

Lesson No. 1 : Introduction of CSS

CSS stand for **Cascading Style Sheet**. With CSS, you have much better control over the layout of you web pages. You can sissify exactly have big a font will be, exactly where an element will be on a page, what the page will look like when printed, and much more.

CSS can also see you a lot of time, particularly when maintaining a large site. Also, the World Wide Web Consortium (W3C) recommends that web developers use CSS tags instead of HTML tags wherever possible. The W3C are gradually phasing out quite a few of these HTML tags.

The basic characteristics of CSS are as follows:

- CSS stands for *Cascading Style Sheets*.
- A CSS file must have a **.css** file extension.
- CSS is a language that works with HTML to define haw to present the contents.
- Style are placed directly into HTML, HTML document head, and/ or in a separate sheet.
- CSS contains rules to define how HTML elements will be style.
- Many HTML files can use the same CSS file, and one HTML file can use many style.

Advantage of CSS

I. CSS save time

Single CSS file can control the appearance of multiple HTML documents. If you wish to make a change to all document you don't have to make the change in every document, just make it in the CSS file, and it will be reflected on all document that are linked to it.

II. Page load faster

By removing the presentation from the HTML documents and saving it in a smaller size CSS file, you get rid of presentation attributes and spacing image which reduces the size of the document and load site pages faster.

III. Multiple device compatibility

Style sheet allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.

IV. Global we standards

Now HTML attributes are being used less as compared to CSS. So it is a good idea to start using CSS in all the HTML pages to make them compatible with future browser.

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Lesson No. 2 : CSS Syntax

CSS Syntax

A rule or rule set tells the browser how to render an element. These rules have 2 parts: **a selector and declaration** parts.

1. **The selector** represents the HTML element to be affected by the rule.
2. **The declaration block** represents the effect to be applied to the element(s), and it contains one or more property value pairs..

Syntax:

Selector {property: value}

The selector is often the HTML element that you want to style.

For example :

```
Div {color: red}
```

The above code tells the browser to render all occurrences of the HTML **div** element's text in **red**.

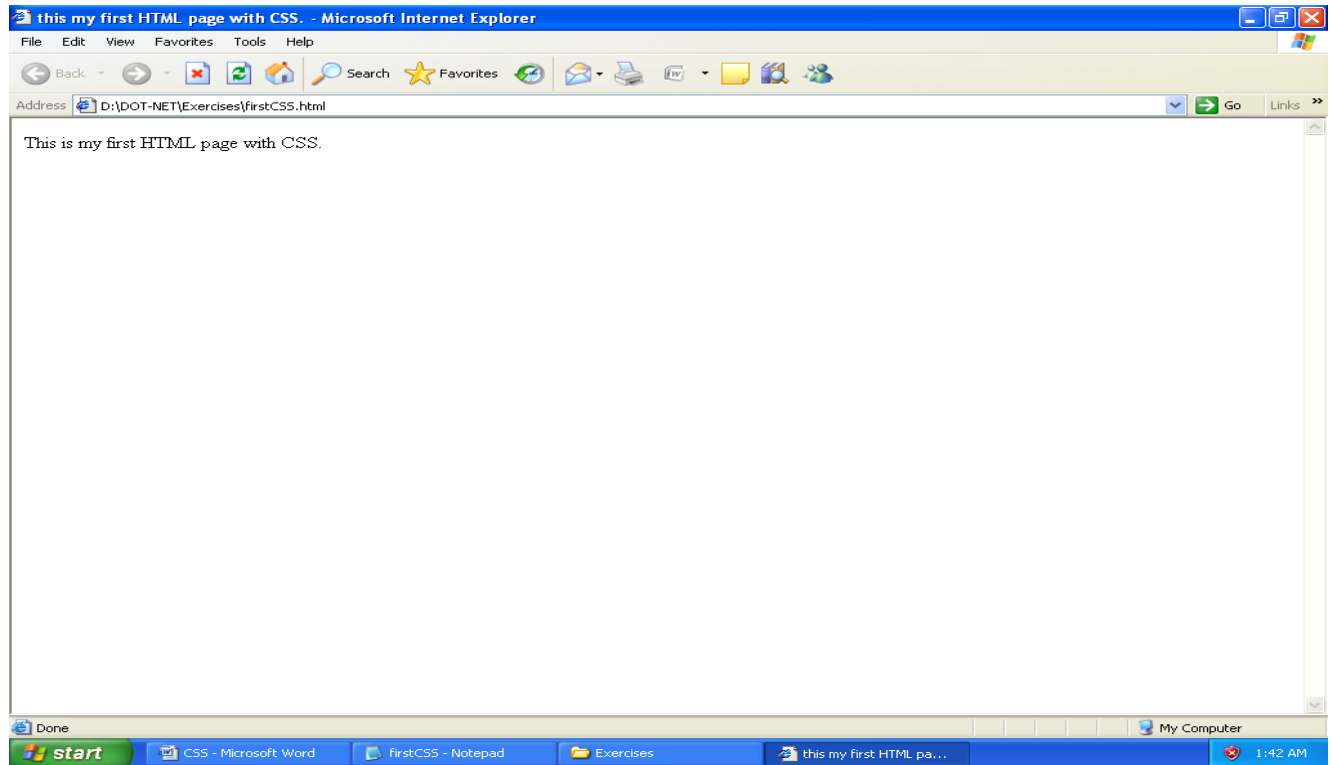
Exercise No. 1

1. Start your text editor (for example, *Notepad*).
2. Type the following code in the Notepad window:

```
<html>
<head>
<Title> this my first HTML page with CSS.</title>
</head>
<body>
  <div style = "color:red;">
    This is my first HTML page with CSS.
  </div>
</body>
</html>
```

