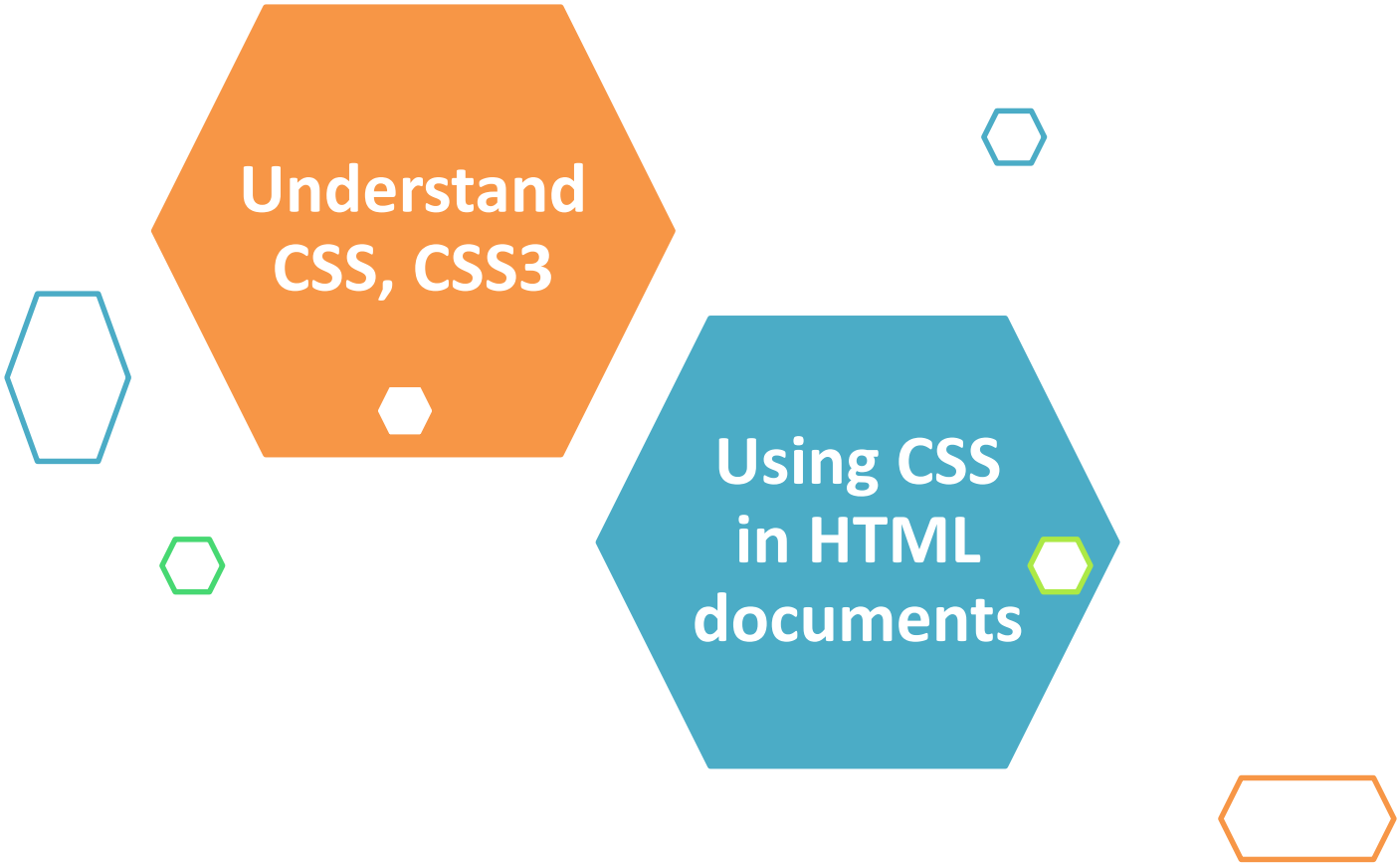
CASCADING STYLE SHEETS

Instructor: DieuNT1

Learning Goals



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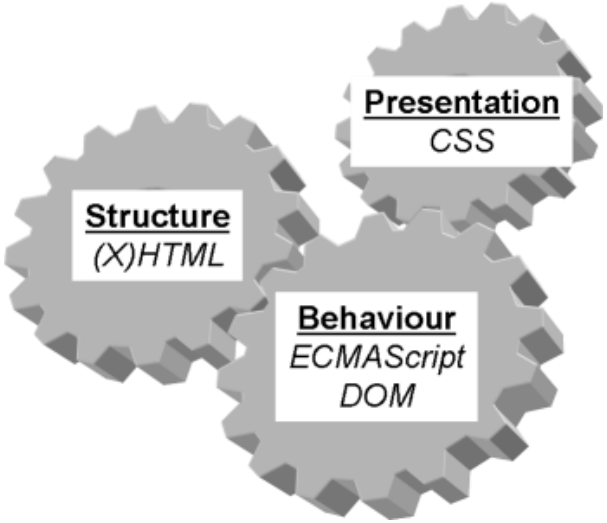
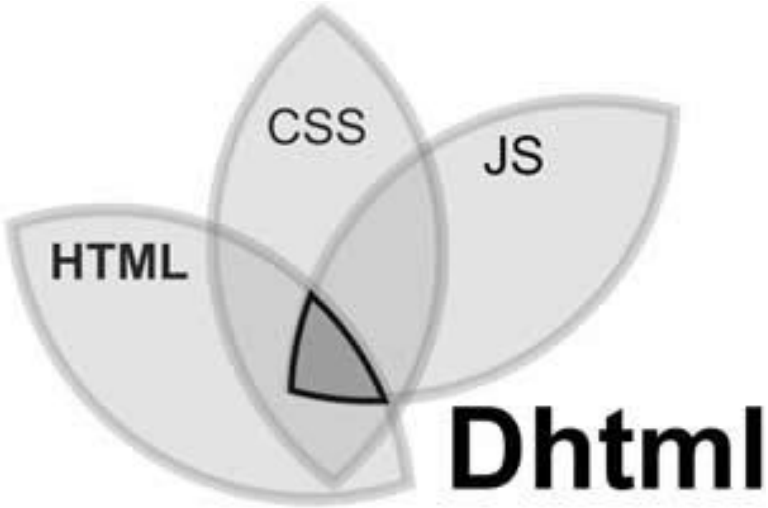
Section 1

DYNAMIC HTML
WHAT IS CSS?
STYLE SHEET IMPLEMENTATION

Dynamic HTML

- DHTML is used to describe the **combination of HTML**, the **stylesheet** and **script language** make the website come alive[sống động].
- The ability to **write the script** allows to add **dynamic features** to Web pages.
- Microsoft DHTML implementation through focusing on the **use of CSS** (Cascading Style Sheets). The **script code** is used for **interactive elements** of CSS.





