A teal-colored circle containing the text "Syntax and Selectors in CSS" in a white serif font. The circle is positioned in the upper right quadrant of the slide.

# Syntax and Selectors in CSS



# Importance of CSS

- HTML is the fundamental structure of every web page, but it is unattractive without any color/text/structure differentiation.
- CSS can be used to style the HTML content on a web page.
- Modifying colors, font types, font sizes, images, element positioning, and more can be done with help of CSS.



Importance of  
CSS

CSS  
Syntax

CSS  
Selectors

Measurement  
Units

# Importance of CSS


Web page with and without CSS:

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# CSS Syntax

- There are three ways to include styles in CSS.
  - Inline CSS.
  - Internal CSS.
  - External CSS.
- The **syntax** will be the **same for internal and external CSS.**
- But it will be different for Inline CSS.



# CSS Syntax - Internal / External CSS



In the **internal/ external CSS styles** can be applied to HTML elements/ id of the elements/ class of the elements.

```
selector
p {
  color: blue;
}
```

---

```
declaration block
p {
  color: blue;
}
```

```
declaration
p {
  color: blue;
}
```

---

```
property
p {
  color: blue;
}
```

```
value
p {
  color: blue;
}
```

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# CSS Syntax - Inline CSS

In the inline CSS the **styles** will be applied to the elements along the open tag of the element with help of the style attribute.

opening tag

```
<p style='color: blue;'>Hello World!</p>
```

---

attribute

```
<p style='color: blue;'>Hello World!</p>
```

declaration

```
<p style='color: blue;'>Hello World!</p>
```

---

property

```
<p style='color: blue;'>Hello World!</p>
```

value

```
<p style='color: blue;'>Hello World!</p>
```

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# CSS Syntax

- Internal styles can be used to style HTML but are also not best practice.
- An external stylesheet separates CSS code from HTML, by using the ".css" file extension.
- External stylesheets are the best approach when it comes to using HTML and CSS.
- External stylesheets are linked to HTML using the <link> element.

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# CSS Selectors

- The **style** can be applied to HTML elements by using their tag name (**h1 /h6 /p**), **id's** and **class names**.
- **Declarations** are a **fundamental part of CSS** because they apply a style to a selected element.
- A selector is used to target the specific HTML element(s) to be styled by the declaration.





# CSS Selectors - Type Selector

- Styles are applied to **Tag name** of the HTML element - **Type selector/ Element selector**.
- Example:

```
p {  
  color: blue; /* text color */  
  text-align: center; /* text alignment */  
  background-color: pink; /* adding  
  background-color to the paragraph */  
}
```

- The type selector will be applied to all the elements of the given type. The above style is applied to all <p> elements in the HTML document.

# CSS Selectors - Universal Selector

apply where

- Style will be applied to all the elements on the page \* is used to specify the universal selector.

- Example:

```
* {  
  border: 1px solid red;  
}
```

- The red color border will be applied to all the elements of the HTML document.

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# CSS Selectors - Class Selector

- HTML elements have class attributes, which is the most common way to select an element.
- Same class name can be used to multiple elements so the styles can be reused.
- To select a class name in the CSS, has to be prepend with the class name.

Same class  
↓  
Same color

```
<h1 class="color">Styles</h1>  
<p class="color">This code will make you understand about class selectors</p>
```

Styles

This code will make you understand about class selectors

```
.color{  
  color: teal;  
}
```

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# CSS Selectors - Class Selector



Interesting

Same class name can be used to multiple elements, similarly multiple class names can be given to the same element.

```
<h1 class="color">Styles</h1>  
<p class="color bold">This code will make you understand about class selectors</p>
```

① + ①  
2 classes

```
.bold{  
  font-weight: bold;  
}
```

• colour { colour: teal; }

Styles

This code will make you understand about class selectors

}  
↓  
Paragraph has  
Both styles  
↓  
Both class

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# CSS Selectors - Id Selector

- Id of the element is unique, similarly when unique styles have to be applied to the elements Id selectors are used.
- To select an id of an HTML element in the CSS **#** has to be prepend with the id of the element.

```
<h1 class="color" id="header-font">Styles</h1>  
<p class="color bold">This code will make you understand about class  
selectors</p>
```

```
#header-font{  
  font-family: cursive;  
}
```

Styles

This code will make you understand about class selectors

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# CSS Selectors - Attribute Selector



*Practice*



By using this attribute selector we can add styles to the element that has the attribute with specified value.

```
<br> <br>

<br> <br>

```

```
img[src*='image']{
  width: 50px;
  height: 50px;
}
```



*Applied on  
Both images*

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# CSS Selectors - Pseudo Class

- Button, link

before, after, hover, n<sup>th</sup> child

To change the appearance of certain elements, in different states pseudo class method is used.

*a tag* *link*

```
<a href="#">Learn more</a>
```

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

*hover cursor* ↓

Learn more

Learn more

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# Measurement Units

CSS supports absolute units (inches, cm, points) and relative units (% , em). The following table describes some important units involved in CSS with examples.

Unit	Description	Example
%	Defines a measurement as a percentage relative to another value, typically an enclosing element.	p {font-size: 16pt; line-height: 125%;}
cm	Defines a measurement in centimeters.	div {margin-bottom: 2cm;}

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# Measurement Units

Unit	Description	Example
em	A relative measurement for the height of a font in em spaces. Because an em unit is equivalent to the size of a given font, if you assign a font to 12pt, each "em" unit would be 12pt; thus, 2em would be 24pt.	p {letter-spacing: 7em;}
ex	This value defines a measurement relative to a font's x-height. The x-height is determined by the height of the font's lowercase letter x.	p {font-size: 24pt; line-height: 3ex;}
in	Defines a measurement in inches.	p {word-spacing: .15in;}

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# Measurement Units

Unit	Description	Example
mm	Defines a measurement in millimeters.	p {word-spacing: 15mm;}
pc	Defines a measurement in picas. A pica is equivalent to 12 points; thus, there are 6 picas per inch. <i>1 picas = 12 points</i> <i>1 inch = 6 picas</i>	p {font-size: 20pc;}
pt	Defines a measurement in points. A point is defined as 1/72nd of an inch. <i>1 point = <math>\frac{1}{72}</math> inch</i>	body {font-size: 18pt;}
px	Defines a measurement in screen pixels.	p {padding: 25px;}

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