CSS

Cascading Style Sheets

Introduction

- **CSS** stands for **C**ascading **S**tyle **S**heets
- CSS defines how HTML elements are to be displayed
- CSS saves a lot of work
- External Style Sheets are stored in CSS files

What CSS does?

- CSS performs the following functions:

1. Controls the text color of any element.
2. Controls the background colors.
3. Controls the border around elements.
4. Spacing between elements and borders.
5. Text manipulation and decoration.

Example

- HTML
  - <h1>This is a heading</h1>
  - This is a paragraph.
- CSS
  - h1 { color:blue; font-size 12px}
  - p {color:red; text-align:center;}

CSS Selectors

- CSS selectors allow you to select and manipulate HTML elements.

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

- There are two types of CSS selectors.
  - Element selector
  - id selector
  - class Selector

1. CSS element Selector

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

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

2. CSS ID Selector

- The id selector uses the id attribute of an HTML element to select a specific element.

- An id should be unique within a page, so the id selector is used if you want to select a single, unique element.

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

Example

```
<!DOCTYPE html>
<html> <head>
<style>
#para1 {
    text-align: center;
    color: red;
     font-size:20px;
}
h3{  color: blue; }
</style>
</head>
<body>
  <p id="para1">Hello World!</p>
  <p>This paragraph is not affected by the
     style.</p>
  <h3> this is heading 3 line one..</h3>
  <h3> this is heading 3 line two..</h3>
  <h3> this is heading 3 line three..</h3>
</body>
</html>
```

Hello World!

This paragraph is not affected by the style.

this is heading 3 line one..

this is heading 3 line two..

this is heading 3 line three..

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:

Example

```
<!DOCTYPE html>
<html>
<head>
<style>
.center {
    text-align: center;
    color: red;
}
</style>
</head>
<body>

<h1 class="center">Red and center-aligned
     heading</h1>
<p class="center">Red and center-aligned
     paragraph.</p>

</body>
</html>
```

Red and center-aligned heading

Red and center-aligned paragraph.

Specific Element class selector

```
<!DOCTYPE html>
<html>
<head>
<style>
p.center {
    text-align: center;
    color: red;
}
</style>
</head>
<body>

<h1 class="center">This heading will not be
    affected</h1>
<p class="center">This paragraph will be red
    and center-aligned.</p>

</body>
</html>
```

This heading will not be affected

This paragraph will be red and center-aligned.

Grouping the selectors

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

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

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

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

Border Style

```
p.dotted {border-style: dotted;}
p.dashed {border-style: dashed;}
p.solid {border-style: solid;}
p.double {border-style: double;}
p.groove {border-style: groove;}
p.ridge {border-style: ridge;}
p.inset {border-style: inset;}
p.outset {border-style: outset;}
p.none {border-style: none;}
p.hidden {border-style: hidden;}
p.mix {border-style: dotted dashed solid double;}
```

CSS Margins

```
p {
  margin-top: 100px;
  margin-bottom: 100px;
  margin-right: 150px;
  margin-left: 80px;
}
```

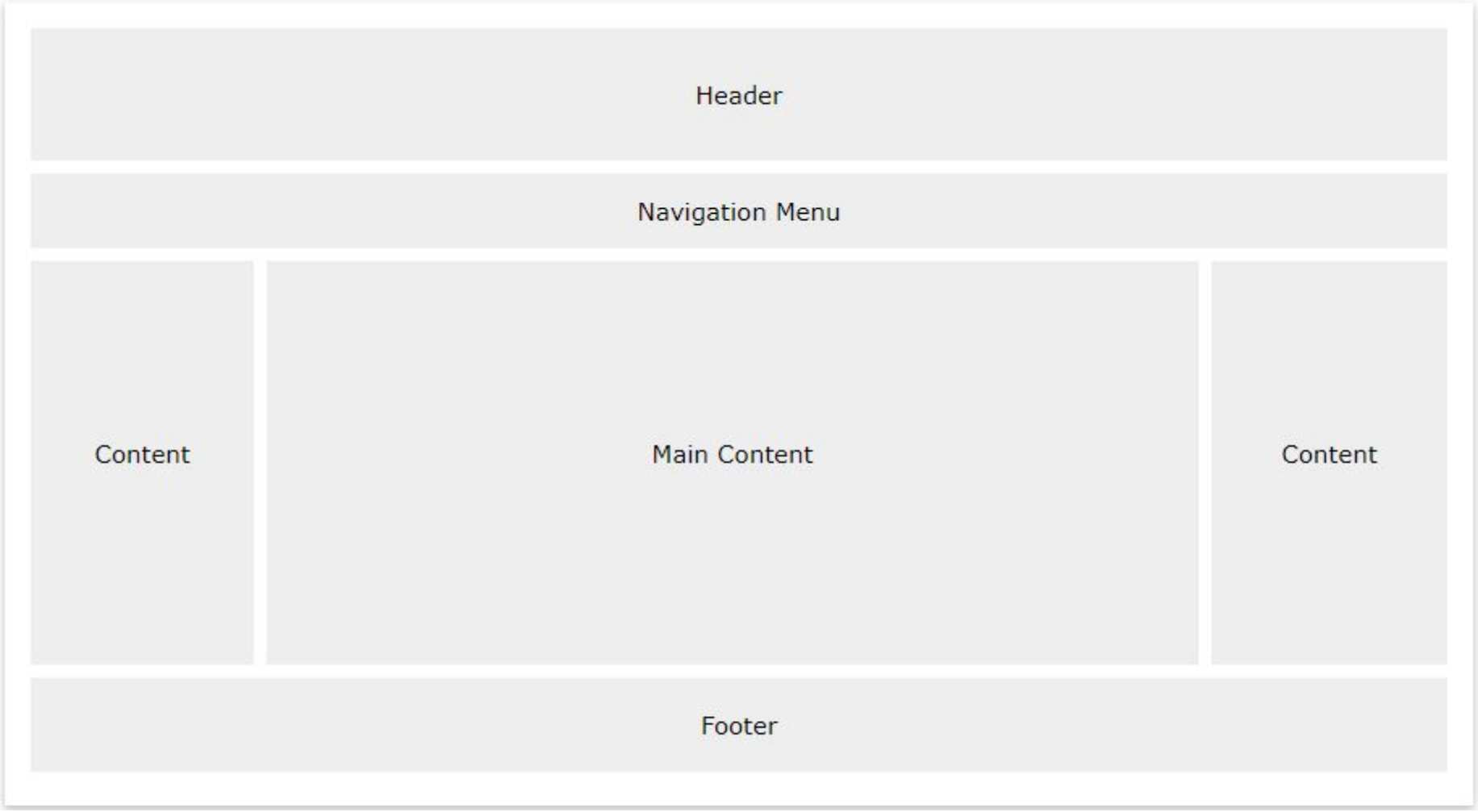
CSS Lists

```
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;
}
```

