Module 4 Day 3

CSS Grid Layout

Aside: CSS Variables

- Used to apply styles consistently and make change easier

```css
style.css ▸ body
1   :root {
2       --top-row-height: 120px;
3       --gutter: 20px;
4       --highlight-color: #00adee;
5       --bg-color: rgba(192, 192, 192, 0.1);
6   }
7
8   body {
9       background-color: var(--bg-color);
10      color: var(--highlight-color, darkblue);
11  }
```

Grid Container

- Usually used to divide a page into sections

- Setup a *Grid Container*

    display: grid;
    grid-template-columns: 100px 1fr 1fr 1fr
    grid-template-areas: ". name1 name2 name3"

    ". name4 name4 name4"

    grid-gap: 10px; /* or grid-column-gap / grid-row-gap */
    grid-template-rows:

- Grid items are the *Direct Children* of the grid container

Grid Items

- Grid Items are **direct children** of the grid container in the HTML

- Assign *Grid Items* to a grid area

    grid-area: name1;
    grid-column-start/end, grid-row-start/end: <linenumber>

Grid Examples and Docs

- FireFox Grid Tools
- https://www.mozilla.org/en-US/developer/css-grid/
- https://gridbyexample.com/
- https://css-tricks.com/snippets/css/complete-guide-grid/
- https://developer.mozilla.org/en-US/docs/Web/CSS/CSS_Grid_Layout/Basic_Concepts_of_Grid_Layout
- http://cssgridgarden.com/

Let's Code

Responsive Design

- A page should respond to the user's environment based on screen size, platform, and orientation (landscape / portrait)
- Three areas to consider:
  - Flexible grid layouts
    - Percentages, not pixels
  - Responsive images
    - Percentages, not pixels

    ```
    img {
        width: 100%;
        height: auto;
    }
    ```
  - Changing layout entirely based on screen characteristics

Media Queries

- Selectively apply CSS based on screen / environment characteristics
  - The @media rule:
    - https://www.w3schools.com/cssref/css3_pr_mediaquery.asp
  - Breakpoints
    - The width where "something changes" in the layout
    - Breakpoints are your choice. You may have zero, or many
    - Bootstrap's breakpoints, for reference ➔
- Remember, the order of CSS matters! https://www.w3schools.com/cssref/tryit.asp?filename=trycss3_media2

```
// Extra small devices (portrait phones, less than 576px)
// No media query since this is the default in Bootstrap

// Small devices (landscape phones, 576px and up)
@media (min-width: 576px) { ... }

// Medium devices (tablets, 768px and up)
@media (min-width: 768px) { ... }

// Large devices (desktops, 992px and up)
@media (min-width: 992px) { ... }

// Extra large devices (large desktops, 1200px and up)
@media (min-width: 1200px) { ... }
```

Let's Code