3. Save this file as firstCSS.html in an appropriate folder
4. Open the firstCSS.html file in the browser. The HTML document will look like as shown in the next figure.

Results Output



Lesson No. 3 : General CSS Format

General CSS Format

The general format of writing a CSS Code is as shown below:

“HTML tag” { “CSS Property” : “Value” ; }

Example:

P {color:white;}

Body {background-color: }

This above code is written in the **<style>.....</style>** tag in an HTML file's **<head>.....</head>** tag section.

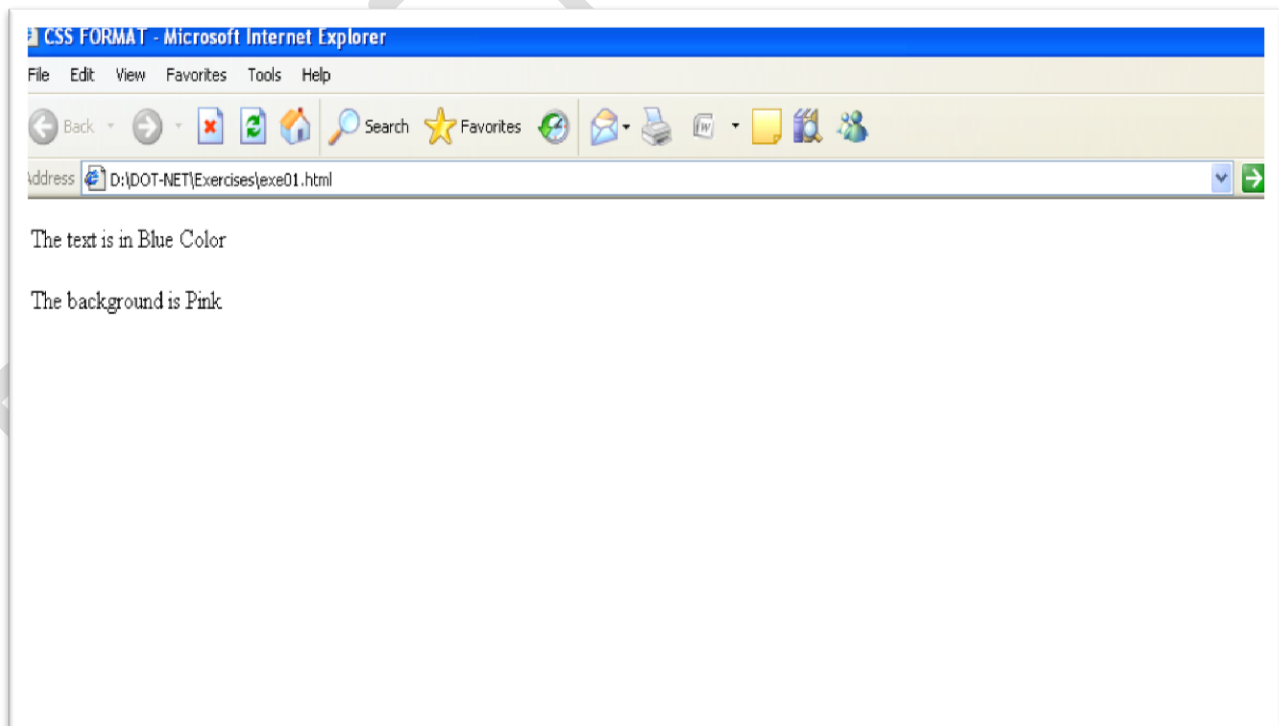
Exercise No. 2

1. Create a new file in Notepad . Type the code shown below in the Notepad window and save it with the name ***cssformat.html***.

```
<html>
  <head>
    <title> CSS FORMAT </title>
    <style type="text/CSS">
      P {color: blue; }
      Body {background – color: pink; }
    </style>
  </head>
  <body>
    <p>The text is in Blue Color</p>
    <p>The background is Pink </p>
  </body>
</html>
```

2. This coding looks as shown in the following figure in the browser:

Results Output



Lesson No. 4 : Implementing CSS

There are 4 ways of implementing CSS :

- Declare *inline*,
- *embed* into the head of your document,
- link to an *external CSS* file,
- *import* a CSS file.

