CSS Div Layouts

Web Authoring and Design

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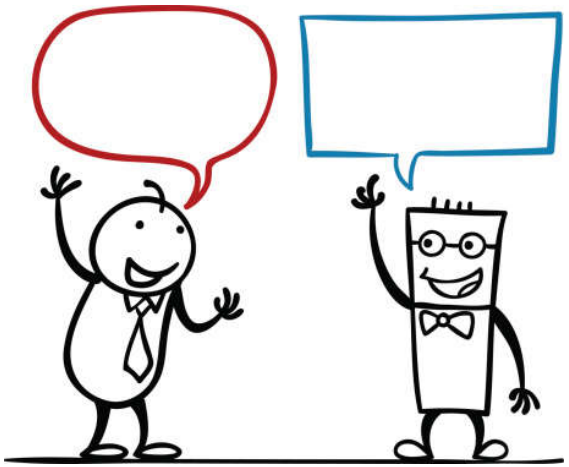
Outline

- Review
- Why use Div Layout instead of Tables?
- How do we use the Div Tag?
- How to create layouts using the CSS Div Tag?
- Summary
- Review/Discussion

Activity

- Write down on a piece of paper the HTML to display the following table:

  (5 Minutes)



Roll No	Name	Team
1001	John	Red
1002	Peter	Blue

Answer

```
<html>
<head>
<!-- Comment -->
</head>
<body>
    <table border="1">
        <tr>
        <td> Roll No </td>
        <td> Name    </td>
        <td> Team    </td>
        </tr>
        <tr>
        <td> 1001   </td>
        <td> John   </td>
        <td> Red    </td>
        </tr>
        <tr>
        <td> 1002    </td>
        <td> Peter   </td>
        <td> Blue    </td>
        </tr>
    </table>
</body>
</html>
```

Question

- What will the output be for the following HTML/CSS?

```
<html>
<head>
    <style type="text/css">
    * {color:#0000ff;}
    #col {color:#ff0000;}
    </style>
</head>
<body>
    Global Text
    <p  id = "col">A Paragraph</p>
    <h1 id = "col">Heading1 Text</h1>
    <h2 id = "no1">Heading2 Text</h1>
</body>
</html>
```

Answer

Global Text

A Paragraph

Heading1 Text

Heading2 Text

Question

- What will happen in this case?

```
<p style="color green">text</p>
```

a) make that specific paragraph green

b) error

c) blank screen

d) none of the above

Answer

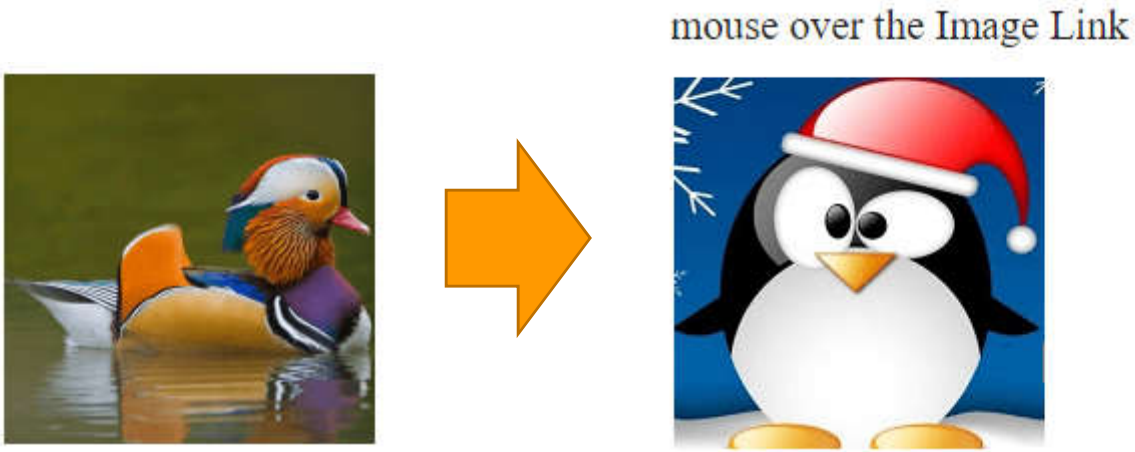
- Answer: d)

Text will be displayed without style formatting (i.e., ‘Text’) – as the ‘colon :’ is missing

Revision Question

- **Write down** the HTML/CSS code to create an ‘Image’ Rollover Effect

  (5 Minutes)



Answer

```
<!DOCTYPE html>
<html >
<head>
<style type="text/css">
    .urlImg {
        width: 185px;
        height:185px;
        display:block;
        background-image: url('img/duck.png');
    }
    .urlImg:hover {
        background-image: url('img/peng.png');
    }
</style>
</head>
<body>
<a href="http://www.hello.com" class="urlImg"></a>
</body>
</html>
```

Table vs Div Layouts

- **table**
  - Pros: supported by all browsers
  - Cons: bind style to content; hard to maintain
- **div**
  - Pros: easy to maintain
  - Cons: not supported by all browsers
- Commonly recommend – **div**, reasons:
  - CSS is to separate **structure** from **content**.
  - Supporting most common/popular browsers are enough. May be it's time for some people to upgrade their browsers

What is Div Tag?

- CSS Division (div) is a container element and it is used to group related items together
- When ever there is a situation that you need to collect various objects into a larger container for scripting or styling purposes, div is the best solution
- The use of tag is straightforward

Div Syntax

syntax :

```
<div> ... </div>
```

e.g.

```
<div>
        <p> A paagraph inside div </p>
</div>
```

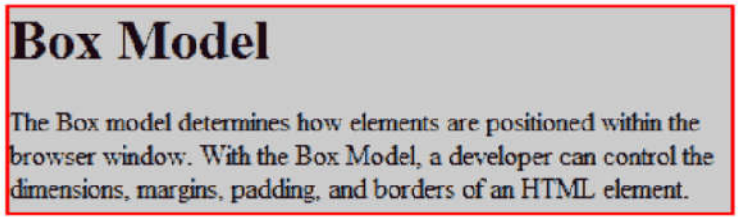
CSS Division

- CSS divisions to provide greater flexibility and mark out regions of the page.
- You can use divs by referencing the selector in the opening tag using ID and CLASS
  - e,g. id="myContainer" or class="myContainer"

