**WEB TECHNOLOGIES**

# Module III

# CSS

**Introduction to style sheets and frameworks Cascading Style sheets: Levels of style sheets-style specification Formats, selector Forms, Property- Value Forms, font Properties, List Properties, Alignment of Text, Color ,The Box model, Background Images, The Span and Div Tags.**

**Frameworks: Overview and Basics of Responsive CSS Frameworks - Bootstrap.**

## 1.Introduction

- The presentation specifications of documents can be more precisely and more consistently described with style sheets.
- The CSS1 specification was developed in 1996
- CSS2 was released in 1998
- CSS3 is on its way
- CSSs provide the means to control and change presentation of HTML documents
- CSS is not technically HTML, but can be embedded in HTML documents
- The most important benefit of style sheets is their capability of imposing consistency on the style of documents. Eg: they allow the author to specify that all occurences of a particular tag use the same presentation style. Style is specified for a tag by the values of its property.

**Advantages of Style Sheets:**

- **Saves time**
- **Easy to change**
- **Keep consistency(always behave in the same way)**
- **more control over layout**
- **create a common format for all the Web pages**

## 2. Levels of Style Sheets

- There are three levels of style sheets
    - **Inline** - specified for a specific occurrence of a tag and apply only to that tag. This is fine-grain style, which defeats the purpose of style sheets - uniform style
    - **Document-level style sheets** - apply to the whole document in which they appear
    - **External style sheets** - can be applied to any number of documents

- When more than one style sheet applies to a specific tag in a document, the lowest level style sheet has precedence
- For eg: if an external style sheet specifies a value for a particular property of a particular tag , that value is used until a different value is specified in either a document style sheet or an inline style sheet
- Likewise  a document style sheet property value can be overridden by different property values in an inline style sheet
- Inline style sheets appear in the tag itself.
- Document-level style sheets appear in the head of the document
- External style sheets are in separate files, they can be stored on any computer on the web. The browser fetches just as it fetches documents.

**When using multiple styles that conflict, which will be displayed?**

Order:

- Inline style sheet
- Embedded style sheet
- External style sheet
- Browser default

- Inline Style sheets have precedence over document style sheets which have precedence over external style sheet.

## 3. Style Specification Formats

- Format depends on the level of the style sheet
- **Format for Inline Style sheets**
- Inline: Style sheet appears as the values of the style attribute of a tag
    - General form:

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

**Example:**

```
<h1 style="color:red; font-family: sans-sarif”>India is my country</h1>
```

**Format for Document-level / Embedded / Internal style sheet**

- A style is applied to the entire HTML file.
- Use it when you need to modify all instances of particular element (e.g., h1) in a web page.

- Style sheet appears as a list of rules that are the content of a <style> tag within the header of a document
- **General form**:

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

rule list

</style>
```

- The <style> tag must include the type attribute, set to "text/css"
- Each style rule in a rule list has two parts:

 - Selector: indicates the tag or tags affected by the rule

 - List of property value pairs

    - Each property/value pair has the form: property: value
    - Pairs are separated by semicolons

- General Form of the rules in rule list:

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

**Example**

```
<style>

h1 {color:red;font-size:20;font-family:monospace;}

</style>
```

**PROGRAM**

```
<html>

<head>

<title>Getting Started</title>

<style type=“text/css”>

     h1 {font-family: sans-serif; color: organge;}

     p{font-size:15;font-style:italic;background-color:grey;}
```

```
</style>

</head>

<body>

<h1>…..</h1>

<p>….</p>

</body>

</html>
```

<u>**General form-External style sheet**</u>

- An external style sheet is a text file containing the style definition (declaration).
- Use it when you need to control the style for an entire web site.

- The <link> tag is used to specify external stylesheets .
- Within <link>, the rel attribute is used to specify the relationship of the linked to document to the document in which the link appears
- The href attribute of <link> is used to specify the url of the style sheet document as in the following document

```
<link rel = "stylesheet"  type = "text/css"

 href = "http://www.wherever.org/termpaper.css">

</link>
```

**Creating an External Style Sheet**

- Open a new blank document in Notepad
- Type style declarations
  - h1 {color:red; font-family:sans-serif;}
- Do not include <style> tags
- Save the document as *filename*.css

**Linking Style Sheets to HTML file**

- Open an HTML file
- Between <head> and </head> add
  - <link href=URL rel="relation_type" type="link_type">
- Save this file and the .css file in the same web server directory

**An example of an external style sheet with an original html file**

| | |
|---|---|
| **<html><br><head><br><title>Getting Started</title><br><link href="scraps.css" rel="stylesheet" type="text/css" /><br></head><body> ….</body> </html>** | **h1 {font-family: sans-serif; color: orange}<br>b {color: blue}** |
| **Html file** | **Text file named stylesheet.css** |

**CSS Comments: CSS comments are introduced with /* and terminated with */**

**<u>Style sheets</u>**

- **<u>Inline Style</u>**

```
Style="property0:value0;property1:value1;

   ………

   propertyZ:valueZ;"
```

- **<u>Document Level</u>**

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

     rule_list

</style>
```

**Each style rule in a rule list has two parts**

- **Selector—the tag or tags affected by the rule.**
- **List of property/value pairs**
- `Selector { property_1: value_1; property_2: value_2:… property_n: value_n;}`
- **<u>External Style sheet</u>**
  - `<link href=URL rel="relation_type" type="link_type">`
    - **URL is the file.css**
    - **Relation_type="stylesheet"**
    - **Link_type="text/css"**
- **Do not include <style> tags**

**Save the style sheet document as *filename*.css**

## <u>4. Selector Forms</u>

The selector can have variety of forms:

**1. Simple selector form**

**2. Class selector**

**3. Generic selector**

**4. Id selector**

**5. Contexual Selectors**

**6. Universal selector**

**7. Pseudo classes**

## 1.Simple selector forms

- 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 ;}`

## 2.Class Selector

- Used to allow different occurrences of the same tag to use different style specifications
- A style class has a name, which is attached to a tag name

```
p.normal {property/value list}

p.warning{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 = "normal">

A paragraph of text  that we want to be presented in ‘normal’
presentation style</p>

<p class = "warning">

A paragraph of text that is a warning to the reader ,which should be
presented in an especially noticeable style.

</p>
```

CLASSES

- HTML and XHTML require each **id** be unique- therefore an id value can only be used once in a document.
- You can mark a group of elements with a common identifier using the **class** attribute.

### 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

Example,

```
.really-big {property-value list }
```

- Use it as if it were a normal style class

```
<h1 class = "really-big"> … </h1>

...

<p class = "really-big"> … </p>
```

### 4.id *Selectors*

- An id selector allow the application of a style to one specific element.
- General form:

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

- Example:

```
#section14 {font-size: 20}
```

Specifies a font size of 20 points to the element

```
<h2 id = "section14">Hello</h2>
```

### 5.Contexual selectors

- 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.

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

- 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.

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

### 6.Universal Selectors

- The universal selector denoted by an asterisk(*). It applies its style to all elements in the document

For Eg:

```
*  {color : red}
```

Makes all elements in the document red.