What is CSS?

- CSS stands for ***Cascading Style Sheet.***
- Typical **CSS file** is a text file with an extention **.css** and contains a series of **commands** or **rules.**
- These **rules** tell the HTML how to display.

Attaching a Style Sheet

There are ***3 ways*** to attach CSS to a page:

1. **Inline Style Sheet*:** CSS is not attached in the <header> but **is used directly within HTML tags.**

```
<p style="color: red">Some Text</p>
```

2. **Internal Style Sheet:** Best used to control styling on one page.

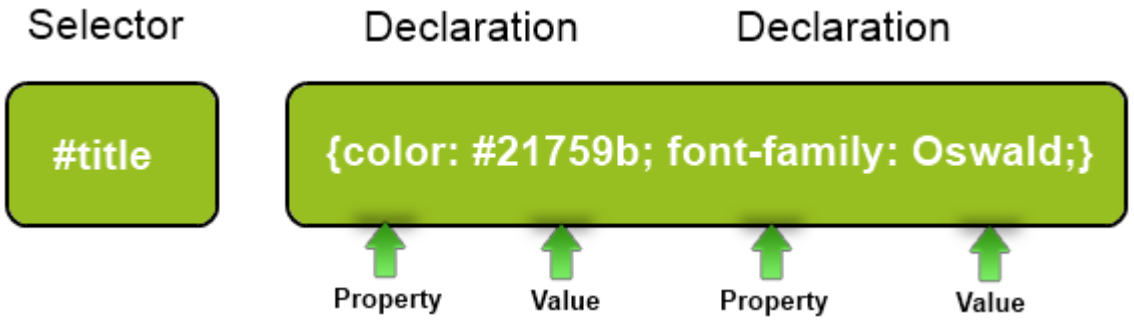
```
<head>
    <style type="text/css">
        h1 {color: red)
    </style>
</head>
```

3. **External Style Sheet:** Best used to control styling on multiple pages.

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

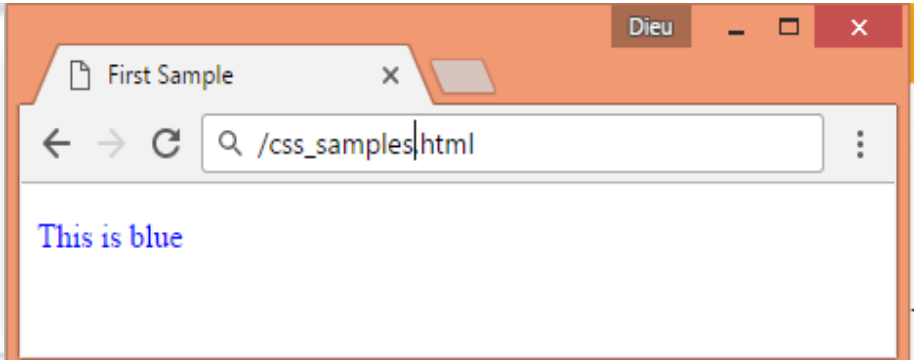
CSS Rule Structure

- A CSS RULE is made up of a **selector** and a **declaration**. A declaration consists of property and value.
- **A selector** is often an element of HTML.
- **Properties** and **values** tell an HTML element how to display.




```
<style>
    p {color:blue;}
</style>
```

Selector Property Value



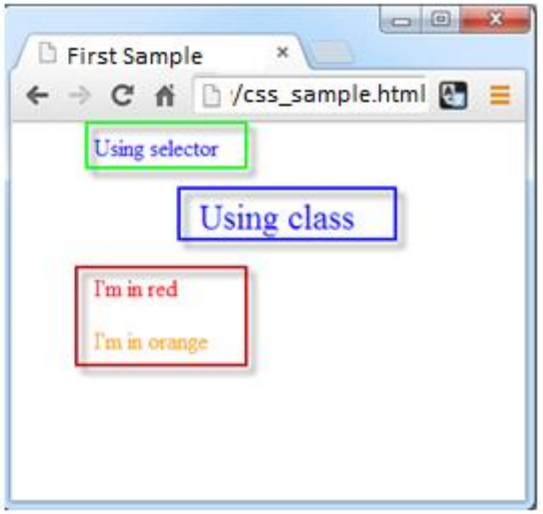
Using selector: element, class, id

```
<html>
<head>
  <style>
        p { text-indent: 3em; color:blue;}

        p.indent { text-indent: 5em; font-size:24px; }

        p#par1 { color: red; }

        p#par2 { color: orange; }

        #par3 { color: blue; }

  </style>
</head>
    <body>
     <p>Using selector</p>

     <p class ="indent">Using class</p>

     <p id="par1">I'm in red</p>

     <p id="par2">I'm in orange</p>

    </body>
</html>
```

1

2

3



Grouping Selectors

- Group **the same selector** with different declarations together on one line.
- Group **different selectors** with the same declaration on one line.