Div in an HTML document

```
<html>
<head>
        <style type="text/css">
                #box {
                        width: 420px;
                        height:120;
                        border-width: 2px;
                        border-style:solid;
                        border-color:red;
                        background: #CCC;
                }
        </style>
</head>
<body>
        <div id="box">
                <h1>Box Model</h1>
                <p>
                The Box model determines how elements are positioned within the
                browser window. With the Box Model, a developer can control the
                dimensions, margins, padding, and borders of an HTML element.
                </p>
        </div>
</body>
</html>
```

Output



Nesting Div

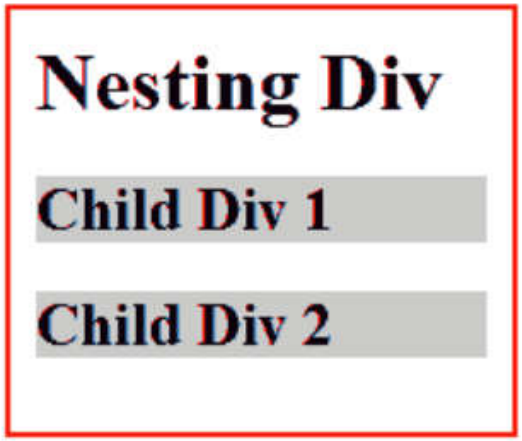
- The div element grouping a generic block of content that should be treated as a logical unit for scripting or styling purposes. A div can contain a number of other divs (child div) like HTML Tables. This is called Nesting Div

```
<div>
        <div>
                Child Div
        </div>
        <div>
                Child Div
        </div>
</div>
```

Nesting Div in an HTML page

```
<html>
<head>
        <style type="text/css">
                .parent {
                        width: 200px;
                        height:120;
                        border-width: 2px;
                        border-style:solid;
                        border-color:red;
                        padding:10px;
                }
                .child {
                        overflow : hidden;
                        background: #CCC;
                }
        </style>
</head>
<body>
        <div class="parent">
                <h1> Nesting Div</h1>
                <div class="child">
                        <h2>Child Div 1</h2>
                </div>
                <div class="child">
                        <h2>Child Div 2</h2>
                </div>
        </div>
</body>
</html>
```

Output



Careful

- Div elements very carefully and use only when it is necessary for logical structure or styling
- Excessive use of Div tags can make a page difficult to manage/debug/extend

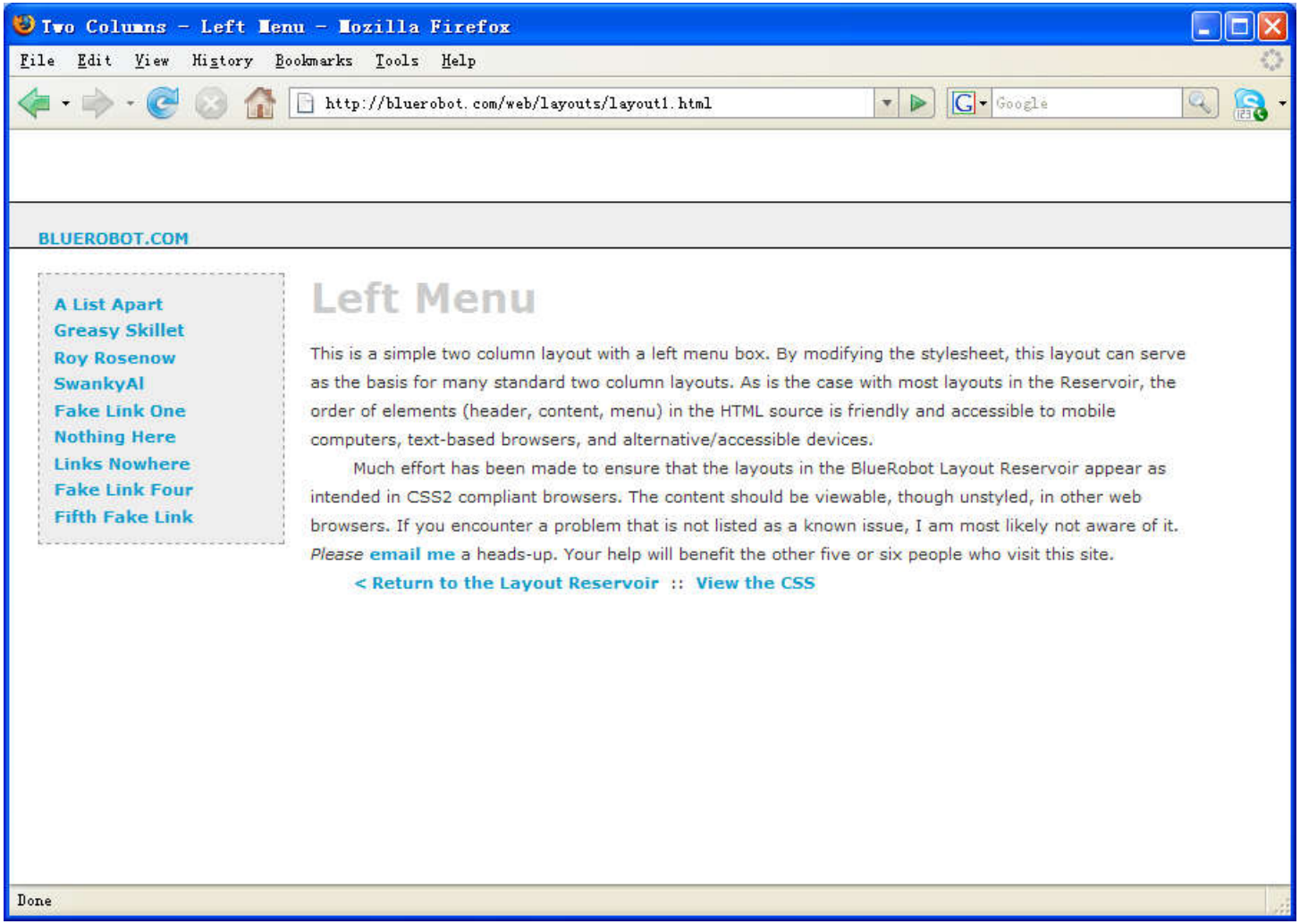
Div Layouts

- Div tag allows you control over the appearance of your website
- Commonly used for website layouts (instead of tables)