## 7.Pseudo Classes

- Pseudo classes are styles that apply when something happens, rather than because the target element(tag) simply exists. Names begin with colons

  The style of **hover** pseudo classes apply when the mouse cursor is over the element.The style of **focus** pseudo classes apply when an element has focus (mouse cursor over the element and click the left mouse button)

- Eg:
- `Input:hover {color: red;}`

**Pseudo Class Example**

```
<!-- pseudo.html -->

<!DOCYPE html>

<html lang=”en”>

<head>

<title>Pseudoclasses</title>

<meta charset=”utf-8” />

    <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>
```

## 5. Property  Value Forms

- CSS1 include 60 different properties in 7 categories:
    - Fonts
    - Lists
    - Alignment of text
    - Margins
    - Colors
    - Backgrounds
    - Borders

**Property Values (values of properties)**

The property value can appear in many forms.

- Keywords – large,medium, small, …
- Number values – integers,decimal numbers etc.
- Length - numbers, maybe with decimal points followed by two character abbreviation of a unit name
- Units:
    - px - pixels
    - in - inches
    - cm - centimeters
    - mm - millimeters
    - pt - points
    - pc - picas (12 points)
    - em – value of the current font size in pixels
    - ex - height of the letter 'x'
    - No space is allowed between the number and the unit specification e.g.,  1.5 in  is illegal!

Eg: 10px, 24pt etc.

- Percentage - just a number followed immediately by a percent sign. Eg: 70%
- URL values

- url(protocol://server/pathname)
- Colors
- **Color name**: eg: fuchsia
- **rgb(n1, n2, n3)** :Eg: rgb(255,0,255)
- Numbers can be decimal or percentages
- Hexadecimal form: hexadecimal numbers must be preceded with pound(#) sign.

Eg : #B0E0E6 stands for powder blue color.

## 6 . Font Properties

### 1.Font-Families

- 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
```

If a font name has more than one word, it should be single-quoted. ‘ Times New Roman‘

### 2.font-size

Sets the size of fonts.There are two categories of font-size values, absolute and relative.

In the case of absolute category the size value could be given as length value in points, picas or pixels or keywords from the list xx-small, x-small, small, medium, large and x-large.

Eg: **font-size: 10pt**

The relative size values are smaller and larger, which adjust the font size relative to the font size of the parent element.

Eg: **font-size:1.2em**

This sets the font size to 1.2 times the font size of the parent element.1.2em and 120% are same.

### 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 letters.

### 4. font-style

- Most commonly used to specify italic.

Eg: `font-style: italic`

### 5. font-weight

- Used to specify degrees of boldness.

`Eg: font-weight: bold`

Possible values are bolder, lighter, bold, normal(default)

- Could specify as a multiple of 100 (100 – 900) where 400 is same as normal.

## 6. Font Shorthands

For specifying more than one font properties. The values can be stated in a list as value of the font property.

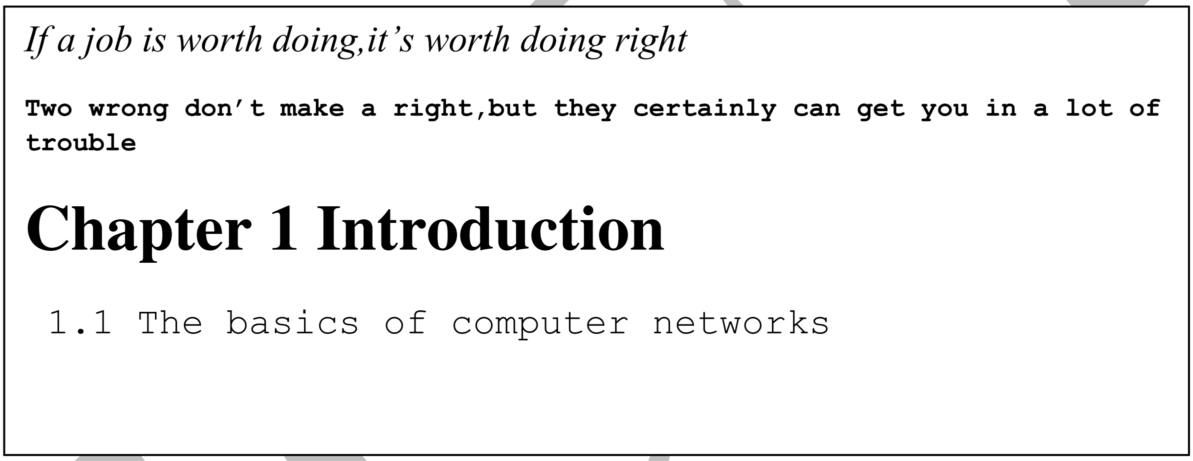
Eg: `font:  bold 14pt  Arial  Helvetica`

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.

- SHOW fonts.html and display

```
<!DOCTYPE html>

<!—fonts.html

      An example to illustrate font properties -->

<html lang=”en”>

      <head><title>Font Properties</title>

<meta charset=”utf-8” />

<style type”text/css”>

p.major {font-size: 14pt;

               font-style: italic;

               font-family: ‘Times New Roman’ ;}

p.minor {font: 10pt bold ‘courier New’;}

h2 {font-family: ‘Times New Roman’;

font-size: 24pt;font-weight: bold;}

 h3 {font-family: ‘Courier New’;}

</style>

</head>

 <body>

 <p class = “major”>
 If a job is worth doing,it’s worth doing right</p>

 < p class = “minor”>

 Two wrong don’t make a right,but they certainly can get you in a lot of
trouble.

</p>

<h2> Chapter 1 Introduction</h2>

<h3> 1.1 The basics of computer networks</h3>

</body>

</html>
```

**OUTPUT**



*If a job is worth doing,it’s worth doing right*

**Two wrong don’t make a right,but they certainly can get you in a lot of trouble**

# Chapter 1 Introduction

1.1 The basics of computer networks

Fonts2.html is a revision of fonts.html that uses an **external style sheet** rather than document level stylesheets.

```
<!DOCTYPE html>

<!—fonts2.html

      An example to illustrate font properties -->

<html lang=”en”>

      <head><title>Font Properties</title>

<meta charset=”utf-8” />

<link rel=“stylesheet” type = “text/css”

 href = “styles.css” />

</head>
```

```
 <body>

 <p class = “major”>

 If a job is worth doing,it’s worth doing right</p>

 < p class = “minor”>

 Two wrong don’t make a right,but they certainly can get you in a lot of
trouble.

