



MODULE - 3

STYLING WEB PAGES USING CSS

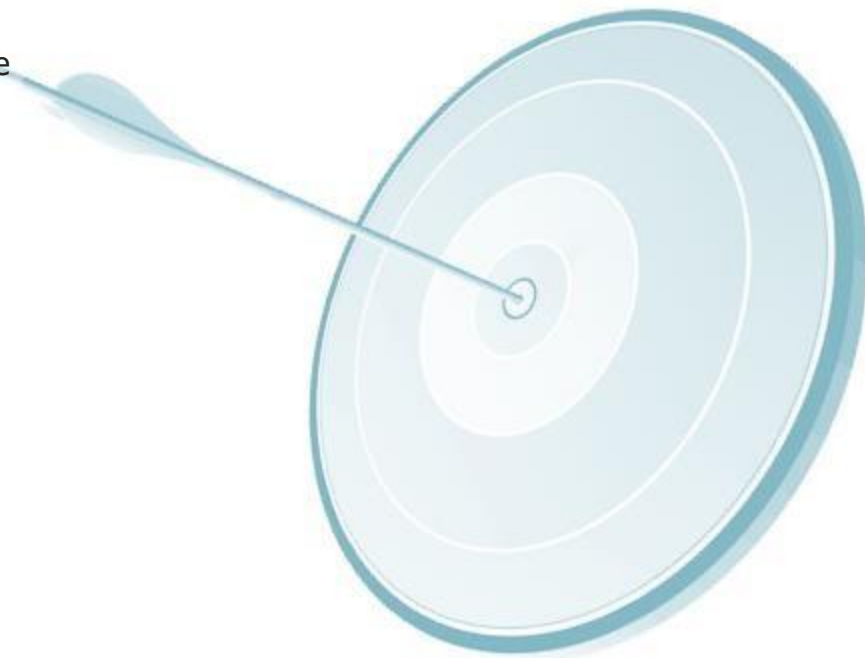
Course Topics

- [Module 1](#)
 - » Deploying the first Website to Amazon S3
- [Module 2](#)
 - » Creating web pages with HTML5
- [Module 3](#)
 - » **Styling web pages using CSS**
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 - » Bootstrap ScrollSpy, jQuery and jQuery UI
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 - » Ajax, Google APIs, Social Plugins
- [Module 10](#)
 - » Project - Building Website Tour

Objectives


At the end of this module, you will be able to understand:

- Styling of HTML elements-text, links, lists and tables
- Different ways to write CSS e.g. external, internal, inline
- Creating Navigation Bars
- Writing Media Rules, hide visibility of an element
- CSS Image Sprites and Gradients
- CSS Pseudo Classes and Pseudo Elements



CSS

- CSS stands for **Cascading Style Sheet**
- CSS is used to provide the **style for the HTML Elements/ HTML webpage**
- Style for html elements are specified between `<style>` and `</style>` tag or it can be specified in another file with an extension of .css
- Current version of CSS is **CSS-3**
- The use of CSS in the HTML script makes the webpage look **effective and attractive** to the user



Web page designing is all about displaying the web page in an elegant manner. It should be catchy and attractive otherwise user will not spend more time on the web site for any commercial purpose

CSS – Selectors

→ **CSS selectors** select the HTML elements and specify the style for the selected elements

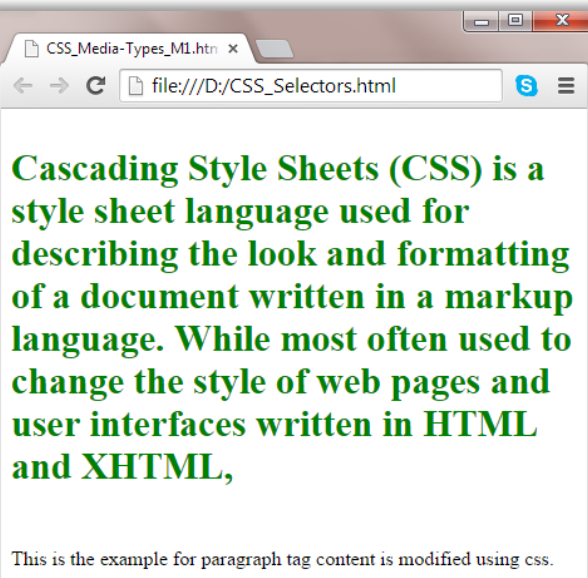
→ The selectors can be tag, **id**, **class** or **groups of elements**

Example

Output

```
<!DOCTYPE html>
<html>
<head>
<style>
p {
color: green;
font-weight: bold;
font-size : 30px}
</style>
</head>
<body>
<p id="paral">Cascading Style Sheets (CSS)
describing the look and formatting of a do
While most often used to change the style
written in HTML and XHTML, </p>
<br/>
This is the example for paragraph tag con
</html>
```

The paragraph is set
to "green" color



Annie's Question



What are the different ways to specify the color in HTML / CSS?

Annie's Answer



Ans. Color can be specified in 3 ways:

- a. By giving the color name.
- b. By using the color code.
- c. By using RGB (r, g, b) values.

Annie's Question



What is the difference between HTML tag and the id given in the tag?

Annie's Answer



Ans. Id is the attribute of the tag. Id is used to identify an element.

CSS – id Selector

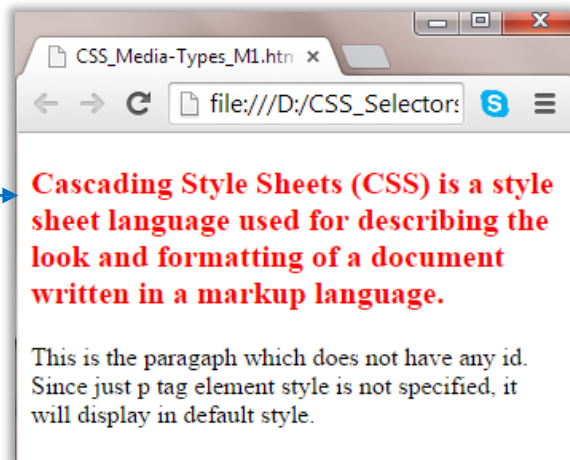
- When you want to style a particular element in the webpage, **id selectors** are used
- Style for the id content can be modified by giving the name of the id preceded by **#** symbol in style tag

Example

```
<!DOCTYPE html>
<html>
<head>
<style>
#para1 {
color: red;
font-weight: bold;
font-size : 20px
}
</style>
</head>
<body>
<p id="para1">Cascading Style Sheets (CSS) is a
describing the look and formatting of a document
<p>This is the paragraph which does not have any
Since just p tag element style is not specified,
it will display in default style.</p>
```

Only the <p> tag with id named "para1" is given the style

Output



CSS – Multiple Selector

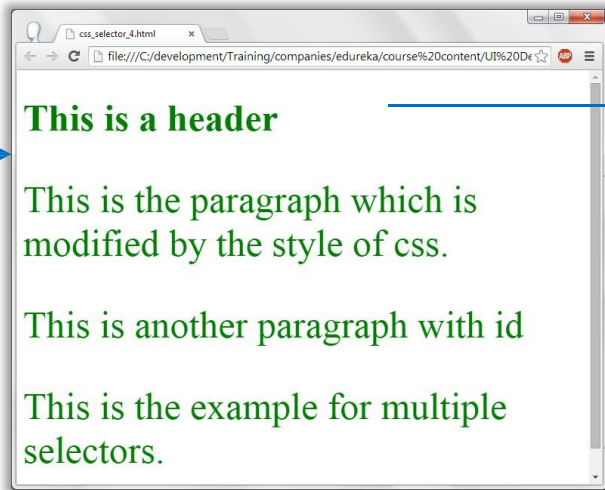
- When multiple elements in the webpage are to be given the same style, multiple selectors can be used
- Multiple tag elements can be modified in css by specifying all of them separated by commas and provide the required style

Example

Output

```
<!DOCTYPE html>
<html>
<head>
<style>
h1, p {
color: green;
font-size: 50px;
}
</style>
</head>
<body>
<h1> This is a header </h1>
<p>This is the paragraph which is affected by the style of css.</p>
<p id="para1">This is another paragraph with id </p>
<p> This is the example for multiple selectors</p>
</body>
</html>
```

Both the h1 and p tag
are given the style



h1

p

Annie's Question



Why do we give background color/image for the web page?

Annie's Answer



Ans. To beautify the web page

Different ways to provide CSS

There are three different ways to provide styles :


- External style sheet – a separate css file is used to declare the styles
- Internal style sheet – CSS styles are declared within the HTML file using <style> tag
- Inline style – CSS styles are declared with the tag itself e.g. `<h1 style="color:blue;">This is a heading.</h1>`

External Stylesheet

→ In this approach CSS styles are declared in a separate css file (other than HTML file) and then that css file is referenced from HTML file using link tag. This approach is best suited when we have to style lots of web pages, by using this approach we can reference the same css file from all different HTML pages

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

abc.html



Note that href attribute of link tag points to location of external CSS file. The style sheet file must be saved with a .css extension. Do not add a space between the property value and the unit (such as margin-top: 10 px;). The correct way is: margin-top: 10px;

```
body {  
    background-color: blue;  
}  
  
h1 {  
    color: navy;  
    margin-top: 10px;  
}
```

styles.css

Internal Stylesheet

- In this approach CSS styles are declared in the same HTML file. This approach is best suited when we have to style a single page with unique style
- Internal styles are defined within the <style> tag inside the <head> tag of an HTML page

```
<head>
<style>
body {
  background-color: green;
}


h1 {
  color: maroon;
  margin-right: 50px;
}
</style>
</head>
```

abc.html

Inline Stylesheet

- In this approach CSS styles are declared with each element (tag). To use inline styles, add the style attribute to the relevant tag. The style attribute can contain any CSS property as shown below

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



Inline approach have the disadvantage that style information is mixed with HTML and styles of one tag can not be reused for some other tag

Multiple Styles

- If some properties have been defined for the same selector in different style sheets with different value then the value will be inherited from the more specific style sheet

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

CSS styles defined in an external stylesheet

```
h1 {  
  color: linen;  
}
```

CSS styles defined as internal (in the same HTML file)

If the HTML page with the internal style sheet also links to the external style sheet the resultant properties for the <h1> element will be:

```
color: linen;  
margin-left: 20px;
```

CSS – Background

- You can give background colors for your webpage to make it look attractive
- In the code, `background-color property` is used to change the back-ground color of the webpage

Example

```
<style>
body {
background-color: #c0c4de;
}
</style>
```

The background color of the webpage is changed

Output



CSS – Background (Contd.)

