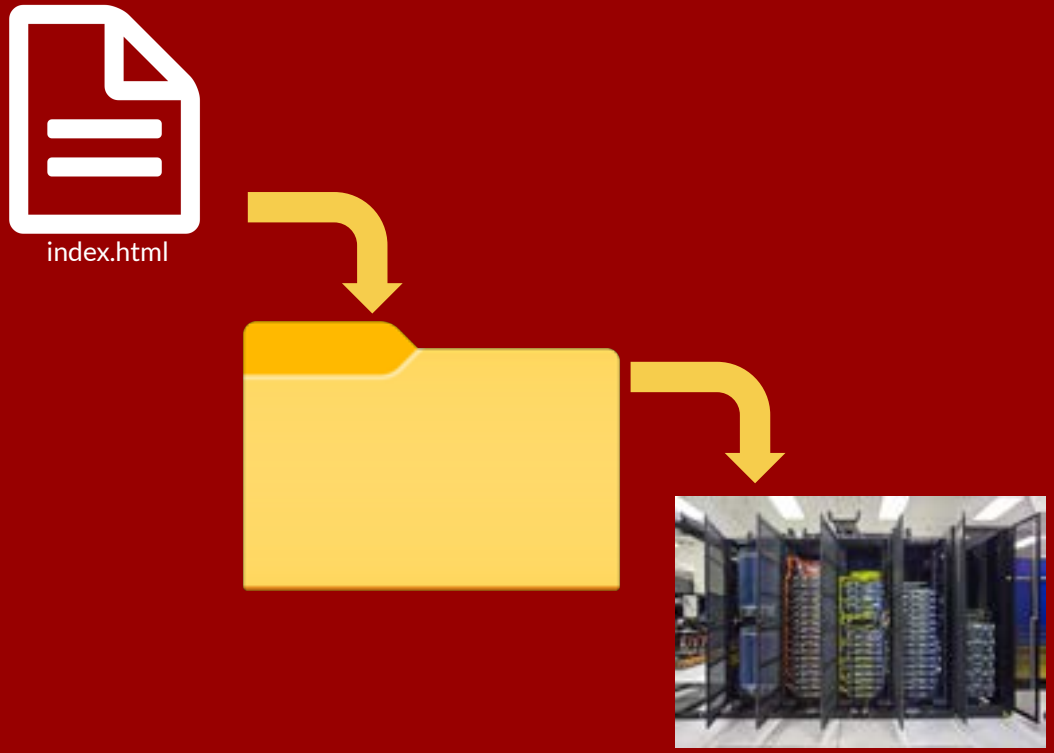
In Summary

When you open a webpage, you are opening an HTML file

index.html

=

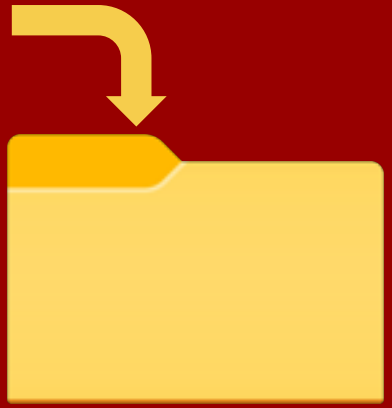
The HTML file lives in a folder, the folder lives on a server



The HTML file lives in a folder, the folder lives on a server

HTML provides the content and structure of the page.

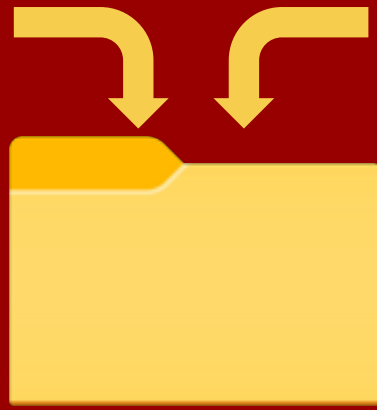
index.html



Also in that folder is a CSS file

HTML provides the content and structure of the page.

index.html



style.css

CSS styles and lays out the page.

The HTML and CSS files are linked

HTML provides the content and structure of the page.

index.html

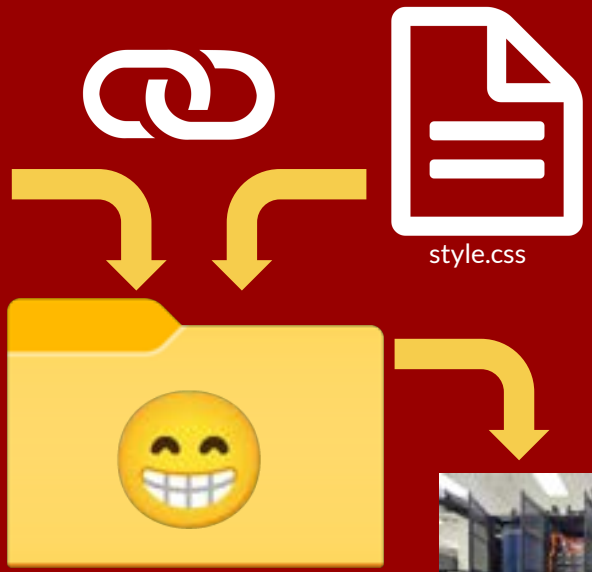
style.css

CSS styles and lays out the page.

The HTML and CSS files are linked and in the same folder

HTML provides the content and structure of the page.

index.html



style.css

CSS styles and lays out the page.

The webpage works and looks great

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Where Might Things Go Wrong?

Common mistakes

- HTML and CSS files are not in the same folder
- HTML and CSS files are not properly linked
- HTML code or CSS code is broken