</p>

<h2> Chapter 1 Introduction</h2>

<h3> 1.1 The basics of computer networks</h3>

</body>

</html>
```

**/*styles.css */**

```
p.major {font-size: 14pt;

         font-style: italic;

         font-family: ‘Times New Roman’;}

p.minor {font:bold 10pt ‘courier New’;}

h2 {font-family: ‘Times New Roman’;

font-size: 24pt;font-weight: bold}

 h3 {font-family: ‘Courier New’;}
```

**OUTPUT**

*If a job is worth doing,it’s worth doing right*

**Two wrong don’t make a right,but they certainly can get you in a lot of trouble**

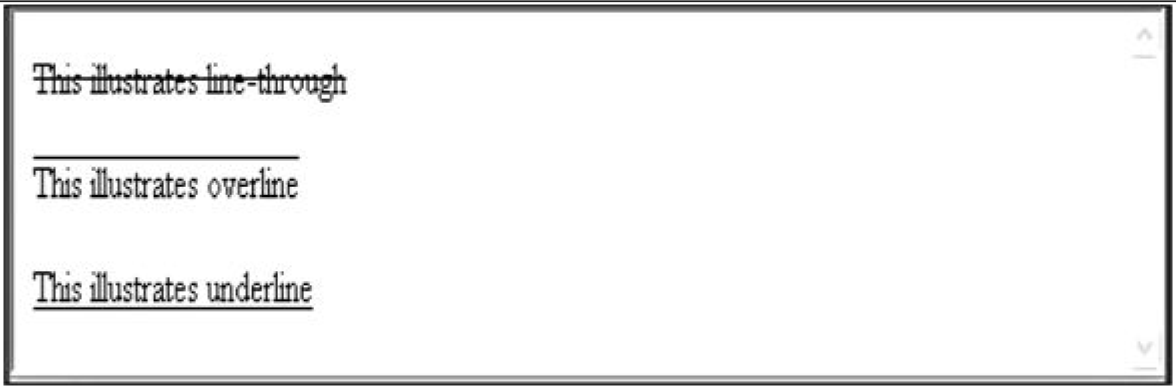
## Chapter 1 Introduction

1.1 The basics of computer networks

**7. The text-decoration property**

- Specifies some special features of text. Possible values of `text-decoration` property are `line-through, overline, underline, none`
- Example:

```
  <!DOCTYPE html>
<!—fonts2.html
  An example to illustrate font properties -->
<html lang=”en”>
<head><title>Text Decoration</title>
<meta charset=”utf-8 />
<style type = “text/css”>
p.delete {text-decoration: line-through}
p.cap {text-decoration:overline}
p.attention {text-decoration: underline}
</style>
</head>
<body>
<p class = “delete”>
This illustrates Linehrough
</p>
<p class = “cap”>
This illustrates overline
</p>
<p class = “attention”>
This illustrates underline
</p>
</body>
</html>
```



~~This illustrates line-through~~

This illustrates overline

This illustrates underline

**8.Text Spacing**

The `letter-spacing` property controls the amount of space between letters in words. This spacing is called tracking The possible values of `letter-spacing` are `normal` or any length property values—for example, 3px.Positive values increase the letter spacing, negative values decrease it. For eg:`letter-spacing: 1px` spreads the letters of words. `letter-spacing: -1px` squeezes the letters of the words together. The value normal resets letter-spacing back to that of parent element.

The space between words in a text can be controlled with the `word-spacing` property, whose values are `normal` or any length value. Positive values increase the letter spacing ,negative values decrease it.

The space between lines of text can be controlled with the `line-height` property. This spacing is called leading. The value of line-height can be a number or a length value.

## 7. List properties

- Property Name: `list-style-type` can applied to both ordered and unordered list.
- **Unordered lists**
  - 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.

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

ul {list-style-type:square}

</style>
```

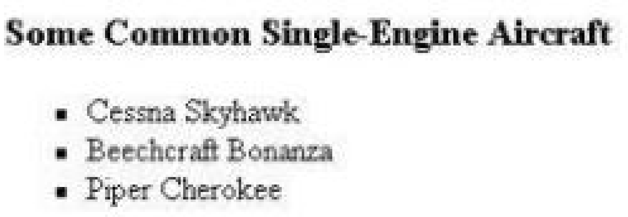
................................

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

  <ul>

      <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>

 </ul>
```

**OUTPUT**



**Some Common Single-Engine Aircraft**

- Cessna Skyhawk
- Beechcraft Bonanza
- Piper Cherokee

An image can be used in a list item bullet.

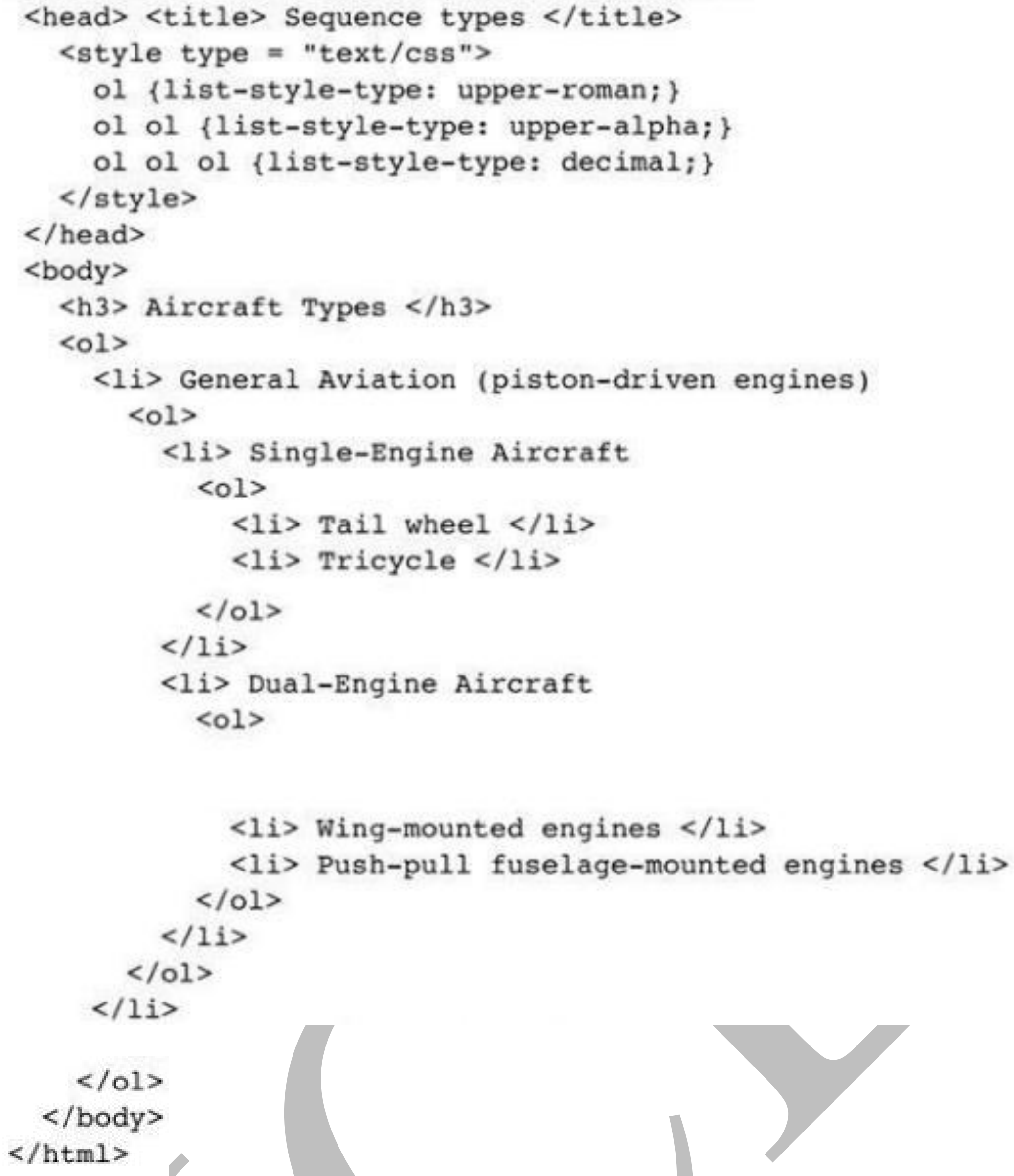
Example:

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

**ORDERED LIST**

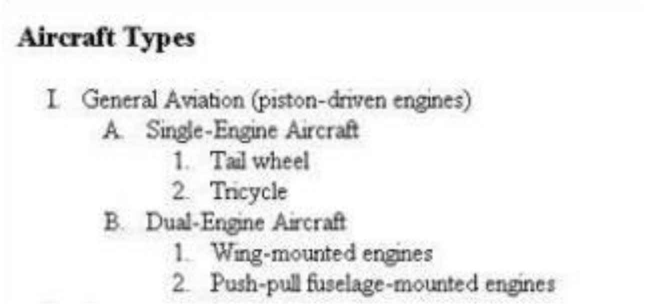
- *On ordered lists* - list-style-type property can be used to change the sequence values

| ***Property value*** | ***Sequence type*** | ***First four*** |
|---|---|---|
| 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 |