Inline CSS

Style is applied to the current element. Instead of defining the style once, then applying the style against all instances of an element, you only apply the style to the instance you want the style to apply to.

Exercise No. 3

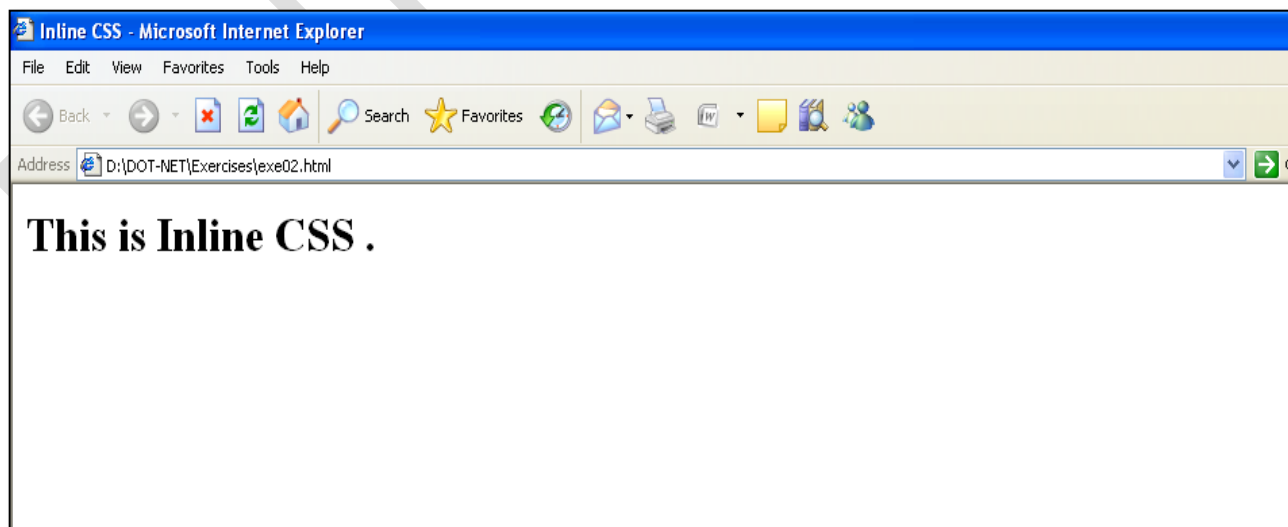
Open Notepad and save the file as ***inlineCSS.html***.

1. Type the following HTML code in Notepad.

```
<html>
  <head>
    <title> Inline CSS </title>
  </head>
  <body>
    <h1 style= "color:green;"> This is Inline CSS . </h1>
  </body>
</html>
```

2. Close the Notepad file and open it in Internet Explorer. It will look as shown in the following window.

Results Output



Lesson No. 5 : Embedded CSS

Embedded CSS

You embed CSS information into an HTML. Documents using the **<style> elements**. You do this by embedding the CSS information within **<style>....</style>** tags in the **<head>.... </head>....</head>** tag of your HTML file.

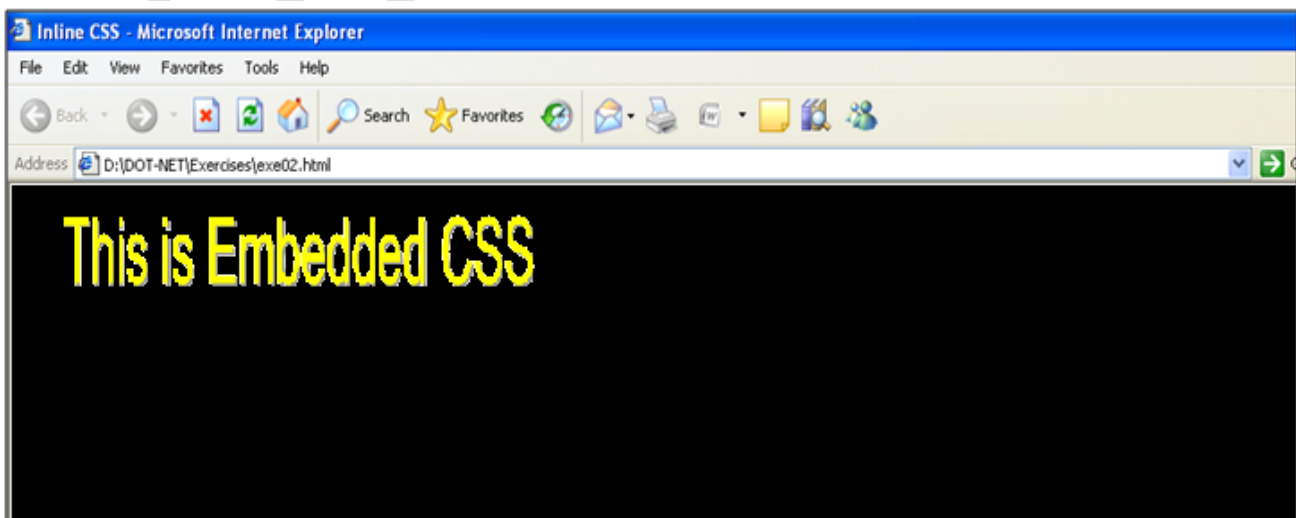
Exercise No. 3

1. Open Notepad and save the file as ***embededcss.html***.
2. Type the following HTML code in Notepad .

```
<html>
  <head>
    <title> Embedded CSS </title>
    <style type="text /CSS">
      P { color : "yellow" ; }
      Body { background-color: "black" ; }
    </style>
  </head>
  <body>
    <p> This is Embedded CSS . </P>
  </body>
</html>
```

