

### **3.1 Introduction**

The CSS1 specification was developed in 1996 by W3C. CSS2 was released in 1998 which added many properties and values to CSS1. CSS3 has been under development since the late 1990s. CSSs provide the means to control and change presentation of HTML documents. CSS is not technically HTML, but can be embedded in HTML documents.

Cascading style sheets were introduced to provide a uniform and consistent way to specify presentation details in XHTML documents. Most of the style tags and attributes are those deprecated from HTML 4.0 in favor of style sheets. Idea of style sheets is not a new concept as it existed in desktop publishing systems and word processors. Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents.

Style sheets can be defined at three levels to specify the style of a document .Hence called Cascading style sheets. Style is specified for a tag by the values of its properties.

For example:

```
<h2 { font-size: 22pt; } >
```

### **3.2 Levels of Style Sheets**

There are three levels of style sheets, in order from lowest level to highest level, are inline, document level, and external. Inline style sheets are specified for a specific occurrence of a tag and apply only to the content of that tag. This application of style, which defeats the purpose of style sheets – that of imposing uniform style on the tags of at least one whole document. Another disadvantage of inline style sheets is that they result in style information, which is expressed in a language distinct from XHTML markup, being embedded in various places in documents.

Document-level style specifications appear in the document head section and apply to the whole body of the document. External style sheets are not part of the documents to which they apply. They are stored separately and are referenced in all documents that use them. They are written as text files with MIME type text/css.

```
<html xmlns = "http://www.w3.org/1999/xhtml">
<head>
<title> Our first document </title>
<style>
h2 { font-size: 32pt; font-weight: bold;font-family: 'Times New Roman';}
h3,h4 { font-size: 18pt; font-family: 'Courier New'; font-style:italic;
font-weight:bold}
</style>
</head> <body>
```

```
<h1> Twinkle twinkle little star</h1>
<h2> how I wonder </h2>
<h3>what you are ???</h3>
<h4>up above the world so high</h4>
<h5> like a diamond</h5>
<h6> in the sky.</h6>
</body>
</html>
```

**Twinkle twinkle little star**

**how I wonder**

*what you are ???*

*up above the world so high*

**like a diamond**

**in the sky.**

### Linking an External Style sheet

A <link> tag is used to specify that the browser is to fetch and use an external style sheet file through href. The href attribute of <link> is used to specify the URL of the style sheet document, as in the following example:

```
<link rel = "stylesheet" type = "text/css"
href = "http://www.wherever.org/termpaper.css"> </link>
```

This link must appear in the head of the document. External style sheets can be validated, with the service [http://jigsaw.w3.org/css-validator/ validator-upload.html](http://jigsaw.w3.org/css-validator/validator-upload.html). External style sheets can be added using other alternate style specification known as file import

- @import url (filename);

Filename is not quoted. Import appears only at the beginning of the content of a style element. The file imported can contain both markup as well as style rules

### **3.3 Style Specification Formats**

The format of a style specification depends on the level of the style sheet. Inline style sheet appears as the value of the style attribute of the tag. The general form of which is as follows:

```
style = "property_1: value_1;  
        property_2: value_2;  
        ...  
        property_n: value_n;"
```

#### **3.3.1 Format for Document-level**

Document style specifications appear as the content of a style element within the header of a document, although the format of the specification is quite different from that of inline style sheets. The <style> tag must include the type attribute, set to "text/css" (as there are other style sheets in JavaScript).

The list of rules must be placed in a comment, because CSS is not XHTML. Style element must be placed within the header of a document. Comments in the rule list must have a different form use C comments (*/\*...\*/*). The general form of the content of a style element is as follows:

```
<style type = "text/css">  
/*  
rule list(/* styles for paragraphs and other tags*/  
*/</style>
```

#### **3.3.2 Form of the rules:**

Each style in a rule list has two parts: selector, which indicates the tag or tags affected by the rules. Each property/value pair has the form->property: value

```
Selector { property_1: value_1; property_2: value_2:...  
property_n: value_n;}
```

Pairs are separated by semicolons, just as in the value of a <style> tag.