Examples of Common Layouts

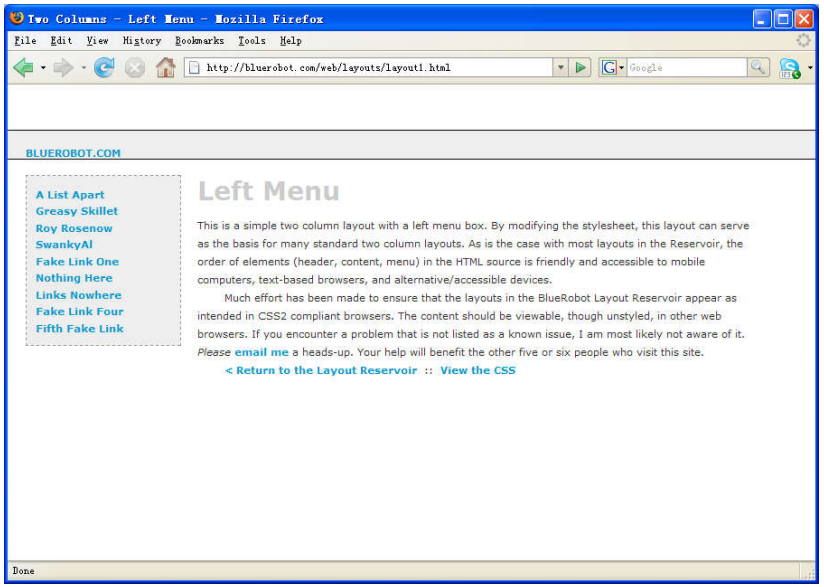
- Variable width content:
  - 2 columns - left menu
  - 2 columns - right menu
  - 3 columns
- Centered (fixed width content):
  - 2 columns
  - 3 columns
- 4 columns (fluid/variable width)
- Many other …

Two Columns - Left Menu

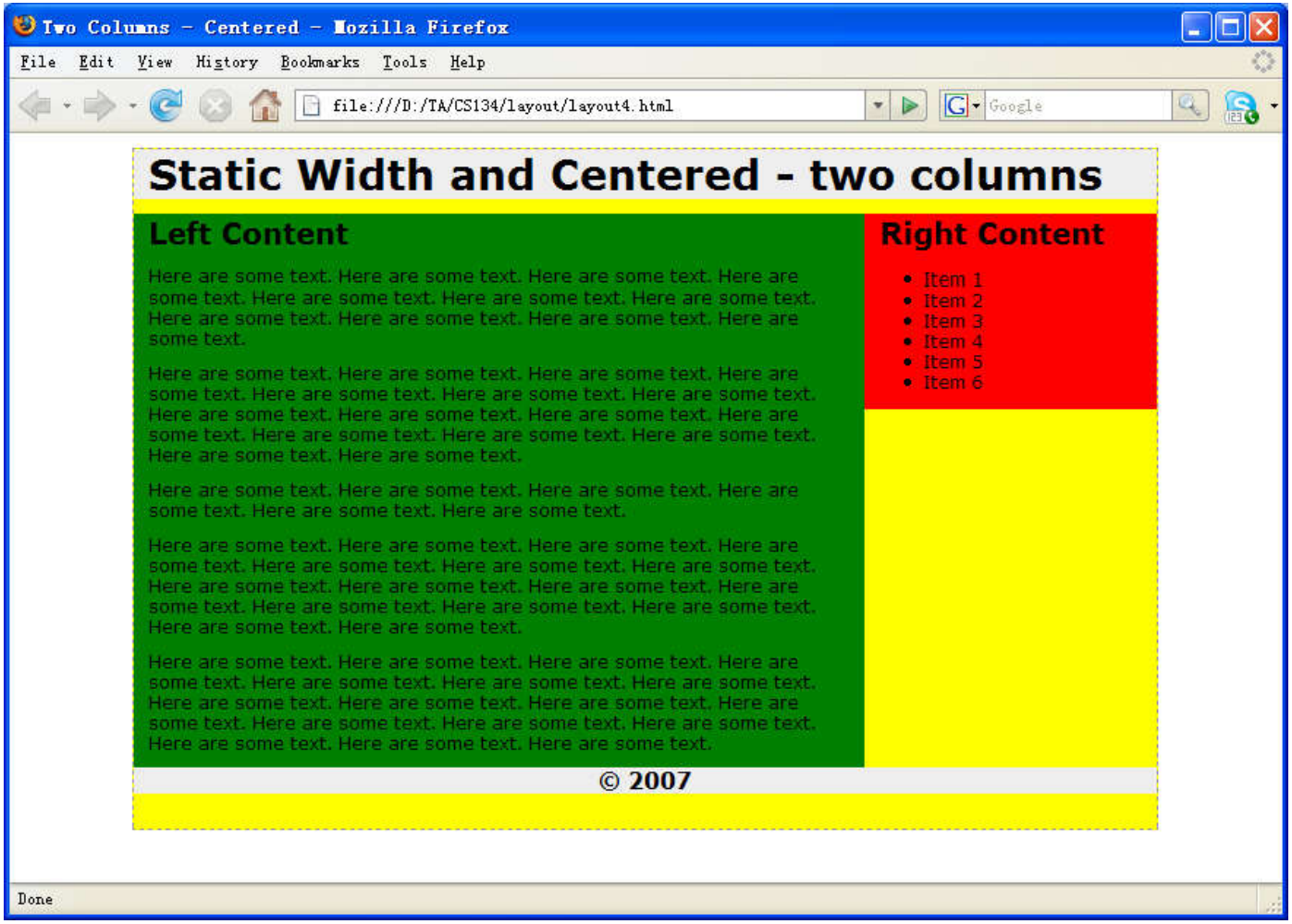


Two Columns - Left Menu

```
#Header {
        margin:50px 0px 10px 0px;
        padding:17px 0px 0px 20px;
        border:1px dashed #999;
        background-color:#eee;
}
#Content {
        margin:0px 50px 50px 200px;
        padding:10px;
        border:1px dashed #999;
        background-color: #eee;
}
#Menu {
        position:absolute;
        top:100px;
        left:20px;
        width:150px;
        padding:10px;
        background-color:#eee;
        border:1px dashed #999;
}
```