```
<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>

   </ol>
  </body>
</html>
```

<u>OUTPUT</u>



**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
```

## 8.<u>Alignment of Text</u>

- The `text-indent` property allows indentation (first line of a paragraph can be intended)
    - This property takes either a length or a % value

```
<style type = “text/css”>
```

```
p.indent  {text-indent: 0.5in}

</style>
```

…………

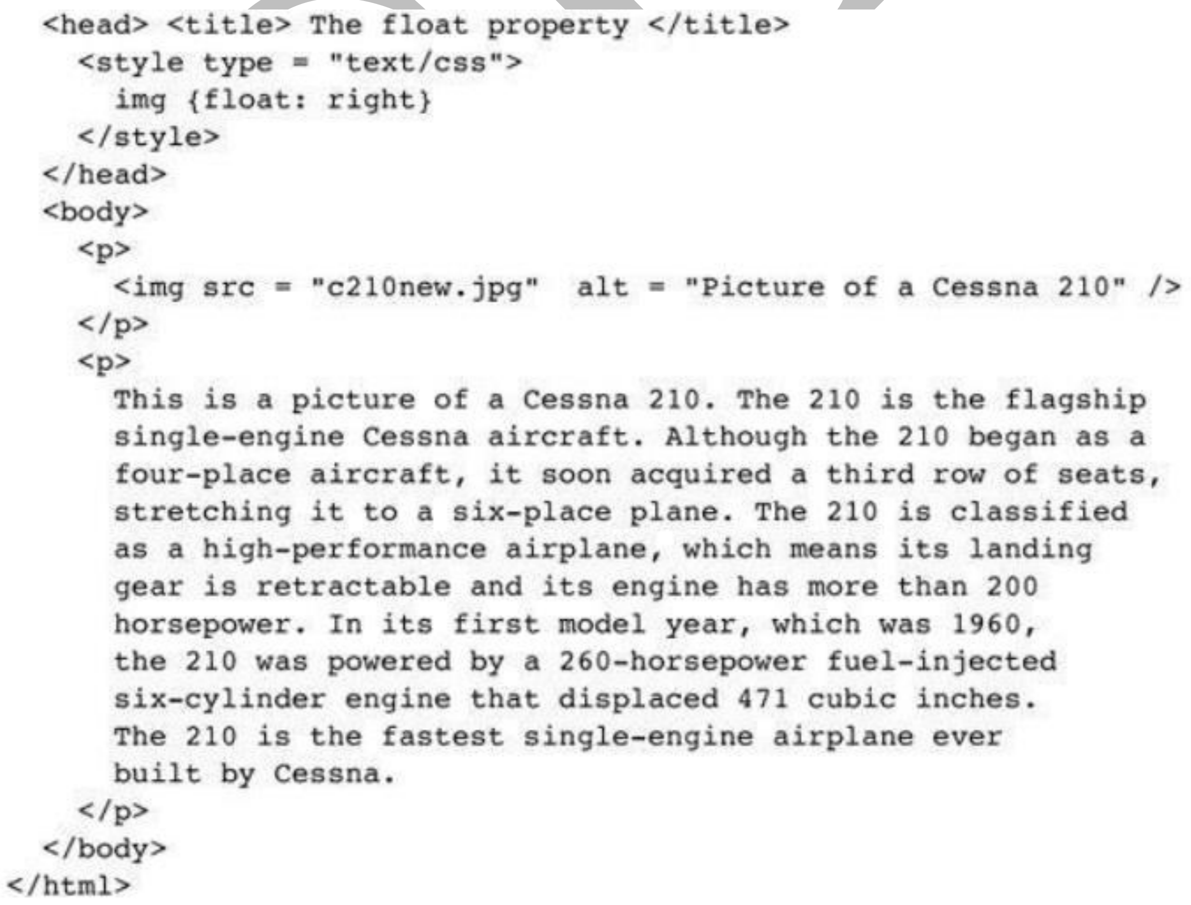
```
<p class ="“indent”>
```

Now is the time for all good Web programmers to begin using cascading style sheets for all presentation details in their documents. No more deprecated tags and attributes, just nice, precise style sheets.
</p>

**OUTPUT**

Now is the time for all good Web programmers to begin using cascading style sheets for all presentation details in their documents. No more deprecated tags and attributes, just nice, precise style sheets

- The `text-align` property has the possible values, `left` (the default), `center, right`, or `justify`
- The `float` property is used to specify that text should flow around another element often an image or table.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.

