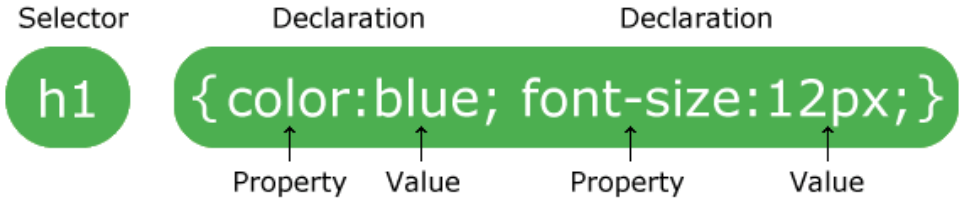
Why Use CSS?

CSS is used to define styles for your web pages, including the design, layout and variations in display for different devices and screen sizes.



- 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
- The class selector selects elements with a specific class attribute.To select elements with a specific class, write a period (.) character,
- /* and ends with */. Comments
- There are three ways of inserting a style sheet:

External style sheet

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

Internal style sheet: n internal style sheet may be used if one single page has a unique style.

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

Inline style:

An inline style may be used to apply a unique style for a single element.

```
<h1 style="color:blue;margin-left:30px;">This is a heading</h1>
```

COLOR:-

Colors are specified using predefined color names, or RGB, HEX, HSL, RGBA, HSLA values.

rgb(*red, green, blue*)

Each parameter (red, green, and blue) defines the intensity of the color between 0 and 255.

rgba(*red, green, blue, alpha*)

The alpha parameter is a number between 0.0 (fully transparent) and 1.0 (not transparent at all):

HEX Value

In HTML, a color can be specified using a hexadecimal value in the form:

#rrggbb

Where rr (red), gg (green) and bb (blue) are hexadecimal values between 00 and ff (same as decimal 0-255).

F

HSL Value

In HTML, a color can be specified using hue, saturation, and lightness (HSL) in the form:

hsl(*hue, saturation, lightness*)

Hue is a degree on the color wheel from 0 to 360. 0 is red, 120 is green, and 240 is blue.

Saturation is a percentage value, 0% means a shade of gray, and 100% is the full color.

Lightness is also a percentage, 0% is black, 50% is neither light or dark, 100% is white

HSLA Value

HSLA color values are an extension of HSL color values with an alpha channel - which specifies the opacity for a color.

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

MARGIN:-

- `margin-top`
- `margin-right`
- `margin-bottom`
- `margin-left`

- `padding-top`
- `padding-right`
- `padding-bottom`
- `padding-left`

Setting height and width

The `height` and `width` properties are used to set the height and width of an element.

Box model:

Margin

Border

Padding

Content

Outline-style

The outline-style property specifies the style of the outline, and can have one of the following values:
dotted - Defines a dotted outline
dashed - Defines a dashed outline
solid - Defines a solid outline
double - Defines a double outline
groove - Defines a 3D grooved outline
ridge - Defines a 3D ridged outline
inset - Defines a 3D inset outline
outset - Defines a 3D outset outline
none - Defines no outline
hidden - Defines a hidden outline

color	Sets the color of text
direction	Specifies the text direction/writing direction
letter-spacing	Increases or decreases the space between characters in a text
line-height	Sets the line height
text-align	Specifies the horizontal alignment of text
text-decoration	Specifies the decoration added to text
text-indent	Specifies the indentation of the first line in a text-block
text-shadow	Specifies the shadow effect added to text
text-transform	Controls the capitalization of text
text-overflow	Specifies how overflowed content that is not displayed should be signaled to the user
unicode-bidi	Used together with the direction property to set or return whether the text should be overridden to support multiple languages in the same document
vertical-align	Sets the vertical alignment of an element
white-space	Specifies how white-space inside an element is handled
word-spacing	Increases or decreases the space between words in a text

CSS Font Families

In CSS, there are two types of font family names:

- **generic family** - a group of font families with a similar look (like "Serif" or "Monospace")
- **font family** - a specific font family (like "Times New Roman" or "Arial")