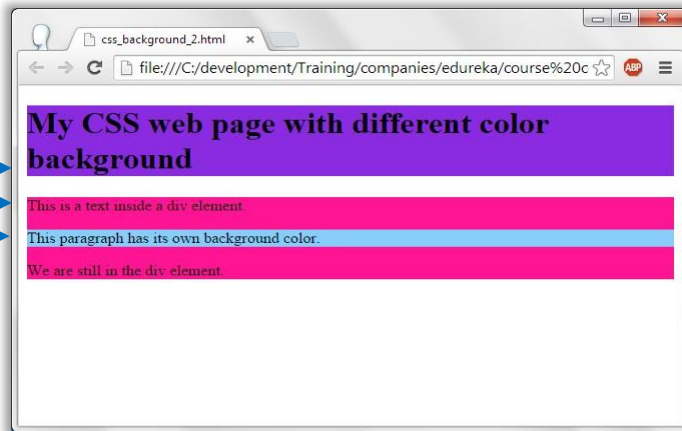
- Each element in the webpage can be given a different background color so that they can be differentiated
- In this code, the `h1`, `div` and `p` tags are given different background color using CSS selectors

Example

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {background-color:#8A2BE2;}
p {background-color:#87CEFA;}
div {background-color:#FF1493;}
</style>
</head>
<body>
<h1>My CSS web page with different color background</h1>
<div>
This is a text inside a div element.
<p>This paragraph has its own background color.</p>
We are still in the div element.</div>
</body>
</html>
```

purple
pink
blue

Output



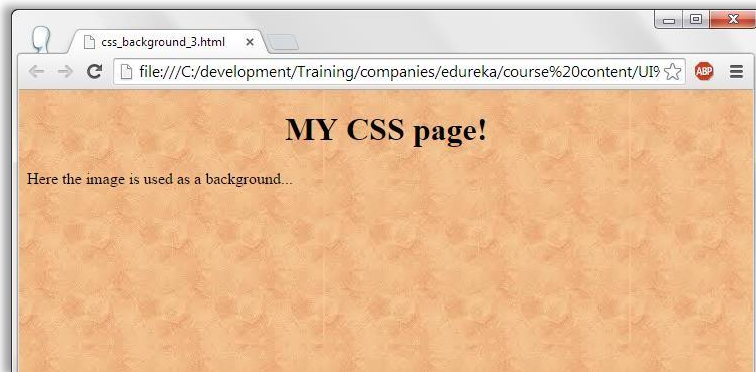
CSS – Image Background

- Images are the best way to grab user's attention. A good background image can really bring life to a website
- Here background-image for the body is specified using the [background-image](#) property

Example

```
<style>  
body {background-image: url("background-image.jpg");}  
h1 {text-align: center;}  
</style>
```

Output



CSS – Background Image

- If the image is small, the image is repeated for the entire web page
- If you want to stop the repetition of this image on the webpage, you can set `background-repeat` property to `no-repeat`

Example

```
body {  
  background-image: url("css-image.jpg");  
}
```

Output



CSS – Background Image with norepeat Property

→ Below is an example of setting the background image with no-repeat

Example

```
<style>
body {
background-image: url("css-image.jpg");
background-repeat: no-repeat;}
```

Output



Annie's Question



Why class attribute is used in HTML?

Annie's Answer



Ans. You can give a style to a class and this class style can be applied to multiple HTML elements

CSS – Texts

Now let us see, why do we need the text properties? Consider the below text:

EDUREKA

Edureka is a New Age Education management company working on a vision of providing high quality education that is affordable and accessible to anyone, anywhere!

By introducing the 24x7 Expert Help, Edureka has changed the traditional ways of problem solving for learners

Major Technical Courses at Edureka are

- Big Data and Hadoop
- Hadoop Administration
- Business Analytics with R
- Data Science

The text shown above looks plain and it does not highlight anything. So the user has to read the entire text to understand what the text actually explains

Now let us see how text properties solve this problem

CSS – Texts (Contd.)

Now consider the text shown below:

EDUREKA

Edureka is a New Age **Education management company** working on a vision of **providing high quality education** that is affordable and accessible to anyone, anywhere!

By introducing the **24x7 Expert Help**, Edureka has changed the traditional ways of problem solving for learners

Major Technical Courses at Edureka are:

- **Big Data and Hadoop**
- **Hadoop Administration**
- **Business Analytics with R**
- **Data Science**

By using the text properties, user tend to focus on the highlighted text which gives him an overall idea of what the text talks about

CSS – Text

- Text color can be changed using color property of CSS
- The color for the text can be given in 3 ways:
 1. color name can be specified such as red, green, yellow, blue etc.
 2. Providing the hex value like #9400D3
 3. Providing RGB (red, blue, green) values like rgb(255,0,0)

CSS – Text (Contd.)

→ Text in the webpage is aligned using text-align property. The text-align property can be set to one of following four :

- » center
- » left
- » right
- » justify

Left Align

Major Technical Courses at Edureka are:

- Big Data and Hadoop
- Hadoop Administration
- Business Analytics with R
- Data Science

Right Align

Major Technical Courses at Edureka are:

- Big Data and Hadoop
- Hadoop Administration
- Business Analytics with R
- Data Science

Center

Major Technical Courses at Edureka are:

- Big Data and Hadoop
- Hadoop Administration
- Business Analytics with R
- Data Science

CSS – Justifying the text

```
<!DOCTYPE html>
<html>
<head>
<style>
p{
  text-align: justify;
}
</style>
</head>
<body>
<p>
Giza is a plateau southwest of modern Cairo which served as the necropolis for the royalty of the Old Kingdom of Egypt.
Most famous for the pyramids of Khufu (completed in 2550 BCE) Khafre (2520 BCE) and Menkaure (2490 BCE) and the Great Sphinx (built 2500 BCE),
recent excavations on the plateau have revealed numerous private tomb complexes and workers' quarters
</p>
</body>
</html>
```

CSS – Justifying the text (Contd.)



Justified text at full browser screen



Justified text on resizing the browser screen

CSS – Text (Contd.)

- Text can be decorated using `text-decoration` property. The text-decoration properties are:
 - » `None`: No decoration for the text
 - » `Underline`: The text is underlined
 - » `Line-through`: It strikes out the text

- Text can be transformed into uppercase, lowercase and capitalize. The text-transform properties are:
 - » `Uppercase`: Text is converted to capital letters
 - » `Lowercase`: Text is converted to small letters
 - » `Capitalize`: First letter of every word is capitalized and the rest of the letters are in small

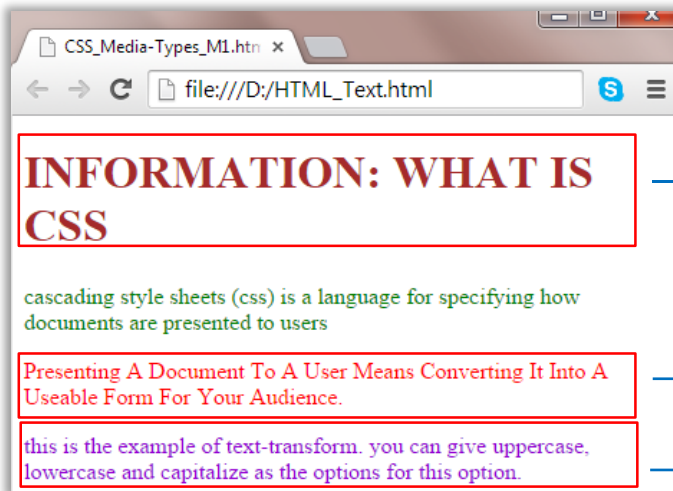
CSS – Text (Contd.)

- Body is in green color
- Header <h1> is in uppercase and it is given a brown color
- The paragraph with class "info" is capitalized and given a red color and the paragraph with class "example" is given a purple color. The remaining part of the paragraph are in lowercase and is given green color

Example