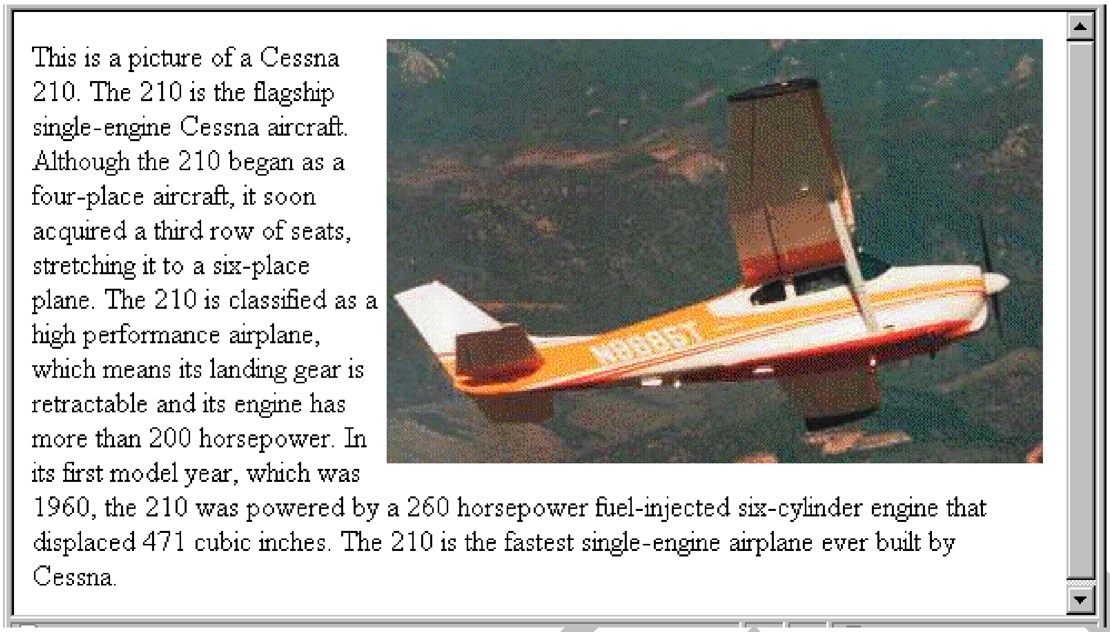


```
  <head> <title> The float property </title>
    <style type = "text/css">
      img {float: right}
    </style>
  </head>
  <body>
    <p>
      <img src = "c210new.jpg"  alt = "Picture of a Cessna 210" />
    </p>
    <p>
      This is a picture of a Cessna 210. The 210 is the flagship
      single-engine 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. 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.
    </p>
  </body>
</html>
```

Or we can specify float style using inline style sheet for image.

```
<img src = "c210.jpg"   style = "float: right" />
```

**OUTPUT**



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.

## 9.Colors

- *Color is 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 set of 17 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 |
| fuchia | FF00FF | aqua | 00FFFF |

2. **There is a much larger set, the Web Palette**

   - 216 named colors

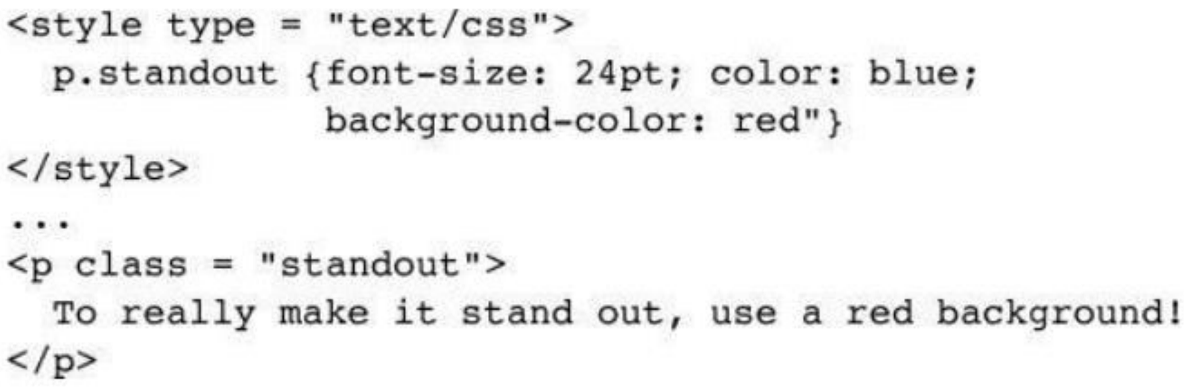
**3.Any one of 16 million different colors**

**Color Properties**

- The `color` property specifies the foreground color of elements

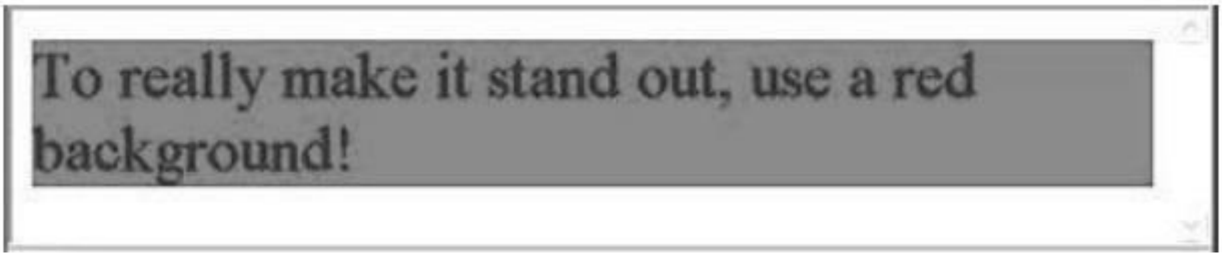
```
<style type = “text/css”>
  th.red {color: red}
  th.orange {color: orange}
</style>
<table>
  <tr>
    <th class = "red"> Apple </th>
    <th class = "orange"> Orange </th>
    <th class = "orange"> Screwdriver </th>
  </tr>
</table>
```

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



```
<style type = "text/css">
  p.standout {font-size: 24pt; color: blue;
              background-color: red"}
</style>
...
<p class = "standout">
  To really make it stand out, use a red background!
</p>
```

**OUTPUT**



To really make it stand out, use a red background!

## 10. The Box Model

Virtually all document elements can have borders with various styles, such as color and width. Furthermore, the amount of space between the content of an element and its border, known as ***padding***, can be specified, as well as the space between the border and an adjacent element, known as the ***margin.*** This model is called ***box model.***