The same selectors 1

```
h1 {color: black;}
h1 {font-weight: bold;}
h1 {background: white;}
```

```
h1 {
color: black;
font-weight: bold;
background: white;
}
```

Different selectors 2

```
h1 {color: yellow;}
h2 {color: yellow;}
h3 {color: yellow;}
```

```
h1, h2, h3 {color: yellow;}
```

Comments in CSS

- **Explain** the purpose of the coding
- **Help** others read and understand the code
- Serve as a reminder to you for what it all means
- Starts with /* and ends with */

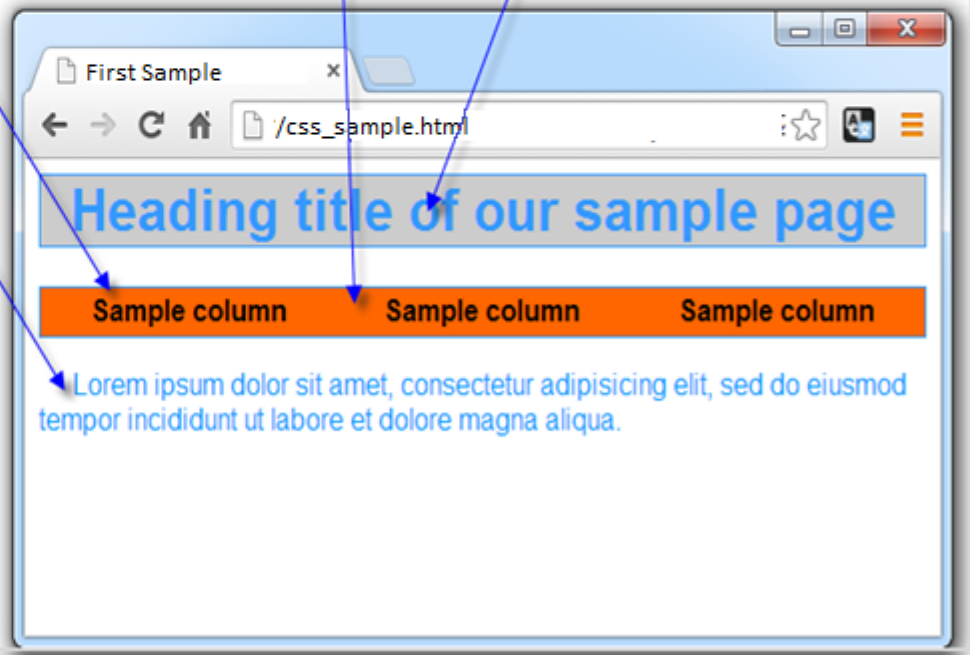
```
p {color: #ff0000;} /*Company Branding*/
```

Systax: /* content of comment */

1

First Example

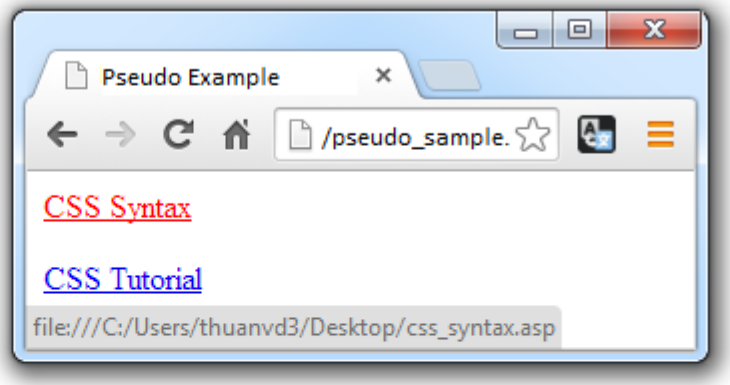
```
<head>
  <style>
    body {font-family: arial;}
    h1 {background-color:#CCC; border: 1px solid; color:#39F;   text-align: center;}
    table { background-color: #F60; border: 1px solid #39F; width: 100%;}
    td { border: 0px;    text-align: center;    }
    p {color:#09F;    text-indent: 20px;}
  </style>
</head>
<body>
<h1>Heading title of our sample page </h1>
<table border="1">
<tr>
    <td><strong>Sample column</strong></td>
    <td><strong>Sample column</strong></td>
    <td><strong>Sample column</strong></td>
</tr>
</table>
<p>Lorem ipsum dolor sit amet, consectetur
adipisicing elit, sed do  eiusmod tempor
incididunt ut labore et dolore magna aliqua.</p>
</body>
```



Pseudo class

- A pseudo-class is used to define a **special state** of an element.
- For example, it can be used to:
  - ✓ Style an element when a user **mouses over** it
  - ✓ Style **visited** and **unvisited** links differently

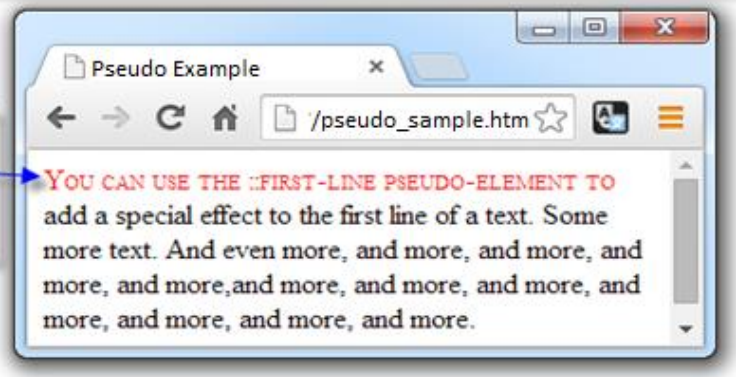
```
<html>
<head>
<style>

a.highlight:hover {
    color: #ff0000;
}
</style>
</head>
<body>

<p><a class="highlight" href="css_syntax.asp">CSS Syntax</a></p>
<p><a href="default.asp">CSS Tutorial</a></p>

</body>
</html>
```



Pseudo element

- A CSS pseudo-element is used to **style specified parts of an element.**
- For example, it can be used to:
  - ✓ Style the **first letter**, or **line**, of an element
  - ✓ Insert content before, or after, the content of an element

