

# CSS Exercises

## Exercise 1: Create a basic CSS layout

- Use BlueFish to open layout.html
- Create a layout using <div> tags
- Use a browser (Firefox) to view your page

### Task 1

Open layout.html in BlueFish – a blank template page which has the head section and a map to a CSS page – also created but blank.

### Step 1

Enter three <div> tags in the empty body tags In each div tag put a paragraph – text: one, two three:

```
<div><p>one</p></div>
```

```
<div><p>two</p></div>
```

```
<div><p>three</p></div>
```

### Task 2

Let's get some basic CSS up and running now. In CSS page give the divs a yellow background – not pretty but good for seeing what's what:

### Step 1

In the same folder as layout.html, open styles.css

Enter the following:

Div

```
{
```

```
background-color: yellow;
```

```
}
```

### Task 3

Now let's set the body width first.

### Step 1

Above the div rule, enter:

```
body {
```

```
width: 70%;
```

```
margin-left: auto; margin-
```

```
right: auto;
```

```
}
```

<p><b>Task 4</b></p> <p>Now let's give these divs a proper width layout -</p> <p>We need to float our divs – which means giving them individual classes in the html and then using CSS to position them</p> <p>Now we can give them width – and margins – remember the box model rules!</p>	<p><b>Step 1</b></p> <p>In layout html, add a class to each opening div tag so your code looks like this:</p> <pre>&lt;div class="left"&gt;&lt;p&gt;one&lt;/p&gt;&lt;/div&gt; &lt;div class="middle"&gt;&lt;p&gt;two&lt;/p&gt;&lt;/div&gt; &lt;div class="right"&gt;&lt;p&gt;three&lt;/p&gt;&lt;/div&gt;</pre> <p>Now let's enter the CSS for each of these classes in styles.css. Remove the div rule and enter the following. Once you have entered the rule for .left you can copy and paste this twice and make the necessary small amendments from the code below to save time:</p> <pre>.left {     float: left;     width: 30%;     margin-right: 3%;     background-color: yellow; } .middle {     float: left;     width: 30%;     margin-right: 3%;     background-color: yellow; } .right {     float: right;     width: 30%;     background-color: yellow; }</pre>
<p><b>Task 5</b></p> <p>View your webpage!</p>	<p>In the program interface, click on the browser view to open up Firefox and view your webpage.</p>

## Borders

Looking good – we have three nicely laid out columns – but time to think about borders. Borders are problematic when doing layouts because they **add** to the overall space taken up by the row of columns – so if you spend time making sure whichever measuring system you are using (percentage or pixels for example) takes up all the available space, adding a border will add further pixels to your layout causing the last column to start on a new row beneath the other two (Assuming we are working with three columns as in these exercises). Not a good outcome.

We have two options:

1. Build in some 'give' to our measurements so that the borders are accommodated.
2. Created a set of divs *inside* the original ones that exist purely to handle borders.

This means that the borders will take up space *within* the predefined column – not adding to the overall measurements.

The second option is the easiest to manage in terms of laying out your page but it does clutter the html with another set of divs – and of course another set of CSS rules for them. I think it is preferable though overall.

### Exercise 2: Add borders and a new row

- Add border div tags to the html ☐ Style the borders in the CSS
- Enter new content
- Use a browser (Firefox) to view your page

#### Task 1

Open layout.html in BlueFish

#### Step 1

Add the following div tags within the current ones:

```
<div class="border"> ... </div> the
```

finished code will look like:

```
<div class="left"><div  
class="border"><p>one</p></div></div>
```

```
<div class="middle"><div  
class="border"><p>two</p></div></div>
```

```
<div class="right"><div  
class="border"><p>three</p></div></div>
```

<p><b>Task 2</b></p> <p>In Styles.css enter some rules for the borders in a new class</p>	<p><b>Step 1</b></p> <p>Under the existing rules enter:</p> <pre>.border { border: thin; border-style: solid; border- color: black; }</pre>
<p><b>Task 3</b></p> <p>Let's tidy up the paragraph text with some css</p>	<p><b>Step 1</b></p> <p>Under the existing rules enter:</p> <pre>p { font-family: arial; margin: 3%; }</pre>
<p><b>Task 4</b></p> <p>Now let's add some more text to simulate a more realistic web content</p>	<p><b>Step 1</b></p> <p>In the H drive open CSS Text.docx</p> <p>Copy para 1 into the first &lt;p&gt; tag where 'one' currently is. Note the text to copy has the &lt;p&gt; tags too so you can replace the existing ones in your code</p> <p>Copy para 2 into the other &lt;p&gt; tags</p> <p>You will have columns with differing amounts of content.</p>
<p><b>Task 5</b></p> <p>View your webpage!</p>	<p>In the program interface, click on the browser view to open up Firefox and view your webpage.</p>

## New rows

When you want another row of columns you might think you simply have to cut and paste the divs you have already setup to repeat the layout on a new row. This is true but you must insert a break with a special CSS property in-between each row to ensure they start as separate rows.

