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Computer Fundamentals!!

Part 1

Cascading Style Sheet

Syntax | Applying CSS to
HTML | CSS selectors



CS HUB

Cascading Style Sheet

- A style sheet language used to describe the presentation semantics of a document written in a markup language
- Cascading Style Sheets(CSS) is a simple design language intended to simplify the process of making web pages presentable.
- It separates a document content from document presentation
- Introduced in 1996 by w3c
- Latest version is CSS3

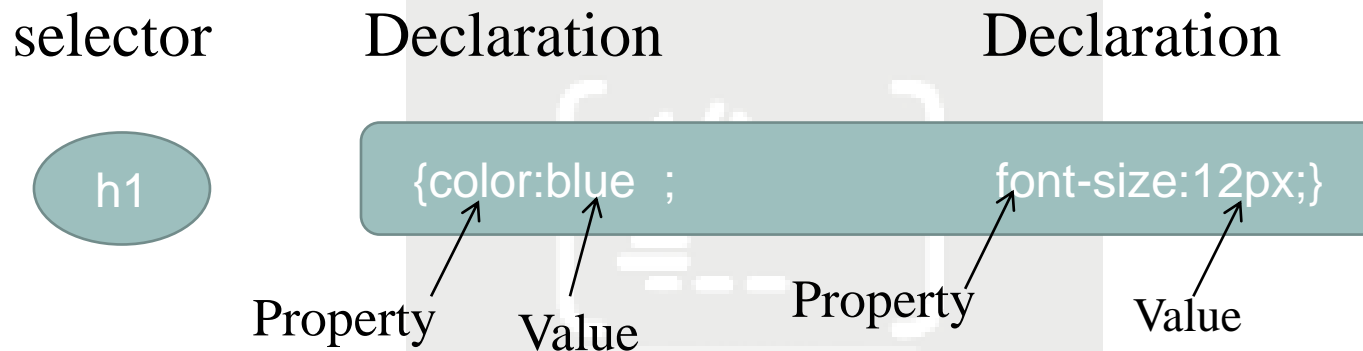
Advantages of CSS

- Saves time
- Pages load faster
- Easy maintenance
- Superior styles to HTML
- Multiple Device compatibility
- Global web standard



CSS syntax

- CSS consists of a list of rules
- Each rule has 2 main parts: a selector and one or more declarations



Ex: `p {color:red; text-align:center;}`

CSS syntax

- **selector { property: value ;}**
- **Selector** — A selector is an HTML tag at which a style will be applied. This could be any tag like <h1> or <table> etc.
- **Property** — A property is a type of attribute of HTML tag. Put simply, all the HTML attributes are converted into CSS properties. They could be *color*, *border* etc.
- **Value** — Values are assigned to properties. For example, *color* property can have value either *red* or *#F1F1F1* etc.