```
<style>
body {color: Green;}
h1 {text-transform:uppercase;color:#A52A2A;}
p{text-transform:lowercase;}
p.info {text-transform:capitalize;color : red; }
p.example{color : #9400D3;}
</style>
```

Output



uppercase

capitalized

lowercase

CSS – Font

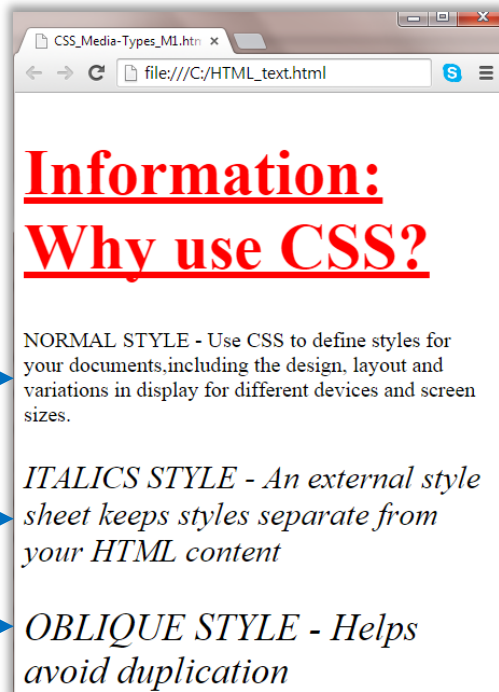
- Font style of the text can be changed using font-style property. The font-style properties are:
 - » Normal – Displays text in a normal way
 - » Italic – Displays text in italics
 - » Oblique – It is like italics itself but slightly different
- Size of the font can be changed using font-size property. E.g., font-size:30px where px stands for pixels

CSS – Font (Contd.)

Example

```
<!DOCTYPE html>
<html>
<head>
<style>
h1 {color : red;font-size:60px; text-decoration:underline;}
p.regular {font-style: normal;font-size:20px;}
p.italic_style {font-style: italic; font-size:30px;}
p.oblique_style {font-style: oblique; font-size:35px; }
</style>
</head>
<body>
<h1> Information: Why use CSS? </h1>
<p class="regular">NORMAL STYLE - Use CSS to define
styles for your documents,including the design,
layout and variations in display for different devices
and screen sizes.</p>
<p class="italic_style">
ITALICS STYLE - An external style sheet keeps
styles separate from your HTML content</p>
<p class="oblique_style">
OBLIQUE STYLE - Helps avoid duplication</p>
</body>
</html>
```

Output



CSS – Font Size

→ For setting the font-size we can also use % notation while defining the text size

Example

```
<style>
h1 { color : red; text-decoration:underline;}
body{font-size:75%;}
p.regular {font-style: normal; }
p.italic_style {font-style: italic; }
p.oblique_style {font-style: oblique;}
</style>
```

Reduces the body size to 75% of its original size

Output



CSS – Link

- HTML links are [hyperlinks](#). The links allow the user to redirect from one webpage to another
- To change the style of the link, the following attributes must be addressed:
 - » [Link](#): Is an unvisited link. We are displaying this link in green color
 - » [Visited](#): Is the link which is already clicked/visited at least once
 - » [Hover](#): Is used when the mouse is moved on the link. On hovering foreground and background color of the link is changed
 - » [Active](#): When the link is clicked, it becomes active

CSS – Link (Contd.)

Example

```
<style>
a:link{color: #0000ff;}
a:hover{color: #00FF00; background-color: #B22222;}
a:active{color: #FFDF00; background-color: #B22222;}
a:visited{color: #00ff00;}
</style>
```

Output



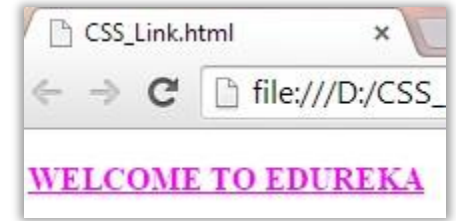
Unvisited Link



On Hovering



When Active



Visited Link

Annie's Question



Why do we need hyperlinks?

Annie's Answer



Ans. Hyperlinks are a way to point to another webpage

CSS – Lists

- Lists are part of everybody's life. An HTML list is a set of items printed one after the other e.g. list of a person's achievements, list of task to be done today etc.
- **List** can be ordered or unordered. `` tag is used to specify the list item in HTML
- **Ordered list** can be specified using `` tag. All the items in the ordered list will be displayed in the order like 1, 2, 3, 4 or A, B, C, D or i, ii, iii, iv etc.
- **Un-ordered list** can be specified using `` tag. Un-ordered list will display a symbol or icon in front of the list items. It does not specify any ordered numbers or alphabets in front of the list items

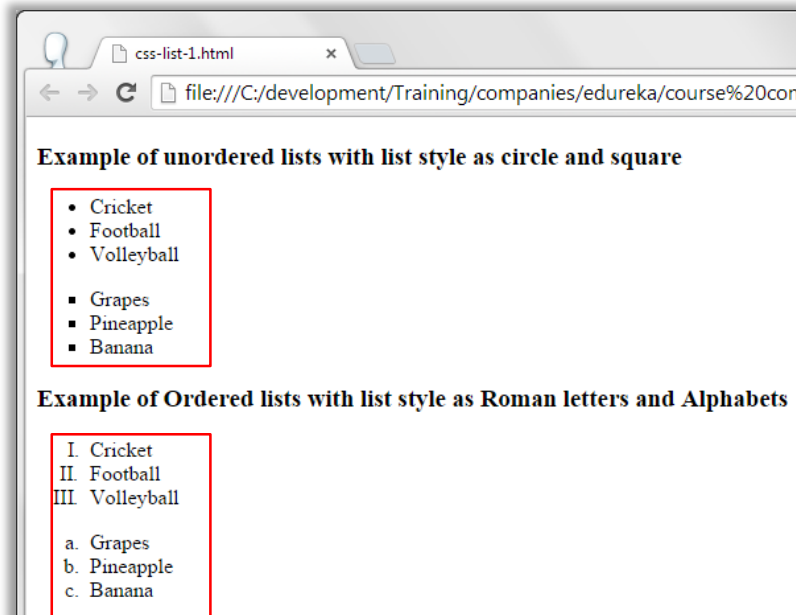


CSS – Lists (Contd.)

Example

```
<style>
ul.circle {list-style-type: circle;}
ul.square {list-style-type: square;}
ol.roman {list-style-type: upper-roman;}
ol.alpha { list-style-type: lower-alpha;}
</style>
```

Output



CSS – Table

→ Tables are used to arrange the data in an orderly manner. When you want to present the data in form of rows and columns, use tables

→ In our example, the table border and the color for both table header and table data is specified in the style section

Example

```
<!DOCTYPE html>
<html>
<head>
<style>
table, th, td {border: 1px solid blue;}
</style>
</head>
<body>
<table>
<tr><th>Firstname</th><th>Lastname</th></tr>
<tr><td>Carol</td><td>Anderson</td></tr>
<tr><td>Merlyn</td><td>Milano</td>
</tr>
</table>
</body>
</html>
```

Output



Firstname	Lastname
Carol	Anderson
Merlyn	Milano

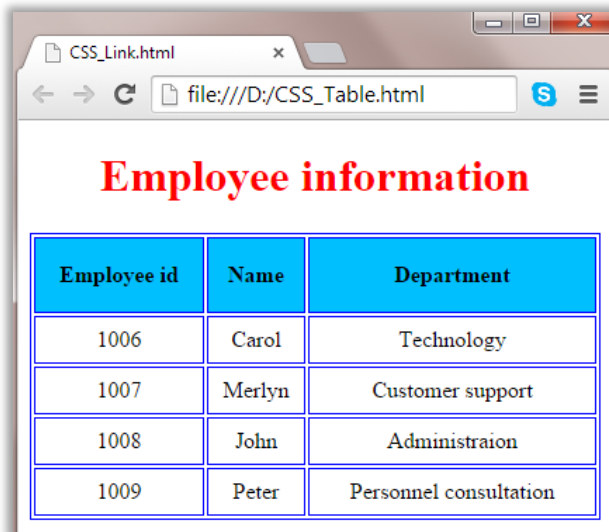
CSS – Table (Contd.)

- It is always necessary to differentiate the table header from the table data so that the user gets a clear understanding of what the table represents
- This can be done in CSS using the code shown below:

Example

