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CSCI-UA-4-005
Intro to Web Design + Computer Principles

CSS – Day 1

Professor Emily Zhao

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Agenda

— Review CSS Basics
— *NYC Website Demo*: CSS

CSS

```css
body {
  background-color: white;
}

h1 {
  color: #2d2d2d;
  font-family: Helvetica, sans-serif;
  font-size: 1.3em;
}

.title {
  font-size: 1.7em;
}

p {
  color: #2d2d2d;
  font-family: Georgia, serif;
  font-size: 1em;
  line-height: 1.4em;
}

a:link, a:visited {
  color: black;
  text-decoration: underline;
}

a:hover {
  color: black;
  background: orange;
}
```

History of CSS

1990s: Web pages were commonly styled with HTML tags and structured with tables

1996:   To separate content from presentation, the concept of CSS was proposed. In 1996, the World Wide Web Consortium (W3C) released the first CSS specification, CSS1 [fonts, colors, margins]

1998:   CSS2 [absolute positioning, improved support for tables, more sophisticated selectors for targeting elements]

Ongoing: CSS3 [gradients, animations, transitions, media queries, and more]

Cascading Style Sheets (CSS)

— Separates the content (HTML) from its presentation (styling)

— Allows you to style elements such as text, fonts, colors, backgrounds, borders, and spacing

— Enables you to define the layout of pages, including the positioning of elements, responsive design for various screen sizes, and multi-column layouts

CSS ZEN GARDEN

The Beauty of CSS Design

A demonstration of what can be accomplished through CSS-based design. Select any style sheet from the list to load it into this page.

Download the example ⬇ HTML FILE and ⬇ CSS FILE

THE ROAD TO ENLIGHTENMENT

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, broken CSS support, and abandoned browsers.

We must clear the mind of the past. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WASP, and the major browser creators.

The CSS Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the time-honored techniques in new and invigorating fashion. Become one with the web.

MID CENTURY MODERN
by Andrew Lohman

GARMENTS
by Dan Mall

STEEL
by Steffen Knoeller

APOTHECARY
by Trent Walton

SCREEN FILLER
by Elliot Jay Stocks

CSS Application

CSS can be applied in 3 different ways to a web page:

1. Inline with HTML code
2. In the `<head>` section of an HTML document
3. In an external `.css` file*

*preferred method

CSS Rule Set

Selector
Indicates which HTML element will be formatted

Property/Value pair(s)
Specifies formatting to apply

Style rules are separated by a ;

```
h1 {
  color: red;
  text-align: center;
}
```

Specifying colors in CSS

[Named color](#)   `background-color: red;`

Hexadecimal code   `background-color: #FF0000;`

Red, green, blue (RGB)   `background-color: rgb(255, 0, 0);`

Hue, saturation, lightness (HSL)   `background-color: hsl(0, 100%, 50%);`

Units of Length

There are two types of length units in CSS: **relative** and **absolute**.

Relative units of length include:
— em (relative to font size)
— % (relative to the containing element)

Absolute units of length include:
— px (pixels)

Alternatively specifications:
— auto (browser calculates length)
— inherit (from the parent element)

ids

— An attribute used to uniquely identify a specific HTML element within a webpage

— Selected using a # followed by the id name.

— **Only ONE instance** of a id can be used on a HTML page

HTML

```
<h1 id="title">

    ...

</h1>
```

CSS

```
#title {
  color: yellow;
}
```

classes

— An attribute used to uniquely identify a specific HTML element within a webpage

— Selected using a . followed by the class name.

— **Several instances** of a style can be used on a HTML page

HTML

```
<article class="blog-post">

    ...

</article>
```

CSS

```
.blog-post {
  background: yellow;
}
```

Cascade

The principle of the "cascade" is applied when style rules are in conflict

Three primary factors determine which style rule wins out:

— Inheritance
— Specificity
— Location

Question 1

```html
<!DOCTYPE html>
<html>
<head>
  <style>
    .container {
      font-size: 18px;
      color: navy;
    }
  </style>
</head>
<body>
  <div class="container">
    <p>Paragraph 1</p>
    <div>
      <p>Paragraph 2</p>
    </div>
    <p style="color: green;">Paragraph 3</p>
  </div>
</body>
</html>
```

What will the styles of each of the paragraphs be?

All paragraphs inside the .container will **inherit** the font-size of 18px, but only paragraphs without inline styles will be colored navy.

Question 2

```html
<!DOCTYPE html>
<html>
<head>
<style>
  .container { color: blue; }
  p { color: green; }
</style>
</head>
<body class="container">
  <div>
    <p>This paragraph is inside a div, which is
inside a body with a 'container' class.</p>
  </div>
</body>
</html>
```

Which color will the text in the paragraph be?

Green.

The direct selector p has higher **specificity** than the inherited style from .container, thus the paragraph's color will be green.