Applying CSS to HTML

- External Stylesheet
- Internal Stylesheet
- Inline style



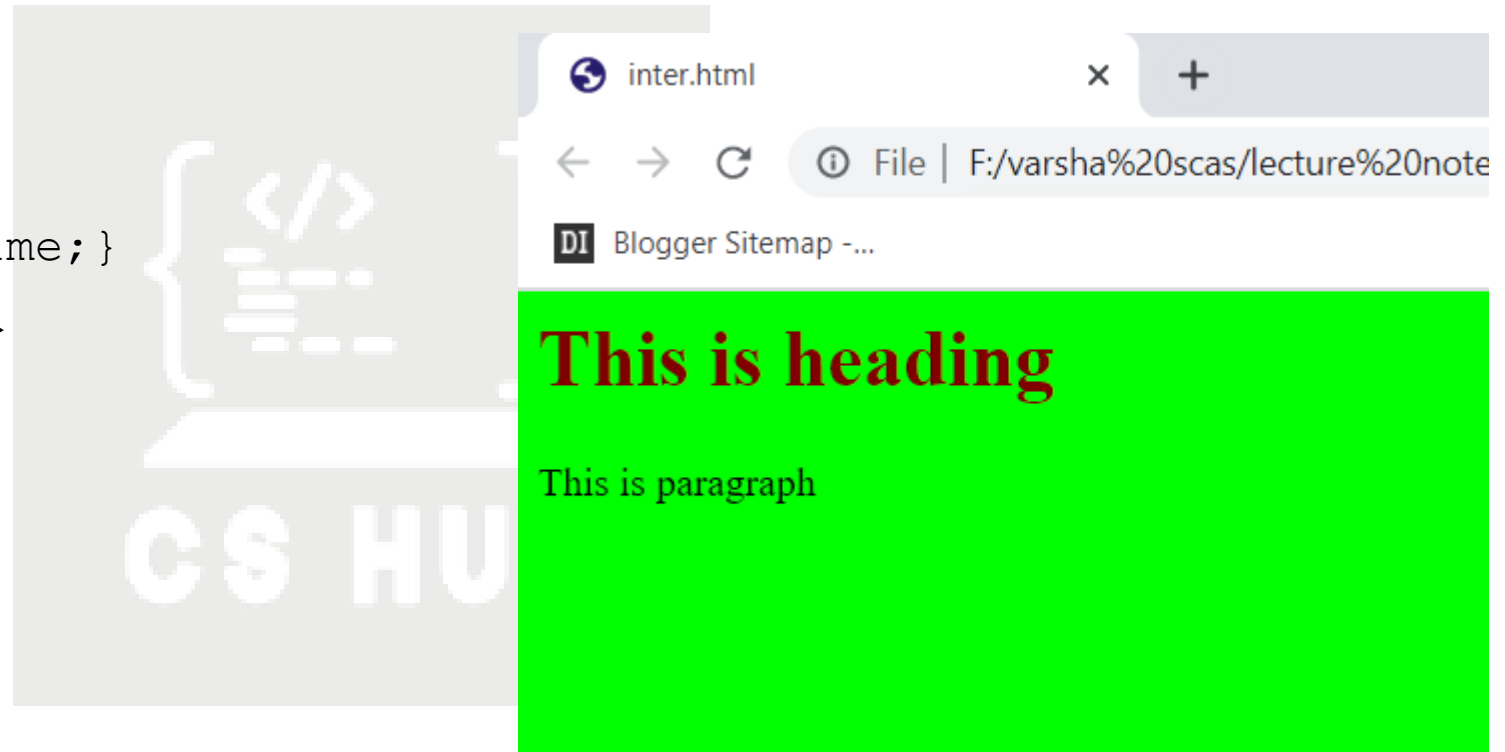
Inline style

- Apply a unique style to a single element
- Loses many of the advantages of stylesheets by mixing content with presentation
- An inline CSS uses the style attribute of an HTML element.
- `<h1 style="color:blue;">A Blue Heading</h1>`
`<p style="color:red;">A red paragraph.</p>`

Internal Stylesheet

- Used when a single document has a unique style
- Internal stylesheets are defined in the <head> section using <style> tag

```
<!Doctype !html>
<html> <head>
<style type="text/css">
body{ background-color:lime;}
h1{color:maroon;}</style>
</head>
<body>
<h1>This is heading</h1>
<p>This is paragraph</p>
</body>
</html>
```



External stylesheet

- Ideal when style is applied to many pages
- Each page must link with stylesheet using *link* element