3. Close the Notepad file and open it in Internet Explorer. It will look as shown in the following window.

Results Output



Lesson No. 6 : External CSS

External CSS

An external style sheet is a separate file where you can declare all the style that you want to use throughout your website. You then link it to the external style sheet from all your HTML pages. This means you only need to set the styles for each element once. If you want to update the style of your website, you only need to do it in one place.

You do this by placing the link of the external style sheet in the `<head> </head>` tags of the HTML file.

Exercise No. 4

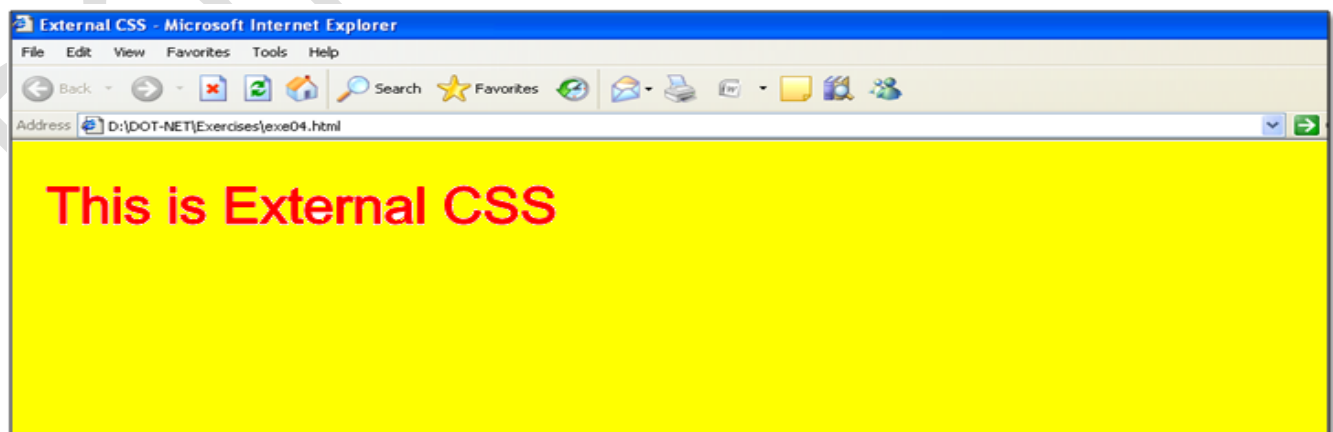
1. Type the following into a text file, and save as **externalcss.css**

```
P { color : "red" ;}
Body { background -color : "yellow" ; }
```
2. Open Notepad and save the file as **externalcss.html**
3. Add the following code to **externalcss.html**

```
<html>
  <head>
    <title> External CSS </title>
    <link rel="stylesheet" href="external CSS . CSS" type="text/CSS">
  </head>
  <body>
    <p>
      This is External CSS.
    </P>
  </body>
</html>
```

4. Close the Notepad file and open it in Internet Explorer. It will look as shown in the following window.

Results Output



Lesson No. 7 : Imported CSS

Imported CSS

You can use the Imported CSS while implementing an HTML file using CSS. You can use **the @import rule** to import rules from other style sheets.

The **@import rule** allows you to include external style sheets in your document. It is a way of creating a style sheet within your document, and then importing additional rules into the document.

Add either of the following between the **<head>**</head> tags inside the **<style>.....</style>** tags of all HTML documents that you want to import a style sheet into.

```
@import "imported-style-sheet.CSS" ;
```

```
@import url("imported-style-sheet . CSS") ;
```