Two Columns
Centered Fixed Width

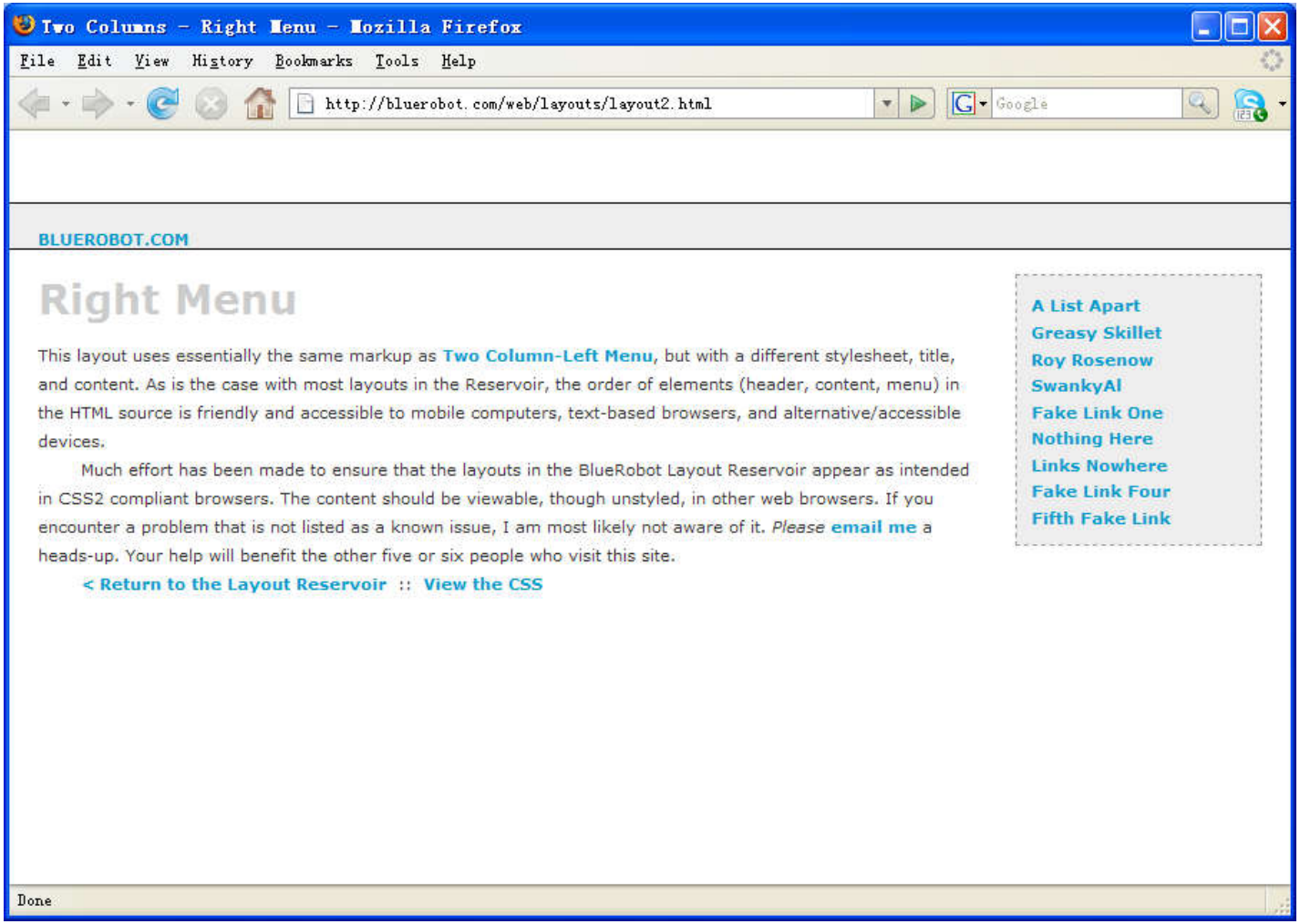


Two Columns
Centered Fixed Width

```
body {
	margin:0px;
	padding:0px;
	text-align: center;
}

#Wrapper {
	width:700px;
	margin-right:auto;
	margin-left:auto;
	border:1px dashed #999;
}

#Header {
	background: #eee;
}
```

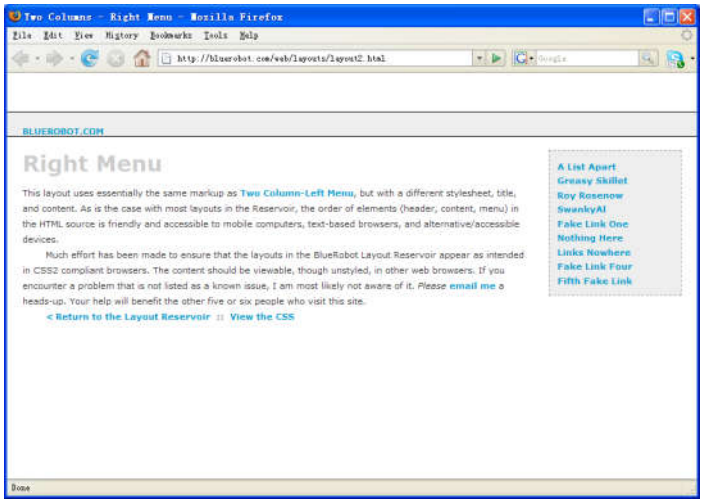
```
#Menu {
	float:right;
	width:200px;
	background: #eee;
}

#Content {
	float:left;
	width:500px;
	background: #666;
}

#Footer {
	clear: both;
	background: #eee;
}
```