<head>

<link rel="stylesheet" type="text/css" href="mystyle.css"/>

</head>

- Style sheet must be saved with a .CSS extension

External stylesheet

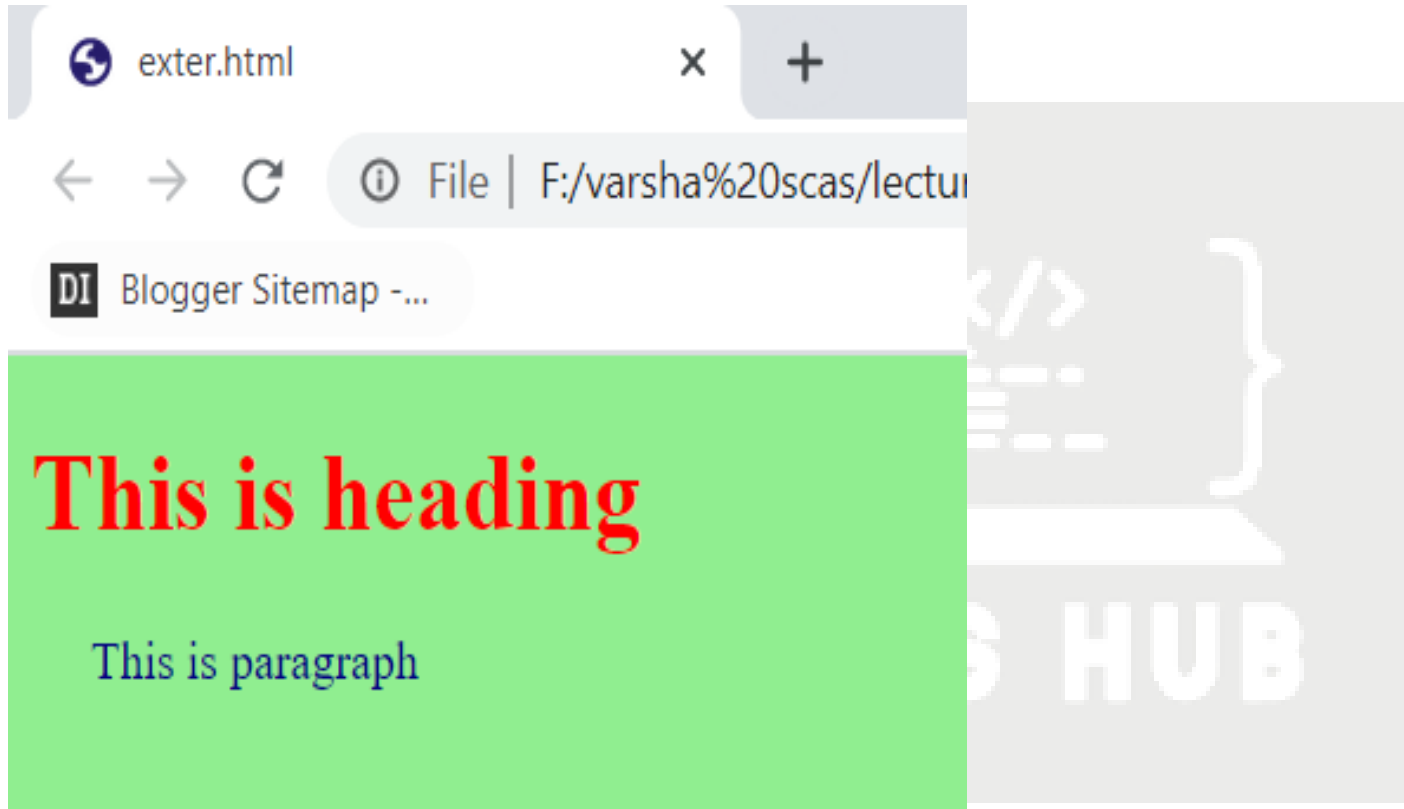
mystyle.css

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



```
body{
background-color:lightgreen;
}
h1{
color:red;
}
p{
margin-left:20px; color:navy;}
.
```

External stylesheet



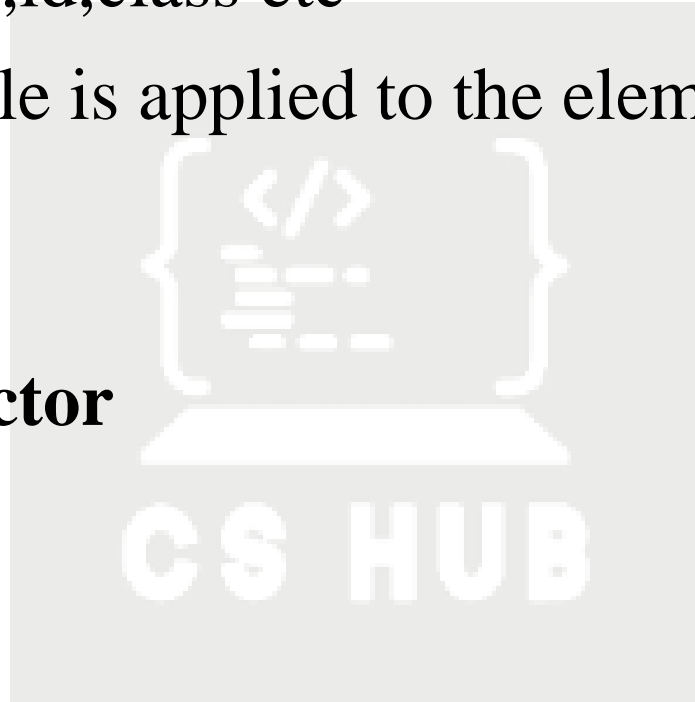
Multiple Stylesheets

- If some properties have been set for the same selector in different stylesheets , the value will be inherited from more specific stylesheet
- Priorities
 1. Inline style
 2. Internal stylesheet
 3. External stylesheet
 4. Browser default



CSS selectors

- A pattern to match the elements in an HTML document based on their element name, id, class etc
- Associated style rule is applied to the elements that match the selector pattern
- **Universal selector**
- **Element type selector**
- **Id selector**
- **Class selector**