```
<style>
table, td, th{
border: 1px solid blue;
text-align:center;
height : 30px;
}
table{width: 100%;}
th{
height: 50px;
background-color:#00BFFF
}
h1 {color:red;}
</style>
```

Output

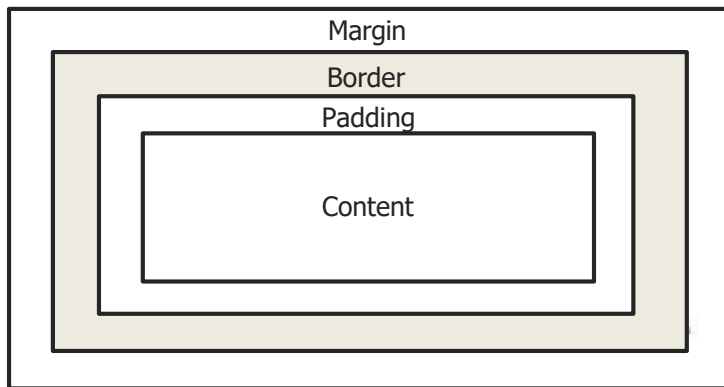


Employee id	Name	Department
1006	Carol	Technology
1007	Merlyn	Customer support
1008	John	Administraion
1009	Peter	Personnel consultation

CSS – Box Model

Box Model is used to explain the layouts in the webpage. The different sections in the box model are as follows:

- **Content:** It is the actual content which will be displayed
- **Padding:** This is the area around the content
- **Border:** This property allows user to draw borders for the element
- **Margin:** It is the area outside the border



CSS – Box Model (Contd.)

Example

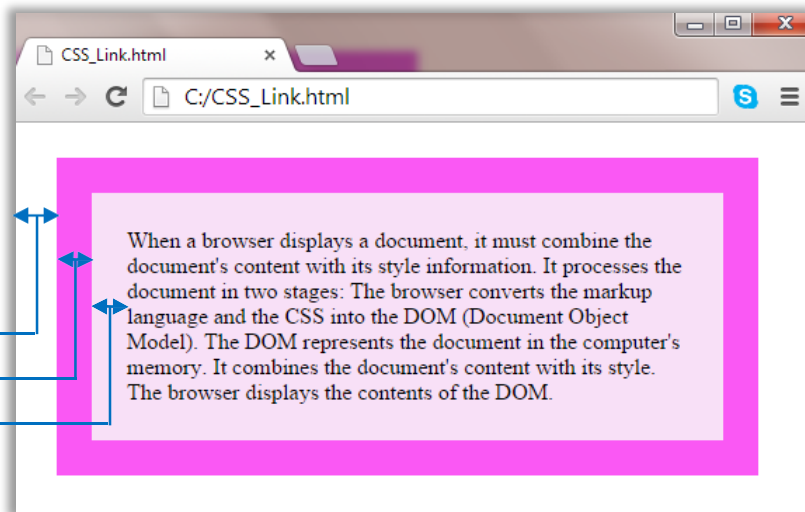
```
<style>
div{
  background-color: #00CED1;
  width: 400px;
  padding: 25px;
  border: 25px solid #8B0000;
  margin: 25px;}
</style>
```

margin

border

padding

Output



CSS – Border

The different styles of borders supported in CSS are:

Dotted: Defines a dotted border

Dashed: Defines a dashed border

Solid: Defines a solid border

Double: Defines two borders. The width of the two borders are same as the border-width value

Groove: Defines a 3D grooved border. The effect depends on the border-color value

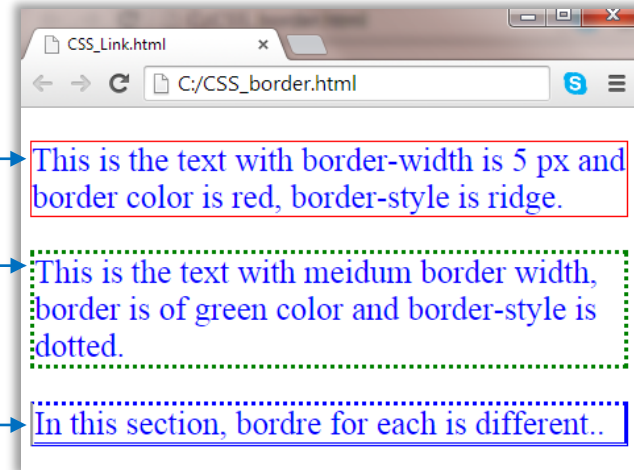
CSS – Border (Contd.)

- For all the paragraphs – font size is 60 pixels and the text is displayed in blue color
- For paragraph with classes one and two, border-style, width and color is specified
- For paragraph with class three, top border style is dotted, right border style is solid, bottom border style is double and left bottom border style is groove

Example

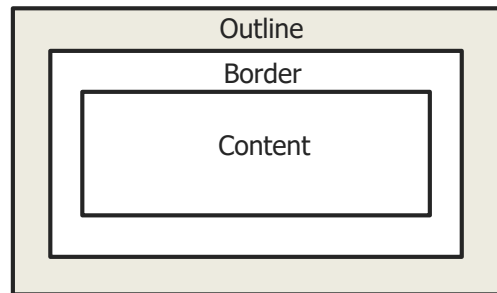
```
<style>
p{font-size:25px; color:blue;}
p.one {border-style: ridge;
       border-width: 1px;
       border-color:red;}
p.two {border-style: dotted;
       border-width: medium;
       border-color: green;}
p.three {border-top-style: dotted;
         border-right-style: solid;
         border-bottom-style: double;
         border-left-style: groove;}
</style>
```

Output



CSS – Outline

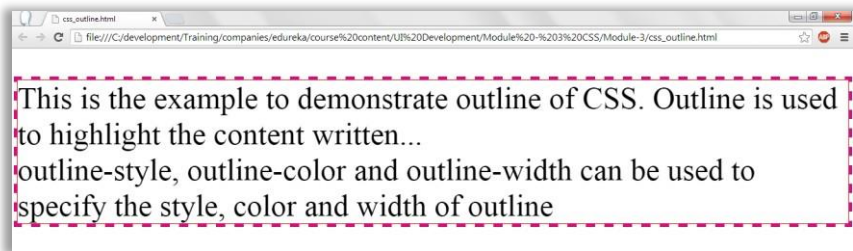
- **Outlines** are the lines outside the border. This is used to increase the visibility of the element to be displayed
- Outlines can have color, width and style
- Properties used to specify them are:
 - » **outline-style** : Specifies the outline style (Dotted, dashed, groove etc,..)
 - » **outline-color** : Uses this color to draw the outline
 - » **outline-width** : specifies width of outline



Example

```
<style>
p {
  border: 1px solid red;
  outline-style: dashed;
  outline-color: #C71585;
  outline-width: 5px;
  font-size : 50px;
}
</style>
```

Output



CSS – Margin

→ **Margin** is used to place the elements at right position

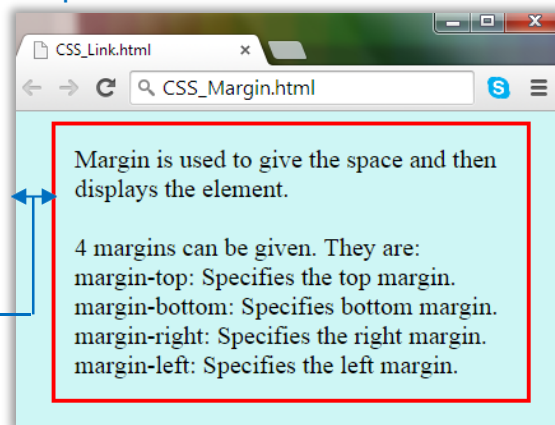
→ 4 margins can be given. They are:

- » **margin-top** : Specifies the top margin
- » **margin-bottom** : Specifies bottom margin
- » **margin-right** : Specifies the right margin
- » **margin-left** : Specifies the left margin

Example

```
<style>
body{background-color: #CEF6F5;}
p {margin-top:5px;
margin-bottom: 25px;
margin-right: 15px;
margin-left: 25px;
font-size:20px;
border:3px solid red;
padding : 15px;
}
</style>
```

Output



margin

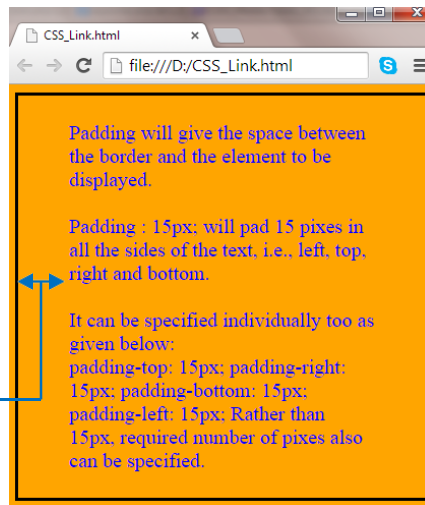
CSS – Padding

- **Padding** will give the space between the border and the element to be displayed
- `padding: 15px;` will pad 15 pixels at all the sides of the text, i.e., left, top, right and bottom

Example

```
<style>
body{background-color: #FFA500;}
p {
padding-top: 25px;
padding-right: 50px;
padding-bottom: 25px;
padding-left: 50px;
font-size:20px;
color:blue;
border:3px solid black;
}
</style>
```

Output



padding

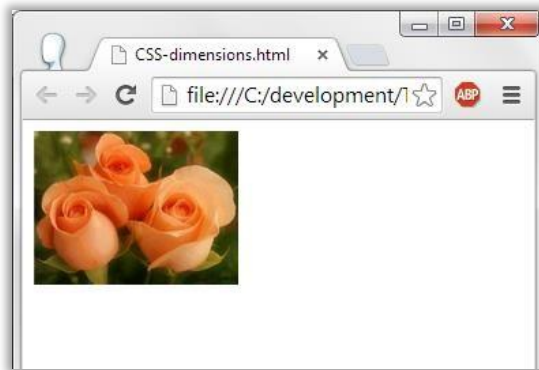
CSS – Dimension

- **Dimension** property controls the height and width of the element to be displayed
- **Minimum height** and **maximum height** of an element can be specified using **min-height** and **max-height** properties
- In our example, the image will be displayed with a maximum height and maximum width of 150 pixels

Example

```
<style>
img
{
  min-height:50px;
  max-height : 150px;
  min-width:50px;
  max-width:150px;
}
</style>
```

Output



CSS – Visibility

→ Visibility is the property which allows the user to decide if a particular element has to appear on the webpage or not

An element can be displayed or hidden by using two properties: `visibility` or `display`

→ `visibility hidden` will hide the element but will leave the blank space which occupies element(e.g. image) on the browser

Syntax for visibility – `visibility: hidden;`

→ `display none` will hide and will not leave any blank lines for the hidden element

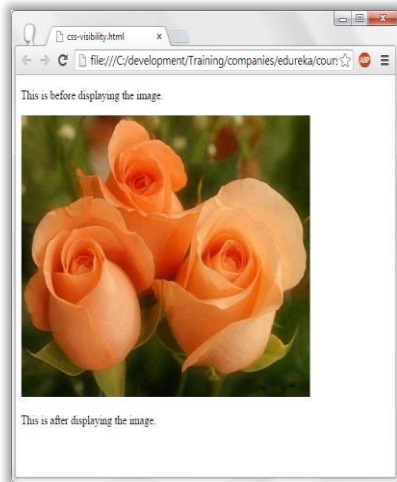
Syntax for display – `display: none;`

CSS – visibility: hidden

→ Image will not be shown but space occupied for the image will be shown when visibility property is used

To see the image, change the visibility to show

Example

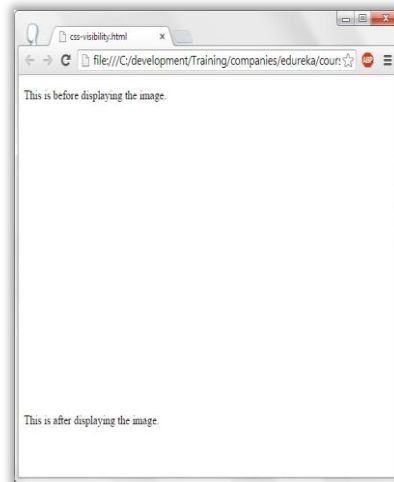


Before applying the
visibility function

```
<!DOCTYPE html><html>
<style>


## Output



A screenshot of a web browser window, identical to the one on the left, but the image of the roses is missing. The text "This is before displaying the image." is at the top, and "This is after displaying the image." is at the bottom. The space between the two lines of text is empty, indicating the image is hidden.