Two Columns - Right Menu

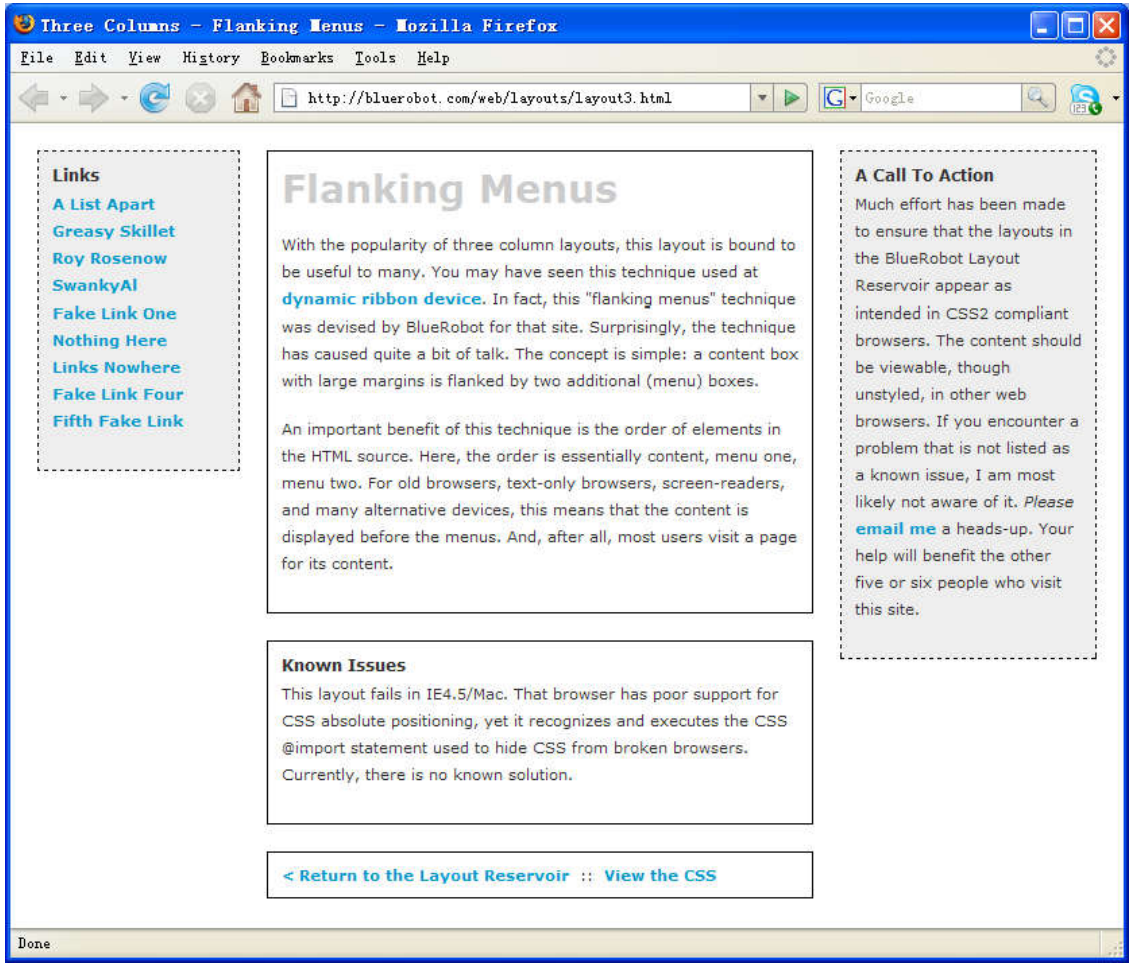


Two Columns - Right Menu

```
#Header {
        margin:50px 0px 10px 0px;
        padding:17px 0px 0px 20px;
        border:1px dashed #999;
        background-color:#eee;
}
#Content {
        margin:0px 200px 50px 50px;
        padding:10px;
        border:1px dashed #999;
        background-color: #eee;
}
#Menu {
        position:absolute;
        top:100px;
        right:20px;
        width:150px;
        padding:10px;
        background-color:#eee;
        border:1px dashed #999;
}
```