CSS Animation

```
<!DOCTYPE html>
<html>
<head>
<style>
#myDIV {
  width: 300px;
  height: 200px;
  background: red;
  animation: mymove 5s infinite;
}
/* Standard syntax */
@keyframes mymove {
  from {background-color: red;}
  to {background-color: blue;}
}
```

CSS Layout (CSS6.HTML)



Way to add CSS

- There are three ways of inserting a style sheet:

1. External style sheet
2. Internal style sheet
3. Inline style

External StyleSheet

- An external style sheet is ideal when the style is applied to many pages. With an external style sheet, you can change the look of an **entire Web site** by changing just one file.

- Each page must include a link to the style sheet with the <**link**> tag. The <link> tag goes inside the head section.

- 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.

Example: External StyleSheet

SAMPLE.HTML

```
<!DOCTYPE html>
<html>

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

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

MYSTYLE.CSS

```
body{
        background-color:rgb(196, 230, 173);
}

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

p{
        color:#5E21DD;
}
```

Internal Style Sheet

- An internal style sheet should be used when a single document has a unique style.

- You define internal styles in the head section of an HTML page, inside the <style> tag.

Example

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

Inline Styles

- An inline style loses many of the advantages of a style sheet (by mixing content with presentation).

- To use inline styles, add the style attribute to the relevant tag. The style attribute can contain any CSS property.

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

CSS Background

- CSS background properties are used to define the background effects of an element.

- CSS properties used for background effects:
  1. background-color
  2. background-image
  3. background-repeat
  4. background-attachment
  5. background-position

Background Color

- The background-color property specifies the background color of an element.

- ```
  body {
      background-color:  #ff0000;
  }
  ```

- With CSS, a color is most often specified by:
  - a HEX value - like "#ff0000"
  - an RGB value - like "rgb(255,0,0)"
  - a color name - like "red"
  ```

Background Image

- The background-image property specifies an image to use as the background of an element.

- By default, the image is repeated so it covers the entire element.

- ```
  body {
      background-image: url("paper.gif");
  }
  ```
  ```

CSS Text

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

- ```
  body {
      color: blue;
  }
  ```

- ```
  h1 {
      color: rgb(255,0,0);
  }
  ```

Text Alignment

- The text-align property is used to set the horizontal alignment of a text.
- Text can be centered, or aligned to the left or right, or justified.
- h1 {
  text-align: center;
  }

  p.date {
  text-align: right;
  }

  p.main {
  text-align: justify;
  }

Text Decoration

- The text-decoration property is used to set or remove decorations from text.

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

  h2 {
      text-decoration: line-through;
  }

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

Text Transformation

- The text-transform property is used to specify uppercase and lowercase letters in a text.

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

  p.lowercase {
  text-transform: lowercase;
  }

  p.capitalize {
  text-transform: capitalize;
  }

Text Indentation

- the text-indent property is used to specify the indentation of the first line of a text.

- p {
  text-indent: 50px;
  }

CSS Font

- CSS font properties define the font family, boldness, size, and the style of a text.

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

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

Font family and Font Size and Font Style

- p {
  font-family: "Times New Roman", Times, serif;
  font-size: 13px
  }
  p.normal {
  font-style: normal;
  }
  p.italic {
  font-style: italic;
  }
  p.oblique {
  font-style: oblique;
  }

Font Example

```
<html><head><style>
p.normal {
    font-family: Times New Roman;
    font-size: 40px;
    font-style: normal;
}
p.italic {
    font-family: Arial;
    font-size: 30px;
   font-style: italic;
}
p.oblique {
    font-family: Courier;
   font-style: oblique;
}
</style></head>
<body>
<p class="normal">This is a paragraph in
    normal style.</p>

<p class="italic">This is a paragraph in
    italic style.</p>

<p class="oblique">This is a paragraph
    in oblique style.</p>
</body>
</html>
```