INTRODUCTION TO CSS

CSS, which stands for Cascading Style Sheets, is a stylesheet language used to describe the presentation of a document written in HTML (Hypertext Markup Language) or XML (eXtensible Markup Language). It enables web developers to control the layout, formatting, and appearance of multiple web pages simultaneously by applying styles consistently across them.

Here's a breakdown of key concepts and features in CSS:

1. **Selectors**: Selectors are patterns that match HTML elements. They are used to target specific elements on a web page that you want to style. Selectors can be based on element names, classes, IDs, attributes, and more.

```css
/* Example selectors */
p {
    color: blue;
}

.highlight {
```

```
    background-color: yellow;
}

#header {
    font-size: 24px;
}
```

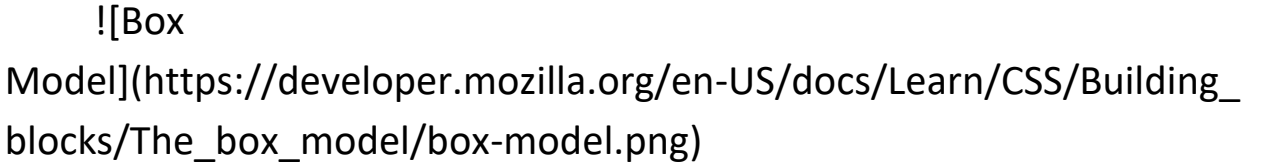
2. **Properties and Values**: CSS rules consist of one or more declarations, each containing a property and its corresponding value. Properties define the aspects of an element you want to style, while values specify the settings for those properties.

```css
/* Example properties and values */
body {
    font-family: 'Arial', sans-serif;
    background-color: #f0f0f0;
}

h1 {
```

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

3. **Box Model**:The CSS box model describes the layout of an HTML element as a rectangular box. It consists of content, padding, borders, and margins. Understanding and manipulating the box model is crucial for controlling the spacing and sizing of elements on a webpage.



4. **Layout Techniques**:CSS provides various techniques for creating responsive and flexible layouts. These include floats, flexbox, and grid. These layout tools allow developers to arrange and position elements on a webpage in a structured way.

```css
/* Example using Flexbox */
.container {
```

```
    display: flex;
    justify-content: space-between;
}
```

5. **Media Queries**: Media queries enable developers to apply different styles based on characteristics of the user's device, such as screen size, resolution, or orientation. This is crucial for creating responsive designs that adapt to various devices.

```css
/* Example media query for responsive design */
@media screen and (max-width: 600px) {
    body {
        font-size: 14px;
    }
}
```

6. **Transitions and Animations**: CSS allows for the creation of smooth transitions and animations, enhancing the user experience. This can include effects like fading, sliding, or rotating elements.

```css
/* Example transition */
.box {
    transition: background-color 0.3s ease-in-out;
}

/* Example keyframe animation */
@keyframes slide-in {
    from {
        transform: translateX(-100%);
    }
    to {
        transform: translateX(0);
    }
}
```

CSS is a fundamental technology in web development, working alongside HTML and JavaScript to create visually appealing and interactive websites. It plays a crucial role in achieving a consistent and

polished user interface across different devices and browsers.

1. Internal (Embedded) CSS:

Internal CSS is applied directly within an HTML document using the `<style>` tag. This style section is typically placed within the `<head>` of the HTML document.

```html
<!DOCTYPE html>
<html>
<head>
    <style>
        /* Internal CSS */
        body {
            background-color: #f0f0f0;
            font-family: Arial, sans-serif;
        }

        h1 {
            color: blue;
```

```
        }
    </style>
</head>
<body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
</body>
</html>
```

2. External CSS:

External CSS is stored in a separate file with a .css extension and linked to the HTML document using the `<link>` tag. This promotes separation of concerns, making it easier to manage styles across multiple pages.

styles.css:

```css
/* External CSS */
body {
    background-color: #f0f0f0;
```

```
    font-family: Arial, sans-serif;
}

h1 {
    color: blue;
}
```

index.html:

```html
<!DOCTYPE html>
<html>
<head>
    <link rel="stylesheet" type="text/css" href="styles.css">
</head>
<body>
    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>
</body>
</html>
```

```

## 3. Inline CSS:

Inline CSS is applied directly to an HTML element using the `style` attribute.

```html
<!DOCTYPE html>
<html>
<body>

    <h1 style="color:blue;">This is a heading</h1>
    <p style="font-family: Arial, sans-serif;">This is a paragraph.</p>

</body>
</html>
```

Comments in CSS:
```

Comments in CSS can be added using `/* */` for multiline comments or `//` for single-line comments.

```css
/* This is a multiline comment in CSS */

body {
    /* Single-line comment */
    background-color: #f0f0f0;
    font-family: Arial, sans-serif;
}

h1 {
    color: blue;
}
```

These are the basic methods for including CSS in your web pages, and using comments to make your code more readable and maintainable.