Introduction to Web Programming

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CSS = *Cascading* Style Sheets

- All browsers have built-in style sheets that describe the default rendering of elements.

- CSS files specify style rules (rule sets) that override the defaults.

- An HTML file can reference more than one style sheet.

Using external style sheets

```
<head>

<link rel="stylesheet" href="path/stylesheet.css">

...
</head>
```

In HTML4.01, the link element also has to include

```
type="text/css"
```

Importing style sheets into style sheets

```
@import url("stylesheetToImport.css");
```

Make sure imports go before the rules that use selectors.

Using multiple style sheets

```
<head>

<link rel="stylesheet" href="../navbarStyles.css">
<link rel="stylesheet" href="../course.css">

...
</head>
```

Style sheets for different devices

```
<head>
<meta name="viewport" content="width=device-width,
  initial-scale=1">


<link rel="stylesheet" href="courseSmall.css"
  media="screen and (max-device-width:1024px)">
<link rel="stylesheet" href="course.css"
  media="screen and (min-device-width:1024px)">


...
</head>
```

Style sheets for different devices

```
<head>
<meta name="viewport" content="width=device-width,
   initial-scale=1">

<link rel="stylesheet" href="basicStyle.css">
<link rel="stylesheet" href="enhancedStyle.css"
  media="screen and (min-device-width:1024px)">

...
</head>
```

Enhance display as you get more and more real estate.

Style sheets for different devices

```
<head>
<meta name="viewport" content="width=device-width,
   initial-scale=1">

...
</head>
```

To fit standard websites onto small screens, mobile browsers render the page on a canvas called the viewport and then shrink that viewport down to fit the width of the screen.

Viewport meta tag allows us to control the size of the initial viewport.

Media queries

- ## Media types
  - print, screen, handheld, braille, projection, tty, tv
  - Use screen for desktop monitors, laptop screens, iPads, iPhones, etc.
- ## Can evaluate specific media features
  - device-width, orientation, resolution
  - Most properties can be tested for minimum or maximum value using min- and max- prefixes

Style instructions

- Called rules or rule sets
- Each rule selects an element and declares how it should look

```
h1 {color: green;}
p {font-size: small;
   font-family: helvetica, sans-serif;}
```

Style instructions, cont'd

- Can select elements based on their context
  - em elements in the context of li elements:

    ```
    li em {color: red;}
    ```

- Can specifically target child elements
  - em elements directly in p elements:

    ```
    p > em {color: red;}
    ```

Style instructions, cont'd

- Can write rules for specific classes
  - Recall from the first tutorial

    ```
    <ul class="navbar">
    <li><a href="index.html">Homepage</a></li>
    <li><a href="musings.html">Musings</a></li>
    <li><a href="town.html">My town</a></li>
    <li><a href="links.html">Links</a></li>
    </ul>
    ```

  - li elements in ul elements that are in the navbar class:

    ```
    ul.navbar li {background: white;}
    ```

Style instructions, cont'd

- And for specific ids
  - Say that we want the homepage link to be special

    ```
    <ul class="navbar">
    <li><a href="index.html"
                id="firstPage">Homepage</a></li>
    <li><a href="musings.html">Musings</a></li>
    <li><a href="town.html">My town</a></li>
    <li><a href="links.html">Links</a></li>
    </ul>
    ```

  - Can specifically modify the id'd element:

    ```
    a#firstPage {background: red;}
    ```