To responsive font

```
<h1 style="font-size:10vw">Hello World</h1>
```

ICONS:is with an icon library, such as Font Awesome.

```
<i class="fa fa-cloud"></i>
```

- a:link - a normal, unvisited link
- a:visited - a link the user has visited
- a:hover - a link when the user mouses over it
- a:active - a link the moment it is clicked

display	Specifies how an element should be displayed
visibility	Specifies whether or not an element should be visib

The position property specifies the type of positioning method used for an element (static, relative, fixed, absolute or sticky)

The CSS overflow property controls what happens to content that is too big to fit into an area.

```
img {
  display: block;
  margin-left: auto;
  margin-right: auto;
  width: 40%;
}
```

CSS Combinators

A combinator is something that explains the relationship between the selectors.

A CSS selector can contain more than one simple selector. Between the simple selectors, we can include a combinator.

There are four different combinators in CSS:

- descendant selector (space)
- child selector (>)
- adjacent sibling selector (+)
- general sibling selector (~)

What are Pseudo-classes?

A pseudo-class is used to define a special state of an element.

For example, it can be used to:

- Style an element when a user mouses over it
- Style visited and unvisited links differently
- Style an element when it gets focus

```
p:first-child {
  color: blue;
}
```

The syntax of pseudo-elements:

```
selector::pseudo-element {
  property:value;
}
```

CSS Opacity / Transparency

The `opacity` property specifies the opacity/transparency of an element.

NAVIGATION BAR

First list the unordered list

For horizontal

```
li {
  display: inline;
}
```

There are two ways to create a horizontal navigation bar. Using **inline** or **floating** list items.

```
<ul>
  <li><a href="#home">Home</a></li>
  <li><a href="#news">News</a></li>
  <li class="dropdown">
    <a href="javascript:void(0)" class="dropbtn">Dropdown</a>
    <div class="dropdown-content">
      <a href="#">Link 1</a>
      <a href="#">Link 2</a>
      <a href="#">Link 3</a>
    </div>
  </li>
</ul>
```

```
.dropdown-content a {
  color: black;
  padding: 12px 16px;
  text-decoration: none;
  display: block;
  text-align: left;
}
```

Image Sprites - Simple Example

Instead of using three separate images, we use this single image ("img_navsprites.gif"):

With CSS, we can show just the part of the image we need

CSS Rounded Corners

With the CSS `border-radius` property, you can give any element "rounded corners".

With the CSS `border-image` property, you can set an image to be used as the border around an element.

CSS Background Size

The CSS `background-size` property allows you to specify the size of background images.

CSS gradients let you display smooth transitions between two or more specified colors.

CSS defines two types of gradients:
Linear Gradients (goes down/up/left/right/diagonally)
Radial Gradients (defined by their center)

display	Specifies the type of box used for an HTML element
flex-direction	Specifies the direction of the flexible items inside a flex container
justify-content	Horizontally aligns the flex items when the items do not use all available space on the main-axis
align-items	Vertically aligns the flex items when the items do not use all available space on the cross-axis
flex-wrap	Specifies whether the flex items should wrap or not, if there is not enough room for them on one flex line
align-content	Modifies the behavior of the flex-wrap property. It is similar to align-items, but instead of aligning flex items, it aligns flex lines
flex-flow	A shorthand property for flex-direction and flex-wrap
order	Specifies the order of a flexible item relative to the rest of the flex items inside the same container
align-self	Used on flex items. Overrides the container's align-items property
flex	A shorthand property for the flex-grow, flex-shrink, and the flex-basis properties

What is The Viewport?

The viewport is the user's visible area of a web page.

Grid system:

```
<div class="grid-container">
  <div class="grid-item">1</div>
  <div class="grid-item">2</div>
  <div class="grid-item">3</div>
  <div class="grid-item">4</div>
  <div class="grid-item">5</div>
  <div class="grid-item">6</div>
```

```
  <div class="grid-item">7</div>
  <div class="grid-item">8</div>
  <div class="grid-item">9</div>
</div>
grid-container {
  display: grid;
  grid-gap: 50px;
}
```

You can adjust the gap size by using one of the following properties:

```
grid-column-gap
grid-row-gap
grid-gap
```