### **3.4 Selector Forms**

**Selector can have variety of forms like:**

1. Simple selector form
2. Class selector
3. Generic selector
4. Id selector
5. Universal selector
6. Pseudo classes

### 3.4.1 Simple selector form

Simple selector form is a list of style rules, as in the content of a <style> tag for document-level style sheets. The selector is a tag name or a list of tag names, separated by commas. Consider the following examples, in which the property is font-size and the property value is a number of points :

```
h1, h3 { font-size: 24pt ;}
h2 { font-size: 20pt ;}
```

Selectors can also specify that the style should apply only to elements in certain positions in the document .This is done by listing the element hierarchy in the selector.

- Contextual selectors: Selectors can also specify that the style should apply only to elements in certain positions in the document .
- In the eg selector applies its style to the content of emphasis elements that are descendants of bold elements in the body of the document.

```
body b em {font-size: 24pt ;}
```

Also called as descendant selectors. It will not apply to emphasis element not descendant of bold face element.

### 3.4.2 Class Selectors

Used to allow different occurrences of the same tag to use different style specifications. A style class has a name, which is attached to the tag's name with a period.

```
p.narrow {property-value list}
p.wide {property-value list}
```

The class you want on a particular occurrence of a tag is specified with the class attribute of the tag.

For example,

```
<p class = "narrow">
Once upon a time there lived a king in the place called Ayodhya.
</p>
...
<p class = "wide">
Once upon a time there lived a king in the place called Ayodhya.
</p>
```

### 3.4.3 Generic Selectors

A generic class can be defined if you want a style to apply to more than one kind of tag.

A generic class must be named, and the name must begin with a period without a tag name in its name. For Example:

```
.really-big { ... }
```

Use it as if it were a normal style class

```
<h1 class = "really-big"> This Tuesday is a holiday </h1>...
```

```
<p class = "really-big"> ... </p>
```

```
<html xmlns = "http://www.w3.org/1999/xhtml">
```

```
<head>
```

```
<title> Absolute positioning </title>
```

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

```
.regtext { font-family: Times; font-size: 14pt; width: 600px }
```

```
.abstext { position: absolute; top: 25px; left: 50px; font-family: Times; font-size: 24pt; font-style: italic; letter-spacing: 1em; color: rgb(102,102,102); width: 500px }
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<p class = "regtext">
```

Apple is the common name for any tree of the genus *Malus*, of the family Rosaceae. Apple trees grow in any of the temperate areas of the world. Some apple blossoms are white, but most have stripes or tints of rose. Some apple blossoms are bright red. Apples have a firm and fleshy structure that grows from the blossom. The colors of apples range from green to very dark red. The wood of apple trees is fine-grained and hard. It is, therefore, good for furniture construction. Apple trees have been grown for many centuries. They are propagated by grafting because they do not reproduce themselves.

```
</p>
```

```
<p class = "abstext"> APPLES ARE GOOD FOR YOU </p>
```

```
</body>
```

```
</html>
```

Apple is the common name for any tree of the genus *Malus*, of the family Rosaceae. Apple trees grow in any of the temperate areas of the world. Some apple blossoms are white, but most have stripes or tints of rose. Some apple blossoms are bright red. Apples have a firm and fleshy structure that grows from the blossom. The colors of apples range from green to very dark red. The wood of apple trees is fine-grained and hard. It is, therefore, good for furniture construction. Apple trees have been grown for many centuries. They are propagated by grafting because they do not reproduce themselves.

### 3.4.4 Id Selectors

An id selector allow the application of a style to one specific element. The general form of an id selector is as follows :

*#specific-id {property-value list}*

Example:

**#section14 {font-size: 20}** specifies a font size of 20 points to the element

**<h2 id =“section14”> Alice in wonderland</h2>**

### 3.4.5 Universal selector

The universal selector, denoted by an asterisk(\*), which applies style to all elements in the document. For example:

- **{color: red;}**

makes all elements in the document red.