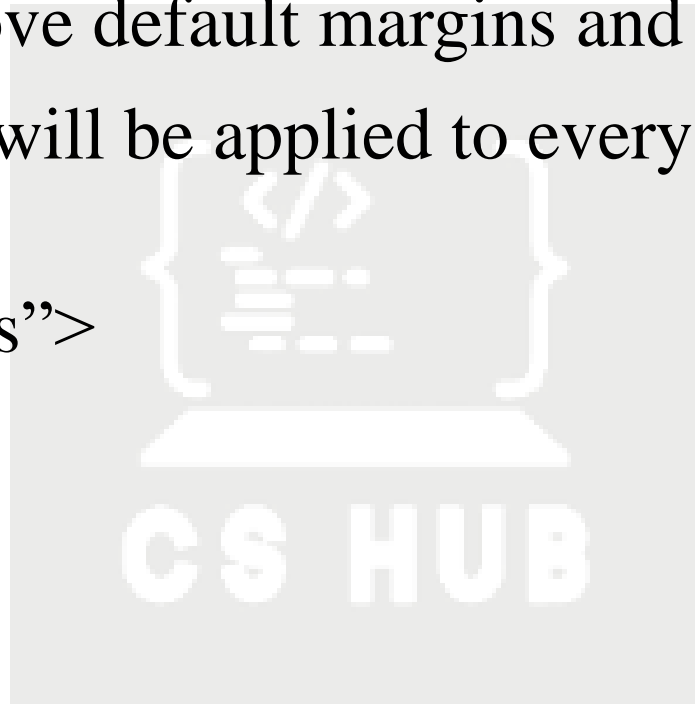
Universal selector(*)

- * matches every single element on the page
- Often used to remove default margins and paddings from elements
- Style rule inside * will be applied to every element in the following HTML document

```
<style type="text/css">
```

```
*{margin:0;  
    Padding:0;  
}
```


```
</style>
```



Element type selector

- Matches every instance of element in the document tree with the corresponding element type name

```
<Head>  
<style type="text/css">  
h1{color:maroon;}</style>  
</head>  
<body>  
<h1>This is heading</h1>  
<p>This is paragraph</p>  
<h1>This is another heading</h1>  
</body>
```



Id selector

- Specify a style for a single element
- To select an element use # followed by id

```
<html><head>
```

```
<style type="text/css">
```

```
#para1 { text-align:center;color:red; }
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<p id="para1">Hello world!</p>
```

```
<p>no style here</p>
```

```
</body>
```

```
</html>
```



The class Selector

- The class selector is used to specify a style for a group of elements
- Uses HTML class attribute and is defined with period (.) sign

- `<h1 class="blue">`

`.blue{color:blue;}`

- HTML element can refer to more than one class

`<h2 class="city main">London</h2>`

```
<!Doctype html>
```

```
<html><head>
```

```
<style >
```

```
.blue {
```

```
Color:blue;
```

```
}
```

```
</style>
```

```
</head>
```

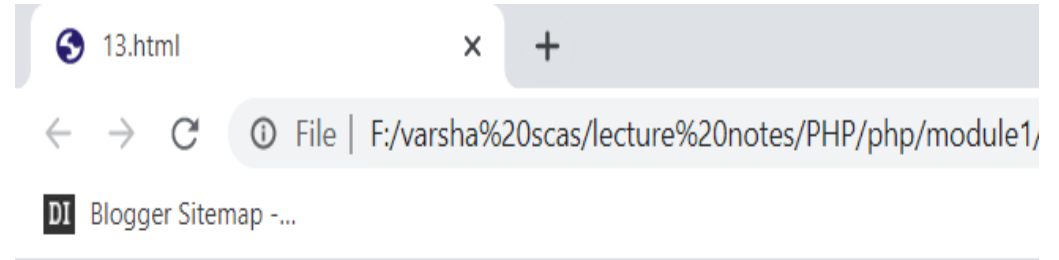
```
<body>
```

```
<h1 class="blue">This is heading</h1>
```

```
<p class="blue">This is paragraph</p>
```

```
</body>
```

```
</html>
```



This is heading

This is paragraph

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Part 2

CSS Styling

Background | Text
formatting | Font | Block
level elements



CSS Background

- CSS provide several properties for styling the background of an element, including coloring the background, placing images in the background and managing their positioning, etc.