Question 3

```
<!DOCTYPE html>
<html>
<head>
<style>
  #main-text {
    color: blue;
  }
  .text-color {
    color: red;
  }
</style>
</head>
<body>
  <p id="main-text" class="text-color">This
is a paragraph.</p>
</body>
</html>
```

Which color will the text in the paragraph be?

Blue.

ID selectors have higher **specificity** than class selectors.

Question 4

```
<!DOCTYPE html>
<html>
<head>
<style>
  p {
    color: orange;
  }
  p {
    color: pink;
  }
</style>
</head>
<body>
  <p>This is a paragraph.</p>
</body>
</html>
```

Which color will the text in the paragraph be?

Pink.

The last rule defined in CSS with the same **specificity** wins.

Question 5

```
<!DOCTYPE html>
<html>
<head>
<style>
  .text-color {
    color: navy;
  }
  .main-text {
    color: silver;
  }
</style>
</head>
<body>
  <p class="text-color main-text">This is a
paragraph.</p>
</body>
</html>
```

Which color will the text in the paragraph be?

Silver.

When multiple classes are applied to an element, the class defined later in the stylesheet, based on its **location**, will override the earlier ones if they have the same specificity.

Question 6

```
<!DOCTYPE html>
<html>
<head>
    <link rel="stylesheet" type="text/css"
href="external.css">
    <style>
        body { color: purple; }
        p { color: blue; }
        .text { color: red; }
    </style>
</head>
<body>
    <p class="text" style="color:pink;">This is some
text.</p>
</body>
</html>
```

external.css

```
p {
    color: green;
}
```

Which color will the text in the paragraph be?

Pink.

In-line style rules are the most **specific**.

Question 7

```
<!DOCTYPE html>
<html>
<head>
<style>
  p {
    color: yellow !important;
  }
</style>
</head>
<body>
  <p style="color: black;">This is a
paragraph.</p>
</body>
</html>
```

Which color will the text in the paragraph be?

Yellow.

The !important rule overrides other declarations even with lower specificity, including inline styles (except when the inline style also uses !important).

NYC Site: CSS

New York City

- Manhattan
- Brooklyn
- Queens
- Staten Island
- Bronx

Introduction

New York is the most populous city in the United States and the center of the New York Metropolitan Area, one of the most populous urban agglomerations in the world. The city is referred to as New York City or the City of New York to distinguish it from the State of New York, of which it is a part. A global power city, New York exerts a significant impact upon commerce, finance, media, art, fashion, research, technology, education, and entertainment. The home of the United Nations Headquarters, New York is an important center for international diplomacy and has been described as the cultural capital of the world.

About

Located on one of the world's largest natural harbors, New York City consists of five boroughs, each of which is a county of New York State. The five boroughs—The Bronx, Brooklyn, Manhattan, Queens, and Staten Island—were consolidated into a single city in 1898. With a census-estimated 2012 population of 8,336,697 distributed over a land area of just 302.64 square miles, New York is the most densely populated major city in the United States. As many as 800 languages are spoken in New York, making it the most linguistically diverse city in the world. The New York Metropolitan Area's population is the United States' largest, with 18.9 million people distributed over 6,720 square miles, and is also part of the most populous combined statistical area in the United States, containing 22.2 million people as of 2011.

History

New York traces its roots to its 1624 founding as a trading post by colonists of the Dutch Republic and was named New Amsterdam in 1626. The city and its surroundings came under English control in 1664 and were renamed New York after King Charles II of England granted the lands to his brother, the Duke of York. New York served as the capital of the United States from 1785 until 1790. It has been the country's largest city since 1790. The Statue of Liberty greeted millions of immigrants as they came to America by ship in the late 19th and early 20th centuries and is a globally recognized symbol of the United States and its democracy.

Population

Borough	Population	Land Area
Manhattan	1,619,090	23 sq miles
Brooklyn	2,565,635	71 sq miles
Queens	2,272,771	109 sq. miles
The Bronx	1,408,473	42 sq. miles
Staten Island	470,728	58 sq. miles

Introduction to Web Design

New York City

- Manhattan
- Brooklyn
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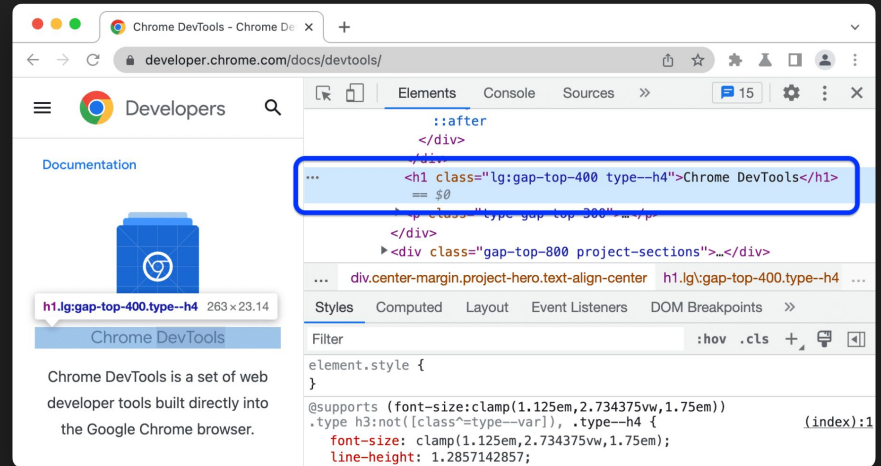
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Developer Tools

