week::two
Understanding the Medium of Web Design

Display Mechanism: The Digital Display

Uses additive color model

- Uses RGB (red, green, blue) pixels to create images on screen.

Base unit is a pixel

- Technically, a “subpixel” is the base unit (see colors to the right), but we can only work with whole pixels.

Resolution is lower than print, but it’s catching up

- Default assumption of pixels-per-inch is **96ppi**.
- Again, mobile devices and HiDPI displays are changing this (iPhone 12 Pro’s screen resolution is 460ppi)

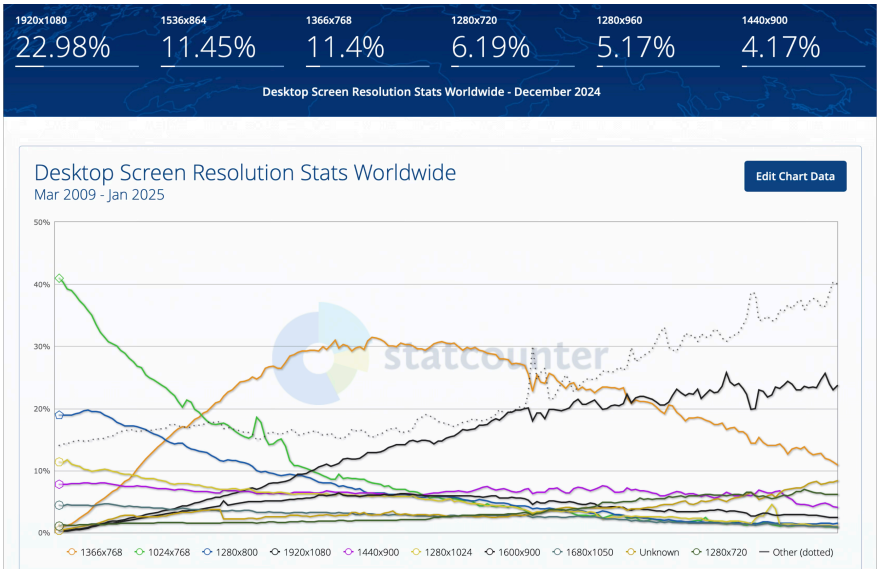
Pages are rendered on the fly, and presentation varies depending on a number of factors:

- Device type (desktop, tablet, smartphone, TV, gaming console, etc.)
- Operating system (Mac, Windows, Linux)
- Web browser maker (Safari, Chrome, Firefox, Microsoft Edge)
- Web browser version (6.0, 7.0, 8.0, etc.)
- User preferences (adjustments to the default typeface, size, colors, etc.)

Page Dimensions

Understanding page width

- Unlike print, you do not know the final size dimensions of the medium that will display the work. The end-user makes this determination.
- Example of variability of device widths (as of January 2025):



- Common width techniques include
  - **Fixed:** Page content width is always one size
  - **Liquid:** Page content width scales with the screen width
  - **Responsive:** Page content adapts and reformats as the page width scales

- Most sites use a combination of Responsive techniques with a fixed maximum width for the content area of a design.
- Designers currently use **between 960 and 1,100 pixels** as the maximum width of most Web content designed for desktop browsers.
- When you specify sizes in pixels, you are addressing the *virtual pixels*, not the actual display pixels.
- Overall page must display well when more width is available.
- Why focus on mobile?
  - More than half (58%) of all browsing is done on a mobile device.

Page length is unlimited

- It is a given that most Web pages will scroll vertically.
- Vertical space is “free” and (technically) unlimited.
- In most circumstances, there is no need to use the “page 1 / page 2” metaphor

Both width and length can change at any time

- For mobile devices, display orientation can change at any time.

Cascading Style Sheets

Why Learn CSS?

