

Web Basics – CSS 3.0

Lab Book

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Document Revision History

| Date | Revision No. | Author | Summary of Changes |
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| 31-Dec-2012 | 1.0 | Mohan Chinnaiah | Initial Draft |
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Getting Started

Overview

This lab book is a guided tour for learning CSS 3.0. It comprises solved examples and 'To Do' assignments. Follow the steps provided in the solved examples and work out the 'ToDo' assignments given.

Setup Checklist for CSS 3.0

Here is what is expected on your machine in order to work with the lab assignments.

Minimum System Requirements

- Hardware: Networked PCs with minimum 64 MB RAM and 60 MB HDD.
- Software:
 - Window based Operating System having the latest version of Browser (Google Chrome 20.0, Mozilla Firefox 13.0, Opera 12.0 and Internet Explorer 9.0 or higher) is installed.
 - Eclipse Luna or Visual Studio 2008 or an editor like Notepad, Edit Plus etc is installed.

Instructions

- For all coding standards refer Appendix A. All lab assignments should refer coding standards.
- Create a directory by your name in drive <drive>. In this directory, create a subdirectory css_assgn. For each lab exercise create a directory as lab<lab number>.
- You may also look up the on-line help provided in the MSDN library.
- The faculty will introduce you to the editor to be used.

Learning More (Bibliography)

www.w3Schools.com
www.csssitepoint.com

Lab 1. Introduction to CSS

| | |
|-------|---|
| Goals | <ul style="list-style-type: none">• Learn and understand the process of:<ul style="list-style-type: none">◦ Using inline, embedded and external CSS |
| Time | 10 minutes |

1.0 Create an HTML file as shown below

```
<!DOCTYPE html>
<html>
  <body>

    <h1> Introduction to CSS</h1>

    <p> A CSS (cascading style sheet) file allows you to separate your web sites
    (X)HTML content from it's style. As always you use your (X)HTML file to arrange
    the content, but all of the presentation (fonts, colors, background, borders, text
    formatting, link effects & so on...) are accomplished within a CSS. </p>

  </body>
</html>
```

Example 1: Introduction.html

1.1 add the following styles to above html file using inline style sheet

Header Font Color : Red
Paragraph Font Color : Blue
Background Color : Light Grey

1.2 add the above styles using embedded style sheet

1.3 add the above styles using external style sheet

Lab 2. Working with Text and Fonts

| | |
|--------------|---|
| Goals | <ul style="list-style-type: none">• At the end of this lab session, you will be able to:<ul style="list-style-type: none">○ Text formatting○ Text effects○ Fonts and custom fonts |
| Time | 30 min |

2.1: Use introduction.html from above exercise and apply following styles using external style sheet

```
h1
{
    font-family: calibri;
    font-size: 30px;
    font-style: normal;
    font-weight: bold;
    color: grey;
    text-decoration: underline;
    text-align: center;
}

p
{
    font-family: verdana;
    font-size: 20px;
    font-style: italic;
}
```

Example 2: Introduction.css

2.2 Use introduction.css and apply the following properties

- Text Transformation
- Text Indentation
- Specify text color using Hex value

2.3 Use introduction.css and apply text-shadow property

2.4 Use introduction.css and apply custom fonts with @font-face to header and paragraph:

Note: Instructor will provide custom fonts.

Lab 3. CSS Selectors

| | |
|-------|---|
| Goals | <ul style="list-style-type: none"> At the end of this lab session, you will be able to understand: <ul style="list-style-type: none"> Universal Selector Type Selector Class Selector ID Selector Attribute Selector Pseudo-classes |
| Time | 30 min |

3.0: Given

```

<!DOCTYPE html>
<html>
<body>

  <h1>Learn CSS 3.0 for better web design</h1>

  <div>Do not go where the path may lead, go instead where there is no path and leave a trail.
</div>

  <div>It is always the simple that produces the marvelous. </div>

  <div>As knowledge increases, wonder deepens.</div>

  <p>For beautiful eyes, look for the good in others; for beautiful lips, speak only words of
kindness; and for poise, walk with the knowledge that you are never alone.</p>

  <p>The best and most beautiful things in the world cannot be seen or even touched - they must
be felt with the heart.</p>

  <p>It is during our darkest moments that we must focus to see the light. </p>

  <p>Happiness is not something you postpone for the future; it is something you design for the
present.</p>

  <p>Be faithful to that which exists within yourself. </p>

</body>
</html>

```

Example 3: Selector1.html

3.1 Use selector.html and apply color attribute using universal selector

3.2 Use selector.html apply different colors to text based on type selectors - H1, Div and P.

3.3 Use selector.html apply id attribute by specifying different values to every paragraph and division (use p1, p2, p3 ... for paragraph and d1, d2, d3 ... for div).