After applying the  
visibility function



Slide 54


```

CSS – display: none

- In the style section, the display property is set to none. Hence the image is not displayed and space occupied by the image is omitted and the next element will be displayed in the place of the image

Example

```
<!DOCTYPE html>
<html>
<style>
div {display:none;}
</style>
<body>
<p> This is before displaying the image. </p>
<div id="show">

</div>
<p> This is after displaying the image. </p>
</body>
</html>
```

Output



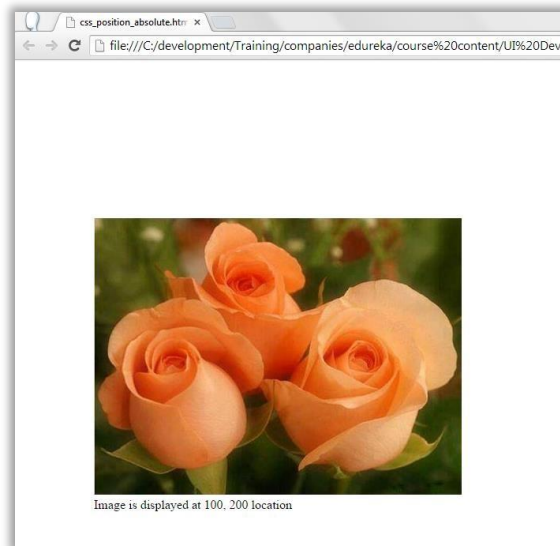
CSS – Positioning

→ Absolute positioning can be used to position the element which means to say that the element should be displayed at a specific location. The image “roses.jpg” is displayed at (100, 200) coordinate in the browser

Example

```
<!DOCTYPE html>
<html>
<style>
#show{
position:Absolute;
left : 100px;
top:200px;
}
</style>
<body>
<div id="show">
<br/>
<fig-caption> Image is displayed at 100, 200 location </fig-caption>
</div>
</body>
</html>
```

Output



If position property is not set to absolute, the image will appear at (0,0) position

CSS – Float

- When you want to insert an image in between the content to make the explanation easier, CSS float property can be used
- With the [CSS float](#), image is displayed either at the left or right of the screen and the elements next to the image are floated around the image
- It is floated [horizontally](#) not vertically
- Elements which are displayed before the float element will have not effect but elements after float element will be affected

CSS – Float (Contd.)

→ Here image is displayed to the right and the text will be floated around the image

→ Try changing the float from right to left and see the result

Example

```
<html>
<style>
p{font-size:40px; }
h1{font-size:80px;text-decoration:underline;}
img{float: right;}
</style>
<body>

<h1> CSS Float </h1>
<p>The float CSS property specifies that an element
</body>
</html>
```

Output – Float Right



Output – Float Left



Annie's Question



What does `img {float:left;}` does in CSS?

Annie's Answer



Ans. Image is displayed to the left and the text will be floated around the image towards right of the image

Pseudo Classes

CSS – Pseudo Classes and Pseudo Elements

Pseudo class is used to change the state of the element. For example:

- `:link`, `:hover`, `:active`, `:visited` in hyperlinks
- `:first-child` : Selects the first child of its parent element
- `::first-letter` : Selects the first letter of an element
- `::first-line` : Selects the first line of an element
- `::before` : Insert content before an element
- `::after` : Insert content after an element

Each one will be discussed in detail in the upcoming slides

CSS – Pseudo Classes (Contd.)

→ Color of the link is changed when visited, hovered and unvisited

Here link, visited and hover are **pseudo classes**

Example

```
<html>
<head>
<style>
a:link {color: #2FFF00;}
a:visited {color: #F811ED;}
a:hover {color: #1115F8;}
</style>
</head>
```

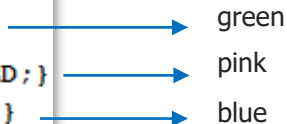


Diagram illustrating the mapping of pseudo classes to colors:

- `a:link` maps to **green** (hex #2FFF00)
- `a:visited` maps to **pink** (hex #F811ED)
- `a:hover` maps to **blue** (hex #1115F8)

CSS – Pseudo Classes (Contd.)

Output



Link: green



Hover: blue

CSS – Pseudo Classes (Contd.)

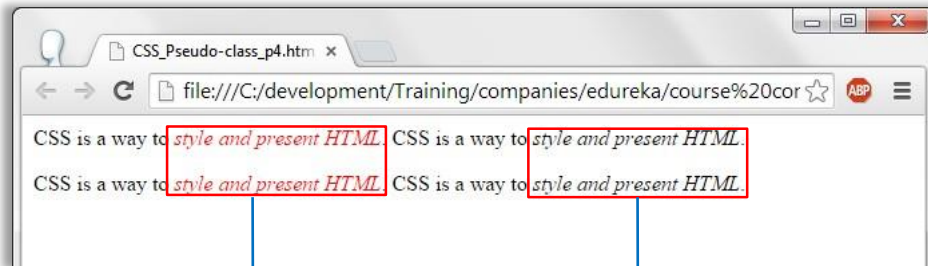
→ Here the first child of <i> tag in <p> element, will be displayed in the red color

Example

```
<html><head><style>
p i:first-child { color: red;}
</style>
</head><body>

<p>CSS is a way to <i>style and present HTML</i> CSS is a way to <i>style and present HTML</i> </p>
<p>CSS is a way to <i>style and present HTML</i> CSS is a way to <i>style and present HTML</i> </p>
</body>
</html>
```

Output



Color is changed to red

Not Affected

CSS – Pseudo Elements – First Line

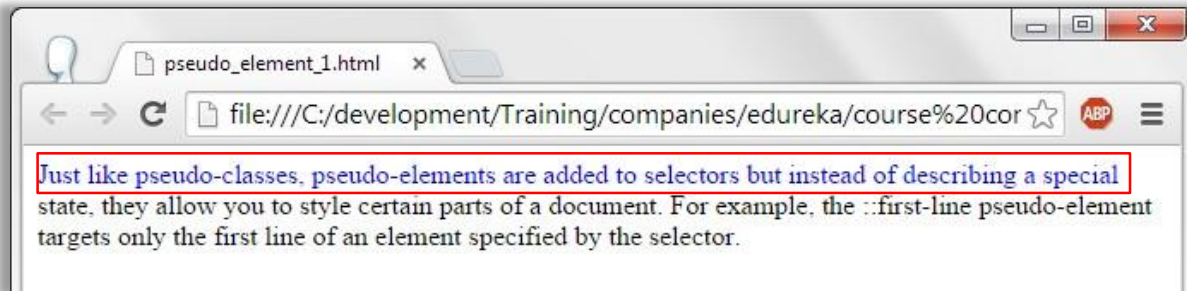
→ When the first line in the content has to be highlighted, you can use first-line pseudo element

In our example, first line of the text is displayed in blue color in the <p> tag

Example

```
<html>
<style> p::first-line{ color : blue; }
</style>
<body>
<p>
Just like pseudo-classes, pseudo-elements are added to selectors but instead of describing a
For example, the ::first-line pseudo-element targets only the first line of an element spec
<p>
</body>
</html>
```

Output



CSS – Pseudo Elements

→ When the first letter of the content has to be in a large size when compared to the other words of the content, **first-letter** pseudo element can be used. E.g., Novel, Newspaper

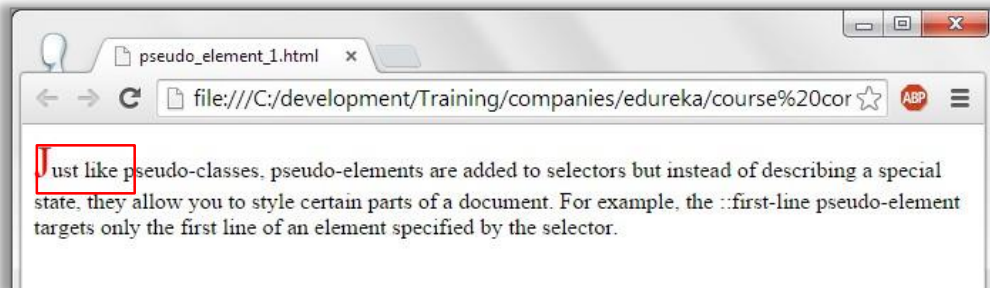
In our example, first letter of the p element is displayed in red color and with a font size of extra large style

Example