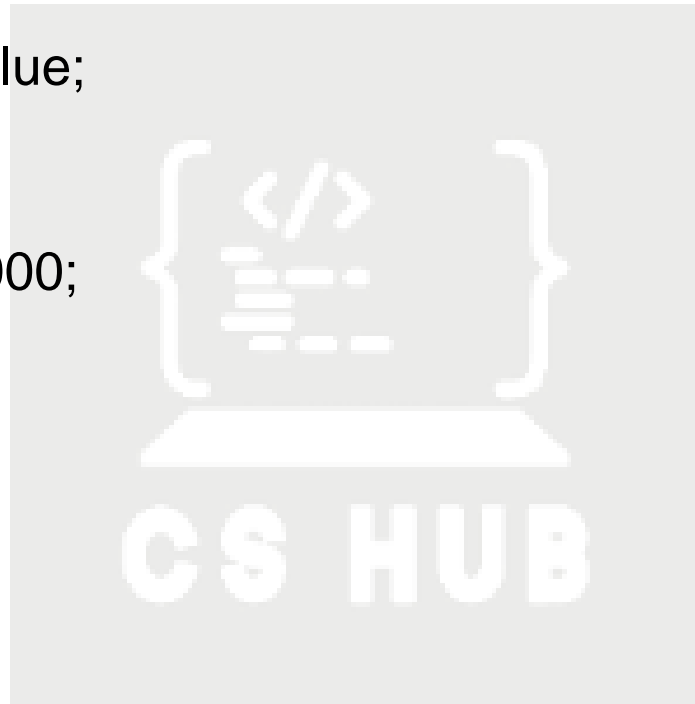
CSS Background Properties

- background-color
- background-image
- background-repeat
- background-attachment
- background-position
- background (shorthand property)



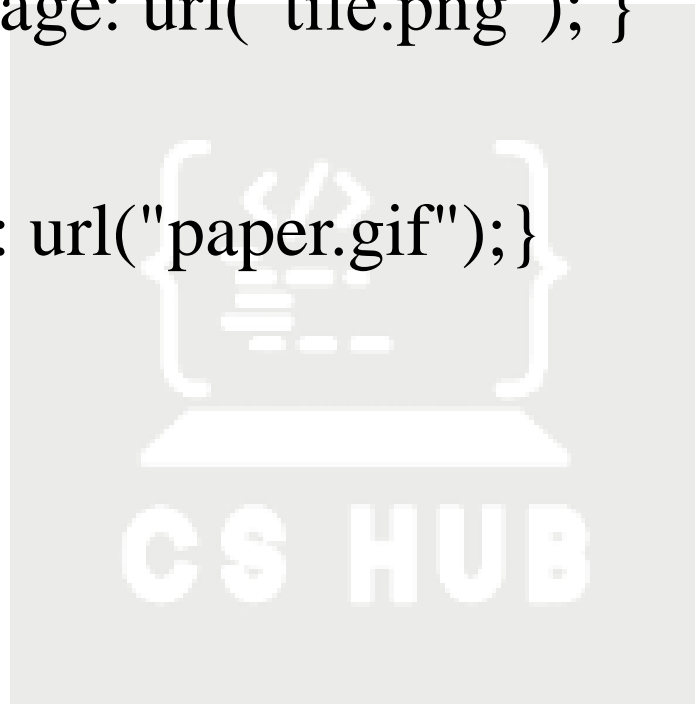
CSS background-color

- The **background-color** property specifies the background color of an element.
- ```
body {
 background-color: lightblue;
}
```
- ```
h1 {  
  background-color: # ff0000;  
}
```



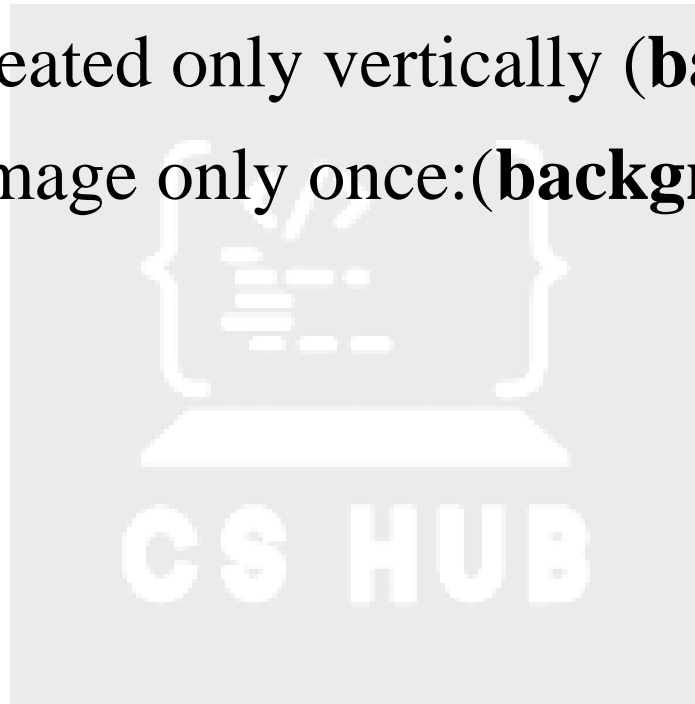
CSS Background Image

- The **background-image** property set an image as a background of an HTML element.
- `body { background-image: url("tile.png"); }`
- `p { background-image: url("paper.gif"); }`