HTML Anatomy

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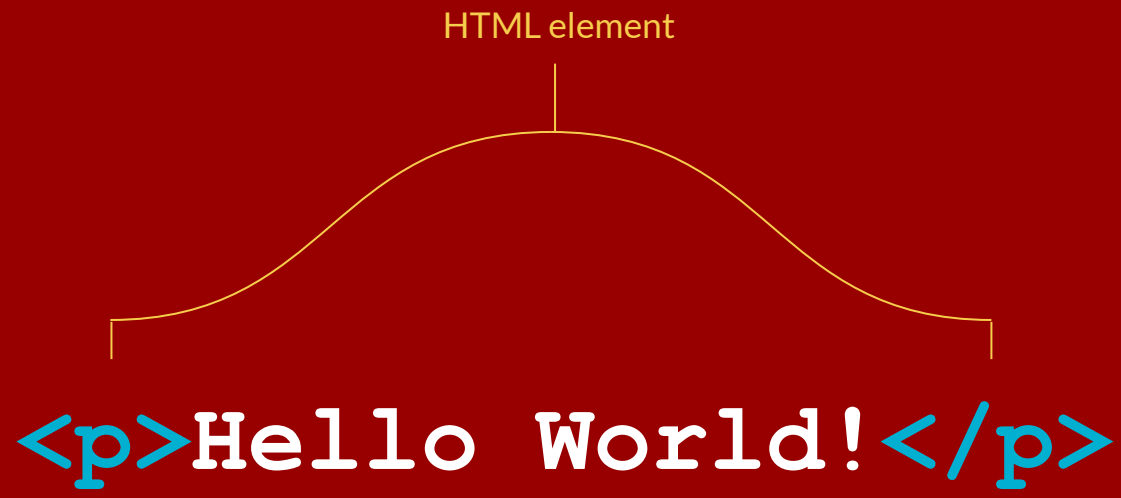
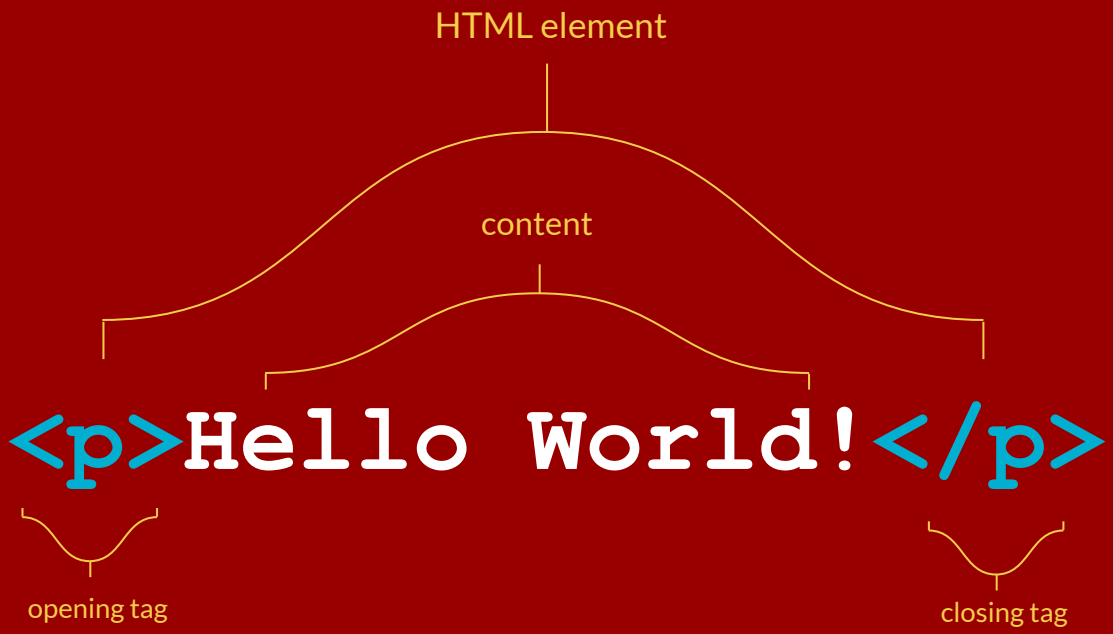
HTML elements, visualized



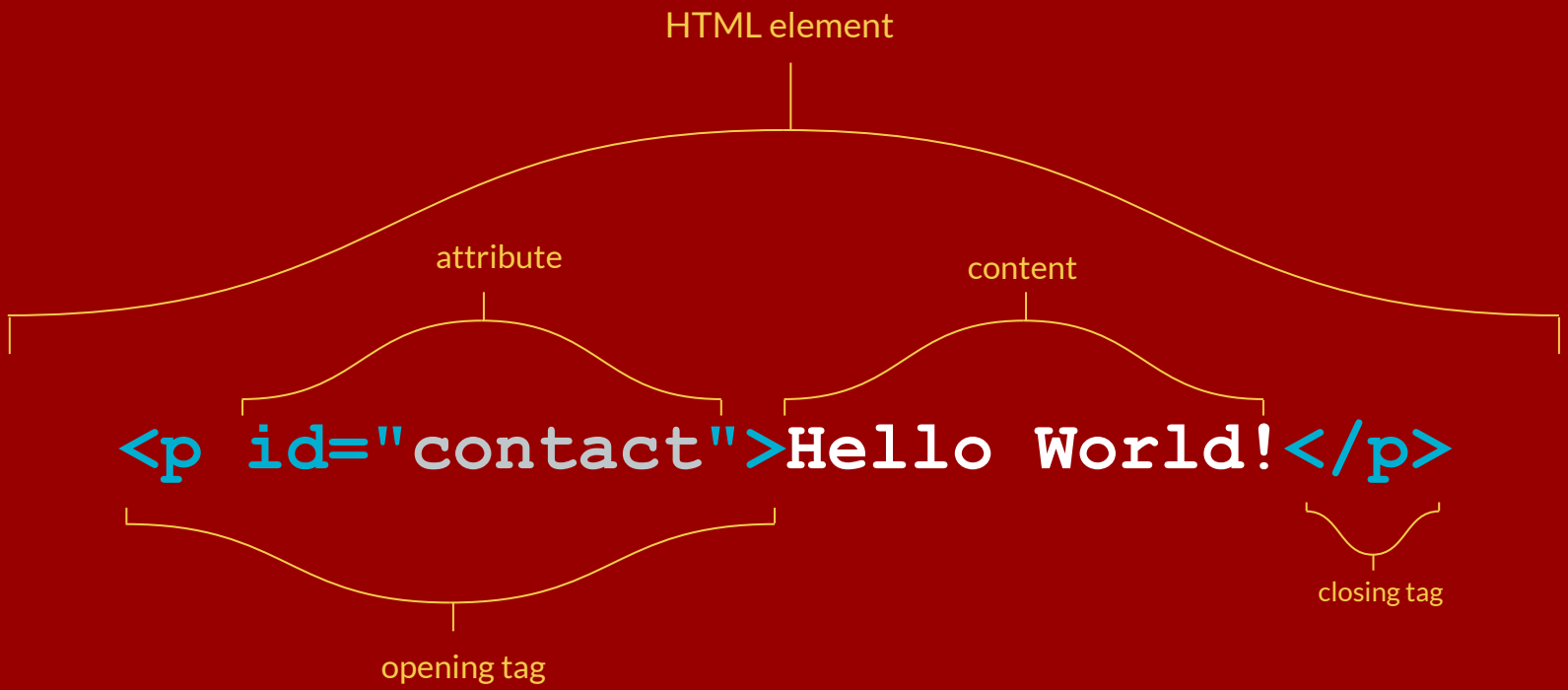
HTML elements are the components HTML. Individual elements make up an HTML document. They are the building blocks of a webpage.