Three Columns Flanking Menu



Three Columns Flanking Menu

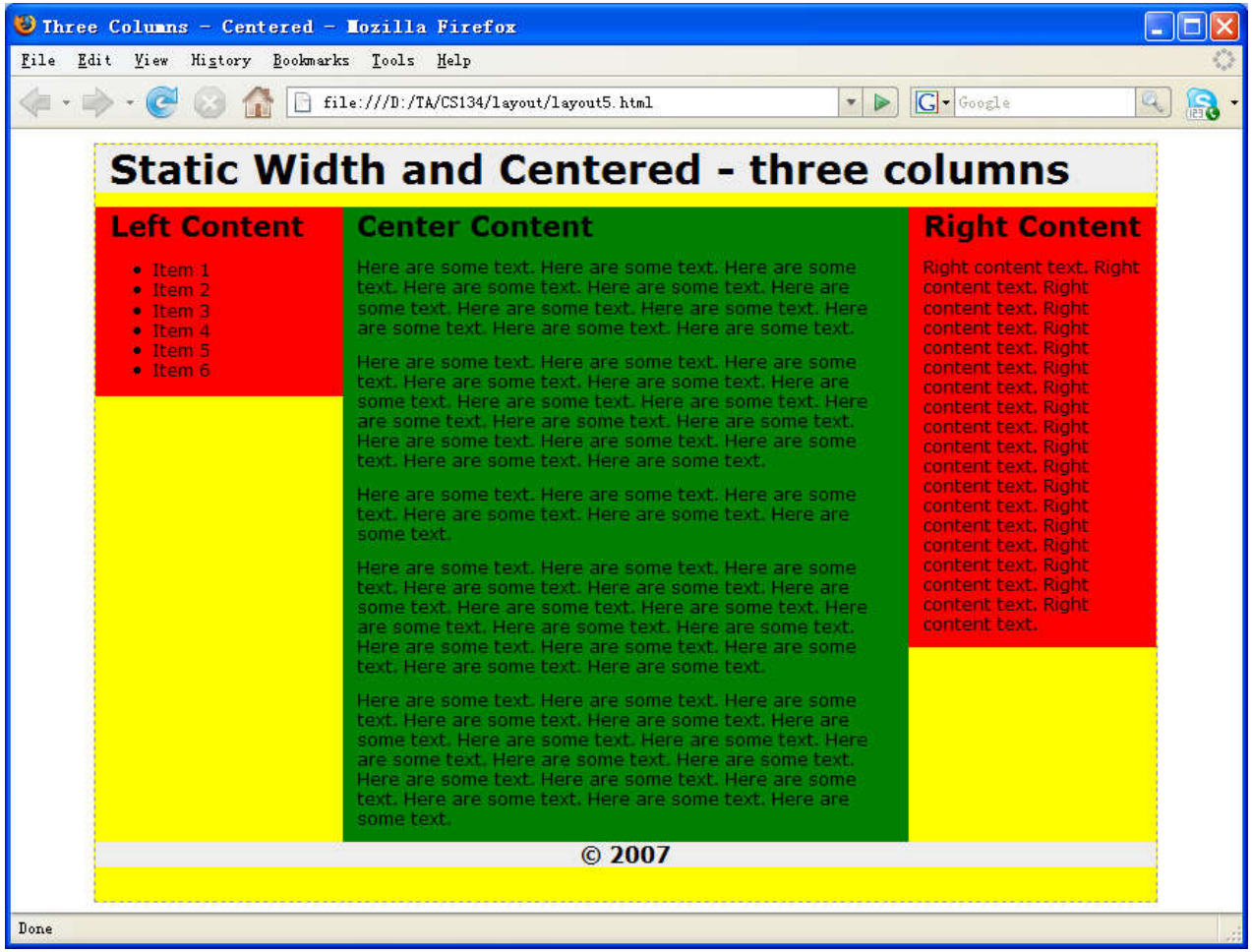
```
.content {
	position:relative;
	width:auto;
	min-width:120px;
	margin:0px 210px 20px 170px;
	border:1px solid black;
	padding:10px;
	z-index:3; /* This allows the content to overlap the right menu in narrow windows in good browsers. */
}
#navAlpha {
	position:absolute;
	width:128px;
	top:20px;
	left:20px;
	border:1px dashed black;
	background-color:#eee;
	padding:10px;
	z-index:2;
}
```

```
#navBeta {
	position:absolute;
	width:168px;
	top:20px;
	right:20px;
	border:1px dashed black;
	background-color:#eee;
	padding:10px;
	z-index:1;
}
```

Z-Index (or Stack Level)

- **z-index**: auto | <integer> | inherit
  - Z-axis positions are particularly relevant when boxes overlap visually.
  - In addition to their horizontal and vertical positions, boxes lie along a "z-axis" and are formatted one on top of the other.
  - Boxes with higher z-index stacked on top of the boxes with lower z-index.
  - Boxes with the z-index are stacked back-to-front according to document tree order.