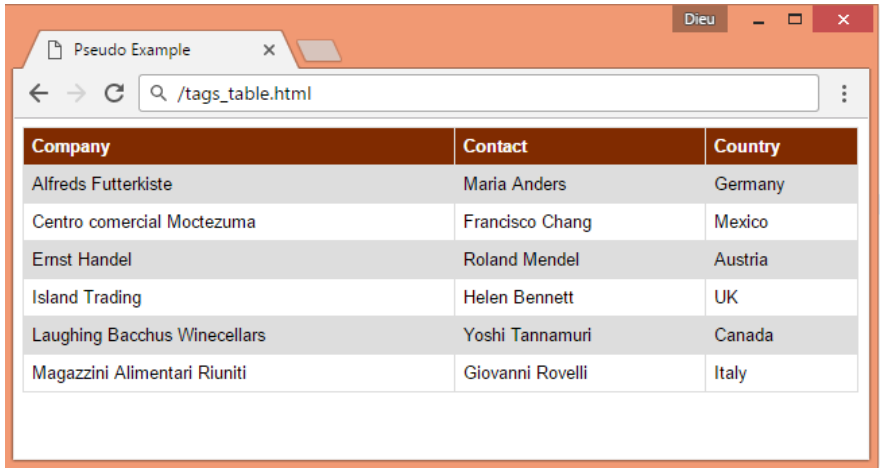
```
<html>
<head>
<style>
p::first-line {
    color: #ff0000;
    font-variant: small-caps;
}
</style>
</head>
<body>

<p>You can use the ::first-line pseudo-element to add a special
effect to the first line of a text. Some more text.
And even more, and more, and more, and more, and more,and more,
and more, and more, and more, and more, and more, and more.</p>

</body>
</html>
```



Pseudo class example

- :first-child, :nth-child()(css3) Selector

```
<style>
table {
    font-family: arial, sans-serif;
    border-collapse: collapse;
    width: 100%;
}

td, th {
    border: 1px solid #dddddd;
    text-align: left;
    padding: 8px;
}

tr:first-child {
    background-color: #802b00;
    color: #ffffff;
}

tr:nth-child(even) {
    background-color: #dddddd;
}
</style>
```

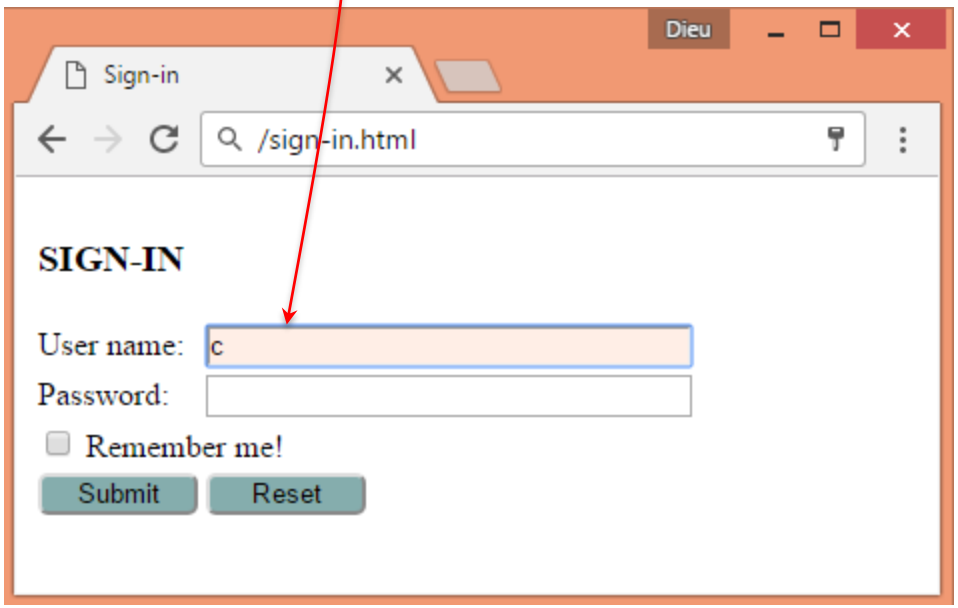


Company	Contact	Country
Alfreds Futterkiste	Maria Anders	Germany
Centro comercial Moctezuma	Francisco Chang	Mexico
Ernst Handel	Roland Mendel	Austria
Island Trading	Helen Bennett	UK
Laughing Bacchus Winecellars	Yoshi Tannamuri	Canada
Magazzini Alimentari Riuniti	Giovanni Rovelli	Italy

Pseudo class example

- :focus Selector

```
input:FOCUS {
    background-color: #ffeee6;
}
```



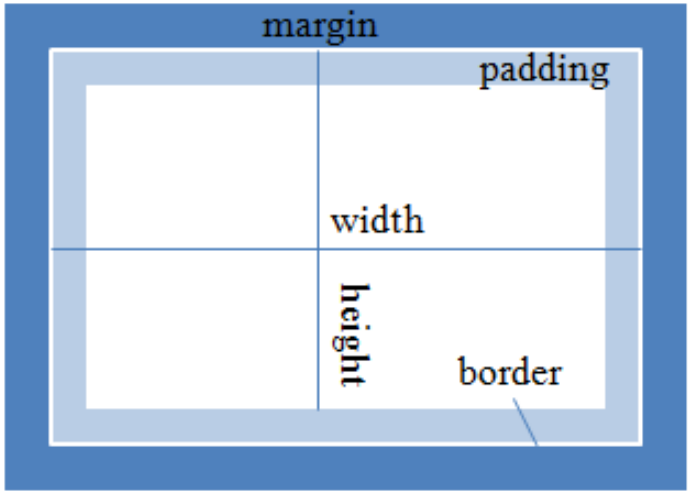
Section 2

COMMON CSS PROPERTIES

Common CSS Properties

- Layout properties
- Text properties
- CSS Colors
- Styling link
- Box Model

Layout Properties



- **Width**: %, px;
- **Height**: %, px
- **Float**: left, right, none, inherite
- **Clear**: left, right, both, none, inherit
- **Border**: px;
- **Padding**: pading, padding-left, padding-right, padding-top, padding-bottom (px, em)
- **Margin**: margin, margin -left, margin -right margin -top, margin -bottom (px, em)