Closing tags have a /

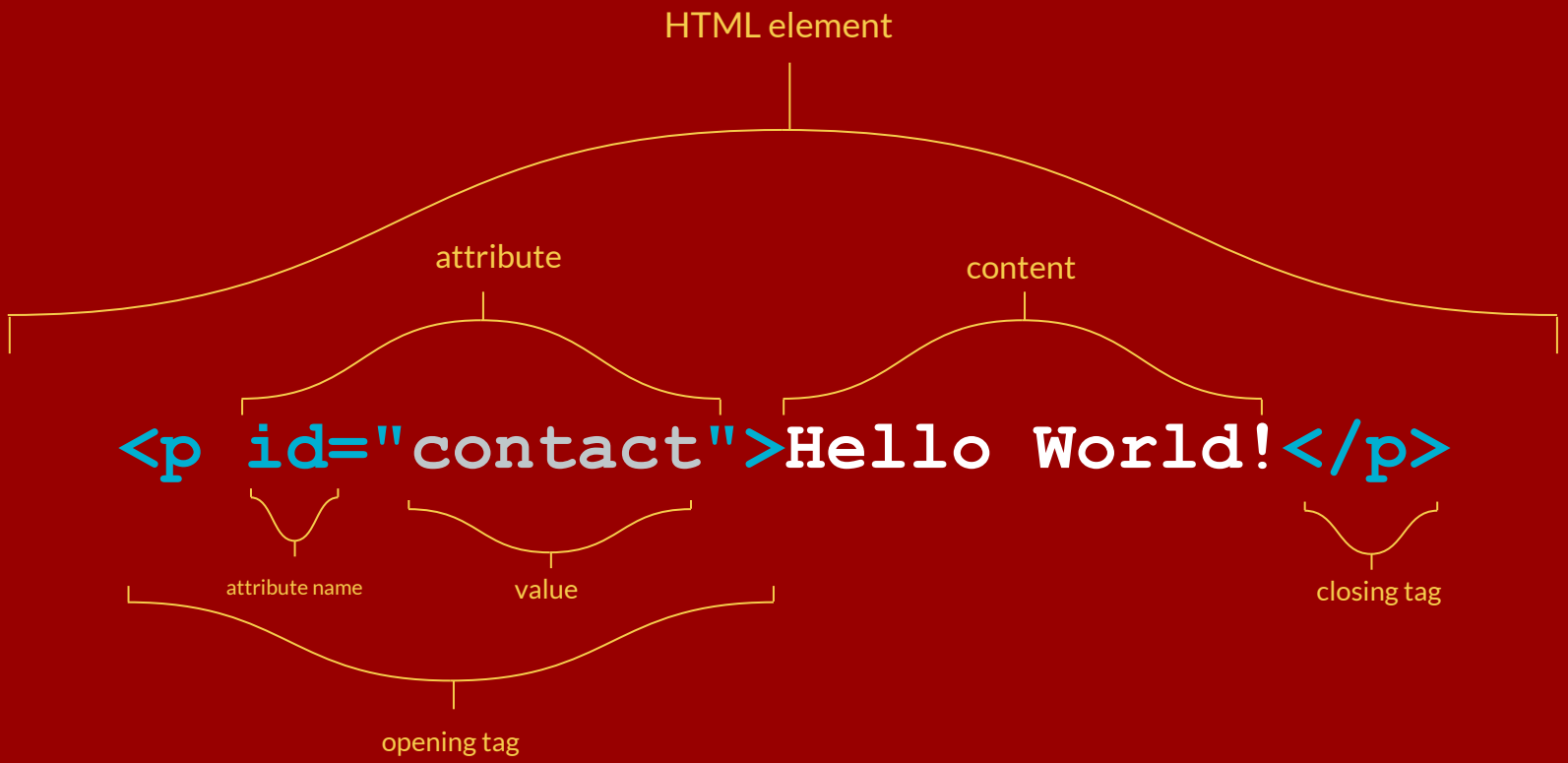
HTML elements begin with an **opening tag** and end with a **closing tag**. Between them is the content.

Attributes



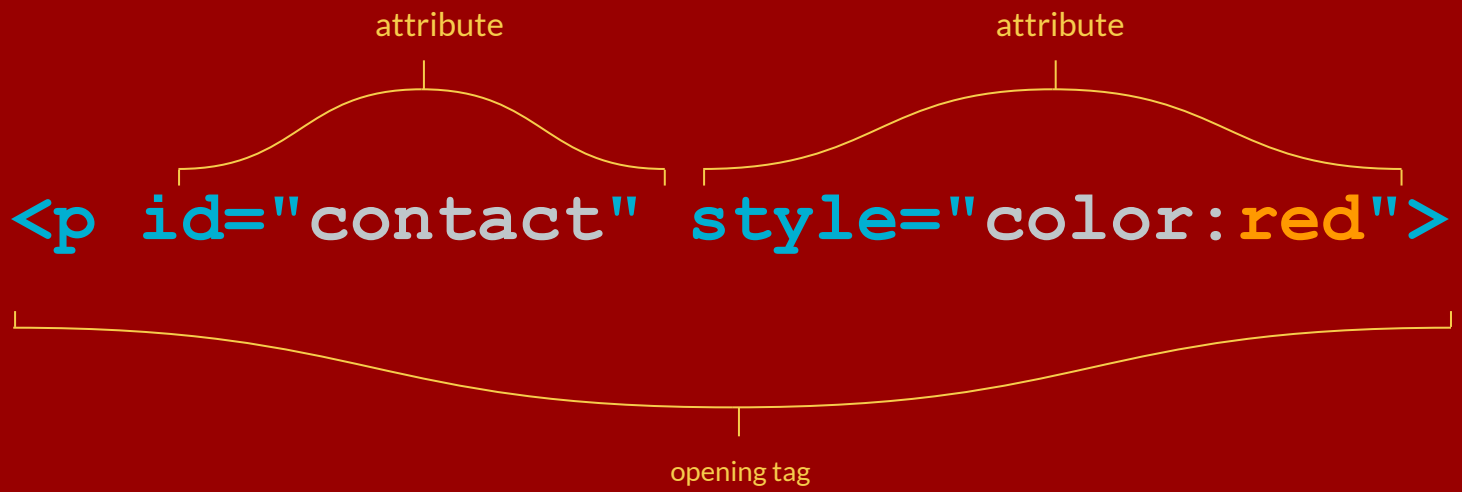
Attributes provide additional information about HTML elements.

Attributes appear within the opening tag



Attribute names and **values** are separated by an equals sign

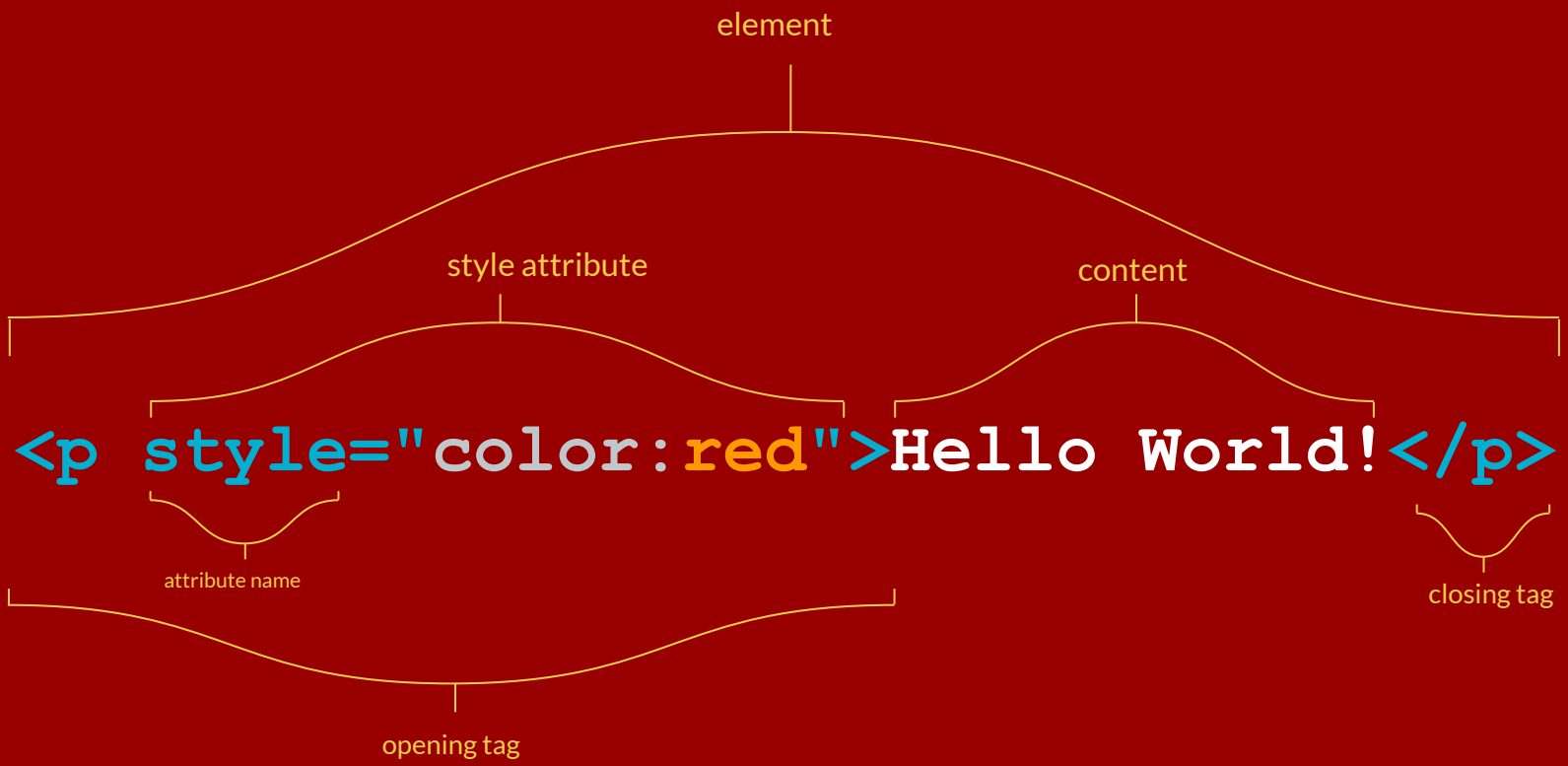
Put double quotes around the attribute value