**Twinkle twinkle little star**

**how I wonder**

*what you are ???*

*up above the world so high*

**like a diamond**

**in the sky.**

### 3.4.6 Pseudo Classes

Pseudo classes are styles that apply when something happens, rather than because the target element simply exists. Names of pseudo classes begin with colons hover classes apply when the mouse cursor is over the element focus classes apply when an element has focus i.e. the mouse

cursor is over the element and the left mouse button is clicked. These two pseudo classes are supported by FX2 but IE7 supports only hover.

```
<html xmlns = "http://www.w3.org/1999/xhtml">
<head> <title> Checkboxes </title>
<style type = "text/css">
  input:hover {color: red;}
  input:focus {color: green;}
</style> </head> <body>
<form action = ""> <p>
  Your name:
  <input type = "text" />
</p> </form>
</body>
</html>
```

Your name:

Your name:

Your name:

### **3.5 Property Values Forms**

CSS1 includes 60 different properties in 7 categories(list can be found in W3C website)  
Fonts, Lists, Alignment of text, Margins, Colors, Backgrounds, Borders. Keywords property values are used when there are only a few possible values and they are predefined

Eg: small, large, medium.

Keyword values are not case sensitive, so Small, SmAIL, and SMALL are all the same as small. Number values can be integer or sequence of digits with decimal points and a + or – sign. Length values are specified as number values that are followed immediately by a two character abbreviation of a unit name. There can be no space between the number and the unit name. The possible unit names are px for pixels, in for inches, cm for centimeters, mm for millimeters, pt for points, pc for picas (12 points),em for value of current font size in pixels, ex for height of the letter ‘x’. No space is allowed between the number and the unit specification e.g., 1.5 in is

illegal!. **Percentage** - just a number followed immediately by a percent sign: eg: font size set to 85% means new font size will be 85% of the previous font size value.

**URL values:** URL property values use a form that is slightly different from references to URLs in links. The actual URL, which can be either absolute or relative, is placed in parentheses and preceded by url, as in the following:

*url(protocol://server/pathname)*

No space should be left between URL and the left parenthesis.

**Colors :**Color name rgb(n1, n2, n3). Hex form: #B0E0E6 stands for powder blue color. Property values are inherited by all nested tags, unless overridden.

## **3.6 Font properties**

### **3.6.1 Font-family**

The font-family property is used to specify a list of font name. The browser will use the first font in the list that it supports. For example, the following could be specified.

*font-family: Arial, Helvetica, Courier*

**Generic fonts:** They can be specified as the font family value for example :serif, sans-serif, cursive, fantasy, and monospace (defined in CSS). Browser has a specific font defined for each generic name. If a font name that has more than one word, it should be single-quoted  
Eg: font-family: 'Times New Roman'

### **3.6.2 Font-size**

Possible values: a length number or a name, such as smaller, xx-large, medium , large etc. Different browsers can use different relative value for the font-size.

### **3.6.3 Font-variant**

The default value of the font-variant property is normal, which specifies the usual character font. This property can be set to small-caps to specify small capital characters.

### **3.6.4 Font-style**

The font-style property is most commonly used to specify italic, as in the following example.

Eg: font-style: italic

### 3.6.5 Font-weights

The font-weight property is used to specify the degree of boldness. For example:

```
font-weight : bold
```

### 3.6.6 Font Shorthands

If more than one font property is to be specified than the values may be stated in a list as the value of the font property . The browser will determine from the form of the values which properties to assign. For example, consider the following specification :

Eg: font: bold 24pt 'Times New Roman' Palatino Helvetica

The order which browser follows is last must be font name, second last font size and then the font style, font variant and font weight can be in any order but before the font size and names. Only the font size and the font family are required in the font value list. Below example displays the fonts.html

```
<html xmlns = http://www.w3.org/1999/xhtml>
<head> <title> Font properties </title>
  <style type = "text/css">
    p.big {font-size: 14pt;
          font-style: italic;
          font-family: 'Times New Roman';
          }
    p.small {font: 10pt bold 'Courier New';}
    h2 {font-family: 'Times New Roman';
        font-size: 24pt; font-weight: bold}
    h3 {font-family: 'Courier New'; font-size: 18pt}
  </style>
</head>

<body>
  <p class = "big">
    Where there is will there is a way.
  </p>
  <p class = "small">
    Practise makes a man perfect.
  </p>
  <h2> Chapter 1 Introduction </h2>
  <h3> 1.1 The Basics of Web programming </h3>
  <h4> Book by Robert Sebesta
</body>

</html>
```

*Where there is will there is a way.*

Practise makes a man perfect.