Text Properties

- **To style the text, it consist of some properties:**
  - ✓ color
  - ✓ letter-spacing
  - ✓ text-transform
  - ✓ word-spacing
  - ✓ text-align
  - ✓ font

```
<style type="text/css">
    .mainHeading {
        color: red;

        letter-spacing: 5px;

        text-transform: uppercase;

        word-spacing: 15px;

        text-align: left;

        font-family: Times;

        text-decoration: underline;

        font-size: 12px;

        font-style: italic;

        font-weight: bold;

    }
</style>
```

CSS Colors

- To style color for text

Standard

- White
- Black
- Blue
- Fuchsia
- Gray
- Green
- Lime
- Aqua

Hexadecimal

- #ffffff
- #fff
- #cccf0f3

```
<style type="text/css">
    .mainHeading {
        color: red;
        letter-spacing: 5px;
        text-transform: uppercase;
    }
</style>
```

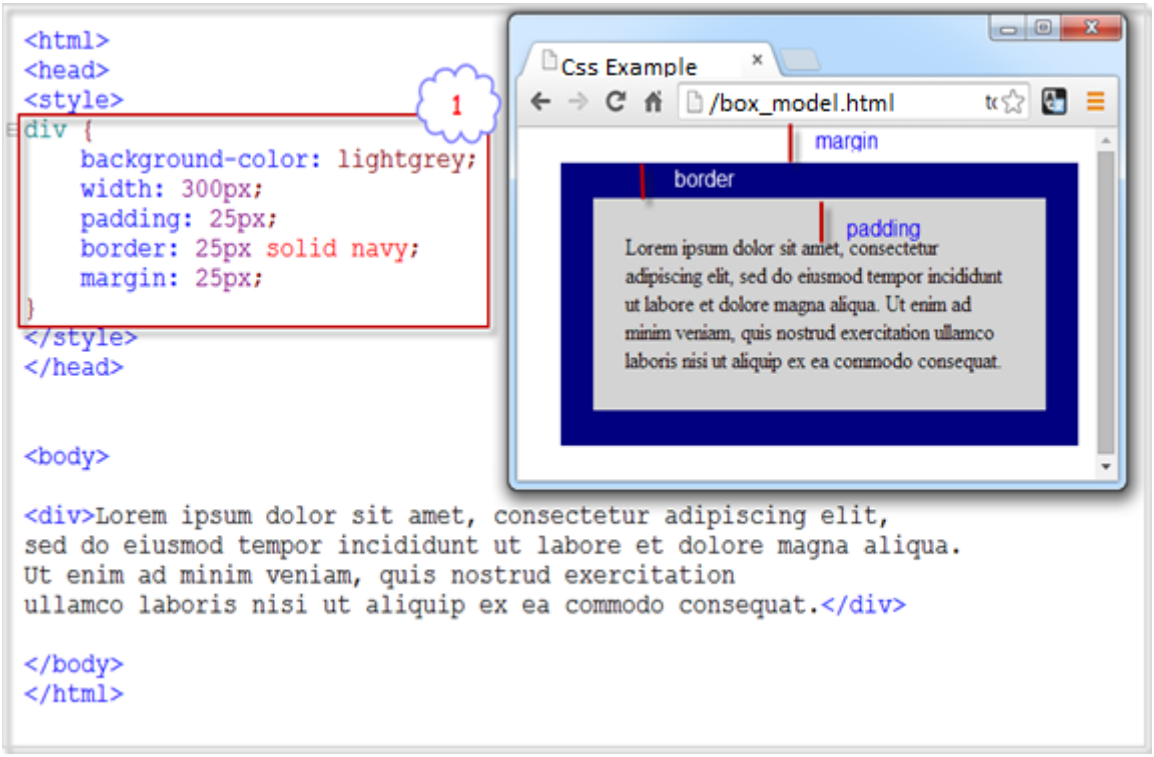
Styling Links

- The links property defines how *inactive*, *hovered*, *active*, and *visited* link states appear to the user.

```
a:link {
    color: red;
    text-decoration: none;
    border-bottom: 1px dashed red;
    background: white;
}
a:visited {
    color: yellow;
}
a:active {
    color: green;
}
a:hover {
    color: orange;
}
```