An HTML tag can have multiple attributes

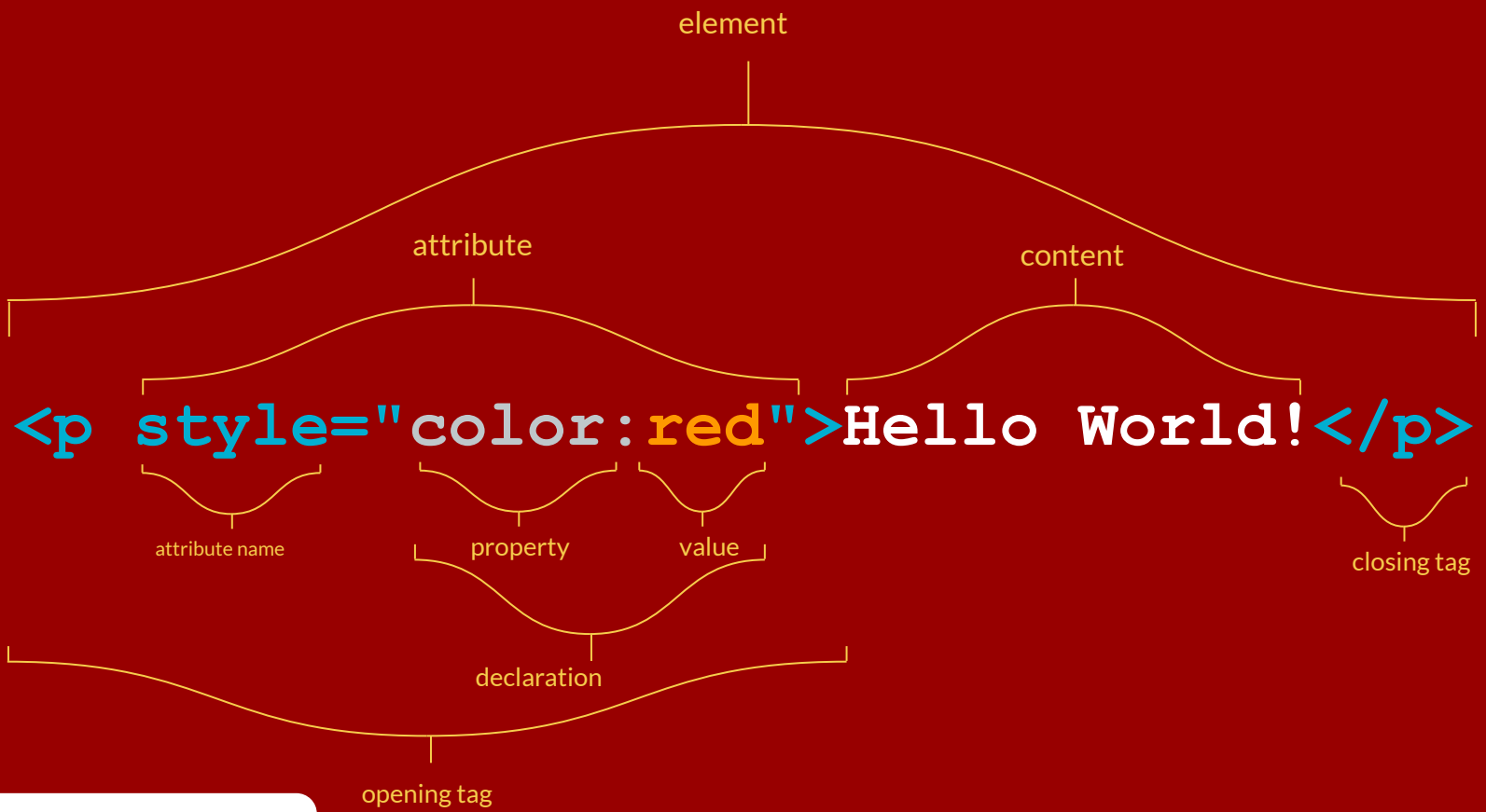
Multiple attributes are separated by a space

Style Attribute



Style attributes style the content of the HTML element

Using style attributes is called in-line styling.
Note: In-line styling is not the ideal way to style HTML.



Style attributes are followed by **declarations** that include a **property** and **value**

Use a colon to separate the property from the value

Multiple declarations are separated by a semicolon
Ex. *<p style="color:red; font-size:20px">*

Note that the quote marks go around all declarations.

Review

Simple HTML Element

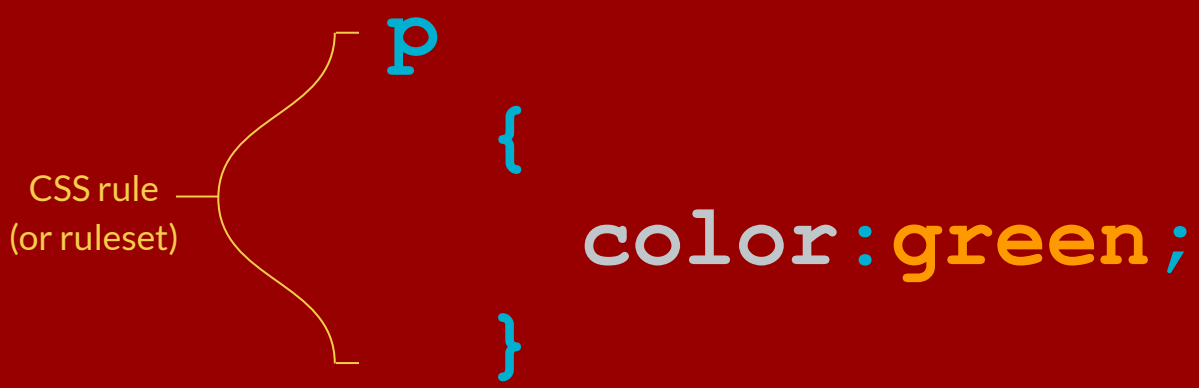
```
<p>Hello World!</p>
```

More Complex HTML Element

```
<p id="contact" style="color:red;font-size:20px">Hello World!</p>
```