## Chapter 1 Introduction

### 1.1 The Basics of Web programming

Book by Robert Sebesta

#### 3.6.7 Text Decoration

The text-decoration property is used to specify some special features of the text. The available values are line-through, overline, underline, and none, which is the default. Many browsers underline links. Text decoration is not inherited

Eg:line-through, overline, underline, none

**Letter-spacing** – value is any length property value controls amount of space between characters in text

- Eg: 3px

```
<html xmlns = "http://www.w3.org/1999/xhtml">
<head> <title> Text decoration </title>
<style type = "text/css">
  p.through {text-decoration: line-through}
  p.over {text-decoration: overline}
  p.under {text-decoration: underline}
</style> </head>
<body>
  <p class = "through">
    Twinkle twinkle little star how i wonder what you are!!!! </p>
  <p class= "over">
    Twinkle twinkle little star how i wonder what you are!!!! </p>
  <p class = "under">
    Twinkle twinkle little star how i wonder what you are!!!! </p>
</body></html>
```

~~Twinkle twinkle little star how i wonder what you are!!!!~~

---

Twinkle twinkle little star how i wonder what you are!!!!

---

Twinkle twinkle little star how i wonder what you are!!!!

```
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<title>CSS Example</title>
<link rel="stylesheet" type="text/css" href="ch03_eg01.css" />
</head>
<body>
<h1>Simple CSS Example</h1>
<p>This simple page demonstrates how CSS can be used to control the presentation of an
XHTML document.</p>
<p class="important">This paragraph demonstrates the use of the <code>class</code>
attribute.</p>
</body>
</html>
```

```
/* CSS Document for ch03_eg01.html */
body {
  font-family:arial, verdana, sans-serif;
  background-color:#efefef;}
h1 {
  color:#666666;
  font-size:22pt;}
p {
  color:#999999;
  font-size:10pt;}
p.important {
  border:solid black 1px;
  background-color:#ffffff;
  padding:5px;
  margin:15px;
  width:40em;}
```

# Simple CSS Example

This simple page demonstrates how CSS can be used to control the presentation of an XHTML document.

This paragraph demonstrates the use of the `class` attribute.

```
<html xmlns="http://www.w3.org/1999/xhtml">
  <head>
    <title>CSS Example</title>
    <link rel="stylesheet" type="text/css" href="ch03_eg02.css" /> </head> <body>
    <p class="one">The first paragraph of text should be displayed in a sans-serif font.</p>
    <p class="two">The second paragraph of text should be displayed in a serif font.</p>
    <p class="three">The third paragraph of text should be displayed in a monospaced font.</p>
    <p class="four">The fourth paragraph of text should be displayed in a cursive font.</p> <p
class="five">The fifth paragraph of text should be displayed in a fantasy font.</p> </body>
</html>
```

CSS Document for ch03\_eg02.html \*/

```
p.one { font-family:arial, verdana, sans-serif;}
p.two { font-family:times, "times new roman", serif;}
p.three { font-family:courier, "courier new", monospace;}
p.four { font-family: Zapf-Chancery, Santivo, cursive;}
p.five { font-family:Cottonwood, Studz, fantasy;}
```

The first paragraph of text should be displayed in a sans-serif font.

The second paragraph of text should be displayed in a serif font.

The third paragraph of text should be displayed in a monospaced font.