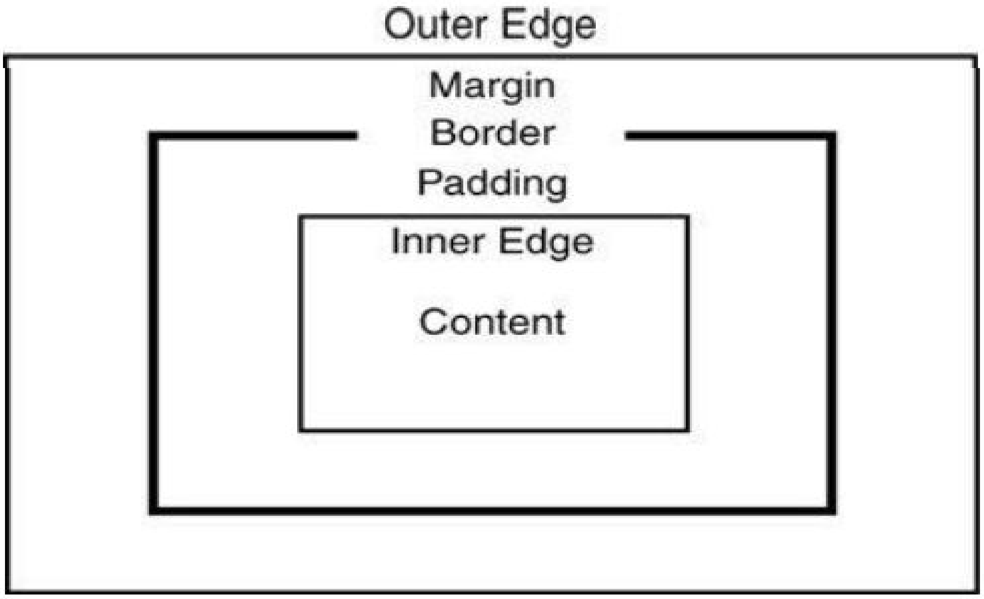


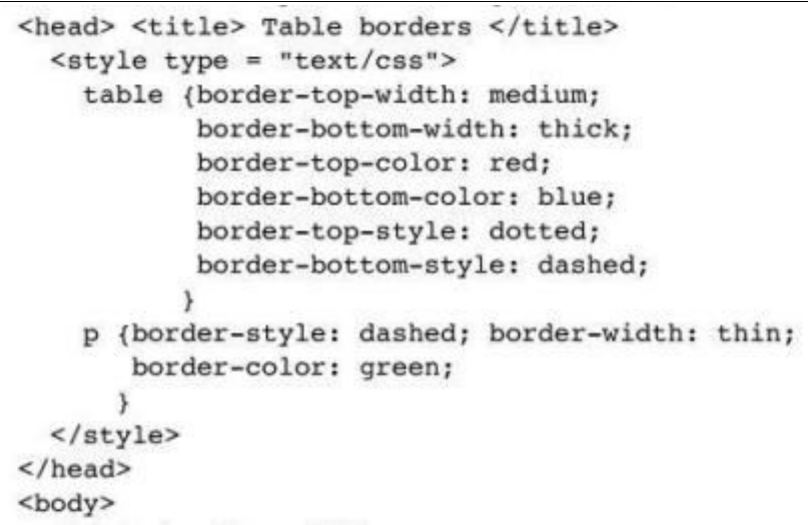
**Figure 3.7** The box model

**Borders**

- Borders – every element has a `border-style` property, that Controls whether the element has a border and if so, the style of the border.
  - `border-style` values: `none`(default), `dotted, dashed, and double`.
  - The style of one particular element can be set with `border-top-style`, `border-bottom-style, border-left-style,` and `border-right-style`
  - `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)

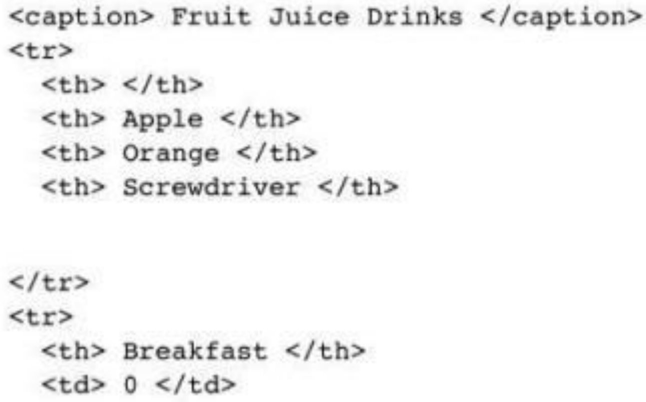
→ SHOW borders.html and display

The following document, `borders.html`, illustrates borders, using a table and a short paragraph as examples:

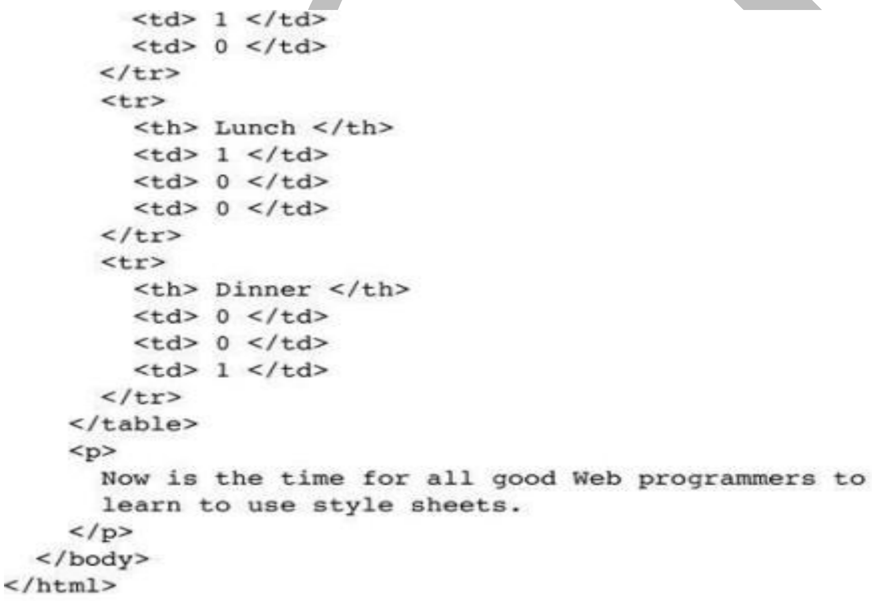


```
  <head> <title> Table borders </title>
    <style type = "text/css">
      table {border-top-width: medium;
             border-bottom-width: thick;
             border-top-color: red;
             border-bottom-color: blue;
             border-top-style: dotted;
             border-bottom-style: dashed;
            }
      p {border-style: dashed; border-width: thin;
         border-color: green;
        }
    </style>
  </head>
  <body>
```

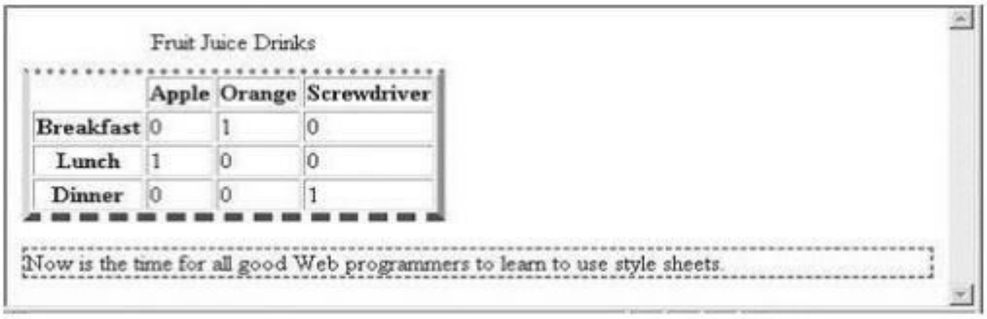
<table>



```
    <caption> Fruit Juice Drinks </caption>
    <tr>
      <th> </th>
      <th> Apple </th>
      <th> Orange </th>
      <th> Screwdriver </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>
      Now is the time for all good Web programmers to
      learn to use style sheets.
    </p>
  </body>
</html>
```