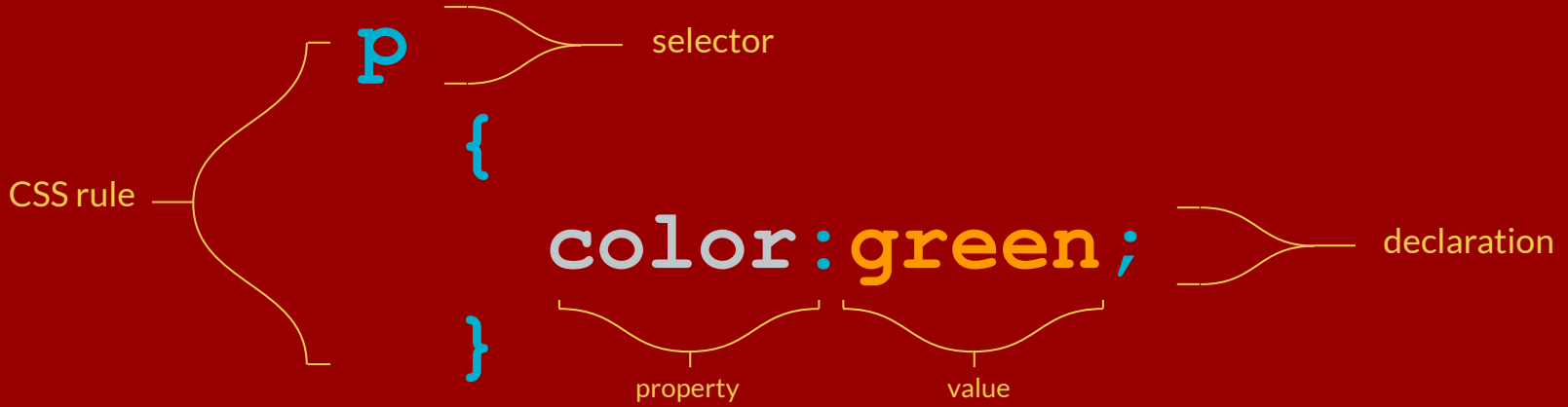
CSS Anatomy

CSS elements, visualized



CSS rules are the components of CSS. They allow you to style your HTML.

Selectors identify the element(s) you want to style

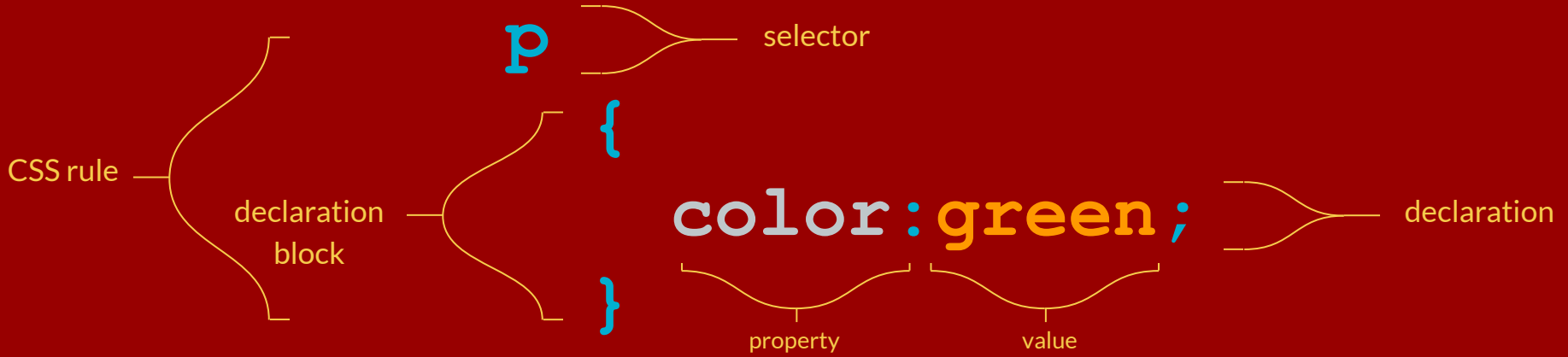


Declarations describe how you want to style the selector

Declarations include a property and value

Colons separate the property from the value

Declarations are separated by semicolons



Declarations are listed within declaration blocks

An open bracket { announces the start of a declaration block

A closing bracket } announces the end of the declaration block

Use multiple declarations to apply multiple styles to the selector(s)

Multiple declarations are separated by semicolons

A **Stylesheet** includes multiple CSS rules that apply to your whole HTML document

These are separated by line breaks/heard returns.

You can have multiple selectors in the same CSS rule

Selectors are separated by commas (if you want the style to apply to each selector)

Use this **CSS Selectors Reference** for more information on selectors

User Experience Design

—

UX, UI, User-friendliness, and User Journeys

UX = User Experience

- UX is how people interact with a product
    - Ex. When turning on a light, we interact with a light switch. The design of the switch—including the color, material, and physical appearance—may impact how we feel about the interaction.
- Term was coined in the 1990s buy Don Norman

Related reading: What Is UX Design

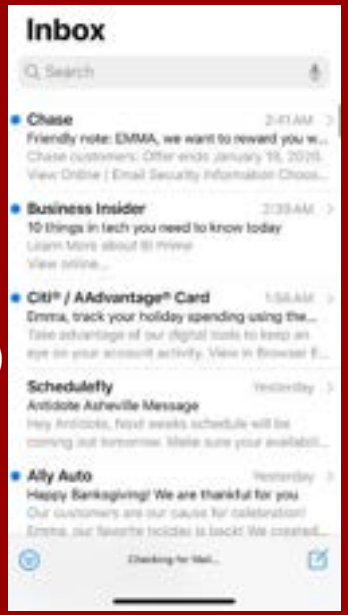
What makes a “good” UX

- **Usable**: A product needs to be simple, easy to use, and familiar.
- **Useful**: A product must fill a need. If the product isn’t filling a perceived gap in the users’ lives, then there is no real reason for them to use it.
- **Desirable**: The visual aesthetics of the product need to be attractive and evoke positive emotions.
- **Findable**: If the user has a problem with a product, they should be able to quickly find a solution.
- **Accessible**: The product or service needs to be accessible to everyone, including those with disabilities.
- **Credible**: The company and its products need to be trustworthy.

