Tutorial 2: Getting Started with CSS

Hia Al Saleh

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Objectives

- Explore the history of CSS

- Study different types of style sheets

- Explore style precedence and inheritance

- Apply color in CSS

- Use contextual selectors

- Work with attribute selectors

- Apply text and font styles

- Use a web font

- Define list styles

- Work with margins and padding space

- Use pseudo-classes and pseudo-elements

- Insert page content with CSS

1 CSS Styles and Colors

1.1 Introducing CSS

- The appearance of the page is determined by one or more style sheets written in the Cascading Style Sheets (CSS) language.

- The latest version of the CSS language is CSS3, built upon several modules, each focused on a separate design topic.

1.2 Types of Style Sheets

- **Browser styles or user agent styles**: Built into the browser.

- **User -defined styles**: Defined by a user based on the configuration settings of the user's browser.

- **External styles**: Created by a website author, placed within a CSS file, and linked to the page.

- **Embedded styles**: Added to the head of an HTML document.

- **Inline styles**: Added as element attributes within an HTML document and applied to only that particular element.

1.3   Exploring Style Rules

- General syntax of a CSS style rule:

```
selector {
    property1: value1;
    property2: value2;
    ...
}
```

- Browser extensions are an extended library of style properties in the browser.

- A vendor prefix indicates the browser vendor that created and supports the style property.

1.4   Embedded Style Sheets

- Inserted directly into the HTML file as metadata by adding the following element to the document head:

```
<style>
style rules
</style>
```

1.5   Inline Styles

- Styles applied directly to specific elements using the following style attribute:

```
<element style="property1: value1; property2: value2;">
content
</element>
```

1.6   Style Specificity and Precedence

- The more specific style rule has precedence over the more general style rule.

- Specificity is an issue when two or more styles conflict.

- If two rules have equal specificity and equal importance, the one defined last has precedence.

1.7   Style Inheritance

- Style inheritance is the process in which properties are passed from a parent element to its children.

- Example:

```
article { color: blue; }
p { text-align: center; }
```

2   Working with Color in CSS

2.1   Color Values

- RGB triplet: The intensity of primary colors expressed as a set of numbers in CSS.

```
rgb(red, green, blue)
```

- Hexadecimal numbers: A number expressed in the base 16 numbering system.

2.2   HSL Color Values

- Hue: Tint of a color, represented by a direction on a color wheel.

- Saturation: Measures the intensity of a color (ranging from 0% (no color) to 100% (full color)).

- Lightness: Measures the brightness of a color (ranging from 0% (black) to 100% (white)).

2.3   Defining Semi-Opaque Colors

- Opacity defines how solid a color appears, specified using:

```
rgba(red, green, blue, opacity)
hsla(hue, saturation, lightness, opacity)
```

where opacity ranges from 0 (completely transparent) to 1.0 (completely opaque).

2.4   Setting Text and Background Color

- CSS defines the text and background color for each element on a webpage:

```
color: color;
background-color: color;
```

3   Using Pseudo-Classes and Pseudo-Elements

3.1   Pseudo-Classes

- A pseudo-class classifies an element based on its current status, position, or use in the document:

```
element: pseudo-class
```

3.2   Pseudo-Elements

- A pseudo-element exists only in the rendered page and can be selected using:

```
element::pseudo-element
```

3.3   Generating Content with CSS

- New content can be added before or after an element using:

```
element::before { content: text; }
element::after { content: text; }
```

4   Formatting Lists

- To change the type of list marker or prevent any display of a list marker:

```
list-style-type: type;
```

5   Working with Margins and Padding

- To set the width of the padding space:

```
padding: size;
```

- To set the size of the margin around block-level elements:

```
margin: size;
margin: top right bottom left;
```