First try just pasting the existing div tags again and see what happens. If you have one column with more content than the others the result is unexpected and not desirable! The difference in column heights means that the new line of divs can't float to the left and be a new row. We need some way to make a distinct break between the divs. We use the `<br>` and give it a class of `clear`. Here it is in the html

### Exercise 3: Add a new row

- *Copy and paste the existing layout*
- *View the result and problem*
- *Enter a rule to a line break to cure the problem*
- *Preview your work*

<b>Task 1</b> Open layout.html in BlueFish	<b>Step 1</b> Copy the code in-between the <code>&lt;body&gt;</code> tags and paste it again underneath and check the result – not what you might expect
<b>Task 2</b> Try and fix the problem using a line break	<b>Step 1</b> In-between the two copies, enter a line break: <code>&lt;br&gt;</code> Check the result – it doesn't work!
<b>Task 3</b> Let's use some css to solve the problem. We give our <code>&lt;br&gt;</code> a class and then enter a rule in styles.css	<b>Step 1</b> In the html give the <code>&lt;br&gt;</code> a class: <code>&lt;br class="clear"&gt;</code> And now under the rest of the rules in the CSS, enter: <code>br.clear{ clear: both;}</code>
<b>Task 1</b> Enter a margin rule in the main <code>&lt;div&gt;</code> tags to add some space	In the css, in each of the left, middle and right rules, add a line: <code>margin-bottom: 2%;</code>
<b>Task 2</b> View your webpage!	In the program interface, click on the browser view to open up Firefox and view your webpage.

#### Exercise 4: Create a row of images

- Create the div tags for your images
- Insert images into the divs
- Create rules to manage the divs and images in CSS

<b>Task 1</b> Create 4 div tags with border divs inside	<b>Step 1</b> Enter the following tags under the last paragraph of main text: <pre>&lt;div&gt;&lt;div&gt;&lt;/div&gt;&lt;/div&gt; &lt;div&gt;&lt;div&gt;&lt;/div&gt;&lt;/div&gt; &lt;div&gt;&lt;div&gt;&lt;/div&gt;&lt;/div&gt; &lt;div&gt;&lt;div&gt;&lt;/div&gt;&lt;/div&gt;</pre>
<b>Task 2</b> Create a class for outer divs and border class for inner divs	<b>Step 1</b> Your code will look like this when finished:  <pre>&lt;div class="pic1"&gt;&lt;div class="picborder"&gt;&lt;/div&gt;&lt;/div&gt; &lt;div class="pic2"&gt;&lt;div class="picborder"&gt;&lt;/div&gt;&lt;/div&gt; &lt;div class="pic3"&gt;&lt;div class="picborder"&gt;&lt;/div&gt;&lt;/div&gt; &lt;div class="pic4"&gt;&lt;div class="picborder"&gt;&lt;/div&gt;&lt;/div&gt;</pre>
<b>Task 3</b> Insert 4 pics into divs	<b>Step 1</b> Insert four images into the inner div tags by entering: <code>&lt;img src="images/pic1.jpg" alt="test" id="pic1"&gt;</code>  Change pic1.jpg to pic2.jpg – pic4.jpg in each inner div tag so you map to the four different images in your images folder.  Your code will look like this:  <pre>&lt;div class="pic1"&gt;&lt;div class="picborder"&gt;&lt;img src="images/pic1.jpg" alt="test" id="pic1"&gt;&lt;/div&gt;&lt;/div&gt; &lt;div class="pic2"&gt;&lt;div class="picborder"&gt;&lt;img src="images/pic2.jpg" alt="test" id="pic2"&gt;&lt;/div&gt;&lt;/div&gt; &lt;div class="pic3"&gt;&lt;div class="picborder"&gt;&lt;img src="images/pic3.jpg" alt="test" id="pic3"&gt;&lt;/div&gt;&lt;/div&gt; &lt;div class="pic4"&gt;&lt;div class="picborder"&gt;&lt;img src="images/pic4.jpg" alt="test" id="pic4"&gt;&lt;/div&gt;&lt;/div&gt;</pre>

## Step 1

### Task 4

Preview your work – what a mess! We need some CSS to help us sort this out.