CSS background-repeat

- By default, the background-image property repeats an image both horizontally and vertically.
- If the image is to be repeated only horizontally (**background-repeat: repeat-x;**)
- If the image is to be repeated only vertically (**background-repeat: repeat-y;**)
- Show the background image only once: (**background-repeat: no-repeat;**)



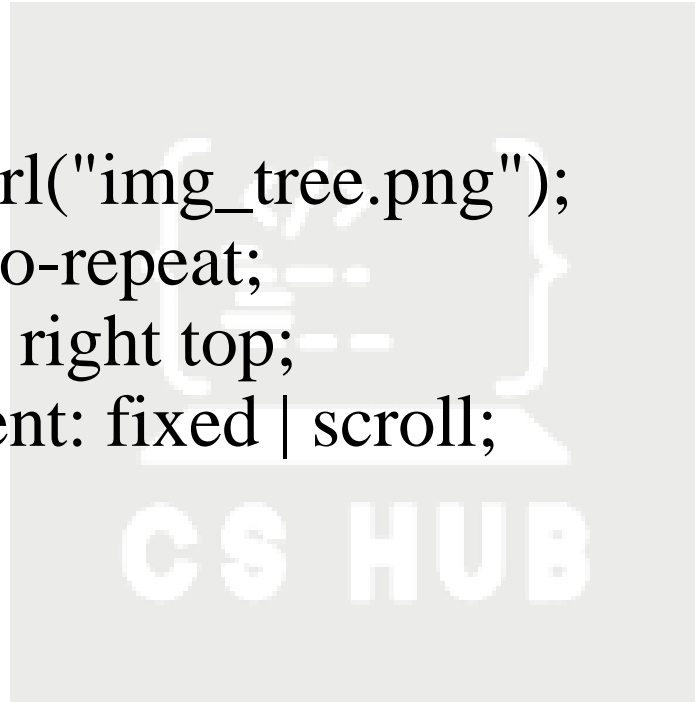
CSS background-position

- The background-position property is used to specify the position of the background image.
- Position the background image in the top-right corner:

```
body {  
    background-image: url("img_tree.png");  
    background-repeat: no-repeat;  
    background-position: right top;  
}
```

CSS background-attachment

- The **background-attachment** property specifies whether the background image should scroll or be fixed (will not scroll with the rest of the page):
- ```
body {
 background-image: url("img_tree.png");
 background-repeat: no-repeat;
 background-position: right top;
 background-attachment: fixed | scroll;
}
```



# CSS background - Shorthand property

- To shorten the code, it is also possible to specify all the background properties in one single property. This is called a shorthand property.
- Instead of writing:
- ```
body {  
    background-color: #ffffff;  
    background-image: url("img_tree.png");  
    background-repeat: no-repeat;  
    background-position: right top;  
}
```
- Use the shorthand property to set the background properties in one declaration:
- ```
body {
 background: #ffffff url("img_tree.png") no-repeat right top;
}
```
- When using the shorthand property the order of the property values is: background-color, background-image, background-repeat, background-attachment, background-position

# CSS TEXT FORMATTING

- The **color** property is used to set the color of the text

```
■ body {
 color: blue;
}

h1 {
 color: green;
}
```



# CSS TEXT FORMATTING

The **text-align** property is used to set the horizontal alignment of a text.

A text can be left or right aligned, centered, or justified.

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

```
h2 {
 text-align: left;
}
```

```
h3 {
 text-align: right;
}
```



# CSS TEXT FORMATTING

- The **text-decoration** property is used to set or remove decorations from text.
- The value `text-decoration: none;` is often used to remove underlines from links:

```
h1 {
 text-decoration: overline;
}
```

```
h2 {
 text-decoration: line-through;
}
```

```
h3 {
 text-decoration: underline;
}
```