Peter Morville’s UX honeycomb

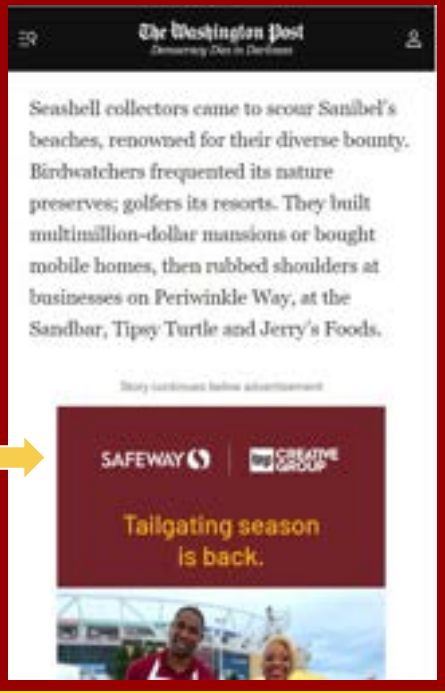
Keys to “good” UX

- **Understanding user …**
  - **Needs** (What are users trying to accomplish?)
  - **Behaviors** (What are they expecting based on their behaviors?)
- **Balancing those considerations with …**
  - **Business goals** (How can make money off product or service?)



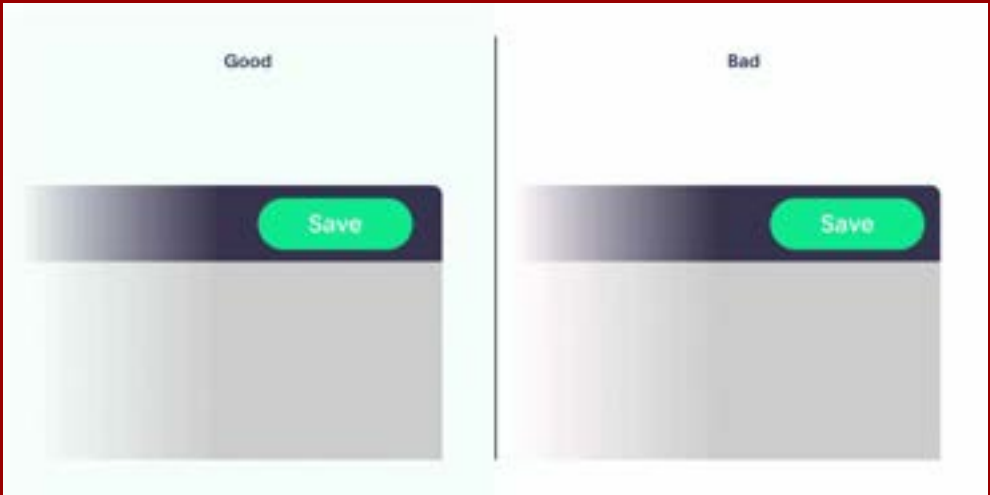
What will happen when I swipe left on a message?

What will happen when I pull down?



More Terms to Know

Good vs. Bad UI



- **User Interface**
  - The visual design that complements the UX, including colors, buttons, typography, layout, imagery, etc.
- **User Friendly**
  - Easy to learn, use, understand, or deal with; intuitive
- **Mobile Friendly**
  - Works well on a mobile device; achieves the key elements of “good” UX even on a small screen.
- **User Journey**
  - The path a user may take to reach their goal when using a particular product. It’s often useful to map this out early in the design process.

The Design Process

(There’s actually no one way to do it.)

Typical Process

1. Ideate
2. Sketch
3. Wireframe
4. Mockup
5. Prototype
6. Code
7. Launch
8. Iterate

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Ideation is when you need to think through your goals, your audience, and their needs and behaviors. Key inputs might be:

- User survey
- Competitive Analysis
- Prioritized Business Goals

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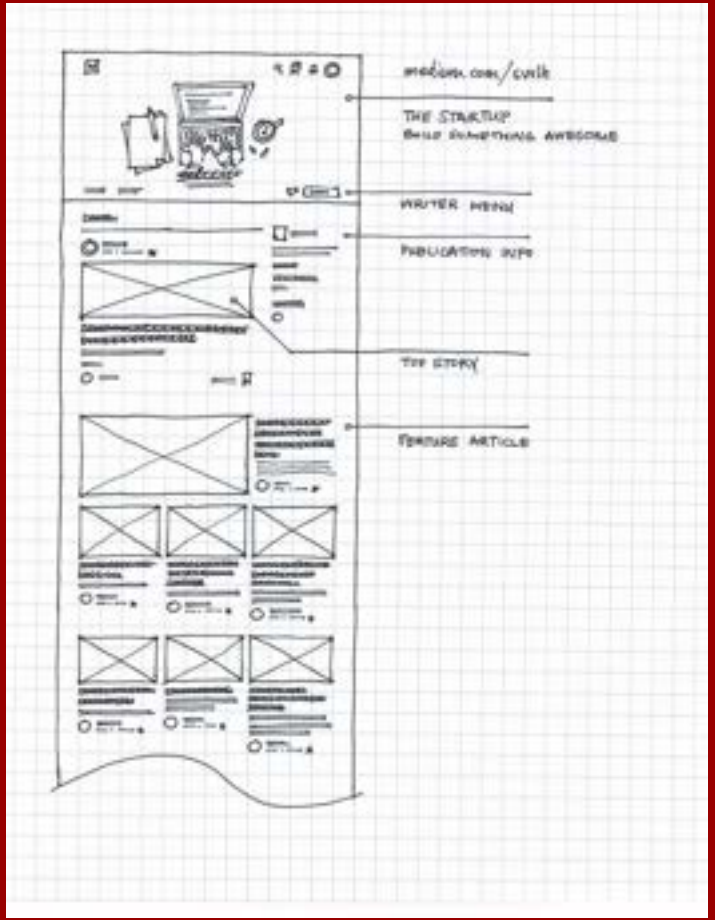

- *Namika Hamasaki*

Typical Process

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A **wireframe** is a visual representation of content layout in a design. Uses placeholders for text and images.

A **mockup** applies real content, images, colors, etc. to the wireframe. Adobe XD is a great tool for creating mockups.

Typical Process

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A **prototype** is an early sample, model, or release of a product built to test a concept.

Wireframes handle structure, mockups handle visuals, and prototypes handle usability.

Typical Process

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All along the way, a few things are happening …

- **Collaboration -** Team members gather and incorporate each others input
- **Testing** - Internal and external users are testing elements of the design, especially the prototype
- **Handoffs** - Assets are being handed off to various players in the process (ex. designers handoff designs to developers)
- **Feedback** - Stakeholders are providing feedback, sometimes in “rounds”, reacting at various stages in the design process.

Typical Process

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Your job is not over once you launch a product! Continue to learn, improve, and **iterate** on it. A/B testing is one way to do this.

