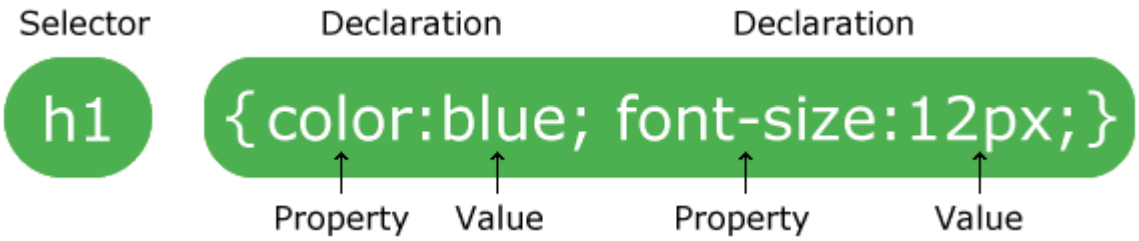
CSS

- **CSS** stands for **C**ascading **S**tyle **S**heets
- CSS describes **how HTML elements are to be displayed on screen, paper, or in other media**
- CSS **saves a lot of work**. It can control the layout of multiple web pages all at once
- External stylesheets are stored in **CSS files**

CSS Syntax and Selectors

- **CSS Syntax**



- A CSS rule-set consists of a selector and a declaration block:
- The selector points to the HTML element you want to style

.

- The declaration block contains one or more declarations separated by semicolons.
- Each declaration includes a CSS property name and a value, separated by a colon.
- A CSS declaration always ends with a semicolon, and declaration blocks are surrounded by curly braces.

- In the following example all <p> elements will be center-aligned, with a red text color:

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

CSS Selectors

- CSS selectors are used to "find" (or select) HTML elements based on their element name, id, class, attribute, and more.

The element Selector

- The element selector selects elements based on the element name.
- You can select all <p> elements on a page like this (in this case, all <p> elements will be center-aligned, with a red text color):
- p {
  text-align: center;
  color: red;
  }

The id Selector

- The id selector uses the id attribute of an HTML element to select a specific element.
- The id of an element should be unique within a page, so the id selector is used to select one unique element!
- To select an element with a specific id, write a hash (#) character, followed by the id of the element.
- The style rule below will be applied to the HTML element with id="para1":

Example

- #para1 {
  text-align: center;
  color: red;
  }
- **Note:** An id name cannot start with a number!

The class Selector

- The class selector selects elements with a specific class attribute.
- To select elements with a specific class, write a period (.) character, followed by the name of the class.
- In the example below, all HTML elements with class="center" will be red and center-aligned:

Example

- .center {
  text-align: center;
  color: red;
  }

Grouping Selectors

- If you have elements with the same style definitions, like this:

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

h2 {
  text-align: center;
  color: red;
}

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

- It will be better to group the selectors, to minimize the code.

- To group selectors, separate each selector with a comma.

- In the example below we have grouped the selectors from the code above:

Example

```
h1, h2, p {
  text-align: center;
  color: red;
}
```

Three Ways to Insert CSS

- External style sheet
- Internal style sheet
- Inline style

External CSS

- With an external style sheet, you can change the look of an entire website by changing just one file!
- Each page must include a reference to the external style sheet file inside the <link> element. The <link> element goes inside the <head> section:

Example

- <head>
  <link rel="stylesheet" type="text/css" href="mystyle.css">
  </head>
- An external style sheet can be written in any text editor. The file should not contain any html tags. The style sheet file must be saved with a .css extension.
- Here is how the "mystyle.css" looks:

```
body {
  background-color: lightblue;
}

h1 {
  color: navy;
  margin-left: 20px;
}
```

Internal Style Sheet

- An internal style sheet may be used if one single page has a unique style.
- Internal styles are defined within the <style> element, inside the <head> section of an HTML page:

Example

- ```
  <head>
  <style>
  body {
    background-color: linen;
  }

  h1 {
    color: maroon;
    margin-left: 40px;
  }
  </style>
  </head>
  ```
  ```

Inline Styles

- An inline style may be used to apply a unique style for a single element.
- To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.
- The example below shows how to change the color and the left margin of a <h1> element:
- <h1 style="color:blue;margin-left:30px;">This is a heading</h1>

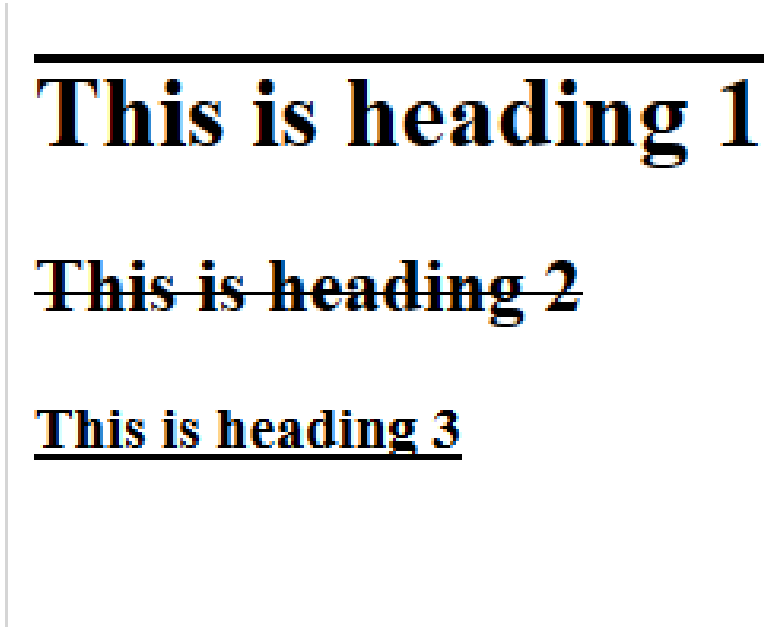
Text Properties

- Text-decoration:none;

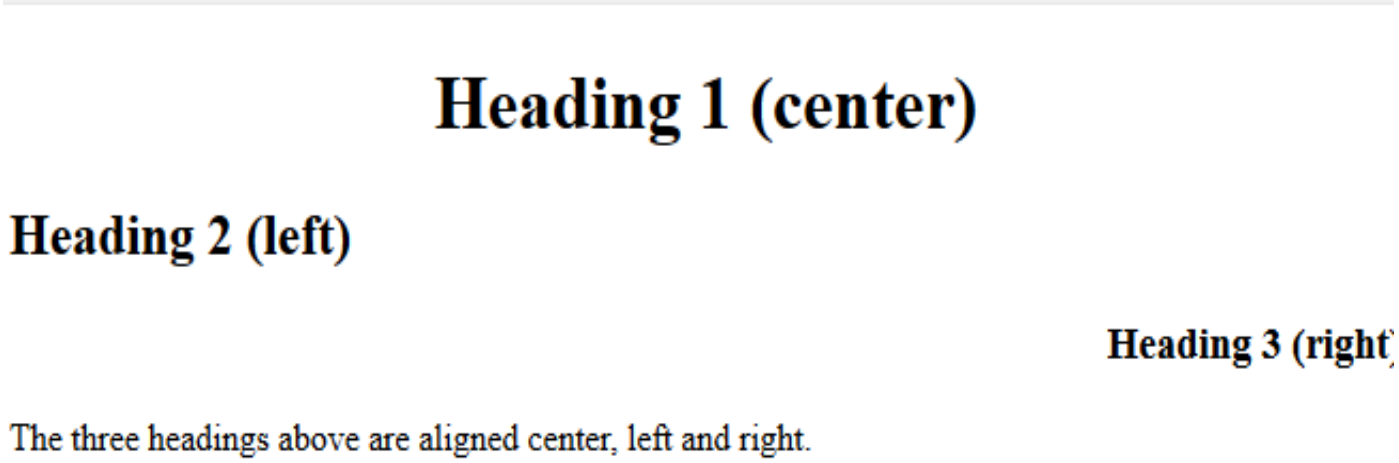
  overline;

  underline;

  line-through;



- Text-align:center;
  :left;
  :right;
  :justify;



- Text-transform:uppercase;

  :lowercase;

  :capitalize;

THIS IS SOME TEXT.

this is some text.

This Is Some Text.

Text Indentation