Box Model

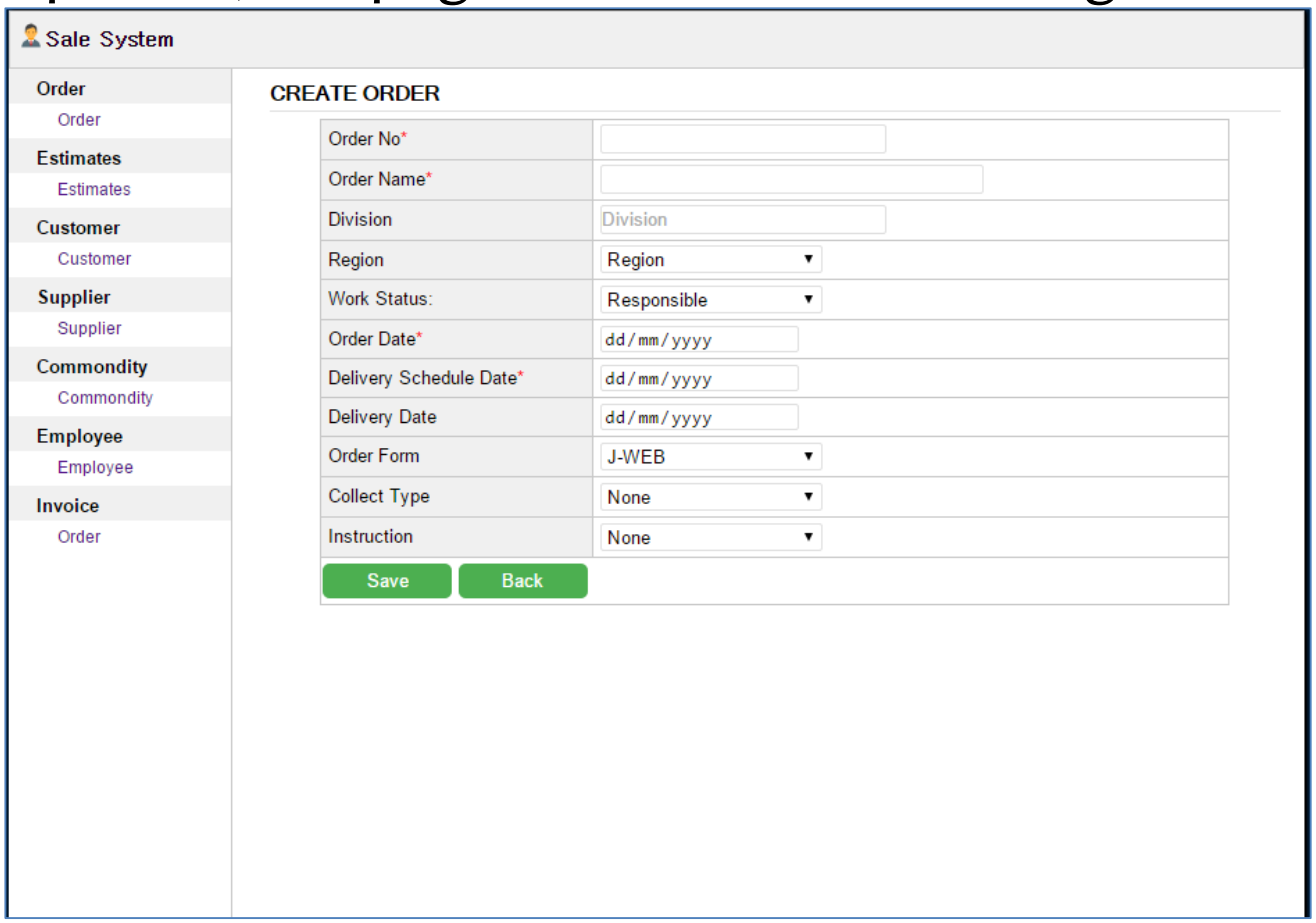
- The CSS box model is essentially a box that wraps around HTML elements, and it consists of:
  - **margins,**
  - **borders,**
  - **padding,** and
  - the **actual content.**




```
<html>
<head>
<style>
div {
    background-color: lightgrey;
    width: 300px;
    padding: 25px;
    border: 25px solid navy;
    margin: 25px;
}
</style>
</head>

<body>

<div>Lorem ipsum dolor sit amet, consectetur adipiscing elit,
sed do eiusmod tempor incididunt ut labore et dolore magna aliqua.
Ut enim ad minim veniam, quis nostrud exercitation
ullamco laboris nisi ut aliquip ex ea commodo consequat.</div>

</body>
</html>
```

Practical time

- Applying CSS for the screen is designed in pre-lecture.
- On completion, the page will look like following:

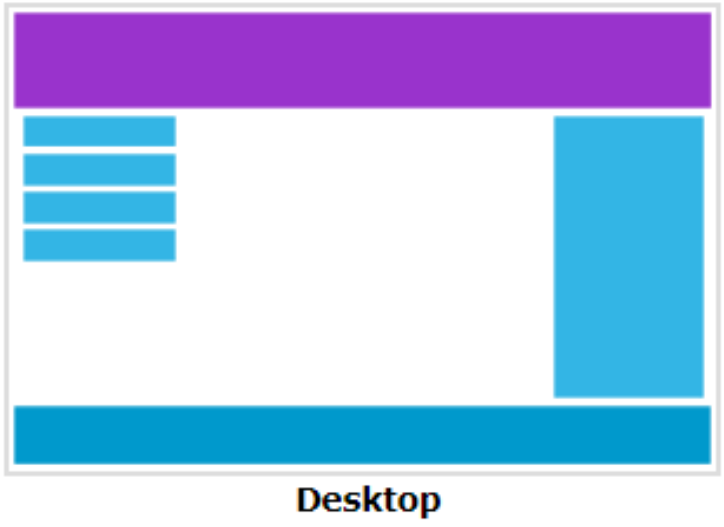


Section 4

RESPONSIVE WEB DESIGN

Introduction

- Responsive web design makes your web page look good on all devices.
- Responsive web design uses only HTML and CSS.
- Responsive web design is not a program or a JavaScript.
- Web pages can be viewed using many different devices: ***desktops***, ***tablets***, and ***phones***.
- Your web page should look good, and be easy to use, regardless of the device.