Apply text and font properties using external style sheet

3.4 Use selector.html apply class attribute for paragraphs and divisions. All the paragraphs under para_class class and all divisions under div_class class. Apply different CSS font and text styles.

3.5 Create an html file as shown

```
<!DOCTYPE html>
<html>
<body>

  <h1>Learn CSS 3.0 for better web design</h1>

</body>
</html>
```

Example 4: Selector2.html

Note: Use your own images and pictures of proper size

Create an external CSS file and apply following styles using attribute selector.

- a. `img[title] { border: 1px solid #000; }`
- b. `img[width] { border: 1px solid #000; }`
- c. `img[title="title"] { border: 1px solid #000; }`

3.6 Create an html file as show below.


```
<!DOCTYPE html>
<html>
<body>

<h2>CSS Pseudo Classes or Links</h2>
<p>This is a <a href="">link with Pseudo Classes</a> ! </p>

</body>
</html>
```

Example 5: Selector3.html

Apply below css to given html file using pseudo classes and understand how pseudo classes works

```
a:link{
    text-decoration: none;
    color: gray;
}

a:visited{
    text-decoration: none;
    color: gray;
}

a:hover{
    text-decoration: none;
    color: green;
    font-weight: bolder;
    letter-spacing: 2px;
}
```

Example 6: Selector4.css

Lab 4. Layout

| | |
|--------------|---|
| Goals | <ul style="list-style-type: none">• At the end of this lab session, you will be able to understand:<ul style="list-style-type: none">○ Positioning○ Box Layout○ Table Layout○ Vendor Prefixes○ Working with Columns |
| Time | 1hr |

4.0 Using CSS layout technique design a web page which looks as shown below having 3 divisions, Header, Content and Footer