```
<html>
<style>
p::first-letter
{
  color : RED;
  font-size : xx-large;
}

</style>  <body>
<p>
Just like pseudo-classes, pseudo-elements are added to selectors but instead of describing a special state,
they allow you to style certain parts of a document. For example, the ::first-line pseudo-element targets only
the first line of an element specified by the selector.
</p> </body> </html>
```

Output





Navigation Bar

Annie's Question



Why do you require a navigation bar in the web site?

Annie's Answer



Ans. In the main page or any other web page, navigation bar gives an easy way to jump to other pages of the website. Navigation bar is intended to aid visitors in accessing information

CSS – Navigation Bar

→ **Navigation bar** is used to navigate across the web page. It helps to go to the required page which is chosen by the user

It has list of links which is developed using **anchor** and **hyperlink**

Example

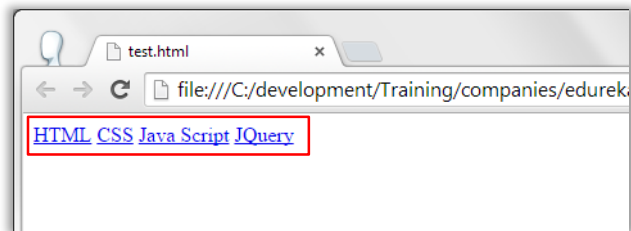
```
<!DOCTYPE html>
<html>
<head>
<style>
ul {
  list-style-type: none;    margin: 0;
  padding: 0;
}
li {
  display: inline;
}
</style>
</head>
<body>

<ul>
  <li><a href="#HTML">HTML</a></li>
  <li><a href="#CSS">CSS</a></li>
  <li><a href="#Java Script">Java Script</a></li>
  <li><a href="#jQuery">jQuery</a></li>
</ul>
</body>
</html>
```

→ To display the list horizontally

→ Do not display any style for the elements specified in the list

Output



CSS – Floating List Items

```
<style>
li{float:left;}
a{ display:block;
   width:150px;
   background-color:#dddddd;
}
</style>
```

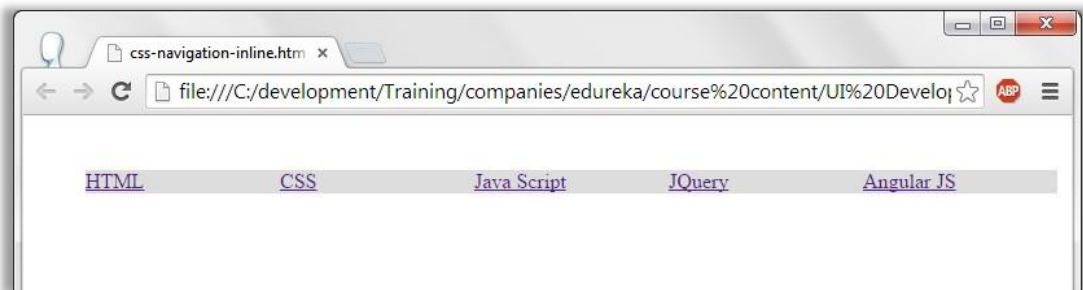
- With the `display: inline`, you cannot provide enough gaps between the elements. In order to solve this, we use blocks and floats so that the elements are placed with appropriate spaces to avoid spacing problem
- Every element in the navigation bar is developed using `` tag
- In the `style tag`, all the `` item are floated left so that they can appear in a single line
- Each `` item is displayed having a width of 150px and a grey background

CSS – Floating List Items (Contd.)

Example

```
<html>
<style>
li{float:left;}
a{ display:block;
   width:150px;
   background-color:#dddddd;
}
</style>
<body>
<br/>
<ul>
<li><a href="#">HTML</a></li>
<li><a href="#">CSS </a></li>
<li><a href="#">Java Script </a></li>
<li><a href="#">JQuery </a></li>
<li><a href="#">Angular JS </a></li>
</ul>
</body>
</html>
```

Output



Creating CSS Mega Menu

→ Almost all the ecommerce websites have big dropdown menus with lots of submenus under each menu. We can create big dropdown menus and style it using CSS. [Creating CSS Mega Menus](#) guide have been uploaded to LMS, which explains how to create big drop down menus step by step

You can see the live demo at below link

<https://s3-ap-southeast-1.amazonaws.com/s3freebucket/BigDropdownMenu/menu.html>

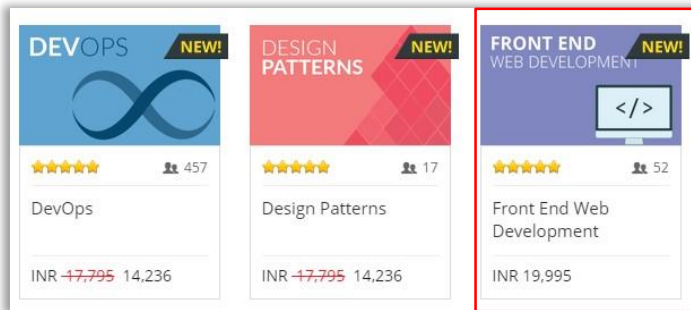
Creating CSS Mega Menus



Image Gallery

CSS – Image Gallery

- Images speak a thousand words
- In a shopping web site, we can display the list of images and when the customer clicks on the image more information about the item can be displayed
- Image gallery is used when there are multiple services. Each service can be displayed as an image



When clicked on "Front End Web Development", the related page will open



CSS – Image Gallery (Contd.)

→ When a set of images must be displayed together in the form of a gallery, Image Gallery can be used. This can easily be achieved with CSS



Image Gallery Demo

Annie's Question



Have you seen image opacity feature on any of the website ?

Annie's Answer



Ans. In some of shopping web sites, product images are displayed in lower opacity. When mouse is moved on the image (hovered) the opacity is made 1.0 so that the original image is displayed with full brightness.

CSS – Opacity

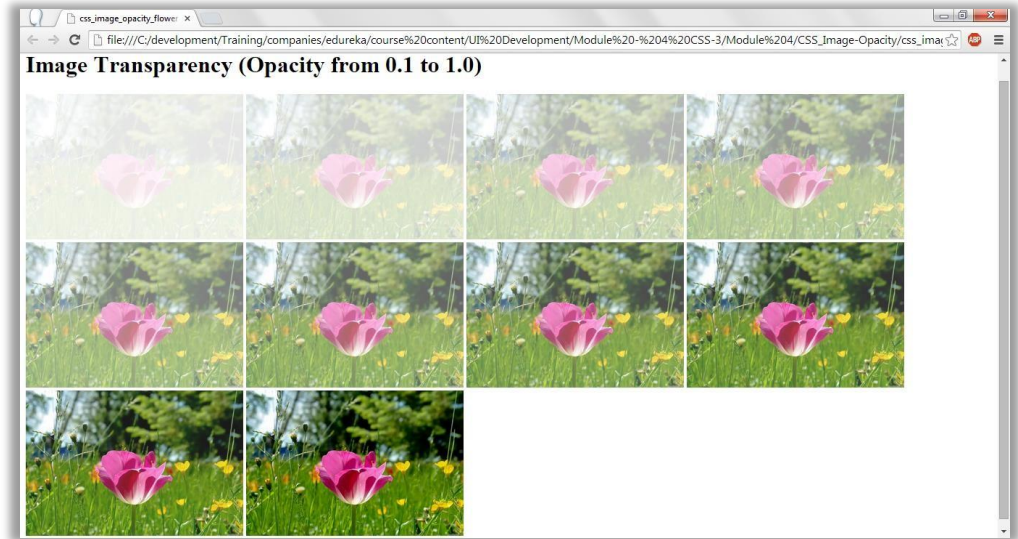
- **Opacity** gives transparency to an image
- Opacity can take the value from 0.0 to 1.0
 - » **0.0** : image will not be displayed
 - » **0.5** : transparency is 50%
 - » **1.0** : Image is displayed as the original image
- Opacity is done to make the image or object look elegant. It is an effect which let you put transparency to an element

CSS – Opacity (Contd.)

Example

```
<style>
#img1 {    opacity: 0.1; }
#img2 {    opacity: 0.2; }
#img3 {    opacity: 0.3; }
#img4 {    opacity: 0.4; }
#img5 {    opacity: 0.5; }
#img6 {    opacity: 0.6; }
#img7 {    opacity: 0.7; }
#img8 {    opacity: 0.8; }
#img9 {    opacity: 0.9; }
#img10 {   opacity: 1.0; }
</style>
```

Output



CSS – Opacity (Contd.)

Example

```
<!DOCTYPE html>
<html>
<head>
<style>
img {opacity: 0.4;} —————> Image Opacity is 0.4
img:hover {opacity: 1.0;} —————> On hovering, original image is displayed
</style>
</head>
<body>
<h1>Image Transparency</h1>
<a href="http://www.discoverhongkong.com/eng/see-do/index.jsp"