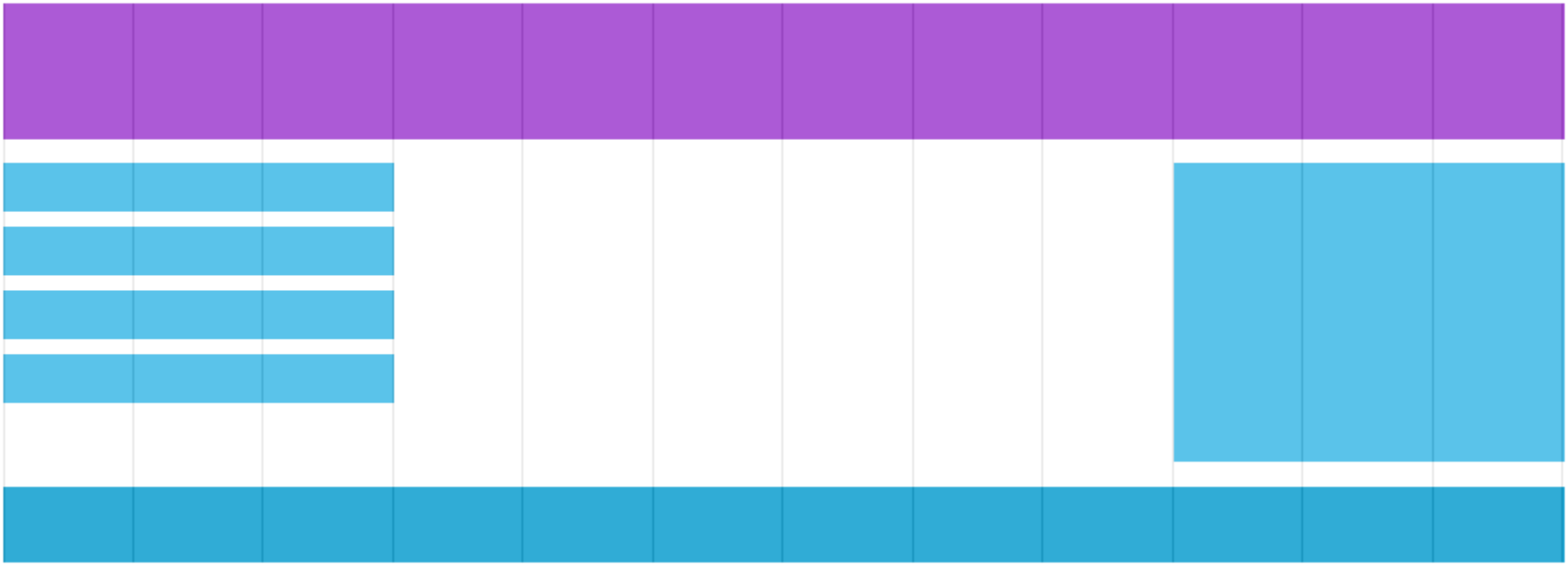
The Viewport

- The viewport is the user's visible area of a web page.
- The viewport varies with the device, and will be smaller on a mobile phone than on a computer screen.
- **Setting The Viewport:**
  - ✓ HTML5 introduced a method to let web designers take control over the viewport, through the **<meta>** tag.
  - ✓ You should include the following <meta> viewport element in all your web pages:

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

Grid-View

- Using a grid-view is very helpful when designing web pages. It makes it easier to place elements on the page.



- A responsive grid-view often has 12 columns, and has a total width of 100%, and will shrink and expand as you resize the browser window.

Grid-View

- The following example shows a simple responsive web page, with two columns:

25%	75%

Example

```
.menu {
    width: 25%;
    float: left;
}
.main {
    width: 75%;
    float: left;
}
```

Media Queries

- Media query is a CSS technique introduced in CSS3.
- It uses the @media rule to include a block of CSS properties only if a certain condition is true.
- **Example:** If the browser window is 600px or smaller, the background color will be lightblue:

```
@media only screen and (max-width: 600px) {
    body {
        background-color: lightblue;
    }
}
```

- **Example2:**

```
/* Use a media query to add a breakpoint at 800px: */
@media only screen and (max-width:700px) {
  /* For mobile phones: */
  .menu, .content{
    width:100%;
  }
```

Section 3

INTRODUCTION CSS3 – BASIC

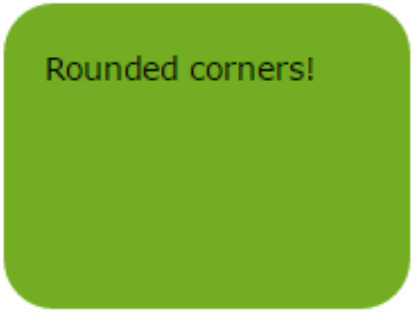
Introduction CSS3 – Basic

- CSS3 is the latest standard CSS.
- CSS3 fully backward compatible with previous versions of CSS.
- Some of the most important CSS3 modules are:
  - ✓ Selectors
  - ✓ Box Model
  - ✓ Backgrounds và Borders
  - ✓ Image Values và Replaced Content
  - ✓ Text Effects
  - ✓ 2D/3D Transformations
  - ✓ Animations
  - ✓ Multiple Column Layout
  - ✓ User Interface

CSS3 Rounded Corners

- With the CSS3 **border-radius** property, you can give any element "rounded corners".
- Example:

```
#rcorners1 {
    border-radius: 25px;
    background: #73AD21;
    padding: 20px;
    width: 200px;
    height: 150px;
}
```



Border & Background Effect

- **Border effects :**
  - ✓ box-shadow
  - ✓ border-image
- **Background effects:**
  - ✓ background-size
  - ✓ background-origin

background-origin:border-box:

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.

background-origin:content-box:

Lorem ipsum dolor sit amet, consectetuer adipiscing elit, sed diam nonummy nibh euismod tincidunt ut laoreet dolore magna aliquam erat volutpat. Ut wisi enim ad minim veniam, quis nostrud exerci tation ullamcorper suscipit lobortis nisl ut aliquip ex ea commodo consequat.

CSS border-color Property

- Set the color of the four borders
- Example:

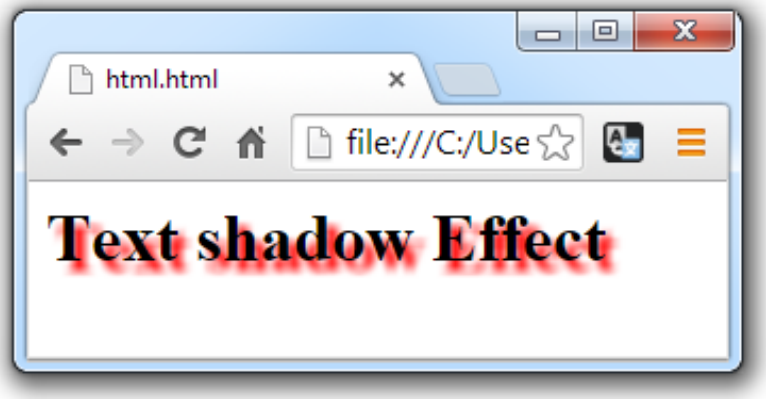
```
p {
    border-style: solid;
    border-color: #ff0000 #0000ff;
}
```

```
<p>Two-colored border!</p>
```

Text Effects

- **Text Effects:**
  - ✓ text-shadow
  - ✓ word-wrap
- **Fonts effects:**
  - ✓ @font-face

```
<style>
 h1{text-shadow: 5px 5px 5px #FF0000;}
</style>

 <h1> Text shadow Effect</h1>
```



CSS border-collapse Property

- Set the collapsing borders model for a table:
- Example:

```
table, th, td {
    border: 1px solid black;
    border-collapse: collapse;
    width: 90%;
    table-layout: fixed;
    padding: 5px;
    margin: auto;
}

table, th, td {
    border: 1px solid black;
    width: 90%;
    table-layout: fixed;
    padding: 5px;
    margin: auto;
}
```

