

Website Development

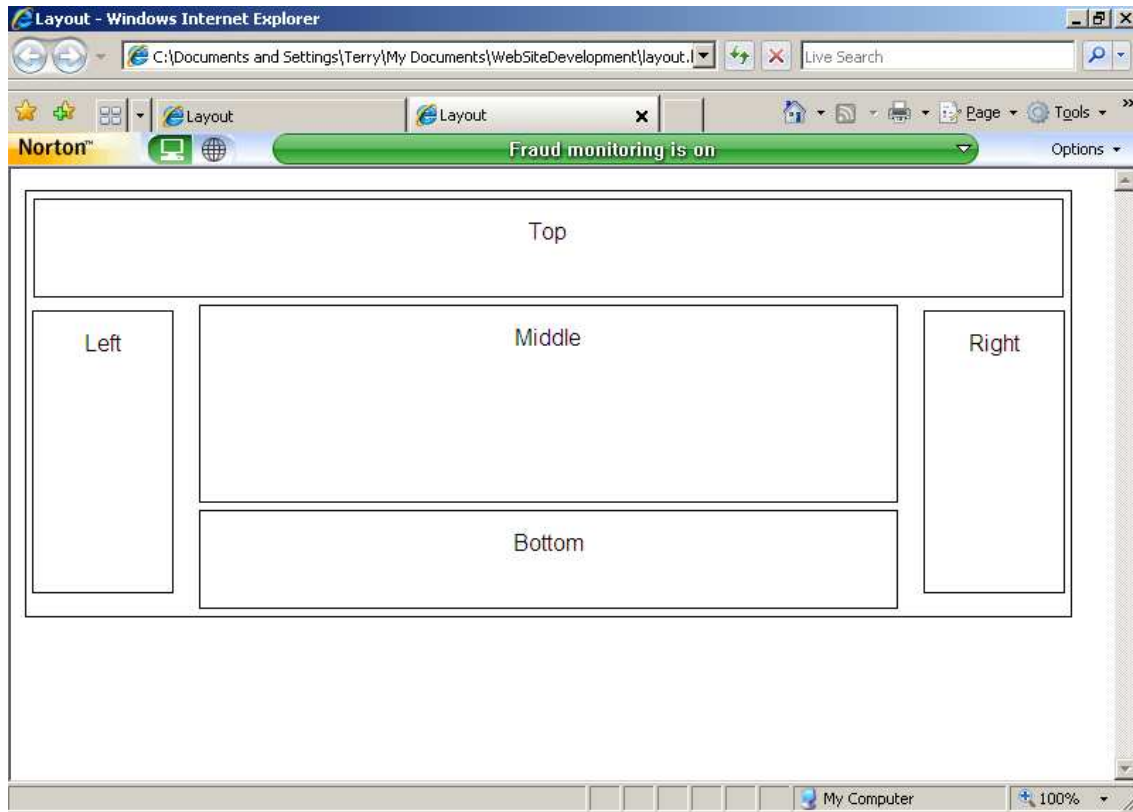
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5 Layout

We demonstrate the classic layout: three columns plus top and bottom rows.

5.1 Layout

A classic layout style is three columns plus top and bottom rows.



5.2 The Style Sheet

Here is the complete style sheet named layoutstyle.css.

```
/* layoutstyle.css - style sheet for layout.html */
```

```
p {  
  font-family: Arial, Helvetica, sans-serif;  
}
```

```
p {  
  font-size: 1em;  
  line-height: 1.5em;  
}
```

```
p.centertext {  
  text-align: center;  
}
```

A class used for centering paragraphs

```
#container {  
  margin: 0 auto 0 auto;  
  padding: 0px;  
  width: 840px;  
  color: black;  
  background: white;  
  border: 1px solid black;  
}
```

The container is a box that contains all other boxes.

```
margin: 0 auto 0 auto;
```

is short for

```
margin-top: 0;  
margin-right: auto;  
margin-bottom: 0;  
margin-left: auto;
```

The box is centred when left and right margins are set to auto.

```
#top {  
  margin: 5px;  
  padding: 10px;  
  border: 1px solid black;  
  height: 70px;  
}
```

```
#left {  
  position: absolute;  
  top: 95px;  
  left: 10px;  
  margin: 5px;  
  padding: 10px;  
  border: 1px solid black;  
  width: 100px;  
  height: 200px;  
}
```

```
position: absolute;
```

means we set the top left hand corner of the box within its container

```
#middle {
  margin: 0px 122px 5px 122px;
  padding: 10px;
  border: 1px solid black;
  height: 140px;
}

#right {
  position: absolute;
  top: 95px;
  left: 740px;
  margin: 5px;
  padding: 10px;
  border: 1px solid black;
  width: 100px;
  height: 200px;
}

#bottom {
  margin: 5px 122px 5px 122px;
  padding: 10px;
  border: 1px solid black;
  height: 70px;
}
```

5.3 The HTML File

The entire HTML File, named layout.html, is shown below.