**The fourth paragraph of text should be displayed in a cursive font.**

*The fifth paragraph of text should be displayed in a fantasy font.*

```
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
  <title>CSS Example</title>
  <link rel="stylesheet" type="text/css" href="ch03_eg08.css" /> </head>
  <body>
    <h1>Lengths</h1>
    <p class="px">The length used here is 12 px</p> <p class="pt">The length used here is 12
pt</p>
    <p class="pc">The length used here is 2 pc</p> <p class="in">The length used here is
0.5in</p>
    <p class="cm">The length used here is 1 cm</p> <p class="mm">The length used here is
12mm</p>
    <p class="em">The length used here is 1.5em</p> <p class="ex">The length used here is
1.5ex</p>
  </body> </html>
```

```
* CSS Document for ch03_eg08.html */
p { font-family:arial; font-size:12pt; }
```

```
/* lengths */
p.px { font-size:12px; }
p.pt { font-size:12pt; }
p.pc { font-size:2pc; }
p.in { font-size:0.5in; }
p.cm { font-size:1cm; }
p.mm { font-size:12mm; }
p.em { font-size:1.5em; }
p.ex { font-size:1.5ex; }
```

## Lengths

The length used here is 12 px

The length used here is 12 pt

The length used here is 2 pc

The length used here is 0.5in

The length used here is 1cm

The length used here is 12mm

### 3.7 List properties

It is used to specify style of bullets or sequencing values in list items. The list-style-type of Unordered lists can be set to disc,circle,square or none.

Bullet can be a disc (default), a square, or a circle. Set it on either the <ul> or <li> tag

On <ul>, it applies to list items

```
<h3> Some Common Single-Engine Aircraft </h3>
```

```
<ul style = "list-style-type: square">
```

```
<li> Cessna Skyhawk </li>
```

```
<li> Beechcraft Bonanza </li>
```

```
<li> Piper Cherokee </li> </ul>
```

On <li>, list-style-type applies to just that item

```
<h3> Some Common Single-Engine Aircraft </h3>
```

```
<ul>
```

```
<li style = "list-style-type: disc">
```

```
  Cessna Skyhawk </li>
```

```
<li style = "list-style-type: square">
```

```
  Beechcraft Bonanza </li>
```

```
<li style = "list-style-type: circle">
```

```
  Piper Cherokee </li>
```

Could use an image for the bullets in an unordered list.

Example:<li style = "list-style-image: url(bird.jpg)">

```

<html>
</head><body>
<h3> Name of subjects offered</h3>
  <ul style = "list-style-type: square">
    <li> web programming</li>
    <li> Data structures</li>
    <li> Compilers design </li>
  </ul>
<h3> Name of subjects offered</h3>
<ul>
  <li style = "list-style-type: disc">
    web programming </li>
  <li style = "list-style-type: square">
    Data structures</li>
  <li style = "list-style-type: circle">
    Compilers design </li>
</ul></body>
</html>

```

### **Name of subjects offered**

- web programming
- Data structures
- Compilers design

### **Name of subjects offered**

- ◆ web programming
- Data structures
- ◇ Compilers design

When ordered lists are nested, it is best to use different kinds of sequence values for the different levels of nesting. The list-style-type can be used to change the sequence values. Below table lists the different possibilities defined by CSS1.

Property value	Sequence type	First four values
Decimal	Arabic numerals	1, 2, 3, 4
upper-alpha	Uc letters	A, B, C, D
lower-alpha	Lc letters	a, b, c, d
upper-roman	Uc Roman	I, II, III, IV
lower-roman	Lc Roman	i, ii, iii, iv

CSS2 has more, like lower-greek and hebrew

```
<?xml version = "1.0"?>
<!DOCTYPE html PUBLIC "-//w3c//DTD XHTML 1.1//EN"
"http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">
<html xmlns = "http://www.w3.org/1999/xhtml">
  <head> <title> Sequence types </title>
  <style type = "text/css">
    ol {list-style-type: upper-roman;}
    ol ol {list-style-type: upper-alpha;}
    ol ol ol {list-style-type: decimal;}
  </style>
</head>body>
  <h3> Aircraft Types </h3>
  <ol>
    <li> General Aviation (piston-driven engines)
      <ol>
li> Single-Engine Aircraft
        <ol>
          <li> Tail wheel </li>
          <li> Tricycle </li>
        </ol>
      </li>
        <li> Dual-Engine Aircraft
          <ol>
            <li> Wing-mounted engines </li>
            <li> Push-pull fuselage-mounted engines </li>
          </ol>
        </li>

      </ol>
    </li>
```