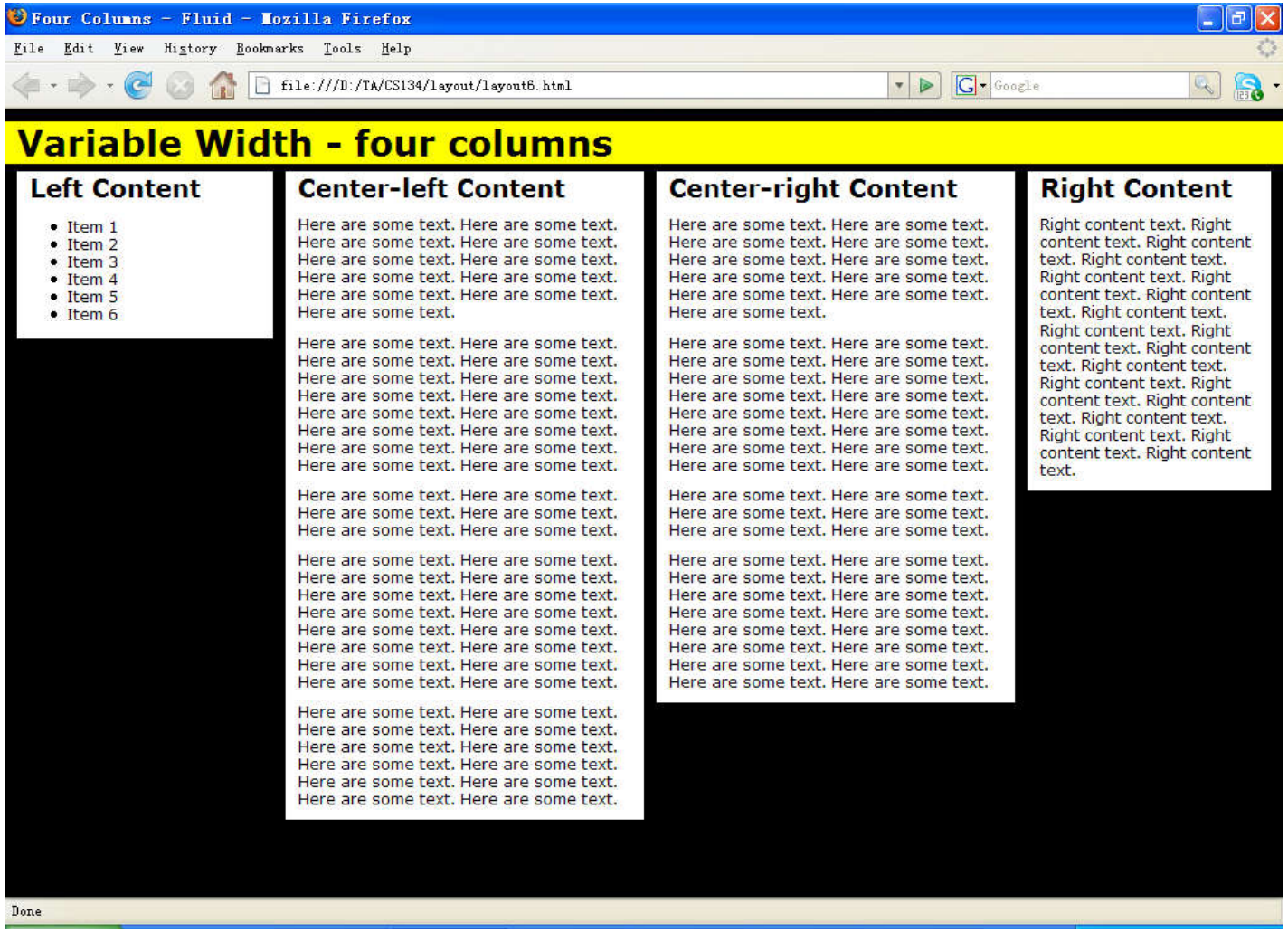
Three Columns Centered Fixed Width



Three Columns Centered Fixed Width

```
body {
	text-align:center;
	margin:0px;
	padding:0px;
	font:12px verdana, arial, helvetica,
sans-serif;
}

#frame {
	width:750px;
	margin-right:auto;
	margin-left:auto;
	margin-top:10px;
	text-align:left;
	border:1px dashed #999;
	background-color: yellow;
}

#topcontent {
	background-color: #eee;
}

#centercontent {
	float:left;
	width:400px;
	background-color: green;
}
#leftcontent {
	float:left;
	width:175px;
	background-color: red;
}
#rightcontent {
	float:left;
	width:175px;
	background-color: red;
}

#bottomcontent {
	background-color:#eee;
	text-align:center;
}
```

Four Columns Variable Width



Four Columns Variable Width

```
#topcontent {
	background-color: yellow;
}

#leftcontent {
	position: absolute;
	left:1%;
	width:20%;
	top:50px;
	background:#fff;
}

#centerleft {
	position: absolute;
	left:22%;
	width:28%;
	top:50px;
	background:#fff;
}
```

```
#centerright {
	position: absolute;
	left:51%;
	width:28%;
	top:50px;
	background:#fff;
}

#rightcontent {
	position: absolute;
	left:80%;
	width:19%;
	top:50px;
	background:#fff;
}
```

CSS Table

- HTML table styling with CSS properties
- CSS table properties offer better control of the presentational aspects of the Table

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green
1004	Ford	Yellow

Example

- CSS

```
table
{
        width:30%;
        background-image: url(bgpic.png);
        box-shadow: 10px -10px 5px #CCC;
}
```

- Output

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green
1004	Ford	Yellow

Table width and height in CSS

- Table width and height, use CSS width, height properties
- For example, table width as 30% and height of the td set to 40px

```
table
{
        width:40%;
}
td
{
        height:40px;
}
```

Output:

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green

```
<!DOCTYPE html>
<html>
<head>
<style>
    table
    {
        width:30%;
    }
    td
    {
        height:40px;
    }
</style>
</head>
<body>
    <table border=1>
        <tr>
        <th>Roll No</th>
        <th>Name</th>
        <th>Team</th>
        </tr>
        <tr>
        <td>1001</td>
        <td>John</td>
        <td>Red</td>
        </tr>
        <tr>
        <td>1002</td>
        <td>Peter</td>
        <td>Blue</td>
        </tr>
        <tr>
        <td>1003</td>
        <td>Henry</td>
        <td>Green</td>
        </tr>
    </table>
</body>
</html>
```

Table column width in CSS

- Specify column width in CSS, use the width property to td

```
td
{
    width: 170px;
}
```

Output

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green

CSS Table Row height

- Set Row Height through CSS line-height property it set to each tr.

```
tr
{
    line-height: 50px;
}
```

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green

CSS Table border

- Table border in CSS, use the CSS border property

```
table,th,td
{
    border:2px solid green;
}
```

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green

```
<!DOCTYPE html>
<html>
<head>
<style>
    table,th,td
    {
        border:2px solid green;
    }
    th, td
    {
        width:100px;
        height:40px;
    }
</style>
</head>
```

```
<body>
    <table>
        <tr>
        <th>Roll No</th>
        <th>Name</th>
        <th>Team</th>
        </tr>
        <tr>
        <td>1001</td>
        <td>John</td>
        <td>Red</td>
        </tr>
        <tr>
        <td>1002</td>
        <td>Peter</td>
        <td>Blue</td>
        </tr>
        <tr>
        <td>1003</td>
        <td>Henry</td>
        <td>Green</td>
        </tr>
    </table>
</body>
</html>
```

CSS Collapse Table borders

- CSS Collapse property takes two values, separate and collapse

- separate : The separate value forced all cells have their own independent borders and allow spaces between those cells.
- collapse : This value collapse all spaces between table borders and cells, so you can see as a single line border

```
table
{
    border-collapse:collapse;
}
```

Output:

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green

CSS Table Text Align

- Align text horizontally and vertically in CSS.
  - ▷Horizontal: text-align property
  - ▷Vertically: vertical-align property

Property	Value
Text-align	Right | left | center | justify
Default : left	

Property	Value
vertical-align	baseline | sub | super | top | text-top | middle | bottom | text-bottom
Default : baseline	

```
td
{
   text-align:right;
   vertical-align:bottom;
}
```

CSS Table Cell Padding

- CellPadding is used to control the space between the contents of a Cell and the Cell borders

```
td
{
    padding: 10px;
}
th
{
    padding: 20px;
}
```

Output:

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green

CSS Table Cell Spacing

- Cellspacing attribute places space around each cell in the table. To specify cell Spacing in CSS, use the CSS border-spacing property

```
table,th,td
{
   border:2px solid green;
   border-spacing: 20px;
}
```

Output:

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green

```
<!DOCTYPE html>
<html>
<head>
<style>
    table,th,td
    {
        border:2px solid green;
        border-spacing: 20px;
    }
</style>
</head>
```

```
<body>
    <table>
        <tr>
        <th>Roll No</th>
        <th>Name</th>
        <th>Team</th>
        </tr>
        <tr>
        <td>1001</td>
        <td>John</td>
        <td>Red</td>
        </tr>
        <tr>
        <td>1002</td>
        <td>Peter</td>
        <td>Blue</td>
        </tr>
        <tr>
        <td>1003</td>
        <td>Henry</td>
        <td>Green</td>
        </tr>
    </table>
</body>
</html>
```