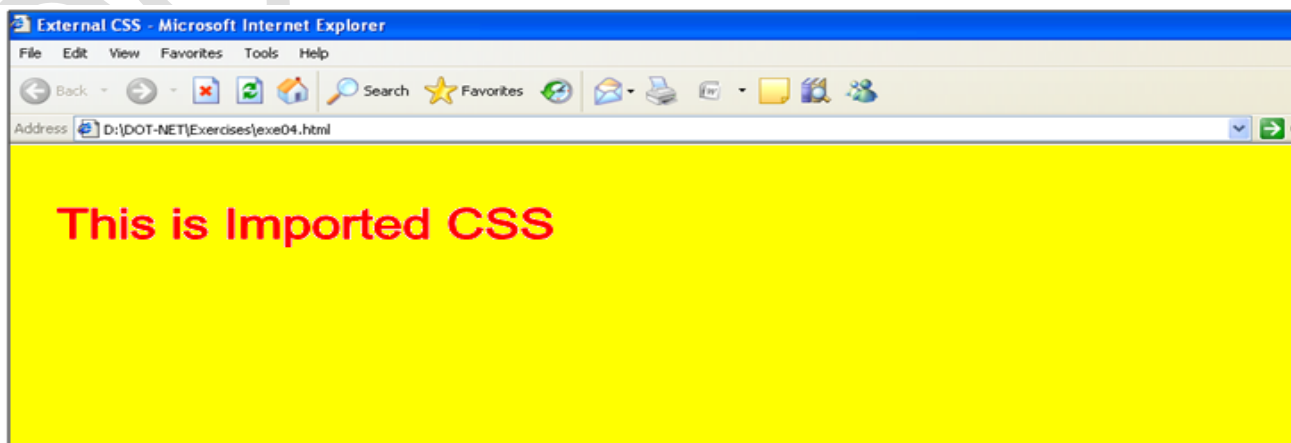
Exercise No. 5

1. Open Notepad and save the file as **importedcss.html**.
2. Type the following HTML code in Notepad.

```
<html>
  <head>
    <title> Imported CSS </title>
    <style type="text / CSS">
      @import "external CSS . CSS" ;
    </Style>
  </head>
  <body>
    <p>
      This is Imported CSS .
    </P>
  </body>
</html>
```

3. Close the Notepad file and open it in Internet Explorer. It will as look as shown in the following window.

Results Output



Lesson No. 8 : CSS Class

It is very useful for a developer if it is possible to give an HTML element multiple looks with CSS. For example, sometimes you want the font to be large and white, while other times you would prefer the font to be small and black. CSS would not be very useful if it did not allow you to have many different types of formats for a single HTML tag. You are in luck! CSS allows you to do just that with the use of classes.

Using classes is simple. You just need to add an extension to the typical CSS code and make sure you specify this extension in your HTML.

CSS Class Syntax

You declare a CSS class by using a **dot (.)** followed by the class name. You make up the class name yourself. After the class name, simply enter the properties / values that you want to assign to your class.

```
. Class – name {property: value; }
```

If you want to use the same class name for multiple elements, but each with a different style, you can prefix the dot with the HTML element name.

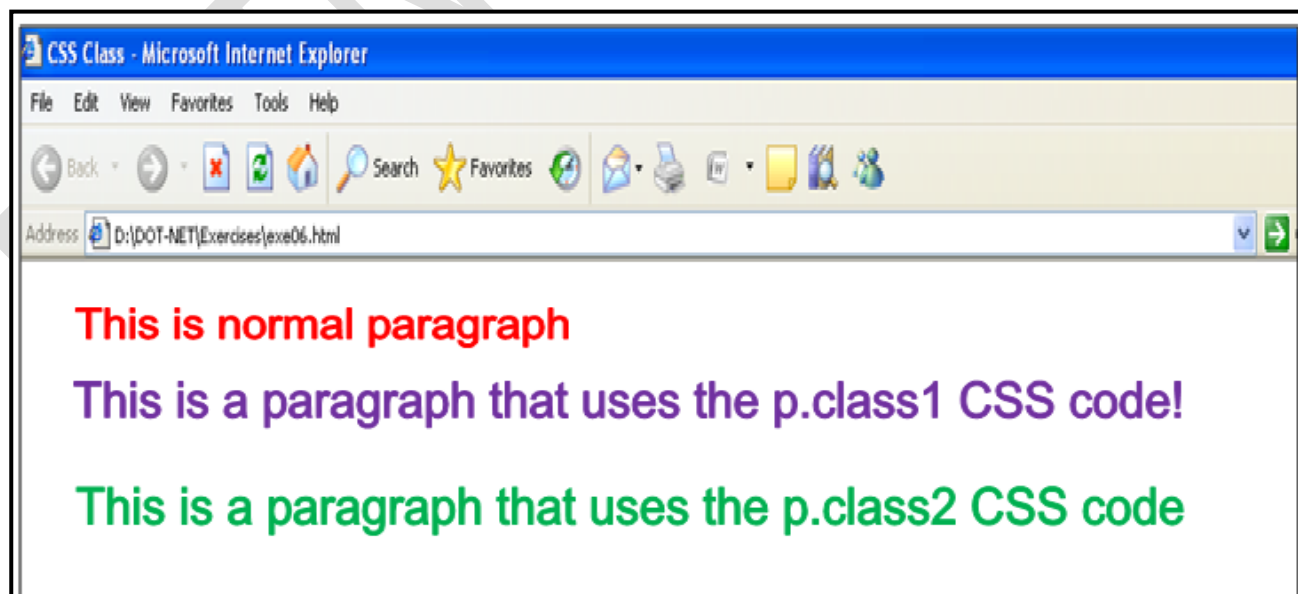
```
Html-element-name. Class –name {property: value; }
```