## Aircraft Types

- I. General Aviation (piston-driven engines)
  - A. Single-Engine Aircraft
    - 1. Tail wheel
    - 2. Tricycle
  - B. Dual-Engine Aircraft
    - 1. Wing-mounted engines
    - 2. Push-pull fuselage-mounted engines
- II. Commercial Aviation (jet engines)
  - A. Dual-Engine
    - 1. Wing-mounted engines
    - 2. Fuselage-mounted engines
  - B. Tri-Engine
    - 1. Third engine in vertical stabilizer
    - 2. Third engine in fuselage

## 3.8 Colors

Colors are a problem for the Web for two reasons:

- 1. Monitors vary widely
- 2. Browsers vary widely

There are three color collections

- 1. There is a larger set, the Web Palette
  - 216 colors. Use hex color values of 00, 33, 66, 99, CC, and FF
- 2. Any one of 16 million different colors due to 24 bit color rep
- 3. There is a set of 16 colors that are guaranteed to be displayable by all graphical browsers on all color monitors

black	000000	green	008000
silver	C0C0C0	lime	00FF00
gray	808080	olive	808000
white	FFFFFF	yellow	FFFF00
maroon	800000	navy	000080
red	FF0000	blue	0000FF
purple	800080	teal	008080
fuchsia	FF00FF	aqua	00FFFF

### 3.8.2 Color properties

The color property specifies the foreground color of XHTML elements. For example, consider the following small table

```

<style type = "text/css">
  th.red {color: red}
  th.orange {color: orange}
</style> ...
<table border = "5">
  <tr>
    <th class = "red"> Apple </th>
    <th class = "orange"> Orange </th>
    <th class = "orange"> Screwdriver </th>
  </tr>
</table>

```

The background-color property specifies the background color of elements.

### 3.9 Alignment of Text

The text-indent property allows indentation. Takes either a length or a % value. The text-align property has the possible values, left (the default), center, right, or justify. Sometimes we want text to flow around another element - the float property. The float property has the possible values, left, right, and none (the default). If we have an element we want on the right, with text flowing on its left, we use the default text-align value (left) for the text and the right value for float on the element we want on the right.

```

<html xmlns = "http://www.w3.org/1999/xhtml">
  <head> <title> The float property </title>
  <style type = "text/css">
    img {float: right}

```

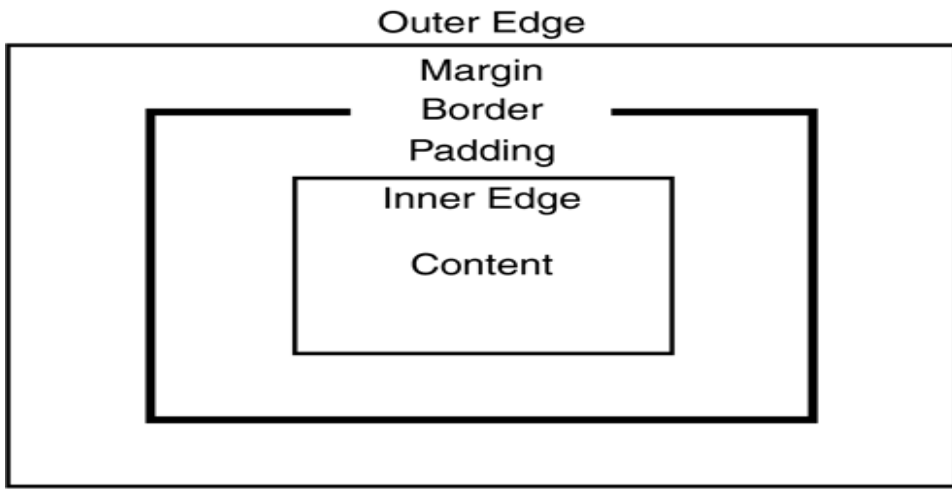
### The Box Model

```

  </style>
</head>
<body> <p>
<img src = "c210new.jpg" alt = "Picture of a Aircraft" />
  </p> <p>
    This is a picture of a Cessna 210. The 210 is the flagship
    single-engine Cessna aircraft. Although the 210 began as a
    four-place aircraft, it soon acquired a third row of seats,
    stretching it to a six-place plane. ....
.....
</p> </body>
</html>

```

### 3.10 The Box Model



#### 3.10.1 Borders

Every element has a border-style property. It Controls whether the element has a border and if so, the style of the border. The styles of one of the four sides of an element can be set with border-style values: none, dotted, dashed, and double border-width – thin, medium (default), thick, or a length value in pixels.