This is heading 1

~~This is heading 2~~

This is heading 3



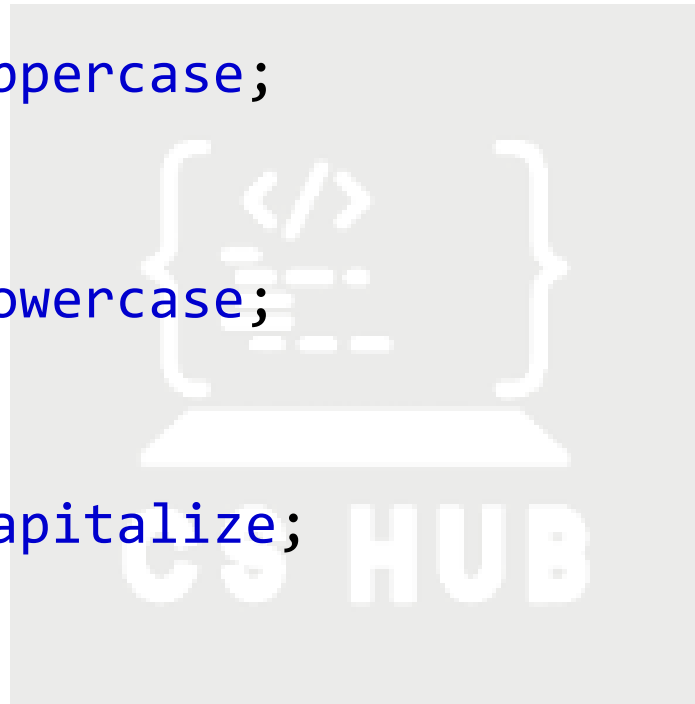
# CSS TEXT FORMATTING

- The text-transform property is used to specify uppercase and lowercase letters in a text.
- It can be used to turn everything into uppercase or lowercase letters, or capitalize the first letter of each word:

```
■ p.uppercase {
 text-transform: uppercase;
}

p.lowercase {
 text-transform: lowercase;
}

p.capitalize {
 text-transform: capitalize;
}
```



# CSS TEXT FORMATTING

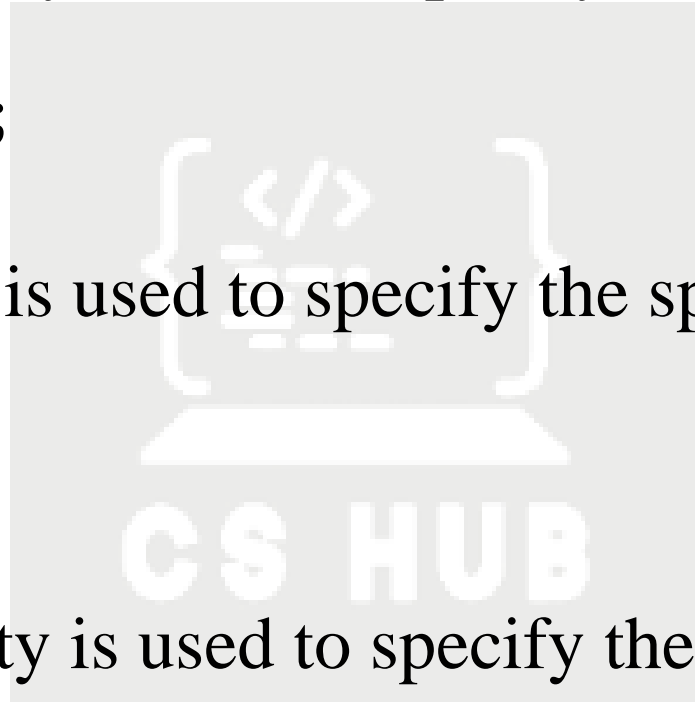
- The **text-indent** property is used to specify the indentation of the first line of a text:  

```
text: p {
 text-indent: 50px;
}
```
- The **letter-spacing** property is used to specify the space between the characters in a text.  

```
h1 {
 letter-spacing: 3px;
}
```
- The **line-height** property is used to specify the space between lines:  

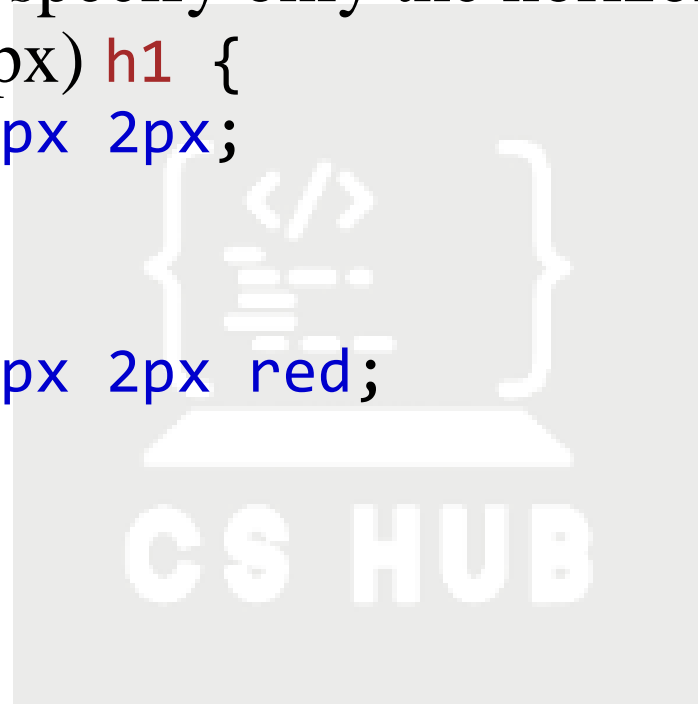
```
p.small {
 line-height: 0.8;
}
```
- The **word-spacing** property is used to specify the space between the words in a text.  

```
h1 {
 word-spacing: 10px;
}
```