Exercise No. 6

1. Open a Notepad file and save it with **cssclass.css** name.
2. Type the following CSS Code in this CSS file.
P{ color : red; font-size: 16px; }
p . Class1 { color : blue; }
p . Class2 { color : green; font -size: 12px; }
3. Open Notepad file again and save it with **cssclass.html** name.
4. Type the following HTML Code.

```
<html>
  <head>
    <title>CSS Class</title>
    <style type="text/CSS">
      @import "CSSClass. CSS" ;
    </style>
  </head>
  <body>
    <p> This is a normal paragraph. </p>
    <p Class=" Class1" >
      This is a paragraph that uses the p.class1 CSS code !
    </p>
    <p Class=" Class2" > This is a paragraph that uses the p . Class2 CSS Code !
  </p>
  </body>
</html>
```

1. Close the Notepad file and open it in Internet Explorer. It will look as shown in the following window.

Result

Lesson No. 9 : Font properties

CSS gives you great control over the way your text is displayed. You can change the text size, color, style, and more. There are some of the properties of font that are used to give the style to the HTML file's font. These are as follows:

Properties	Syntax	Explanation
Family	<i>Font-family</i> : Times or Georgia	Used to change the face of a font.
Size	<i>Font-size</i> : pt or px	Used to increase or decrease the size of a font.
Style	<i>Font-style</i> : italic	Used to make a font italic or oblique.
Variant	<i>Font-variant</i> : small-caps or normal	Used to create a small-caps effect.
Weight	<i>Font-weight</i> : bold or bolder	Used to increase or decrease how bold or light a font appears.
Font	<i>Font</i> : 12px, Arial, italic, small-caps	Used to set all the font properties at once

Font-family

The font-family property is used to change the face of a font.

Example:

CSS Code

```
<style type="text/css">
  P {font-family: comic sans ms;}
</style>
```

HTML Code

```
<p> this font-family is comic sans ms.</p>
```

Output:

This Font-family is Comic Sans MS.

Font-size

The font-size property is used to increase or decrease the size of a font.

Example:

CSS Code

```
<style type="text/css">
  P {font-size: 16pt;}
</style>
```

HTML Code

```
<p> This is font size is 16 points.</p>
```

Output: This Font- Size is 16 points

Font-Style

This font-style property is used to make a font italic or blique.

Example:

CSS Code

```
<style type="text/css">  
P {font-style:italic;}  
</style>
```

HTML Code

```
<p> This Font-style is ITALIC. </p>
```

Output:

This Font-style is ITALIC

Font-variant

The font-variant property is used to create a small-caps effects.

CSS Code

```
<style type="text/css">  
P {font-variant" small-caps;}  
</style>
```

HTML Code

```
<p> This is Font-variant is SMALL-CAPS. </p>
```

Output:

This Font- variant is SMALL-CAPS.

Font-Weight

The font-weight property is used increase or decrease how bold or light a font appears.

CSS Code

```
<style type="text/css">  
P {font-weigt: bolder;}  
</style>
```

HTML Code

```
<p> This is Font-weight is bolder. </p>
```

Output:

This Font- weight is bolder.

Font

This shorthand property allows you to specify one or more font properties at once in the following order:

{style, variant, weight, size, fontName}

For example:, p {font: italic 16px/18px arial};

CSS Code

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

```
  P {font: italic small-caps bold 15px georgia;}
```

```
</style>
```

HTML Code

```
<p> This is shown with shorthand font properties.. </p>
```

Output:

THIS TEST IS SHOWN WITH SHORTHAND FONT PROPERTIES.