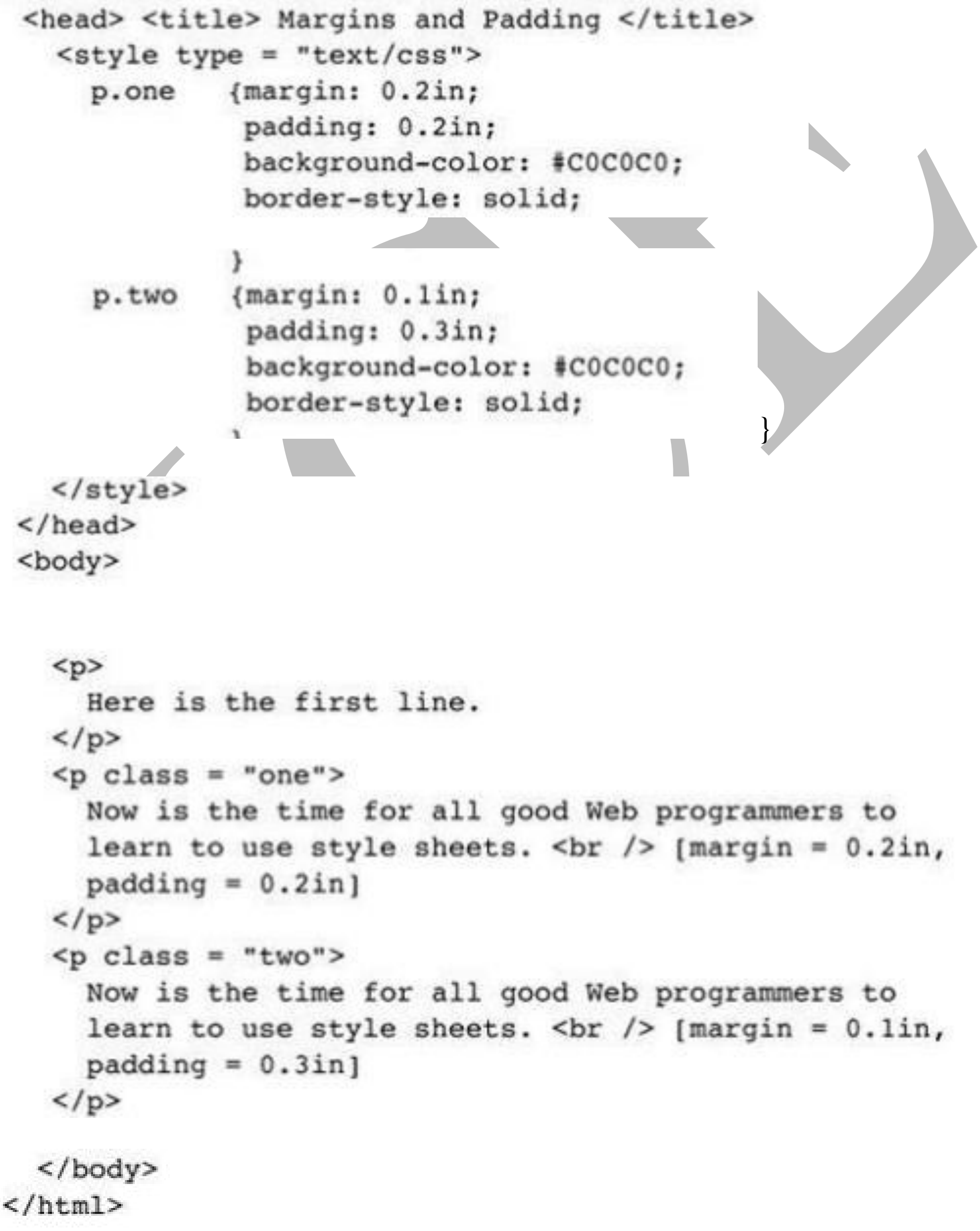
Fruit Juice Drinks

| | Apple | Orange | Screwdriver |
|---|---|---|---|
| Breakfast | 0 | 1 | 0 |
| Lunch | 1 | 0 | 0 |
| Dinner | 0 | 0 | 1 |

Now is the time for all good Web programmers to learn to use style sheets.

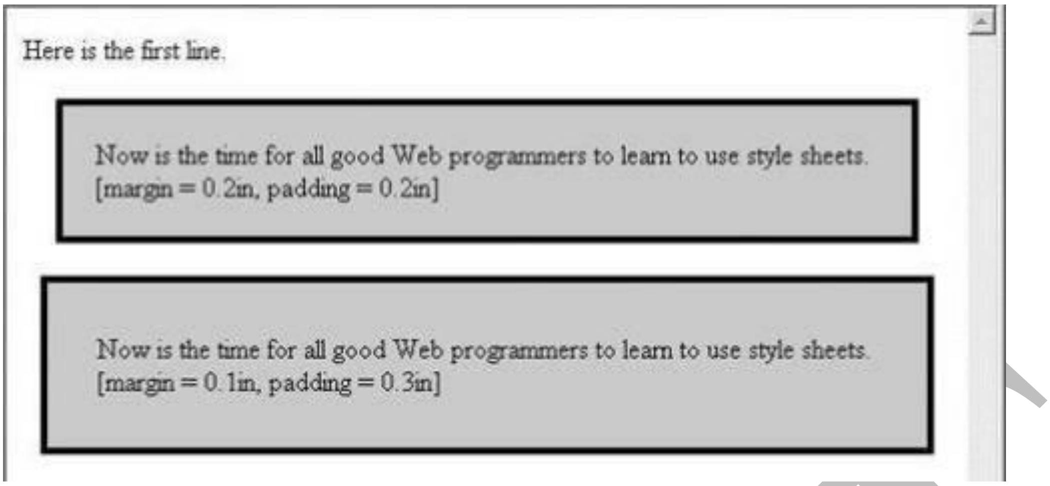
## Margins and padding

Margin is the space between the border of an element and its neighbor element. Padding is the space between the content of an element and its borders.
The margin properties are named `margin`, which applies to all four sides of an element: `margin-left, margin-right, margin-top` and `margin-bottom`. The padding properties are named `padding`, which applies to all four sides: `padding-left, padding-right, padding-top` and `padding-bottom`.



```
<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;
                                        }

  </style>
</head>
<body>


  <p>
    Here is the first line.
  </p>
  <p class = "one">
    Now is the time for all good Web programmers to
    learn to use style sheets. <br /> [margin = 0.2in,
    padding = 0.2in]
  </p>
  <p class = "two">
    Now is the time for all good Web programmers to
    learn to use style sheets. <br /> [margin = 0.1in,
    padding = 0.3in]
  </p>

 </body>
</html>
```

**OUTPUT**



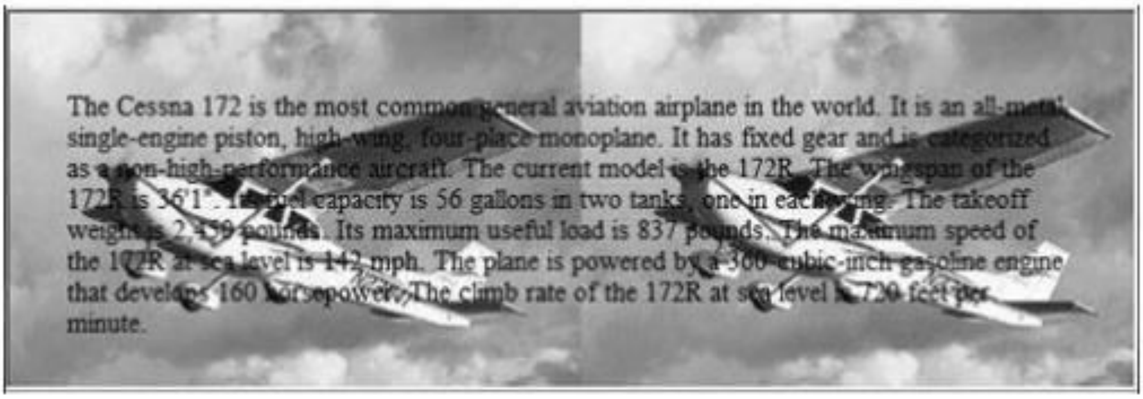
Here is the first line.

