**INTRODUCTION**

**Cascading Style Sheet(CSS)**

CSS stands for Cascading Style Sheets. It's a styling language used to control the layout and visual appearance of web pages written in HTML.

**What does CSS do?**

**CSS helps to:**

1. Separate presentation from content (HTML)

2. Control layout and visual styling

3. Customize fonts, colors, and spacing

4. Create responsive designs for different devices

5. Add animations and interactions

**Key Features of CSS:**

1. Selectors: target specific HTML elements

2. Properties: define style attributes (e.g., color, font-size)

3. Values: specify property values (e.g., red, 18px)

4. Cascading: combines styles from multiple sources

5. Inheritance: elements inherit styles from parents

**Types of CSS:**

1. Internal CSS: written within HTML documents

2. External CSS: stored in separate files (e.g., styles.css)

3. Inline CSS: written directly in HTML elements

**Why CSS:**

1. Faster loading times

2. Improved accessibility

3. Easier maintenance

4. Enhanced user experience

5. Better search engine optimization (SEO)

**Common CSS Uses:**

1. Web development

2. Mobile app development

3. Email template design

4. Game development

5. Desktop application design

**CSS selectors**

1. Universal Selector: \*

2. Tag Name Selector: tag (e.g.h2, p, img)

3. Class Selector: .classname

4. ID Selector: #idname

5. Attribute Selector: [attr]

**Length Units**

1. `px` (Pixels): absolute unit, 1px = 1/96th of an inch

2. `cm` (Centimeters)

3. `mm` (Millimeters)

4. `in` (Inches)

5. `pt` (Points): 1pt = 1/72nd of an inch

6. `pc` (Picas): 1pc = 12pt

**Relative Units**

1. `em`: relative to font size (1em = font size)

2. `rem`: relative to root element font size (1rem = root font size)

3. `%` (Percentage): relative to parent element

**Viewport Units**

1. `vw` (Viewport Width): 1vw = 1% of viewport width

2. `vh` (Viewport Height): 1vh = 1% of viewport height

3. `vmin` (Viewport Minimum): 1vmin = smallest of vw or vh

4. `vmax` (Viewport Maximum): 1vmax = largest of vw or vh

**Explainations**

`px` is an absolute unit, suitable for precise control.

`em` and `rem` are relative units, useful for responsive design.

`vw`, `vh`, `vmin`, and `vmax` are viewport units, ideal for full-screen designs.

`%` is a percentage unit, often used for layout and spacing.

`deg`, `rad`, `ms`, `s`, and `Hz` are specialized units for specific properties.

**Best Practices**

1. Use `px` for images and graphics.

2. Use `em` or `rem` for font sizes and spacing.

3. Use `vw` and `vh` for full-screen layouts.

4. Use `%` for responsive layouts.

5. Avoid mixing units; choose one and stick to it.

https://youtu.be/Z\_HzAyNNiGA?si=4YsWORwBLgNzMqXl