</html>
```

Output

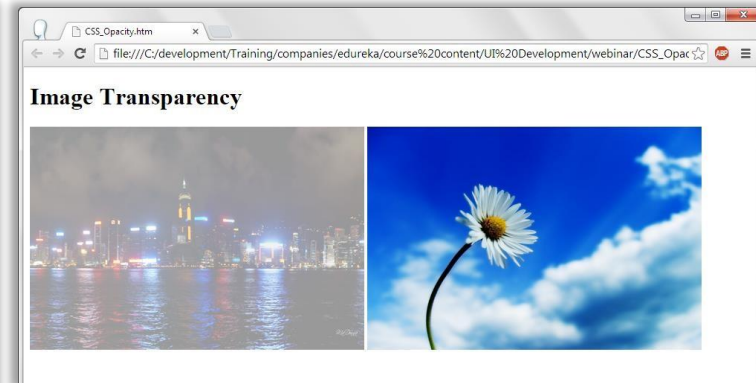


Image Sprites

CSS – Image Sprites

An Image Sprite is a combination of multiple images into a single image

→ With image sprites we can reduce the number of server requests and save bandwidth

→ In Image Sprites, a single image having multiple partitions is displayed. Each partition is given a hyperlink

→ When a portion of that image is clicked, the webpage linked with that partition is displayed to the user

Example



On Clicking this, you will be directed to the previous page

On Clicking this, you will be directed to the home page

On Clicking this, you will be directed to the next page

CSS – Image Sprites (Contd.)

The code to achieve the output required is as shown below:

Example

```
#navlist li {
    margin: 0;
    padding: 0;
    list-style: none;
    position: absolute;
    top: 0;
}

#navlist li, #navlist a {
    height: 44px;
    display: block;
}

#backward {
    left: 63px;
    width: 43px;
    background: url('image_sprite.jpg') -50px 0;
}

#home {
    left: 0px;
    width: 46px;
    background: url('image_sprite.jpg') 0 0;
}

#forward {
    left: 129px;
    width: 43px;
    background: url('image_sprite.jpg') -91px 0;
}
```

```
<ul id="navlist">
  <li id="backward"><a href="link_to_previous_page"></a></li>
  <li id="home"><a href="link_to_home_page"></a></li>
  <li id="forward"><a href="link_to_next_page"></a></li>
</ul>
```



Media Type

CSS – Media Type

→ When you want to print the content in a different format, you can use the media type rules

Using the `@media <type>`, different layouts can be given for screen, mobile, print etc.

Example

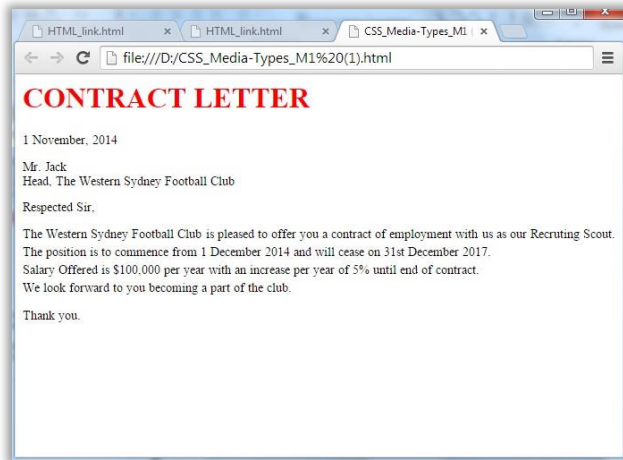
```
@media screen{  
p{  
font-family: "Times New Roman", Times, serif;  
font-size: 14px;  
}  
}  
@media print{  
p{  
font-size: 20px;  
color: blue;  
}  
}
```


CSS – Media Type (Contd.)

- @media is used to specify the **type of media** required
 - @media screen is for **screen** and @media print is for **print out**
 - For screen, font is set to **Times New Roman**
 - For printing, the same content is displayed in blue color with a font size of 20 pixels
- To test this, press **<ctrl+p>** which gets the **print menu** and **print preview**
- » @media print style can be seen in the print preview

CSS – Media Type (Contd.)

Output on the screen



Output when the print option is given



Attribute Selectors

CSS – Attribute Selectors

→ We can change the style of the attributes without using the “class” and “id” parameter of the HTML element

For example, where “target=_blank” element can be an attribute for changing the style of the HTML element href="#" can be another attribute, wherever this attribute is used, the style of this HTML element is changed

Some times it is required to change the style of the HTML elements based on attribute, hence attribute selectors are used

For example: All the hyperlinks which the user opened in the search page can be displayed in the blue color to differentiate, when opened in a new webpage

Valid CSS! - Jigsaw Demo Site - World Wide Web Consortium

jigsaw.w3.org/css-validator/check/referer ▼

A description for this result is not available because of this site's robots.txt – learn more.

Cascading Style Sheets - World Wide Web Consortium

www.w3.org/Style/CSS/Overview.en.html ▼

5 days ago - Authoritative information from the W3C. Provides complete specifications, lists of CSS browsers and authoring tools, and information about ...

→ Unvisited link

→ Visited link

CSS – Attribute Selectors (Contd.)

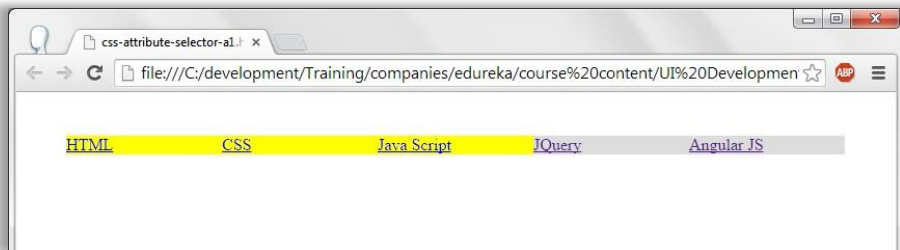
You can change the attributes style by selecting them

Here, for all the `href="#"`, background color of the hyperlink is changed to yellow color

Example

```
<html>
<style>
li{float:left;}
a{display:block; width:150px; background-color:#dddddd;}
a[href="#"]
{ background-color : yellow;}
</style>
<body>
<br/>
<ul>
<li><a href="#">HTML</a></li>
<li><a href="#">CSS </a></li>
<li><a href="#">Java Script </a></li>
<li><a href=" " >JQuery </a></li>
<li><a href=" " >Angular JS </a></li>
</ul>
</body>
```

Output



CSS – Attribute Selectors (Contd.)

→ Here in the login form, the textbox, password, body and the header attributes are selected and the style is specified

Example

```
body{  
    background-color: #FFF5F5;  
}  
  
h2,h3{  
    color: Blue;  
}  
  
input[type=text] {  
width: 150px;  
display: block;  
margin-bottom: 10px;  
background-color: yellow;  
}  
input[type=password] {  
width: 150px;  
display: block;  
margin-bottom: 10px;  
background-color: yellow;  
}
```

Output



CSS Borders

Annie's Question



Where can you apply rounded borders in a web page?

Annie's Answer



Ans. Images can be displayed with rounded borders or the web page itself can have a rounded border to display beautifully.

CSS Borders

→ When you want the content in the webpage to be presented within the borders, we can use the border attribute

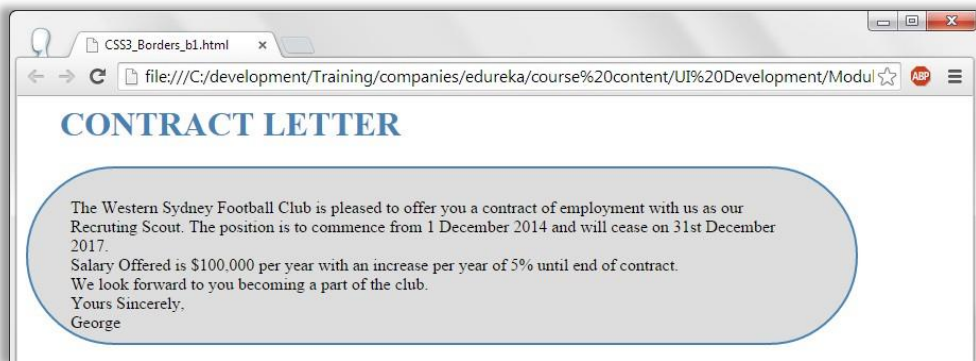
Borders are used to differentiate different parts of the text

Rounded borders are achieved through `border-radius` property

Example

```
p{  
border: 2px solid black;  
padding: 10px 40px;  
width: 700px;  
border-radius: 105px;  
border-color: #4682B4;  
background-color: #dddddd;  
}
```

Output



CSS – Shadow Border

→ Shadow Borders can be applied to images using the box-shadow property

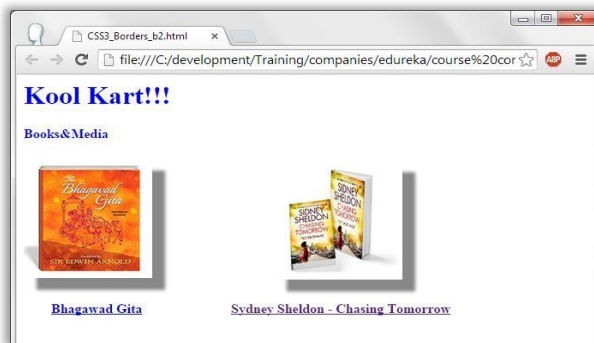
E.g., box-shadow: 15px 15px 5px #888888;

15px horizontal shadow, 15px vertical shadow and 5px is the depth and 888888 is the color for the shadow

Example