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01
Transitional//EN">
<html>
<head>
<title>Layout</title>
<meta http-equiv="Content-Type"
content="text/html;charset=utf-8">

<style type="text/css">
@import url(layoutstyle.css);
</style>

</head>
<body>
<div id="container">

<div id="top">
<p class="centretext">Top</p>
</div>

<div id="left">
<p class="centretext">Left</p>
</div>

<div id="middle">
<p class="centretext">Middle</p>
</div>

<div id="right">
<p class="centretext">Right</p>
</div>

<div id="bottom">
<p class="centretext">Bottom</p>
</div>

</div>
</body>
</html>
```

centre the text

5.4 Stepwise Refinement

Website developers, people like you and me, check, improve and correct our style sheets and HTML as we go along: we do a little bit, check it out, do a little bit, check it out, do a little bit, check it out. We check both style sheets and HTML with a validator such as <http://validator.w3.org>.

First, we do the bare layout, the position of the boxes. Initially, the boxes are empty (except for a line of text that identifies them), the borders are shown, and consistent margins and paddings such as `margin: 5px, padding: 10px`, are used. We check the bare layout with different browsers e.g. Windows Internet Explorer 5 (IE5), IE6, Opera 9.23, Safari 1.3, and different computer systems e.g. Windows 98, Windows 2000, Windows XP, Linux, and Mac, using (for example) <http://browsershots.org>.

Then we refine the margins, padding, and colours, and hide the borders, and re-check with different browsers and computer systems.

Finally, we add real content box by box by box, re-checking after each.

If we find errors, we either fix them, or make a note of them to be fixed at a later date. It is more important to know what the errors and shortcomings are, and to document them, than it is to write style sheets and HTML.

If we leave the error checking to the very last moment (as weaker students nearly always do) we are usually presented with an overwhelming collection of incomprehensible errors with no obvious causes.

5.5 Exercise

1. Try out the style sheet and HTML shown above. Make changes to suit the layout of your own website. Check the validity of your style sheet and HTML. If the result is not as you expect, try out the version shown in §5.6 below.
2. Most browsers have bugs of one kind or another that affect the way a web page appears. Investigate the following bugs:
 - flash of unstyled content
 - the Internet Explorer 6 (IE6) Peek-a-boo bug and the Holly Fix
 - the IE5 Centering Hack
 - the IE5 Tantek Box Model Hack

5.6 A Layout Hack

The three column plus top and bottom row layout (see above) does not work with Internet Explorer 6 - the two side columns do not appear in their expected places. One solution is to:

In the css:

- float the left column to the left
- float the right column to the right

In the html:

- place div left and div right one under the other (because, in html, float always works with respect to the previous element).

So the css file, with the changes shown in bold, now looks like this:

```
/* layoutstyle.css - style sheet for layout.html */

p {
  font-family: Arial, Helvetica, sans-serif;
}

p {
  font-size: 1em;
  line-height: 1.5em;
}

p.centertext {
  text-align: center;
}

#container {
  margin: 0 auto 0 auto;
  padding: 0px;
  width: 840px;
  color: black;
  background: white;
  border: 1px solid black;
}
```

```

#top {
  margin: 5px;
  padding: 10px;
  border: 1px solid black;
  height: 70px;
}

#left {
  /* position: absolute;
  top: 95px;
  left: 10px; */
  margin: 5px;
  padding: 10px;
  border: 1px solid black;
  width: 100px;
  height: 200px;
  float: left;
}

#middle {
  margin: 0px 122px 5px 122px;
  padding: 10px;
  border: 1px solid black;
  height: 140px;
}

#right {
  /* position: absolute;
  top: 95px;
  left: 740px; */
  margin: 5px;
  padding: 10px;
  border: 1px solid black;
  width: 100px;
  height: 200px;
  float: right;
}

#bottom {
  margin: 5px 122px 5px 122px;
  padding: 10px;
  border: 1px solid black;
  height: 70px;
}

```

The absolute position is commented out.

The box is floated to the left of its container.

And the html looks like this:

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01
Transitional//EN">
<html>
<head>
<title>Layout</title>
<meta http-equiv="Content-Type"
content="text/html; charset=utf-8">

<style type="text/css">
@import url(layoutstyle.css);
</style>

</head>
<body>
<div id="container">

<div id="top">
<p class="centretext">Top</p>
</div>

<div id="left">
<p class="centretext">Left</p>
</div>

<div id="right">
<p class="centretext">Right</p>
</div>

<div id="middle">
<p class="centretext">Middle</p>
</div>

<div id="bottom">
<p class="centretext">Bottom</p>
</div>

</div>
</body>
</html>
```

```
<div id="right">
...
</div>

must come immediately
after

<div id="left">
...
</div>
```