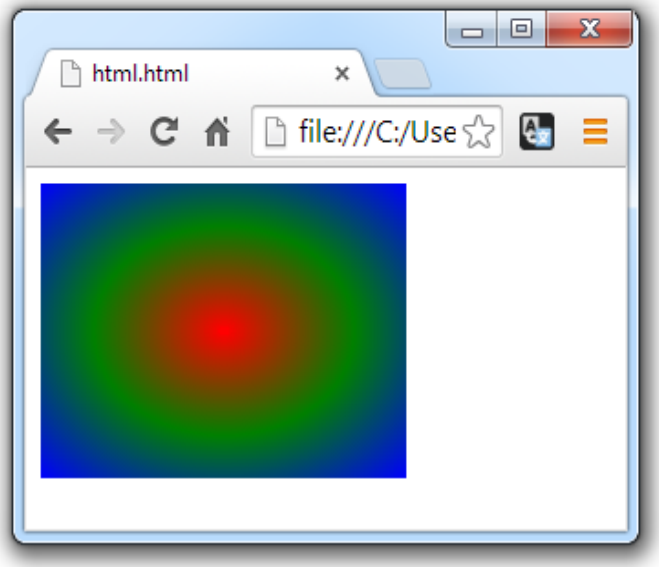
Last Name	First Name	Age
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

Last Name	First Name	Age
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

Gradient effects

- CSS3 gradients let you display smooth transitions between two or more specified colors.
- CSS3 defines two types of gradients:
  - ✓ Linear Gradients (goes down/up/left/right/diagonally)
  - ✓ Radial Gradients (defined by their center)

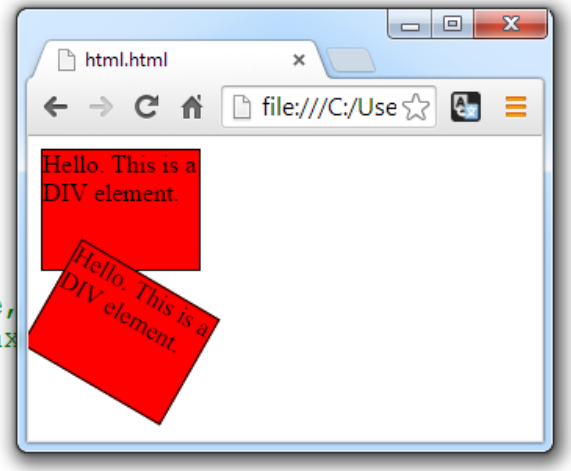
```
<style>
 #grad1
  {
  height:150px;
  width:200px;
  background: -webkit-radial-gradient(red, green, blue);
  background: -o-radial-gradient(red, green, blue);
  background: -moz-radial-gradient(red, green, blue);
  background: radial-gradient(red, green, blue);
  }

</style>

 <div id ="grad1"></>
```



2D-Transformation Effects

- CSS3 transforms allow you to translate, rotate, scale, and skew elements.
  - ✓ translate()
  - ✓ rotate()
  - ✓ scale()
  - ✓ skew()
  - ✓ matrix()
- Examples of rotate():

```
<style>
div {
    width: 100px;
    height: 75px;
    background-color: red;
    border: 1px solid black;
}
div#div2 {
    -ms-transform: rotate(30deg); /* IE 9 */
    -webkit-transform: rotate(30deg); /* Chrome,
    transform: rotate(30deg); /* Standard syntax
}
</style>

<div>Hello. This is a DIV element.</div>
<div id="div2">Hello. This is a DIV element.</div>
```

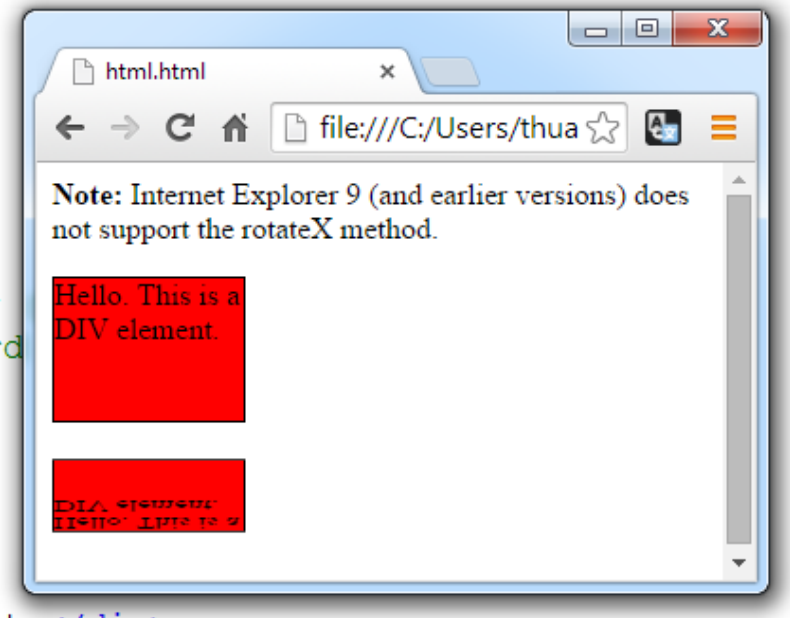


3D-Transformation Effects

- ✓ rotateX()
- ✓ rotateY()

- **Examples of rotateX():**

```
<style>
div {
    width: 100px;
    height: 75px;
    background-color: red;
    border: 1px solid black;
}
div#div2 {
    -webkit-transform: rotateX(120deg); /*
    transform: rotateX(120deg); /* Standard
}
</style>
<p><b>Note:</b> Internet Explorer 9
(and earlier versions)
does not support the rotateX method.</p>
<div>Hello. This is a DIV element.</div>
<div id="div2">Hello. This is a DIV element.</div>
```



Summary

- What is CSS?
- CSS & HTML
- CSS Rule Structure
- Common CSS properties
- CSS 3

Thank you