- The text-indent property is used to specify the indentation of the first line of a text:
- Example
- p {
  text-indent: 50px;
  }

Text Shadow

- The text-shadow property adds shadow to text.
- The following example specifies the position of the horizontal shadow (3px), the position of the vertical shadow (2px) and the color of the shadow (red):
- h1 {
  text-shadow: 3px 2px red;
  }

Letter Spacing

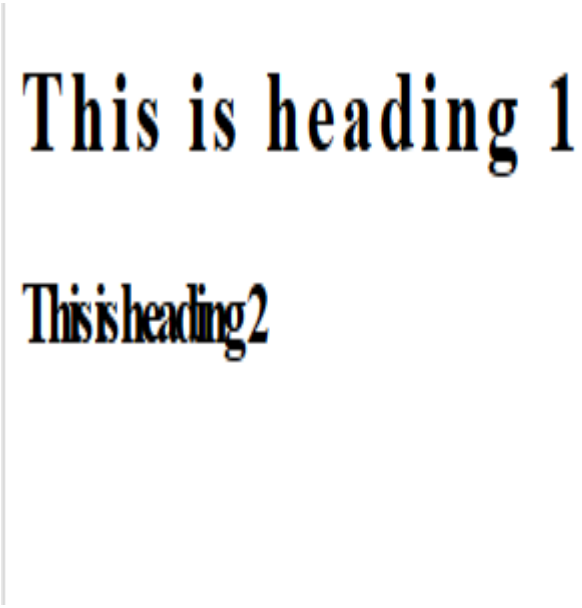
- The letter-spacing property is used to specify the space between the characters in a text.
- The following example demonstrates how to increase or decrease the space between characters:

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
  letter-spacing: 3px;
}

h2 {
  letter-spacing: -3px;
}
</style>
</head>
<body>

<h1>This is heading 1</h1>
<h2>This is heading 2</h2>

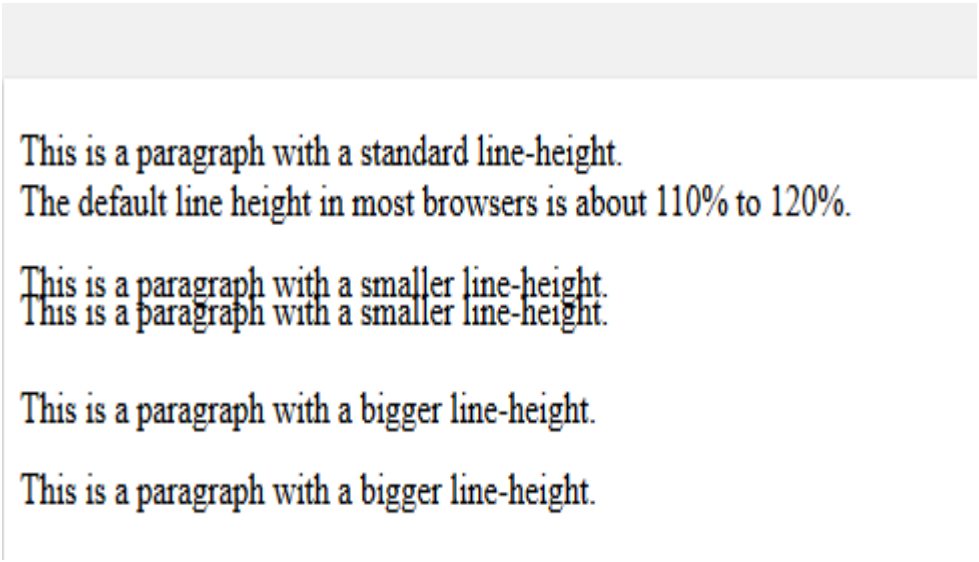
</body>
</html>
```