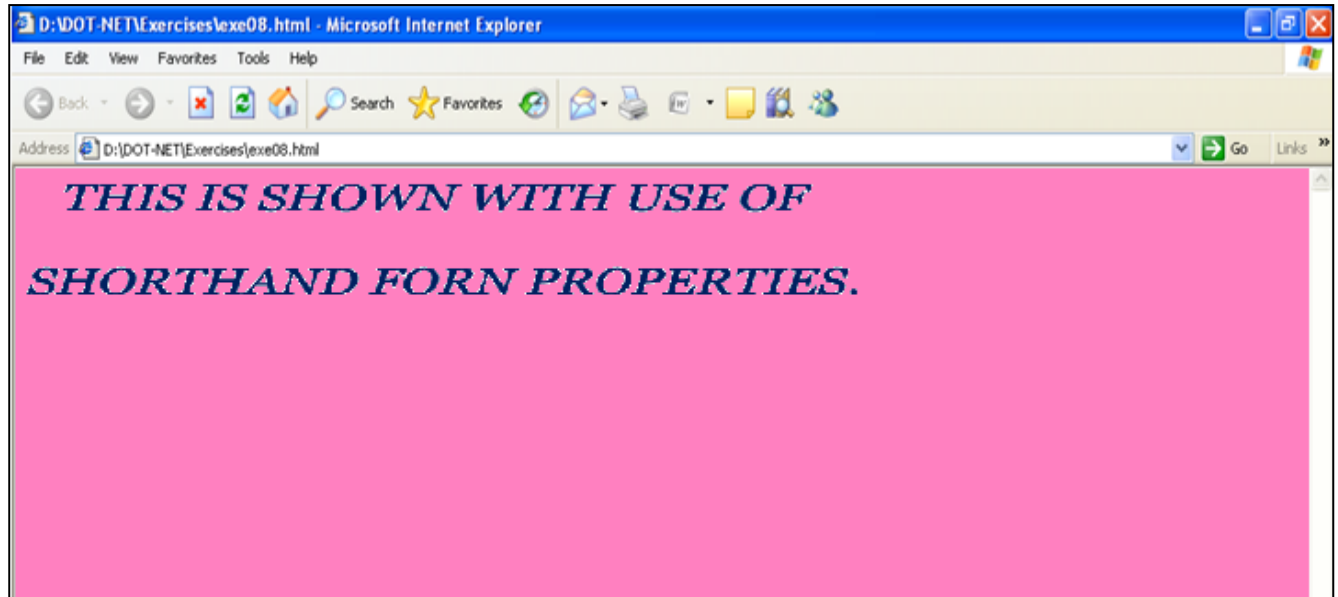
Exercise No. 7

1. Open a Notepad file and name it with **cssfont.html** name.
2. Type the code shown below:

```
<html>
<head>
<style type="text/css">
P {font-family : Georgia;
    Font-size : 18px;
    font-style : italic;
    font-variant : small-caps;
    font-weight : light;}
Body { background-color:pink;
    color:blue;}
</style>
</head>
<body>
<p>This text shown with use of shorthand font properties.</p>
</body>
</html>
```

3. Close the Notepad window and open this file in your browser.

Results Output



Lesson No. 10 : Border Properties

CSS border, allows you to completely customize the borders that appear around HTML element. With HTML, it used to be impossible to place a border around an element, except for the table. CSS borders let you create crisp, customize border styles with very little work, compared to the antiquated methods of HTML.

The border properties allow you to specify how to border of the box representing an element should look. Following are properties that you can change:

Properties	Syntax	Explanation
Color	<i>Border-color</i> : color name	Specifies the color of a border.
Style	<i>Border-style</i> : style type or style name	Specifies whether a border should be solid, dashed line, double line, or one of the other possible values
Width	<i>Border-width</i> : pixel or px	Specifies the width of a border.
Border	<i>Border-width</i> : style, color	A shorthand property that allows you to specify color, style, and width of lines in one property

Border Color

The *border-color* property allows you to change the color of the border surrounding an element. You can individually change the color of the *bottom*, *left*, *top* and *right* sides of an element's border using the properties:

Properties	Syntax	Explanation
Border-bottom-color	<i>Border-bottom-color</i> : <i>value</i>	Changes the color of bottom border.
Border-top-color	<i>Border-top-color</i> : <i>value</i>	Changes the color of top border.
Border-left-color	<i>Border-left-color</i> : <i>value</i>	Changes the color of left border.
Border-right-color	<i>Border-right-color</i> : <i>value</i>	Changes the color of right border.

Syntax:

Border-color : *value* ;

The value in the above syntax can be given in any one of the following formats :

Value

Example

- | | | |
|------|--------------------|------------------------------------|
| i. | Color name | border-color: rgb (100, 100, 255); |
| ii. | Hexadecimal number | border-color: #FFBD32; |
| iii. | RGB color code | border-color: blue; |

Border Style

You can set the style of a border independently with the *border-style* property. You can individually change the style of the *bottom*, *left*, *top* and *right* sides of an element's border using the properties shown in the following table.

Properties	Syntax	Explanation
Border-bottom-style	Border-bottom-style : <i>style</i>	Changes the style of bottom border.
Border-top-style	Border-top-style : <i>style</i>	Changes the style of top border.
Border-left-style	Border-left-style : <i>style</i>	Changes the style of left border.
Border-right-style	Border-right-style : <i>style</i>	Changes the style of right border

Syntax :

Border-style : *value* ;

The value in the above syntax can be given in any one of the following formats :

Value	Explanation
<i>Dashed</i>	A series of short lines.
<i>Dotted</i>	A series of dots.
<i>Double</i>	Two solid lines.
<i>Groove</i>	Looks as though it is carved into the page.
<i>Solid</i>	A single solid line.

Border Width

You can set the width of a border independently with the *border-width* property. You can individually change the width of the *bottom*, *left*, *top* and *right* sides of an element's border using the properties:

Properties	Syntax	Explanation
Border-bottom-width	Border-bottom-width : <i>pixels</i>	Changes the width of bottom border.
Border-top-width	Border-top- width : <i>pixels</i>	Changes the width of top border.