Developer tools (often referred to as DevTools) are built-in tools within web browsers to inspect, debug, and improve web pages.
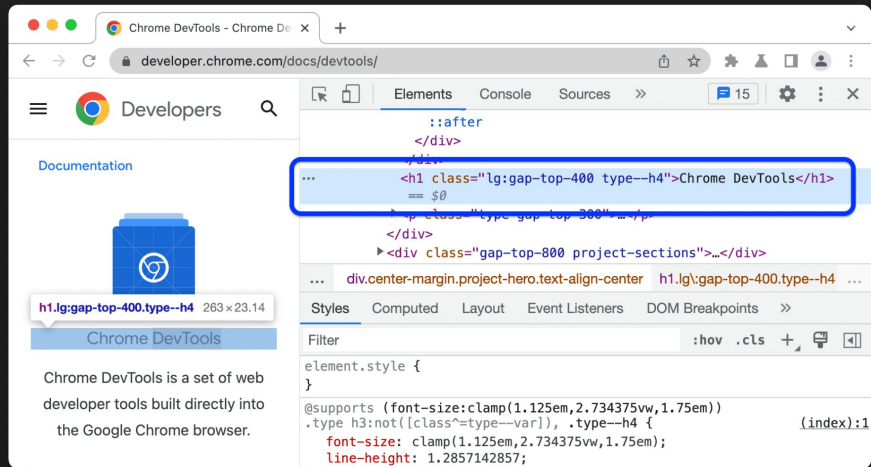
They provide powerful features for understanding how a website is structured, styled, and functioning, making them invaluable for web design and development.

Developer Tools

Allow you to inspect the underlying HTML and CSS of a webpage. You can see how elements are structured, which styles are being applied, and modify them in real time.

You can make temporary changes to the CSS directly in the browser to see how certain adjustments (like colors, layouts, margins) will look without changing your actual codebase.

Developer Tools

Intro to Web Design & Computer Principles

* Syllabus

Schedule -

Assignment

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Common

General

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Course

There are two primary aspects to this course. The
websites and prepare the various elements that

Open Link in New Tab
Open Link in New Window
Open Link in Split View
Open Link in Little Arc
Open Link in Incognito Window

Save Link As...
Copy Link Address

Copy
Copy Link to Highlight
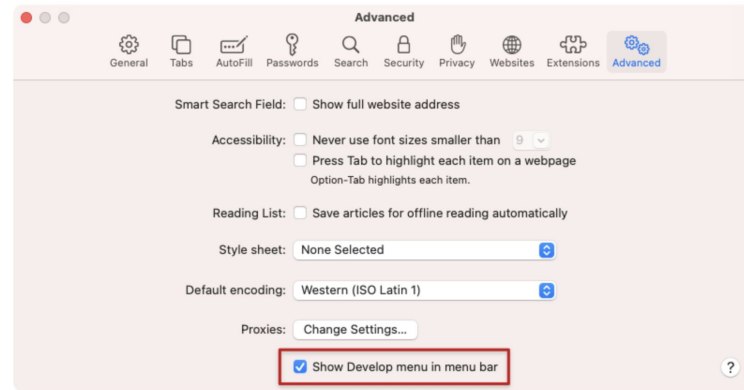Search Google for "* Syllabus"
Print...

Inspect

Speech

Services

Apple Safari

Before you can access the developer console in Safari, you first need to enable the **Developer Menu**. To do that, go into Safari's preferences (**Safari Menu > Preferences**) and select the **Advanced Tab.**

Once that menu is enabled, you will find the developer console by clicking on **Develop > Show Javascript Console.**

You can also use the shortcut `Option` + `⌘` + `C`.

Using CSS Pseudo-classes

— Pseudo-classes are used to style elements that cannot be targeted using only standard element selectors.

— Pseudo-classes are denoted by a colon (":") followed by their name.

Styling Links

There are four primary link states:

a:link   Describes the styles that illustrate to the user that an element is a link; default is [blue underlined text]

a:visited   What a link looks like after it has been clicked on; default is [purple underlined text]

a:hover   What a link looks like when the mouse cursor is hovering on it

a:active   What a link looks like when you are actively clicking on the link