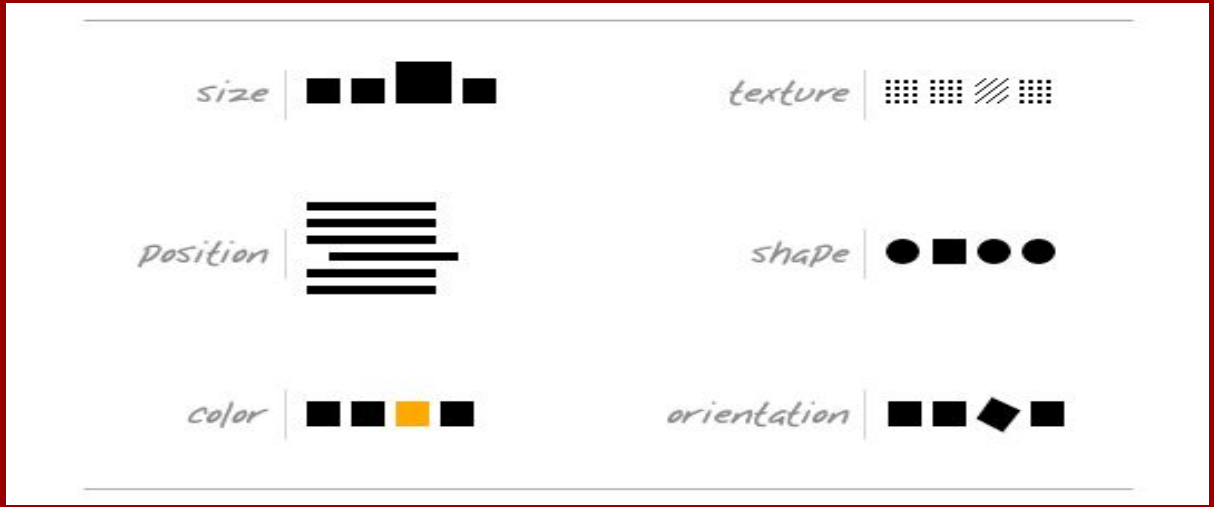
4 Graphic Design Principles

—

Contrast, Repetitiveness, Alignment, Proximity (CRAP)

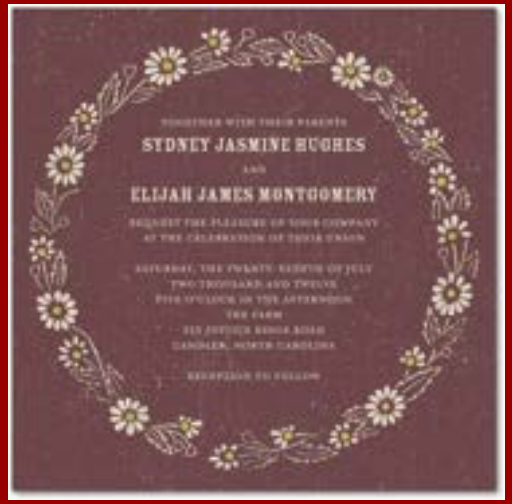
1. Contrast

- **Contrast** draws the user's attention. Contrast may be achieved using color, size, visual weight, fonts, and more.
    - Note: Too many contrasting elements can be distracting.
    - Examples of contrast



2. Repetition

- **Repetition** helps to unite a document. Repetition may be achieved by repeating fonts, styles, colors, icons, and so forth.
    - Repeat aspects of the design throughout for unity.

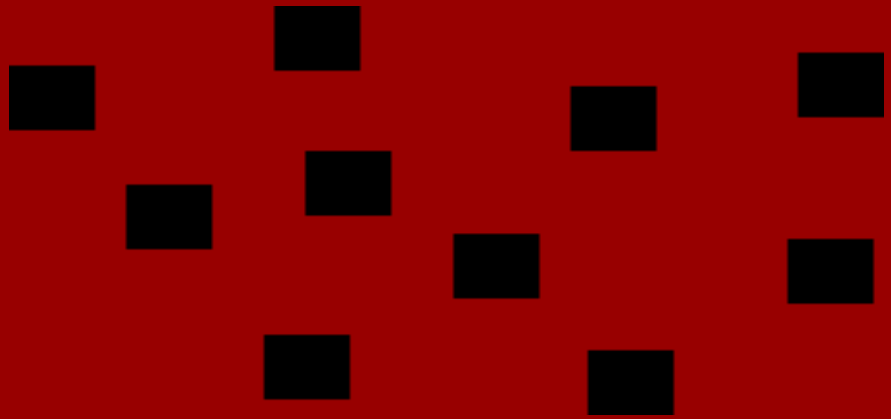


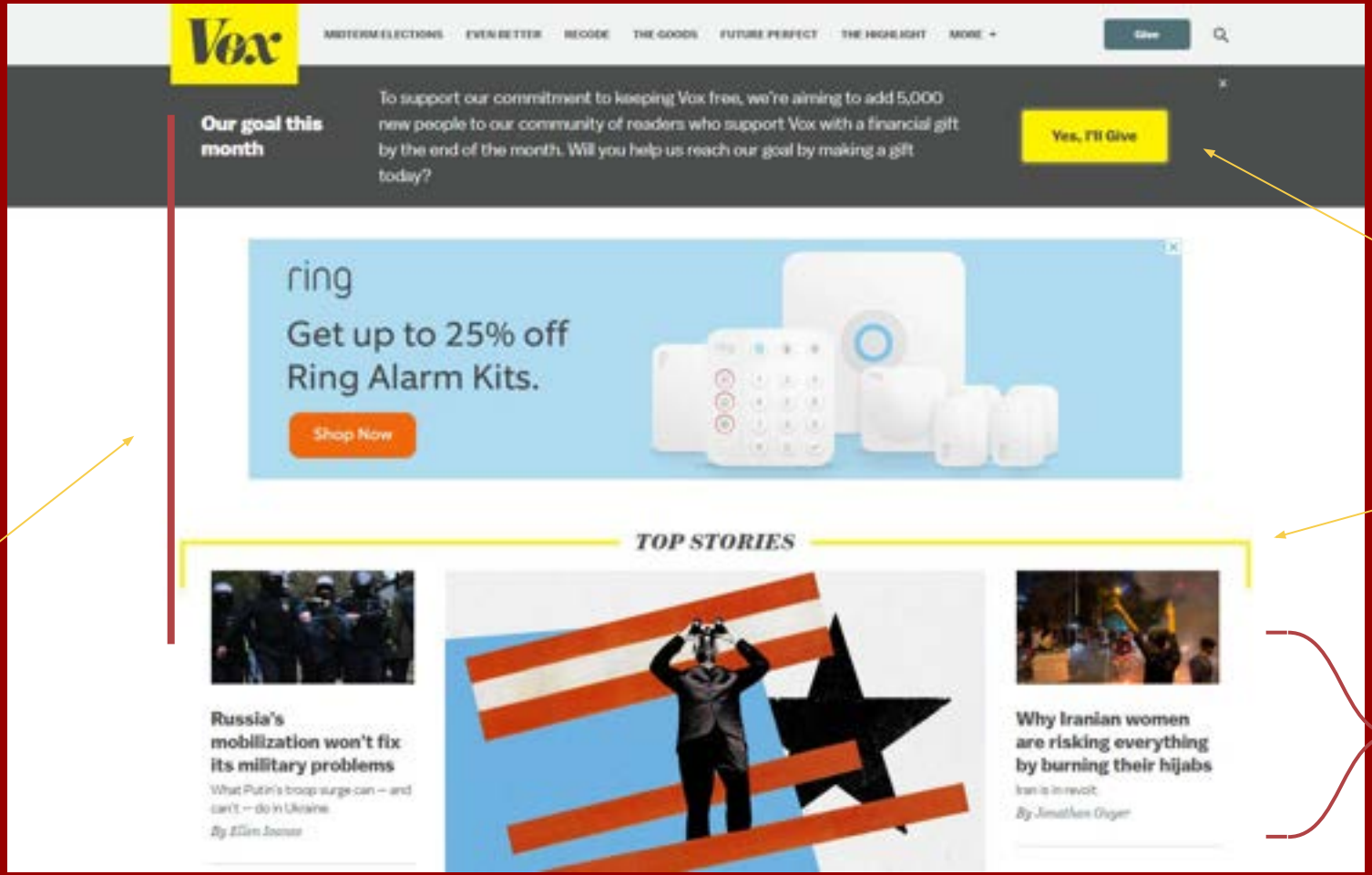
3. Alignment

- **Alignment** helps to organize information to make it easier to process. Alignment may be achieved using a grid system.
  - Nothing should be placed on the page arbitrarily.
  - Every item should have a visual connection with something else on the page.