# CSS TEXT FORMATTING

- The **text-shadow** property adds shadow to text.
- In its simplest use, specify only the horizontal shadow (2px) and the vertical shadow (2px) `h1 {`  
`text-shadow: 2px 2px;`  
`}`
- `h1 {`  
`text-shadow: 2px 2px red;`  
`}`



# CSS Fonts

- Use the **font-family** property to specify the font of a text.
- ```
.p1 {  
  font-family: "Times New Roman", Times, serif;  
}
```
- The **font-style** property is mostly used to specify italic text.
- This property has three values:
 - normal - The text is shown normally
 - italic - The text is shown in italics
 - oblique - The text is "leaning"
- ```
p.normal {
 font-style: normal|italic|oblique;
}
```

# CSS Fonts

- The **font-weight** property specifies the weight of a font

- ```
p.normal {  
    font-weight: normal;  
}
```

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

- The **font-size** property sets the size of the text.
- Absolute size: Sets the text to a specified size
- Relative size: Sets the size relative to surrounding elements

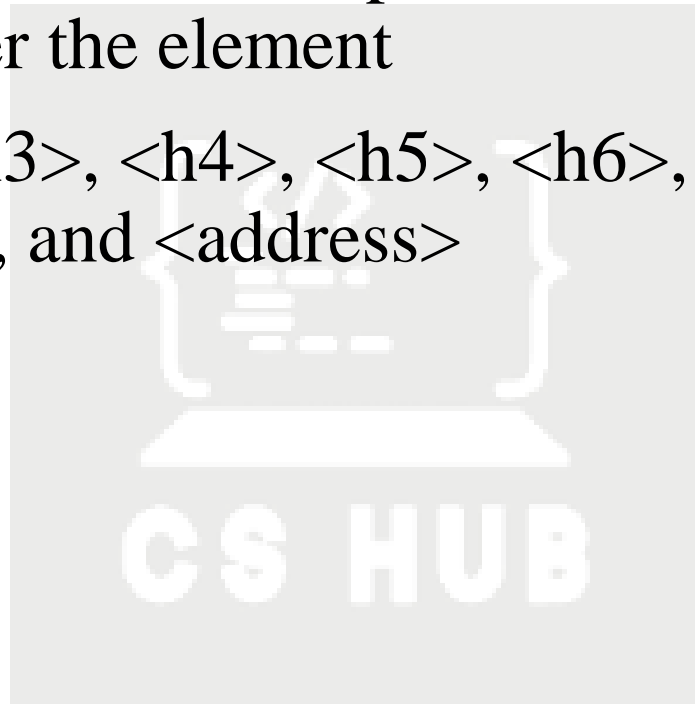
- ```
h1 {
 font-size: 40px;
}
```

- ```
h1 {  
    font-size: 2.5em;  
}
```

1em=current font size.default is 16 px

Block-level element

- In HTML programming, a block-level element is any element that starts a new line (e.g., paragraph) and uses the full width of the page or container.
- A block-level element can take up one line or multiple lines and has a line break before and after the element
- `<p>`, `<h1>`, `<h2>`, `<h3>`, `<h4>`, `<h5>`, `<h6>`, `<div>`, ``, ``, `<dl>`, `<pre>`, `<hr>`, `<blockquote>`, and `<address>`



The <div> tag

- This is the very important block level tag which plays a big role in grouping various other HTML tags and applying CSS on group of elements.

```
<html>
<head>
<style>
.myDiv {
  border: 5px outset red;
  background-color: lightblue;
  text-align: center;
}
</style>
</head>
<body>

<div class="myDiv">
  <h2>This is a heading in a div element</h2>
  <p>This is some text in a div element.</p>
</div>

</body>
</html>
```

This is a heading in a div element

This is some text in a div element.



THANK YOU



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