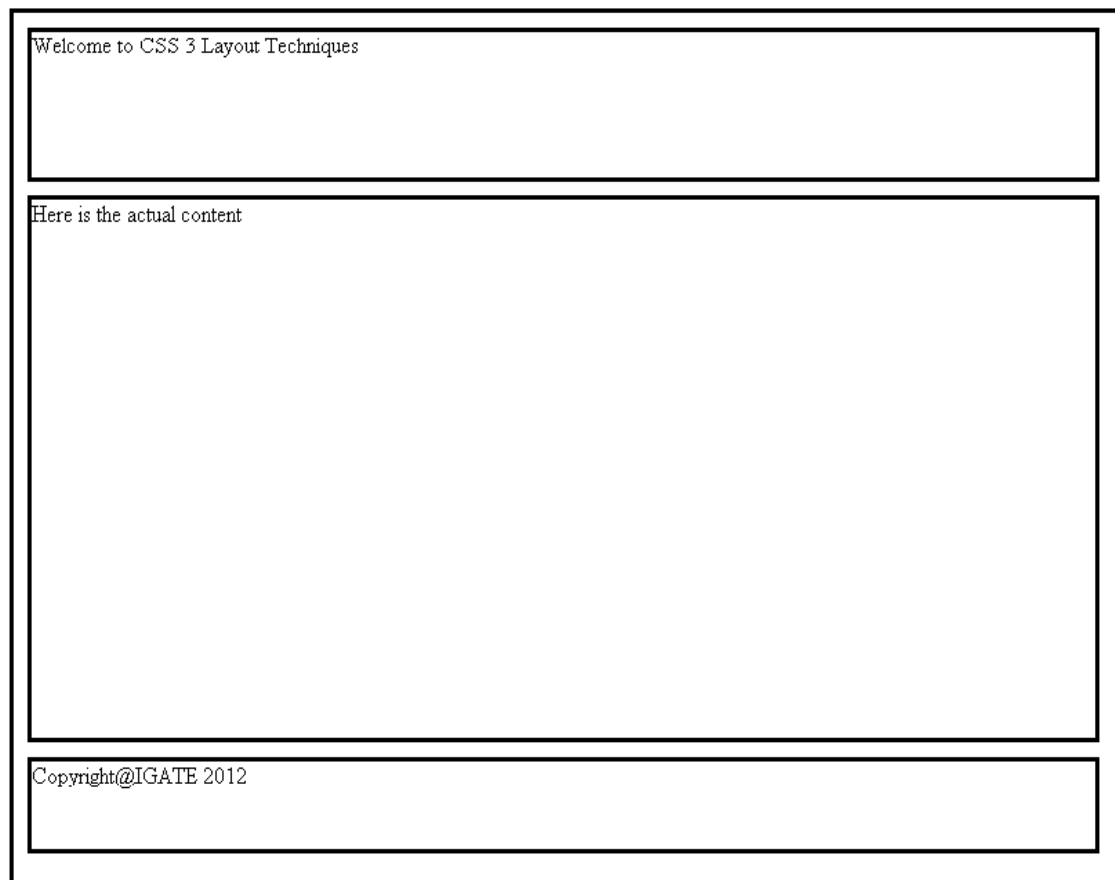


Figure 1: Layout-1

4.1. Refer the page you designed in problem 4.0, make the following changes

- Set appropriate background and foreground color
- Change header title to **'University for Learning'**
- Align title to center of the division and set appropriate font style

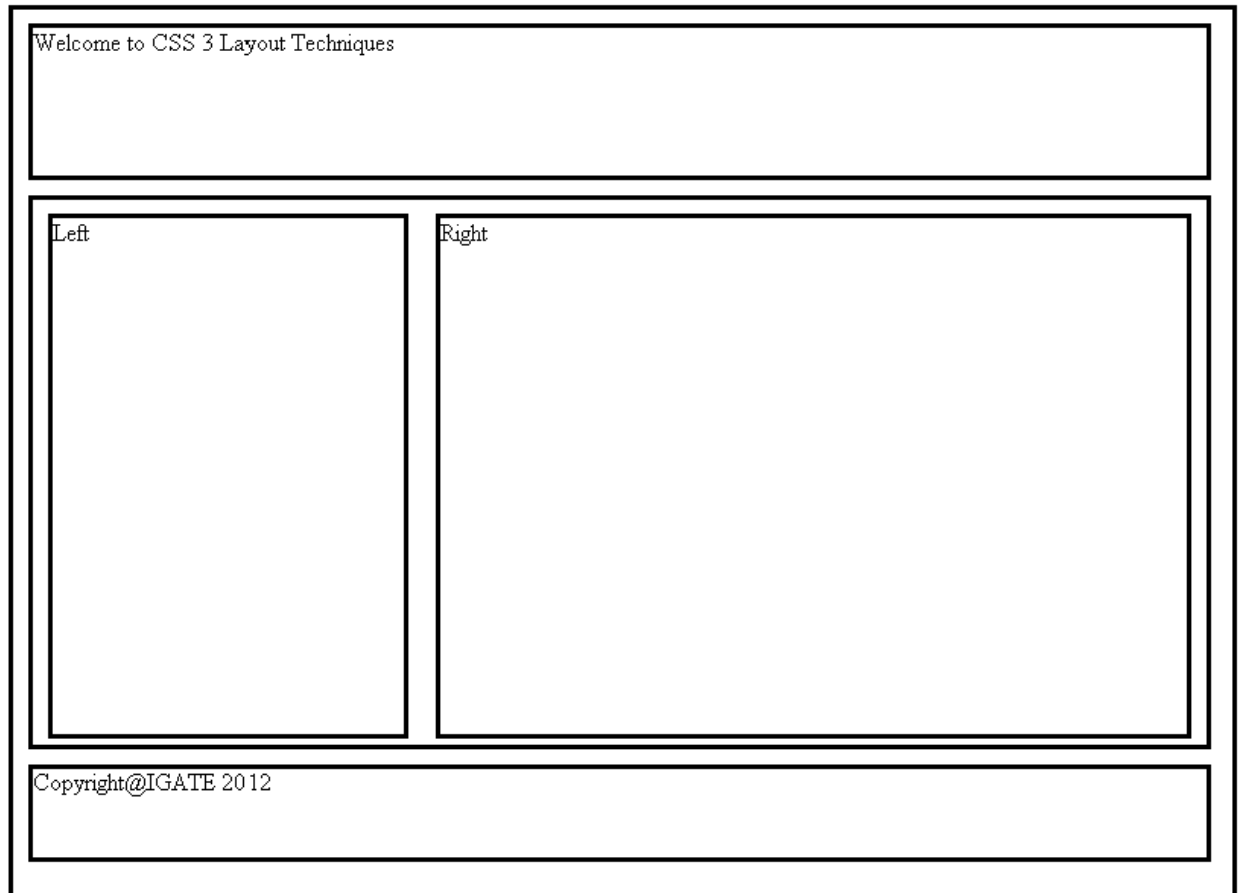
4.2 Refer the layout designed in problem 4.1 then make changes to middle division so that webpage looks as shown below. Set appropriate background and foreground colors to all the divisions