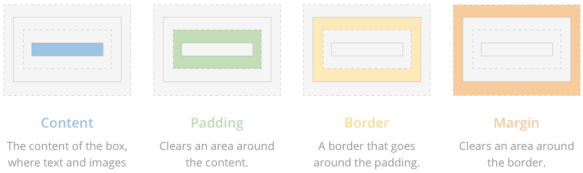
- Understanding HTML and CSS helps tremendously in web design work that doesn’t even require one line of code.
- The best web designers I have known also knew at least some HTML and CSS.
- They represent the final representation of your designs—it only makes sense that you have some knowledge of how these “materials” come together to create the final product.
- You wouldn’t design something in a physical medium like tile, wood, or metal without having some understanding of the physical qualities of the material.

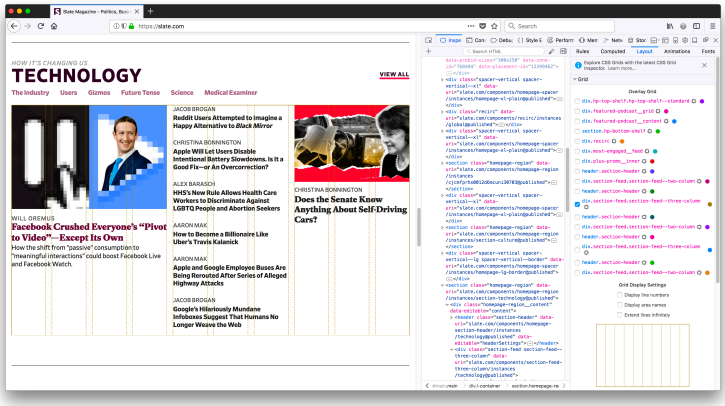
A web classic: CSS Zen Garden

- http://www.csszengarden.com/

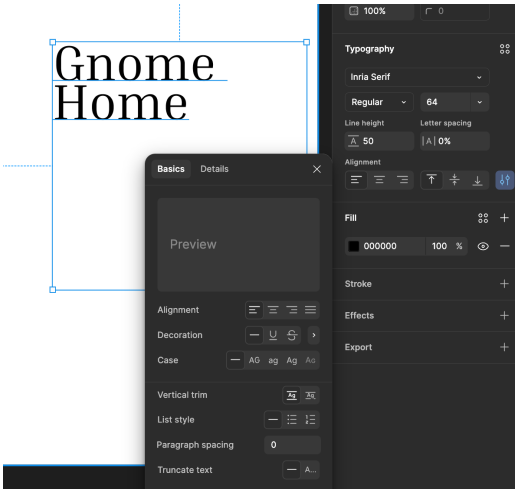
CSS Layout — Floats, Flexbox & CSS Grid

- Everything is a Box
- Space Around Objects
- Borders
  - You can control Color, Thickness, & Style
- Aligning items to a grid
- Flexible, responsive Web design
- CSS Grid





Web Typography Primer



Things you can control

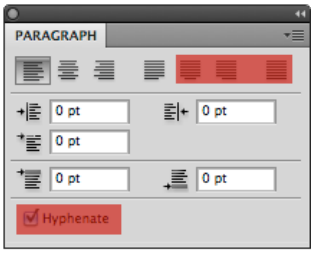
- Typeface (see below) & Type size
- Color (both foreground and background)
- Leading (line-height)
- Font weight & style
- Tracking (letter-spacing)
- Word spacing
- Character case (Uppercase, lowercase)
- Text shadow (blurred or not)
- Alignment

Example: Figma

- Figma only allows options that work in CSS.
- It also includes the full listing of fonts available on Google Fonts.

Example: Photoshop

- Character and Paragraph Panels—not always a good match for Web design.
- Highlighted panels can NOT be used in Web design:



Some CSS Design Options

Rounded rectangle borders

Box shadow

Text shadow

Colors can be semi-opaque (opacity)

Complex gradients

Interactivity

Web sites *respond* to user action—they interact with your design

Interactivity & Animations

- :hover changes (mouse)
- :active changes (touch)
- Transitions
- Animations
- Can be mocked-up in Figma using the Prototype mode