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IT 161 - Web Authoring

**Introduction to CSS, Part 2 - Carrie Dils**

***Common CSS Concepts***

1) [True or False] By default, backgrounds extend all the way to the inside edge of the element’s border.

True

2) [True or False] By default, backgrounds are transparent.

True

3) [Critical Thinking] Why does the author choose to hide the text of his heading tags from visible view while showing an image instead?

This method allows for a site to display a logo in place of text as a site’s title whilst keeping the textual information for screen readers and to improve SEO.

4) The CSS color property is used to define the color for the content of the element. In the case of a p tag (paragraph) what will this property effect?

The color of the text

5) [True or False] Absolute values are good for devices in which the exact size is already known, for example a printer.

True

6) [True or False] An advantage to using the relative value em is that the starting size of the text is up to the device itself. As the user changes the resolution, the relationship of the sizes based on ems will stay exactly the same.

True

7) [True or False] Pixels are calculated relative to the parent element.

False

8) [True or False] According to our author normal document flow can and should handle the majority of our layout needs.

False

9) Which value of the position property removes an element from normal document flow and repositions the element based on top, right, left or bottom offset values?

Absolute

10) [True or False] To determine its position, an absolutely positioned element looks to the nearest parent element that has positioning. If no elements are positioned above it, it looks to the body tag for positioning.

False

11) [True or False] Fixed positioning is similar to absolute, but the position is always relative to the active viewport, not the parent element.

True

12) Which CSS property controls allow positioned elements to stack (appear on top of) other elements?

z-index

13) [True or False] When we float an element, it moves as far over as it can, either to the right or to the left, and the elements below it move up to take up the space the floated element used to occupy.

True

14) [True or False] When we float an element, we essentially remove it from normal document flow.

True

15) [Critical Thinking] If we wish the text in a paragraph tag to wrap to the left on a floated image, what value do we set to the float property of the image?

float: right;

16) Which flexbox child property places child elements one on top of each other? (vertically)

flex-direction: column;

17) While the grid layout is a powerful tool, it may not be fully supported by all browsers at this time. The author mentioned a couple of tactics to use grids with browsers that don’t fully support grids at this time. Name 1.

Using flags in older versions of Firefox/Chrome e.g. the “layout.css.grid.enabled” flag

***Working with CSS***

18) According to the author, what is an advantage of using lots of comments in our CSS?

It helps make code easier to understand and read from a programmer’s perspective.

19) [Critical Thinking] What is an advantage of grouping related styles in the same place?

Keeps similar items grouped in a logical flow so it’s easier to know where to find different items.

20) According to the author, why should we consider splitting our CSS into multiple files?

If we have a lot of CSS code, it helps to separate into smaller and more manageable blocks of related code than to have to scroll through one long document to find a style.

21) What does the author do to inspect an element on a page?

Select an object, right-click, and select Inspect (in Chrome or Firefox)

22) What does a code linter do?

Cleans and validates code

***Responsive CSS***

23) [Critical Thinking] In the video the author flexes the screen to approximate what the page would look like on a mobile phone. Would this be sufficient to determine how the page would work for a phone? If not, why not?

No, because phone browsers and operating systems vary from what you use on a computer or laptop.

24) [Critical Thinking] Write the exact syntax of a media query that allows you to write styles for all screens smaller than 600 pixels.

@media only screen and (max-width:600px) { CSS styles here }

25) What does the author mean by mobile-first?

The author is referencing a style of web development that keeps mobile devices in mind before all other devices and gives them the highest level of importance. This means styling for mobile devices is primary while devices like tablets and desktops come secondary or tertiary.

***Going Further with CSS***

26) [Critical Thinking] When should we consider using a CSS framework instead of creating our own CSS?

When producing large-scale sites, speeding up development, or learning more about CSS

27) According to the author, what is the biggest reason to use CSS pre-processors?

Pre-processors save lots of time

# Video Notes

***Common CSS Concepts***

[Borders and backgrounds (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/borders-and-backgrounds) - 5:59

* Borders define outside edge of elements
  + Affects overall width of element
    - Begins from padding and extends outward
  + Defined by 3 properties: style, width, color
    - Shorthand notation prevents border property syntax from being ultra long
      * use: border-side: width, style, color
      * instead of: border-top-style, border-top-width, border-top-color
* Border vs. Outline:
  + Outline always goes around all sides of an element
  + Not part of box model
    - Doesn’t affect positioning of element or nearby elements
  + Often used for accessibility
* Background area
  + Extends all the way to inside edge of an element border
  + Default backgrounds are transparent
  + Can be used to display solid colors, gradients, or images
* Text indent can be used to push text off-screen
  + Keeps text on page for SEO while displaying logo for other users

[Working with color (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/working-with-color) - 4:13