Open styles.css and give rules for outer div classes –  
float and percentages

Give our image id's a width

In styles.css enter the following code at the bottom to style the width of the outer divs – the first three are identical so copy and paste and just change the class name:

```
div.pic1 {  
    width:  
    20%; float:  
    left;  
    margin-right: 6%;  
}
```

```
div.pic2 {  
    width:  
    20%; float:  
    left;  
    margin-right: 6%  
}
```

```
div.pic3 {  
    width:  
    20%; float:  
    left;  
    margin-right: 6%  
}
```

```
div.pic4 {  
    width:  
    20%; float:  
    right;  
}
```

	<p>Add the following code for the image ID elements</p> <pre>#pic1 { width: 100%; }  #pic2 { width: 100%; }  #pic3 { width: 100%; }  #pic4 { width: 100%; }</pre>
<p><b>Task 5</b></p> <p>Add a br.clear tag to end this section so further content starts reliably below Preview work</p>	<p>In index.html, add the following code under the divs we created for the images to end that section just above the &lt;hr&gt; tag:</p> <pre>&lt;br class="clear"&gt;</pre> <p>Check out the page – getting better!</p>
<p><b>Task 6</b></p> <p>Give rules for border class Pics don't fit</p>	<p>Back in the CSS add the following code to style our border divs:</p> <pre>div.picborder { border-color: red; border-style: solid; border-width: thin; border-radius: 15%; }</pre> <p>check results – not quite there!</p>



<p><b>Task 7</b></p> <p>Give pic ids a border radius</p>	<p>Finish by giving the image id's a border radius to match and a minus margin-bottom setting to take care of the white space – your image id rules will look like this when finished:</p> <pre>#pic1 { width: 100%; margin-bottom: -3%; border- radius: 15% }  #pic2 { width: 100%; margin-bottom: -3%; border- radius: 15% }  #pic3 { width: 100%; margin-bottom: -3%; border- radius: 15% }  #pic4 { width: 100%; margin-bottom: -3%; border- radius: 15% }</pre>
<p><b>Task 8</b></p> <p>Preview your work</p>	<p>Should be looking good!</p>

### Exercise 5: Create a two column layout for the main text

- Create two columns for main text area
- Float and space the columns
- Add a back ground gradient effect for the second column

#### Task 1

Add div tags around the main text and underneath

Give this divs the classes teaching and research

Add some content

#### Step 1

Add <div> tags before and after the <p> tags that wrap the main text.

Add

<div></div> underneath the main text

Copy the <p> tags and their content and paste it into the empty div tags you have just created. Check this in preview to make sure you have two lots of text in the browser.

#### Task 2

Add br clear after image and after research div close tag

#### Step 1

Add:

<br class="clear">

after the image StevePicForITLP.jpg

and also after the <div class="research"> closing tag (</div>).

#### Task 3

Create some CSS for the div tags

#### Step 1

In styles.css, add the following code to style the new div tags:

div.teaching

```
{  
    width: 55%;  
    float: left;  
    margin-right: 5%;  
}
```

div.research

```
{  
    width: 40%;  
    float: right;  
}
```

Check your work – you should have two columns

<p><b>Task 4</b></p> <p>Let's add a background gradient to the research div</p> <p>Add a border radius</p>	<p><b>Step 1</b></p> <p>Go to <a href="http://www.css3factory.com/linear-gradients/">http://www.css3factory.com/linear-gradients/</a></p> <p>And using the tool create a gradient using two colours of your choice</p> <p>Copy the code and paste it into the bottom of your div.research CSS rule.</p> <p>Add this code to the class to give a small radius border:</p> <p>border-radius: 5%;</p>
<p><b>Task 5</b></p> <p>Preview your work</p>	<p>Should be looking good!</p>

### Exercise 6: Create an text shadow effect for the H1 tag

- Edit the H1 style to include a text shadow effect that mimics engraving
- Experiment with different CSS styling
- Save and preview the index.html

Add a rule to the H1 CSS	<b>Step 1</b> Open the Styles.css file.
Use the Save As to create a new file that matches a link from the navigation menu	<b>Step 1</b> Enter the line of code as shown below in the H1 CSS entry:  Text-shadow: 0px 1px 1px #D2FFFF;
	<b>Step 2</b> Save the file and preview the index.html file in Firefox to see the effect.

### Exercise 7: Further ideas

Go to publications.html and create a few more entries (or copy and paste existing ones!). Create <div> tags around each section with a class and make a gradient as a background.

In biography.html create a multi column layout for the main section and pull some text from your department/college website to fill another column with supporting information for your biog.

In the layout exercise experiment with different border styles and positioning using padding and margins.