Border width can be specified for any of the four borders (e.g., border-top-width) border-color – any color. Border color can be specified for any of the four borders (e.g., border-top-color)

```
<html xmlns = "http://www.w3.org/1999/xhtml">
  <head> <title> Table borders </title>
  <style type = "text/css">
    table {border-top-width: medium;
           border-bottom-width: thick;
           border-top-color: red;
           border-bottom-color: green;
           border-top-style: dotted;
           border-bottom-style: dashed;
          }
    p {border-style: dashed; border-width: thin;
       border-color: green
      } </style> </head>
  <body>  <table border = "5">
    <caption> Diet chart </caption>
    <tr>
      <th> </th>
      <th> Fruits </th>
```

```

        <th> vegetables </th>
        <th> Carbohydrates </th>
</tr>   <tr>
        <th> Breakfast </th>
        <td> 0 </td>
        <td> 1 </td>
        <td> 0 </td>
</tr>   <tr>
<th> Lunch </th>
        <td> 1 </td>
        <td> 0 </td>
        <td> 0 </td> </tr>   <tr>
        <th> Dinner </th>
        <td> 0 </td>
        <td> 0 </td>
        <td> 1 </td>
</tr>
</table> <p>
    If you strictly follow the chart you can easily lose weight.
</p> </body>
</html>

```

Diet chart

	Fruits	vegetables	Carbohydrates
Breakfast	0	1	0
Lunch	1	0	0
Dinner	0	0	1

If you strictly follow the chart you can easily lose weight.

### 3.10.2 Margin

The space between the border of an element and its neighbor element. The margins around an element can be set with margin-left, etc. - just assign them a length value <img src = "c210.jpg" style = "float: right; margin-left: 0.35in; margin-bottom: 0.35in" />

Padding – the distance between the content of an element and its border  
Controlled by padding, padding-left, etc. bottom, left, or right

```

<html xmlns = "http://www.w3.org/1999/xhtml">
<head><title> Margins and Padding

```

```

</title><style type = "text/css">
  p.one {margin: 0.2in;
        padding: 0.2in;
        background-color: #C0C0C0;
        border-style: solid;
        }
  p.two {margin: 0.1in;
        padding: 0.3in;
        background-color: #C0C0C0;
        border-style: solid;
        }
  p.three {margin: 0.3in; padding: 0.1in;
          background-color: #C0C0C0;
          border-style: solid;      }
  p.four {margin:0.4in;
          background-color: #C0C0C0;}
  p.five {padding: 0.4in;
          background-color: #C0C0C0;
          }
</style> </head>

```

```

</style> </head> <body>
  <p> Here is the first line. </p>
  <p class = "one">

```

Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents <br /> [margin = 0.2in, padding = 0.2in]

```

  </p>
  <p class = "two">
    Style sheets allow you to impose a standard style on a whole document, or even a whole
    collection of documents. <br /> [margin = 0.1in,
    padding = 0.3in]
  </p>

```

<p class = "three">  
 Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents <br /> [margin = 0.3in, padding = 0.1in]

Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents  
[margin = 0.2in, padding = 0.2in]

Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents.  
[margin = 0.1in, padding = 0.3in]

Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents  
[margin = 0.3in, padding = 0.1in]

Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents  
[margin = 0.4in, no padding, no border]

Style sheets allow you to impose a standard style on a whole document, or even a whole collection of documents  
[padding = 0.4in, no margin, no border]

This is my last session.