4. Proximity

- **Proximity** helps to establish relationships between items. Items in close proximity appear related.





Contrast

Repetition

Alignment

Proximity

Color, Typography & Spacing

—

In Design and CSS

Color

Color Explainer

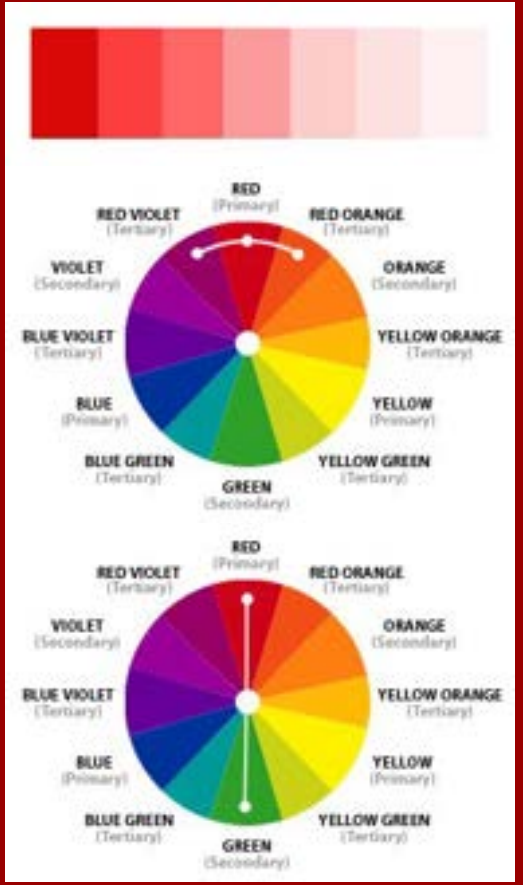
READ:

Codecademy article on color and color palettes

https://www.codecademy.com/article/f1-u6a2-design-color

Designing With Color

- A good **color palette** is a set of colors that work together harmoniously. Your palette should offer various options for different uses
- Color rules:
  - **Monochromatic** — Variations on a single hue
  - **Analogous** — Hues near or adjacent on the color wheel and variations on these
  - **Complementary** — Hues opposite each other on the color wheel and variations on these
- Consider accessibility and readability when choosing your colors
  - Ex. Choose contrasting colors for background and text
- Apply the most striking colors to the most important elements
- Similar elements should have similar colors



Color & CSS

- The “color” property controls the font color
- The “background-color” property controls the background color
- Consider hover colors
- Consider opacity
- For color values, you can use …
  - One of these 140 color names supported by all modern browsers
  - HEX values
    - Ex. #000000 = black, #FFFFFF = white

```
h1
    {
        color:green;
    }

p
    {
        color:#008000;
    }
```

Color & CSS

HELPFUL TUTORIAL:

https://www.codecademy.com/courses/learn-css/lessons/color/exercises/introduction-to-color

Typography

Typography & CSS

WATCH:

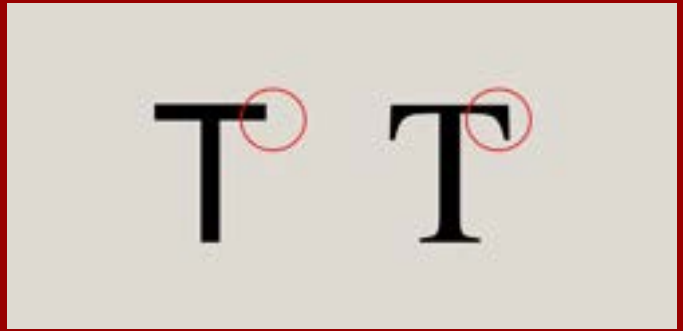
Don’t Fear Web Typography

http://www.dontfeartheinternet.com/07-web-typography/

(You only need to watch the first 8 minutes, just up until the narrator says “phew!”)

Typography in Design

- **Selecting a font**
  - Use case (heading, paragraph) and versatility
  - Serif vs. San Serif
    - Explainer article
    - Serif = more traditional
    - San serif = modern, minimal, accessible
  - Kerning/spacing
  - Size
  - Weight
  - Uppercase/lowercase



Typography & CSS

- **Typography properties**
  - Font-family
    - Note: Always set a fallback
  - Font-weight
    - Lighter, normal, bold, bolder
    - 100-900
  - Font-size
  - Text-transform
    - Lowercase, uppercase, capitalize
  - Letter-spacing (space between letters)
  - Line-height (space above and below letters)
  - Text-align
    - Left, right, center, justify

Typography & CSS

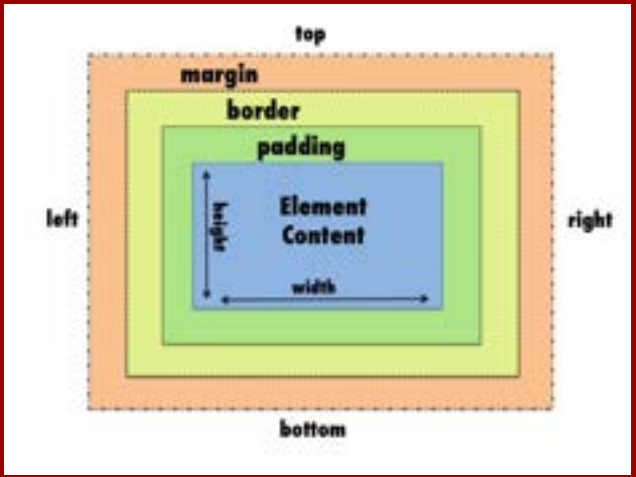
- **Font options**
  - Web safe fonts
  - Imported fonts **(@font-face)**
  - Google fonts
  - Adobe fonts
- **Font pairings**
  - Two complimentary fonts that work in tandem. Usually one is for headings, the other for content.
  - Helpful links:
    - https://heyreliable.com/ultimate-google-font-pairings/
    - https://www.fontpair.co/
    - https://www.typewolf.com/

Spacing

Spacing in Design

- Spacing is the negative area between elements
- It is controlled by adjusting placement, dimensions, padding and margins
    - **Dimensions** refer to the width and height of elements
    - **Padding** is the space between elements within a component. Padding can be measured both vertically and horizontally
    - **Margins** are the space between components, the layout of a page also typically has margins

The Box Model



Spacing & CSS

READ:

CSS Box Model

https://www.w3schools.com/css/css_boxmodel.asp

Spacing & CSS

- **Spacing properties**
  - Width
  - Height
  - Padding
    - Can be a single measurement
    - Padding-left, padding-right, padding-top, padding-bottom
    - Or padding shorthand (0px 0px 0px 0px)
  - Margins
    - Can be a single measurement
    - Margin-left, margin-right, margin-top, margin-bottom
    - Or margin shorthand (0px 0px 0px 0px)
  - Float
    - Left, right