Border-left- width	Border-left- width : <i>pixels</i>	Changes the width of left border.
Border-right- width	Border-right- width : <i>pixels</i>	Changes the width of right border

Syntax

Border-width: *value*;

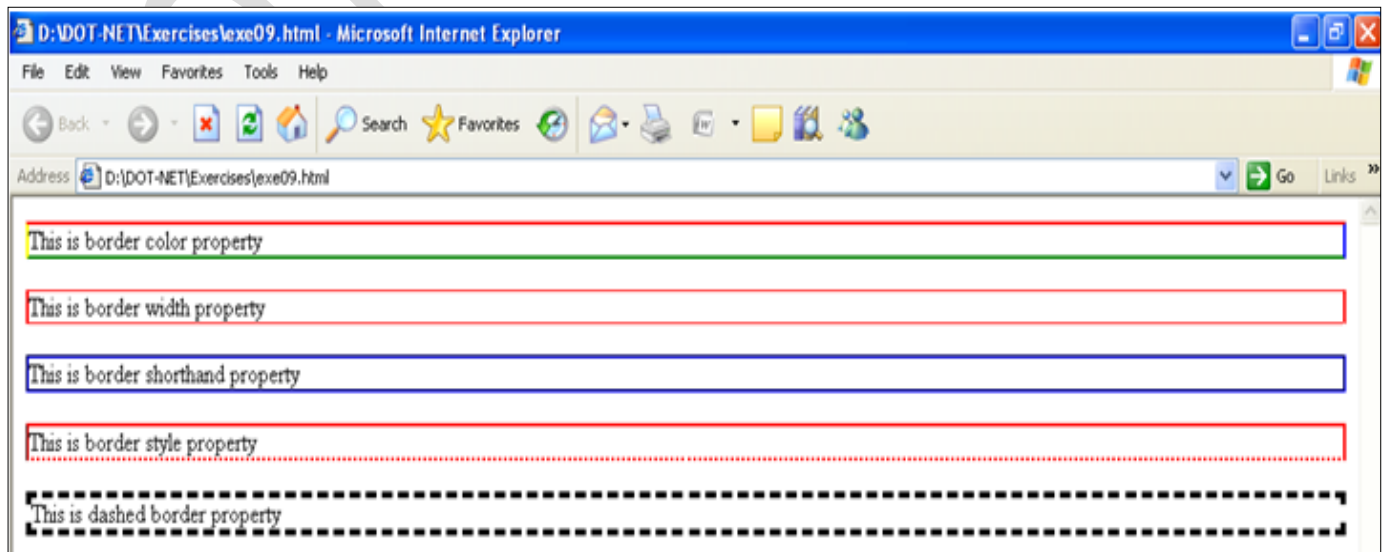
Exercise No. 8

1. Open a Notepad file and save it with ***border.html*** name.
2. Type the code as shown in the figure given below.
3. Close the Notepad window and open this file in your browser. It must appear as shown below:

```

<html>
  <head>
    <style type="text/css">
      p.solid { border-bottom-color: green;
                border-top-color:red;
                border-left-color:yellow;
                border-right-color:blue;
                border-style:solid;
                border-width:2px;
              }
      p.double { border-bottom-width: 1px;
                 border-top-width:1px;
                 border-left-width:2px;
                 border-right-width:2px;
                 border-style:double;
                 border-color:red;
              }
      p.groove { border:2px groove blue;}
      p.dotted { border-bottom-style: dotted;
                 border-top-style:solid;
                 border-left-style:groove;
                 border-right-style:double;
                 border-width:2px;
                 border-color:red; }
      p.dashed {border-style: dashed; }
    </style>
  </head>
  <body>
    <p class="solid">This is border color property</p>
    <p class="double">This is border width property</p>
    <p class="groove">This is border shorthand property</p>
    <p class="dotted">This is border style property</p>
    <p class="dashed">This is dashed border property</p>
  </body>
</html>
  
```

Results Output



Lesson No. 11 : CSS – positioning

CSS helps you to position your HTML element. You can put any HTML element at whatever location you like. You can specify whether you want the element positioned relative to its natural position in the page or absolute based on its parent element.

There are three ways of positioning HTML elements using CSS which are as follows:

1. Relative positioning
2. Absolute positioning
3. Fixed positioning

You can't differentiate between all these three by writing code for these. Only by seeing the effect of that code in a browser you get the difference of all these positionings

Relative Positioning

Relative positioning change the position of the HTML element relative to where it normally appears. If we had a header that appears at the top of page, we could use relative positioning to move it a bit to the right and down a couple of pixels.

You define the four possible directions (left, right, up, and down) using on tow (left and top). Here's a quick reference when moving HTML elements in CSS

- Move Left- Use a negative value for *Left*.
- Move Right- Use a positive value for *left*.
- Move Up- Use a negative value for *top*
- Move Down- Use a positive value for *top*

Absolute Positioning

With absolute positioning, you define the exact pixel value where the specified HTML element will appear. The point of origin is the top-left of the browser's viewable area, so be sure you are measuring from that point.

Fixed Positioning

Fixed positioning is a lot like absolute positioning. The position of the element is calculated in the same way as the absolute model-from the side of the view port. But fixed elements are then fixed in that location, like a watermark. Everything else on the page will then scroll past that element. Specified coordinates will be relative to the browser window.