```
img{  
width: 150px;  
height: 150px;  
background-color: #FFF5F5;  
box-shadow: 15px 15px 5px #888888;  
}
```

Output



Background and Gradient

Annie's Question



How can you specify the background image for a web page in CSS?

Annie's Answer



Ans. Background image can be specified using
`background :url ("image file")`

Annie's Question



What does background-size attribute signify in CSS?

Annie's Answer



Ans. Background-size specifies how much of width and height of the image should be taken and displayed on the page

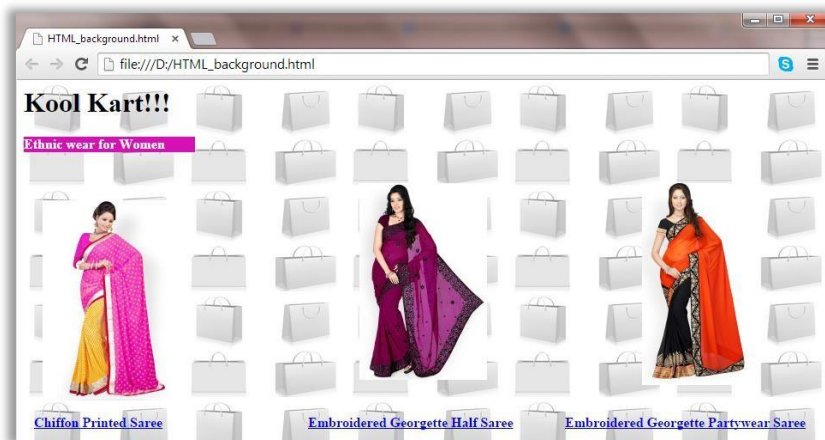
CSS – Background

- Images are the best way to convey information and attract people to read your webpage. If the images used are appealing to the user, user will be tempted to read your webpage

Example

```
body{  
background: url(HTML_Image.png) ;  
background-size: 20% 20%;  
}
```

Output



CSS3 – Gradients

- **Gradients** are smooth transition between two or more colors
- **Linear-gradient** and **radial-gradient** are two types of gradients. Linear is straight line gradient and radial is circular gradient

Example

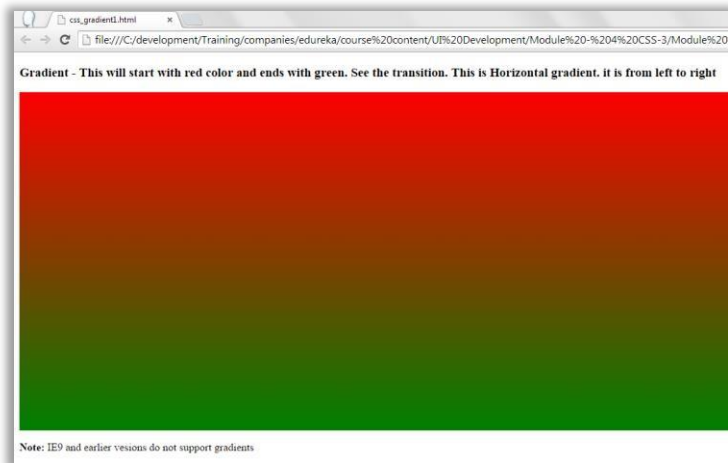
```
<style>
#grad1{
height:500px;
background: linear-gradient(red, green);
}
</style>
```

In our example, the color changes from red to green and it's a linear gradient



Default style for linear gradient is from top to bottom but you can also set the linear gradient from left to right or diagonally or even using angles

Output



CSS3 – Gradients (Contd.)

Now let us create a linear gradient from left to right

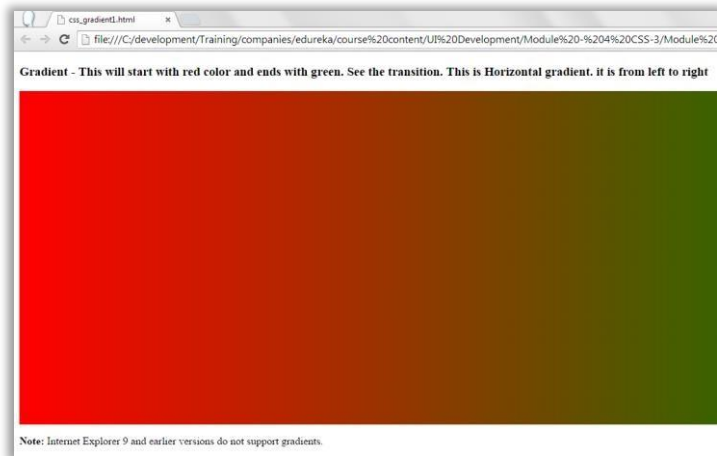
Example

```
<style>
#grad1 {
height:500px;
background: linear-gradient(to right, red, green);
}
</style>
```

Here we are showing a linear gradient

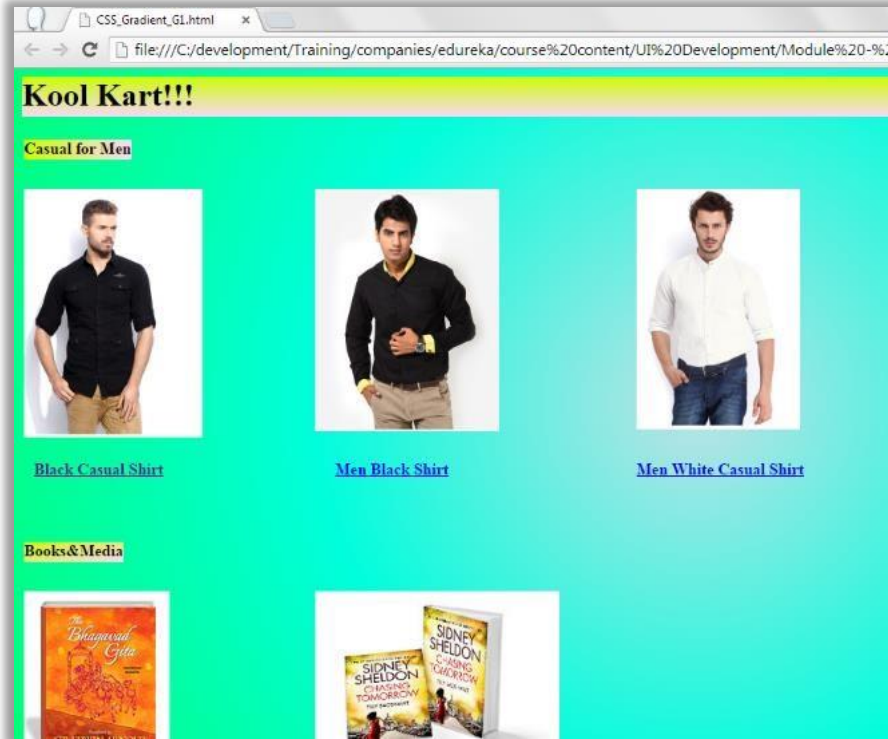
The transition is towards right from red to green color

Output



CSS3 – Gradients (Contd.)

Now let us use the techniques learnt to create a webpage as shown below:





DEMO

QUESTIONS

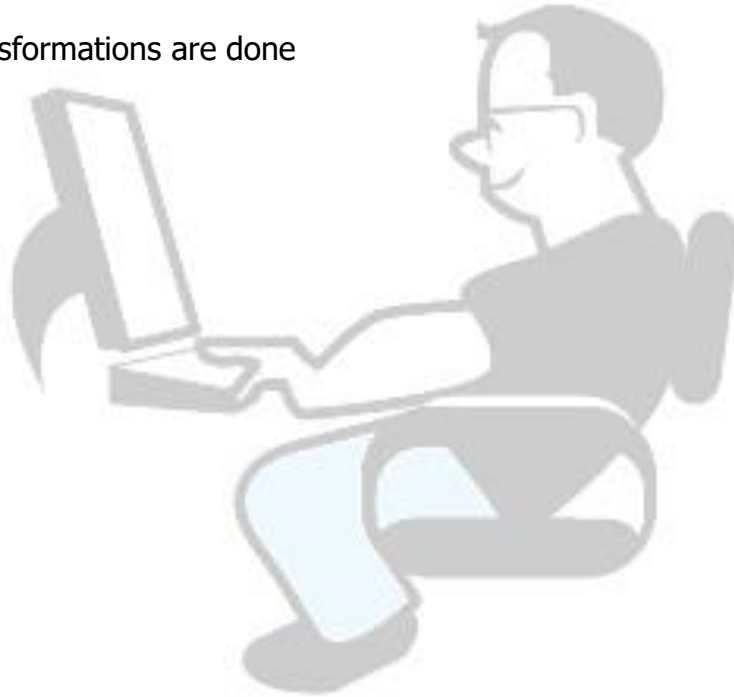


Assignment

- Display a header and display any paragraph in HTML
- Change the background color of the body to color Fuchsia
- Display the insurance company policy holder's information in a table. The table must have the following information:
 - » Policy Id, Policy Holder's Name, and Insured AmountPerform the following operations on it:
 - » Display the table which is 50% width of the screen
 - » Table header should be in Dark Gray color
 - » Display the border in green color for table header and data
- Display an image by specifying absolute position at 300 from left and 100 pixels from top
- Display 3 paragraphs and have separate borders for them. Display the first paragraph in solid border, second in dotted and third in dashed. Font color should be in navy blue and size of the font should be 20 pixels

Pre-work for Next Class

- ✏ Explore the various text-effects attributes in CSS
- ✏ Check how 2D and 3D transformations are done



Agenda for the Next Class

In the next module you will be able to:

- Learn how to apply transitions in the webpage
- Understand how animations are done
- Analyse how 2D and 3D transformations are done



Further Reading

- <http://alistapart.com/article/sprites>
- <http://scotch.io/quick-tips/how-to-change-a-css-background-images-opacity>
- <http://www.howtocreate.co.uk/tutorials/css/mediatypes>



Survey

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Thank you!