CSS Table background Image

```
table
{
    background-image: url(your image file);
}
```

Output:

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green
1004	Ford	Yellow

CSS Shadow on a Table

```
table
{
   box-shadow: 10px -10px 5px #CCC;
}
```

Output:

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green
1004	Ford	Yellow

CSS Rounded Corners Table

```
table
{
    border-radius:25px
}
```

Output:

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green
1004	Ford	Yellow

Highlight CSS Table Row on Hover

```
tr:hover
{
  background-color: #ffff99;
}
```

Move mouse over the rows

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue
1003	Henry	Green
1004	Ford	Yellow

This Week

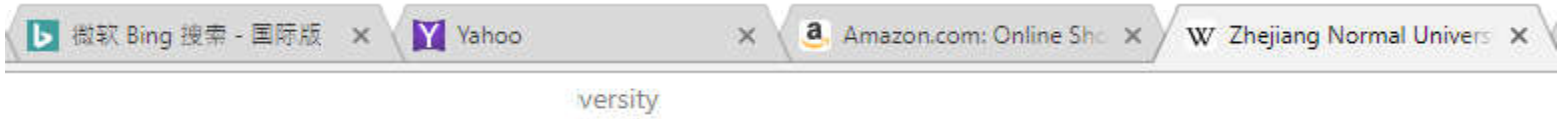
- Review Slides
- Read Associated Chapters
- Online Quizzes
  - ▷Additional quizzes each week
- Do this weeks Tasks
  - ▷Implement Style Sheet Examples
- Update Github Website
  - ▷Regularly make commits/updates
  - ▷Structure your/folders/sections
    - Manage/demonstrate different features/techniques

Summary

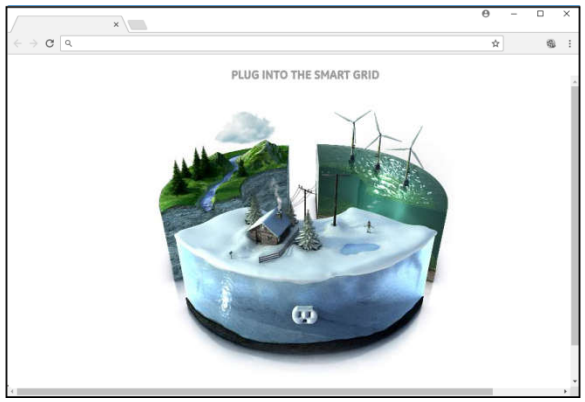
- Overview of CSS Div Layouts
- Tables and CSS Styles
- Hands-On/Practical

Questions/Discussion

- Research Task:
  - ▷Adding ‘Icon’ to your webpages

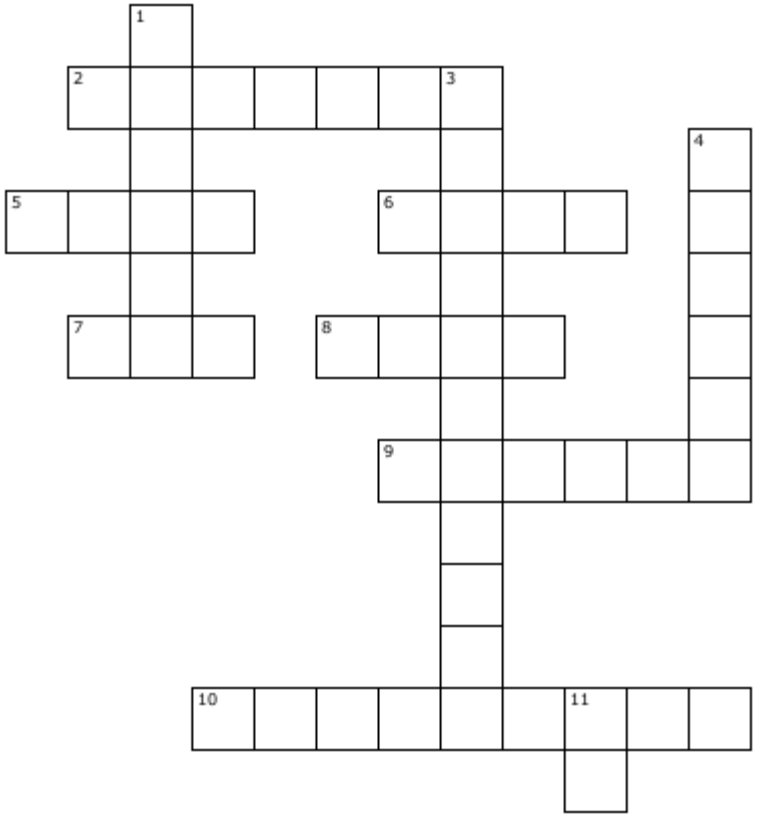


- Challenge



Create website like this
-Rollover Images
(select areas/items)
-Animations
(water/clouds/rain)

Puzzle to Solve for Next Week



Across

2. A program commonly used to write HTML.

5. Standard Protocol for a web page.

6. Used to navigate websites.

7. Unique address for every page on the internet.

8. The code used for making website.

9. Where a website is hosted.

10. A link on a webpage which navigates you to another web page.

Down

1. Usually contains copyright notices, publication dates, etc.

3. A program usually used to code websites.

4. Head of a web page.

11. Internet Protocol.

Print out/or copy out your answers and bring them with you for next lesson

Question

- Write down the html/css to create the following output:

  (5 minutes)

Roll No	Name	Team
1001	John	Red
1002	Peter	Blue

Answer

```
<html>
<head>
    <style type="text/css">
        table, th, td
        {
            border: 2px solid green;
        }
    </style>
</head>
<body>
    <table>
        <tr>
        <td> Roll No </td>
        <td> Name    </td>
        <td> Team    </td>
        </tr>
        <tr>
        <td> 1001   </td>
        <td> John   </td>
        <td> Red    </td>
        </tr>
        <tr>
        <td> 1002    </td>
        <td> Peter   </td>
        <td> Blue    </td>
        </tr>
    </table>
</body>
</html>
```


#titanic {
float: none;
}