Figure 2: Layout-2

4.3. Refer the layout designed in 4.2, then make the changes so that web page looks as shown below.

University for Learning

University Course Catalog

- JEE
 - Core Java
 - Web Components
 - Frameworks
- .Net
 - SQL Server
 - C#
 - Linq
- Mainframe
- BI
- RDBMS
 - C
 - UNIX
 - Oracle

About IGATE Corporate University

IGATE Corporate University has been an integral part of igate since 1990. It has been providing training on technologies like JEE, .NET, Mainframe, Database technologies. Every new joiner in igate has to get trained from university before he gets deployed in live projects. University has training department in Bangalore, Chennai, Pune and Mumbai. In all these locations we have trainers skilled with different technologies who can cater to training requirements of Business Units. Every trainer in university is expected to learn new technologies every now and then so that he/she is updated with the current technologies.

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Figure 3: Layout-3

Lab 5. Working with Colors

| | |
|-------|---|
| Goals | <ul style="list-style-type: none">• At the end of this lab session, you will be able to understand:<ul style="list-style-type: none">○ Background○ Multiple Image Background○ Applying Colors○ Opacity & Transparency○ Using <code>currentColor</code>○ Working with Gradients |
| Time | 30 minutes |

5.0. Refer problem 4.3's solution and set appropriate background and foreground colors using following mechanism.

- Hexadecimal colors
- RGB colors
- RGBA colors
- HSL colors
- HSLA colors

5.1. While setting color for a particular division use `currentColor` attribute.

5.2. Apply CSS 3 gradient function, to background color of header division as follows.

background: repeating-linear-gradient(90deg,rgb(255,0,0),rgb(100,0,0) 20px, rgb(255,0,0) 40px);

Apply same functionality to other divisions with different color combinations.

Lab 6. Borders and Transformation

| | |
|-------|---|
| Goals | <ul style="list-style-type: none"> At the end of this lab session, you will be able to learn how to apply : <ul style="list-style-type: none"> Borders Resizable Borders Rounded Corners Applying Shadows in border Transformation 2D and 3D using rotate, skew, scale and translate |
| Time | 1 hr |

6.0 Refer problem 4.3 and make changes so that it looks as shown below,(replace mid-right division by login division)

University for Learning

University Course Catalog

- JEE
 - Core Java
 - Web Components
 - Frameworks
- .Net
 - SQL Server
 - C#
 - Ling
- Mainframe
- BI
- RDBMS
 - C
 - UNIX
 - Oracle

Username

Password

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Figure 4: Layout-4

6.1: Refer 6.0 designs; apply the following transformation on login division.

- A. Rotate by 30 degree
- B. Scale by 2 units
- C. Translate it by 20px along y axis and -20 along x axis
- D. Apply Skew function with 20deg.
- E. Apply all the above with matrix function and rotate it by 20 deg.

Lab 7. Animation

| | |
|--------------|---|
| Goals | <ul style="list-style-type: none">At the end of this lab session, you will be able to understand:<ul style="list-style-type: none">CSS 3 AnimationsWorking with Key frames |
| Time | 30 minutes |

7.0 Refer 6.1 designs and include IGATE logo on the right side of header division as shown below.

The layout is enclosed in a blue border. At the top, a header section contains the text 'University for Learning' in a large, bold, black serif font, followed by the 'IGATE' logo in blue with the tagline 'Speed.Agility.Imagination' in a smaller font below it. Below the header, the main content area is divided into two sections. On the left, titled 'University Course Catalog' in bold black text, is a list of courses: JEE (with sub-items Core Java, Web Components, Frameworks), .Net (with sub-items SQL Server, C#, Ling), Mainframe, BI, and RDBMS (with sub-items C, UNIX, Oracle). On the right is a login form with a blue background and rounded corners, outlined in red. It contains labels 'Username' and 'Password' next to white input fields, and a grey 'Login' button below them. At the bottom of the layout, a footer section contains the text 'Copyright @ IGATE 2015' in a bold, italicized black serif font.

Figure 5: Layout-5

Apply animation to IGATE log and rotate it along y-axis.

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