Now is the time for all good Web programmers to learn to use style sheets.
[margin = 0.2in, padding = 0.2in]

Now is the time for all good Web programmers to learn to use style sheets.
[margin = 0.1in, padding = 0.3in]

## 11 .Background Images

- `The background-image` property is used to place an image in the background of an element.



The Cessna 172 is the most common general aviation airplane in the world. It is an all-metal single-engine piston, high-wing, four-place monoplane. It has fixed gear and is categorized as a non-high-performance aircraft. The current model is the 172R. The wingspan of the 172R is 36'1". Its fuel capacity is 56 gallons in two tanks, one in each wing. The takeoff weight is 2,450 pounds. Its maximum useful load is 837 pounds. The maximum speed of the 172R at sea level is 142 mph. The plane is powered by a 360-cubic-inch gasoline engine that develops 160 horsepower. The climb rate of the 172R at sea level is 720 feet per minute.

The background image is replicated as necessary to fill the area of the element. This replication is called tiling. The tiling can be controlled with the `background-repeat` property. Possible values: `repeat` (default), `no-repeat`, `repeat-x`, or `repeat-y`. The `no-repeat` value specifies that just one copy of the image is to be displayed. The `repeat-x` value means that the image is to be repeated horizontally; `repeat-y` means that the image is to be repeated vertically. In addition, the position of a non repeated background image can be specified with the background-position property. Possible values: `top`, `center`, `bottom`, `left`, or `right`.

## 12. The <span> and <div> tags

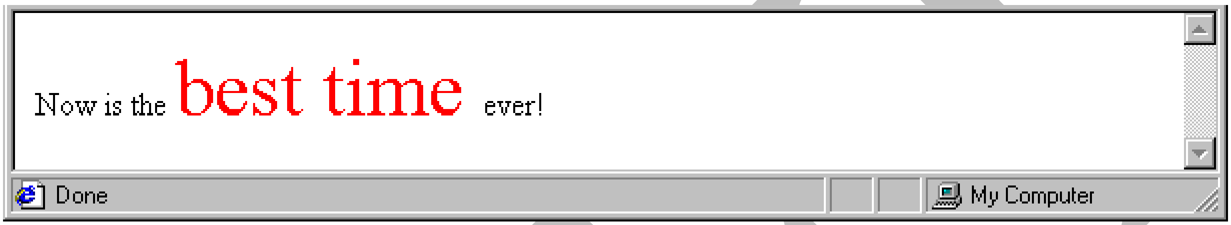
One problem with the font properties is that they apply to whole elements, which are often too large .In many situations we want to apply special font properties to less than a whole paragraph of text. For eg: it is often useful to have a word or phrase in a line appear in a different font size or color . The <span> tag is designed for just this purpose. Unlike most other tags there is no default layout for the content.The default meaning of <span> is to leave the content as it is.

```
<p>

Now is the <span> best time </span> ever!
```

```
</p>
```

Use <span> to apply a document style sheet to its content

```
<style type = "text/css" >
      bigred {font-size: 24pt;
              font-family: Ariel; color: red}
     </style>
     <p>
        Now is the   <span class = "bigred">   best time </span> ever!
     </p>
```

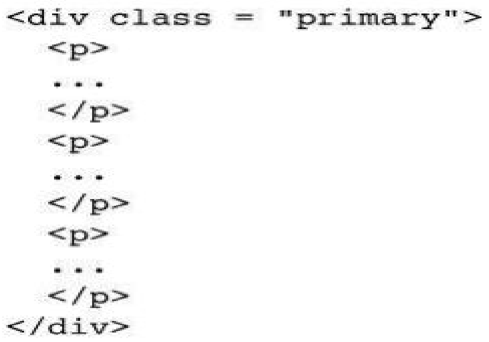


Now is the best time ever!

- The <span> tag is similar to other HTML tags, they can be nested and they have id and class attributes.
- Another tag that is useful for style specifications: <div>

It is common for documents to have sections, each consisting of some number of paragraphs that have their own presentation styles. Used to create document sections (or divisions) for which style can be specified.

- e.g., A section of five paragraphs for which you want some particular style.

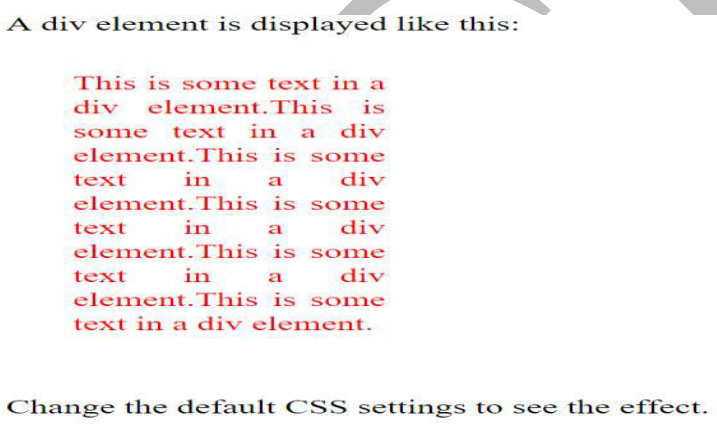


```
<div class = "primary">
  <p>
  ...
  </p>
  <p>
  ...
  </p>
  <p>
  ...
  </p>
</div>
```

**Example:**

```
<html><head>
<style>
div {  line-height: 20px;
margin: 30px;
padding-bottom: 20px;
text-align: justify;

width: 140px;

color: red; }

</style></head>

<body><p>A div element is displayed like this:

<div>This is some text in a div element.This is some text in a div
element.This is some text in a div element.This is some text in a div
element.This is some text in a div element.This is some text in a div
element.</div>

Change the default CSS settings to see the effect.

</p>

</body>

</html>
```

**OUTPUT**



A div element is displayed like this:

This is some text in a div element.This is some text in a div element.This is some text in a div element.This is some text in a div element.This is some text in a div element.This is some text in a div element.

Change the default CSS settings to see the effect.

**KTU QUESTION PAPER 2018**

1.What do you mean by “class” and “id” in CSS? Explain with example?

2.What is bootstrap? What is the advantage of using bootstrap?

3. Write CSS code for the following:

i) set the background color for the hover and active link states to "yellow".
ii) Set the list style for unordered lists to "square".
iii) Set "Flower.gif" as the background image of the page
iv) Set dashed border for the document.

4. Differentiate between div and span tags with examples.