### **3.11 Background Images**

The background-image property is used to place an image in the background of an element. Repetition can be controlled. Background image can be replicated to fill the area of the element. This is known as tiling background-repeat property possible values: repeat (default), no-repeat, repeat-x, or repeat-y background-position property. Possible values: top, center, bottom, left, or right.

```
<html xmlns = "http://www.w3.org/1999/xhtml">
  <head> <title> Background images </title>
    <style type = "text/css">
      body {background-image: url(c172.gif);}
      p {margin-left: 30px; margin-right: 30px;
        margin-top: 50px; font-size: 14pt;}
    </style>
  </head>
  <body>  <p >
```

The Cessna 172 is the most common general aviation airplane in the world. It is an all-metal, single-engine piston,

.....

.....at sea level is 720 feet per minute.

</p> </body>

</html>

This is a picture of a Cessna 210. The 210 is the flagship single-engine Cessna aircraft. Although the 210 began as a four-place aircraft, it soon acquired a third row of seats, stretching it to a six-place plane. The 210 is classified as a high performance airplane, which means its landing gear is retractable and its engine has more than 200 horsepower. In its first model year, which was 1960, the 210 was powered by a 260 horsepower fuel-injected six-cylinder engine that displaced 471 cubic inches. The 210 is the fastest single-engine airplane ever built by Cessna.



### 3.12 The <span> and <div> tags

One problem with the font properties is that they apply to whole elements, which are often too large.

Solution: a new tag to define an element in the content of a larger element - <span>.it makes a word or a phrase appear different. The default meaning of <span> is to leave the content as it is.it has no default layout. The <span> tag is similar to other HTML tags, they can be nested and they have id and class attributes.

```
<html xmlns = "http://www.w3.org/1999/xhtml">
<head>
  <title> Relative positioning </title>
</head>
<body style = "font-family: Times; font-size: 24pt;">
  <p>
    You are <span style =
      "position: relative; top: 10px;
      font-family: Times; font-size: 48pt;
      font-style: italic; color: red;">
    Welcome </span> to Web Programming class.
  </p> </body>
</html>
```

Another tag that is useful for style specifications: <div>. Used to create document sections (or divisions) for which different style can be specified.

e.g., A section of five paragraphs for which you want some particular style  
It is applied with <div> tag

```
<body> <div class = "regtext">
```

Apple is the common name for any tree of the genus Malus, of the family Rosaceae. Apple trees grow in any of the temperate areas of the world. Some apple blossoms are white, but most have stripes or tints of rose. Some apple blossoms are bright red. Apples have a firm and fleshy structure that grows from the blossom. The colors of apples range from green to very dark red. The wood of apple trees is fine-grained and hard. It is, therefore, good for furniture construction. Apple trees have been grown for many centuries. They are propagated by grafting because they do not reproduce themselves.

```
<span class = "abstext"> APPLES ARE GOOD FOR YOU </span>
</div> </body>
</html>
```

### 3.13 Conflict Resolution

When two or more rules apply to the same tag there are resolutions for deciding which rule applies. In-line style sheets have precedence over document style sheets. Document style sheets have precedence over external style sheets. Within the same level there can be conflicts a tag may be used twice as a selector

```
h3{color:red;} body h3 {color: green;}
```

A tag may inherit a property and also be used as a selector. Style sheets can have different sources:

The browser itself may set some style

eg: In FX2 min font size can be set in *Tools-Options-Advanced* window

The author of a document may specify styles. The user, through browser settings, may specify styles. Individual properties can be specified as important or normal.

Eg: `p.special{font-style: italic !important;  
font-size :14}`

This property is known as weight of a specification.

Conflict resolution is a multistage sorting process. The first step in the process is to gather the style specifications from the three possible levels of style sheets. These specifications are sorted into order by the relative precedence of the style sheet levels. This is done according to the following rules, in which the first has the highest precedence.

From highest to lowest

1. Important declarations with user origin
2. Important declarations with author origin
3. Normal declarations with author origin
4. Normal declarations with user origin
5. Any declarations with browser (or other user agent) origin

Tie-Breakers

Conflict resolution by Specificity (high to low)

1. id selectors
2. Class and pseudo-class selectors
3. Contextual selectors
4. General selectors

Position

Essentially, later has precedence over earlier. Most recently seen specification is the one which gets more precedence. Sorting process to resolve the style specification is known as cascade.