Line Height

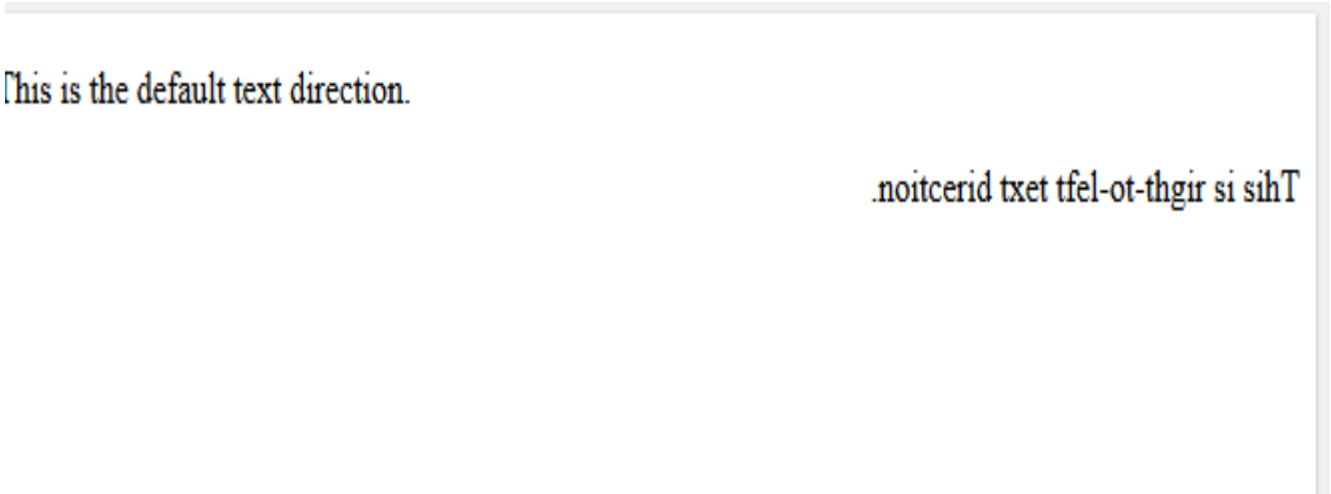
- The line-height property is used to specify the space between lines:

```
<head>
<style>
p.small {
  line-height: 0.6;
}
p.big {
  line-height: 1.8;
}
</style>
</head>
<body>
<p>
This is a paragraph with a standard line-height.<br>
The default line height in most browsers is about 110% to 120%.<br>
</p>
<p class="small">
This is a paragraph with a smaller line-height.<br>
This is a paragraph with a smaller line-height.<br>
</p>
<p class="big">
This is a paragraph with a bigger line-height.<br>
This is a paragraph with a bigger line-height.<br>
</p>
</body>
```



Text Direction

- The direction property is used to change the text direction of an element:



```
<!DOCTYPE html>
<html>
<head>
<style>
p.ex1 {
  direction: rtl;
}
</style>
</head>
<body>

<p>This is the default text direction.</p>
<p class="ex1"><bdo dir="rtl">This is right-to-left text direction.</bdo></p>

</body>
</html>
```

Word Spacing

- The word-spacing property is used to specify the space between the words in a text.
- The following example demonstrates how to increase or decrease the space between words:

This is heading 1

Thisisheading2

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {
  word-spacing: 10px;
}

h2 {
  word-spacing: -5px;
}
</style>
</head>
<body>
<h1>This is heading 1</h1>
<h2>This is heading 2</h2>
</body>
</html>
```

Font Family

- The font family of a text is set with the font-family property.
- The font-family property should hold several font names as a "fallback" system. If the browser does not support the first font, it tries the next font, and so on.
- Start with the font you want, and end with a generic family, to let the browser pick a similar font in the generic family, if no other fonts are available.
-
- **Note**: If the name of a font family is more than one word, it must be in quotation marks, like: "Times New Roman".
- More than one font family is specified in a comma-separated list:

```
p {
  font-family: "Times New Roman", Times, serif;
}
```

Font Style

- The font-style property is mostly used to specify italic text.
- This property has three values:

1. normal - The text is shown normally
2. italic - The text is shown in italics
3. oblique - The text is "leaning" (oblique is very similar to italic, but less supported)

This is a paragraph in normal style.

This is a paragraph in italic style.

This is a paragraph in oblique style.

Font-size

Font weight

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

```
<head>
<style>
p.normal {
  font-weight: normal;
}
p.light {
  font-weight: lighter;
}
p.thick {
  font-weight: bold;
}
p.thicker {
  font-weight: 900;
}
</style>
</head>
<body>
<p class="normal">This is a paragraph.</p>
<p class="light">This is a paragraph.</p>
<p class="thick">This is a paragraph.</p>
<p class="thicker">This is a paragraph.</p>
</body>
</html>
```

This is a paragraph.

This is a paragraph.

This is a paragraph.

This is a paragraph.

Font Variant

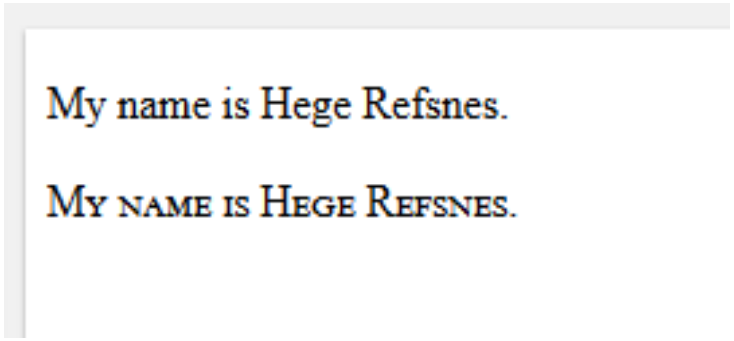
- The font-variant property specifies whether or not a text should be displayed in a small-caps font.
- In a small-caps font, all lowercase letters are converted to uppercase letters. However, the converted uppercase letters appears in a smaller font size than the original uppercase letters in the text.