* Can be defined by hexadecimal notation, RGB color notation, or HSL notation
  + Hexadecimal uses hexadecimal notation to represent RGB values
    - Shorthand notation allows pairs of matching values to be shortened
    - e.g. #667788 = #678
  + RGB is additive
  + HSL (Hue Saturation Light)
* Transparency can also be applied to elements
  + Opacity - applies to entirety of element (including borders and outlines)
  + RGBA and HSLA allows independence of transparency by applying inline with color property

[Units of Measurement (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/units-of-measurement) - 3:07

* px (Pixels)
  + Absolute (fixed) value
  + Used to define height and width values
* em
  + Relative value (to font-size of ***parent*** element)
  + Roughly equal to value of text at default size
  + Starting size of text depends on device/user agent
* rem (root-em)
  + Relative value (to font-size of ***root*** element)
  + Offers more predictable control than ems
* percentages
  + Used for responsive layouts
  + Typically used for block-level elements than font-sizes

***CSS Layouts***

[Element Positioning (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/element-positioning) - 5:46

* Allows you to control position relative to viewport or other elements
* Normal flow
  + Browser default layout - nothing is done to control element positioning by programmer
* Element flow
* Relative positioning:
  + Moves elements based on offset values given
  + Other elements don’t move to fill in empty space left by elements
  + Moves elements with their parents
* Absolute positioning:
  + Removes element from normal flow based on offset values given
  + Other elements move to fill in empty space left by elements
  + Viewport is used to position element
* Fixed positioning:
  + Element position is fixed in certain location relative to viewport
  + Scrolling won’t change position
  + Sometimes called “sticky menu”
* Element stacking
  + z-index allows manipulation of foreground/background

[Floats (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/floats) - 3:18

* Floating is based upon relationship of elements being floated
  + Text floats around floated text
* Floated elements move as far left or right as possible
  + Elements below it move to occupy the space that was once occupied by a floated element
    - Elements may also move *underneath* floated elements
  + clear property prevents elements from floating

[Flexbox (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/flexbox) - 2:21

* Flexible Box Layout Model (Flexbox)
  + 1-dimensional layout model ensuring predictable layout on varied screens
  + Determines location based on Main and Cross axes
    - Flex-direction determines if main axis is horizontal (row) or vertical (column)
  + Not ideal as *full* page layout system by itself

[CSS Grid Layout Module (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/css-grid-layout-module) - 2:25

* Most powerful way to define layout thus far
* 2-dimensional grid-based layout system
  + Children of grid container can be positioned into arbitrary slots in predefined flexible or fixed-sized grid layout
    - Programmers can “draw” grids and place content as desired
  + Any element with display property set to grid
    - display: grid;
  + Grids have rows, columns, grid lines, grid tracks (space between two grid lines), grid cells, grid area (any area defined by four outer lines, can contain multiple cells)
* Grid works well with flexbox, but is not supported by many browsers yet
  + Can still use vendor prefixes in Microsoft browsers or browser flags for older versions of Firefox/Chrome
    - Firefox/Chrome
      * layout.css.grid.enabled flag

***Working with CSS***

[Organizing CSS (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/organizing-css) - 4:02

* Using comments liberally improve the legibility of code
* Use consistent naming conventions
  + Consistent prefixes for css class names
  + [Evolution of CSS: Class Naming Methodologies](https://webdevstudios.com/2017/03/28/evolution-css-class-naming-methodologies/)
* Consider splitting up files depending upon how much code you have

[Using browser inspection tools (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/using-browser-inspection-tools) - 2:22

[Validating CSS (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/validating-css) - 2:05

* CSS beautifier tools help make formatting consistent

***Responsive CSS***

[Introduction to responsive web design (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/introduction-to-responsive-web-design) - 2:40

* Google announced in 2015 it would penalize sites that weren’t mobile-accessible

[Working with media queries (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/working-with-media-queries) - 2:17

* Media queries allow programmers to select when to show portions of CSS depending on device
  + @media not|only mediatype and (media feature) {CSS here}
  + @media only screen and (min-width:800px) {CSS code here}

[What is mobile first (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/what-is-mobile-first) - 1:51

* Mobile first approach puts mobile device layouts first in priority
  + Determines smallest amount of data necessary for a site to run on a small device with limited bandwidth

***Going Further with CSS***

[CSS frameworks and grids (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/css-frameworks-and-grids) - 1:23

* Similar to reset and normalize codes
* Framework is collection of CSS files that contain commonly used styles
* CSS Grids are similar, but focus explicitly on grids
  + Does not refer to Grid Layout Module
* Designed to help speed up web development

[CSS Preprocessors (Links to an external site.)](https://www.linkedin.com/learning/introduction-to-css/css-preprocessors) - 2:16

* Preprocessor is a scripting language that extends CSS
  + Compiles CSS
  + Gives access to variables, mixins, nested selectors, and functions
  + Makes CSS more efficient to write, maintain, and scale
  + Biggest advantage is that it saves time