```
<!DOCTYPE html>
<html>
<head>
<style>
p.normal {
  font-variant: normal;
}

p.small {
  font-variant: small-caps;
}
</style>
</head>
<body>

<p class="normal">My name is Hege Refsnes.</p>
<p class="small">My name is Hege Refsnes.</p>

</body>
</html>
```



CSS Backgrounds

The CSS background properties are used to define the background effects for elements.

- CSS background properties:
- background-color
- background-image
- background-repeat
- background-attachment
- background-position

Border Style

- The border-style property specifies what kind of border to display.
- The following values are allowed:
- dotted - Defines a dotted border
- dashed - Defines a dashed border
- solid - Defines a solid border
- double - Defines a double border
- groove - Defines a 3D grooved border. The effect depends on the border-color value
- ridge - Defines a 3D ridged border. The effect depends on the border-color value
- inset - Defines a 3D inset border. The effect depends on the border-color value
- outset - Defines a 3D outset border. The effect depends on the border-color value
- none - Defines no border
- hidden - Defines a hidden border

Border Width

- The border-width property specifies the width of the four borders.
- The width can be set as a specific size (in px, pt, cm, em, etc) or by using one of the three pre-defined values: thin, medium, or thick.
- The border-width property can have from one to four values (for the top border, right border, bottom border, and the left border).

Border Color

- The border-color property is used to set the color of the four borders.
- The border-color property can have from one to four values (for the top border, right border, bottom border, and the left border).

Rounded Borders

- The border-radius property is used to add rounded borders to an element:

border

- Border-size:80px;
- Border:size type color;
- Border-radius:30px;
- Border-top-left-radius:40px;
- Border-bottom-left-radius:40px;
- Box-shadow:20px 30px pink;
- Box-shadow:20px 30px 30px pink;

- CSS padding properties are used to generate space around an element content inside of any defined borders.
- CSS margin properties are used to create space around elements outside of any defined borders.

list-style-type

```
<!DOCTYPE html>
<html>
<head>
<style>
ul.a {
  list-style-type: circle;
}

ul.b {
  list-style-type: square;
}

ol.c {
  list-style-type: upper-roman;
}

ol.d {
  list-style-type: lower-alpha;
}
</style>
</head>
```

Example of unordered lists:

- Coffee
- Tea
- Coca Cola

- Coffee
- Tea
- Coca Cola

Example of ordered lists:

I. Coffee
II. Tea
III. Coca Cola

a. Coffee
b. Tea
c. Coca Cola

list-style-image

list-style-position

Remove Default Settings

- The list-style-type:none property can also be used to remove the markers/bullets. Note that the list also has default margin and padding. To remove this, add margin:0 and padding:0 to <ul> or <ol>:

Table properties

- Width:20px;
- Height:50px;
- text-align: left;
- vertical-align: bottom; (like top, bottom, or middle)
- border: 1px solid black;
- border-collapse: collapse;

The border-collapse property sets whether the table borders should be collapsed into a single border:

- padding: 15px;
- To control the space between the border and the content in a table, use the padding property on <td> and <th> elements:
- border-bottom: 1px solid #ddd;

Block-level Elements

- A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).
- Examples of block-level elements:
-
- <h1> - <h6>
- <p>
- <form>
- <header>
- <footer>
- <section>

Inline Elements

- An inline element does not start on a new line and only takes up as much width as necessary.
- This is an inline element inside a paragraph.
- Examples of inline elements:
-
- <a>
- <img>

Anchor Properties

Selector	Description	Example
a:link	sets the style for an unvisited link	a:link {font-family:Arial; color:red; text-decoration:none}
a:visited	sets the style for a visited link	a:visited {font-family:Arial; color:green; text-decoration:none}
a:active	sets the style for the link when it is linking	
a:hover	sets the style for the link while the mouse pointer is hovering over the text	a:hover {font-family:Arial; color:black; text-decoration:none}

Properties For Image

- opacity: 0.5;
- filter: alpha(opacity=50); /* For IE8 and earlier */
- The opacity property can take a value from 0.0 - 1.0. The lower value, the more transparent