

LINKS

PROF. DAVID ROSSITER



AFTER THIS PRESENTATION

- You'll be able to add a link to any web page
- You'll be able to add a link to any position within a page
- You'll appreciate the role of lorem ipsum text

ELEMENTS WE WILL LOOK AT

<a>

href attribute

~~name attribute~~

Any element id attribute

LINKS

Make sure you check your
[gmail](https://www.gmail.com/) account every 10 minutes!

< a > means *anchor* i.e. attaching something to something else

Make sure you check your gmail account every 10 minutes!

To try the link open the example first

ANCHORING LINKS

The anchor could be anything, such as an image

```
<p>Select an icon to go to the web site!</p>

<a href="https://twitter.com/"></a>
<a href="https://www.facebook.com"></a>
<a href="https://plus.google.com"></a>
```

Select an icon to go to the web site!



To try the links open the example first

A POSITION WITHIN A PAGE

A link may go to any position in a page. For example:

1. Add `id="here"` to the element you will link to

同页面内跳转
 2. Then use `Go here`
 3. From another web page use
`Go here`
加一个文件名
- An example is here

LOREM IPSUM TEXT

For temporary text, use Lorem Ipsum

Lorem Ipsum is used by the publishing industry

Lots of generators on the web e.g.

<http://www.lipsum.com/>

VOID ELEMENTS & BREAKS

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AFTER THIS PRESENTATION

- You'll appreciate what a void element is
- You'll be able to differentiate between and use 3 types of break

ELEMENTS WE WILL LOOK AT

Handling breaks
 <wbr> <hr>

VOID ELEMENTS

All elements we have seen so far have this structure:

<start_tag> . . . </end_tag>

Some elements do not have any content

无值

These are called 'void elements'

They must not use an end tag

A VOID ELEMENT WE HAVE ALREADY SEEN

```
<meta name="author" content="David Rossiter">
```

Void elements may or may not have attributes

SOME OTHER VOID ELEMENTS

Handling multimedia - before

Handling forms - later

Handling breaks - now

BREAKS

```
<p>
My favourite word is supercalifragilisticexpialidocious. It comes
from the movie 'Mary Poppins' and is hard to spell correctly.
</p>
<p>
My favourite word is supercalifragilisticexpialidocious.<br>It comes
from the movie 'Mary Poppins' and is hard to spell correctly.
</p>
<p>
My favourite word is supercalifragilistic<wbr>expialidocious. It comes
from the movie 'Mary Poppins' and is hard to spell correctly.
</p>
<p>
My favourite word is supercalifragilisticexpialidocious.<hr>It comes
from the movie 'Mary Poppins' and is hard to spell correctly.
</p>
```

<hr>: 放置一条线在两句中间

Open this example to experience it

**<wbr>: 会根据浏览器的显示大小，将超出单行空间的
supercalifragilisticexpialidocious分为两个词；如果单行可显示，则不分割**

STYLE

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AFTER THIS PRESENTATION

- You'll appreciate the concept of style with html
- You know how to create different types of style rules

ELEMENTS & ATTRIBUTES WE WILL LOOK AT

<link>

href attribute

rel attribute

type attribute

<style>

Any HTML element id attribute

STYLE PROPERTIES WE WILL LOOK AT

Foreground color color

Background color background

WE NEED STYLE!

We need to learn *style*

Without style your page is visually boring!

Style is also a major control feature for JavaScript libraries

The language for style on the web is CSS,
Cascading Style Sheets

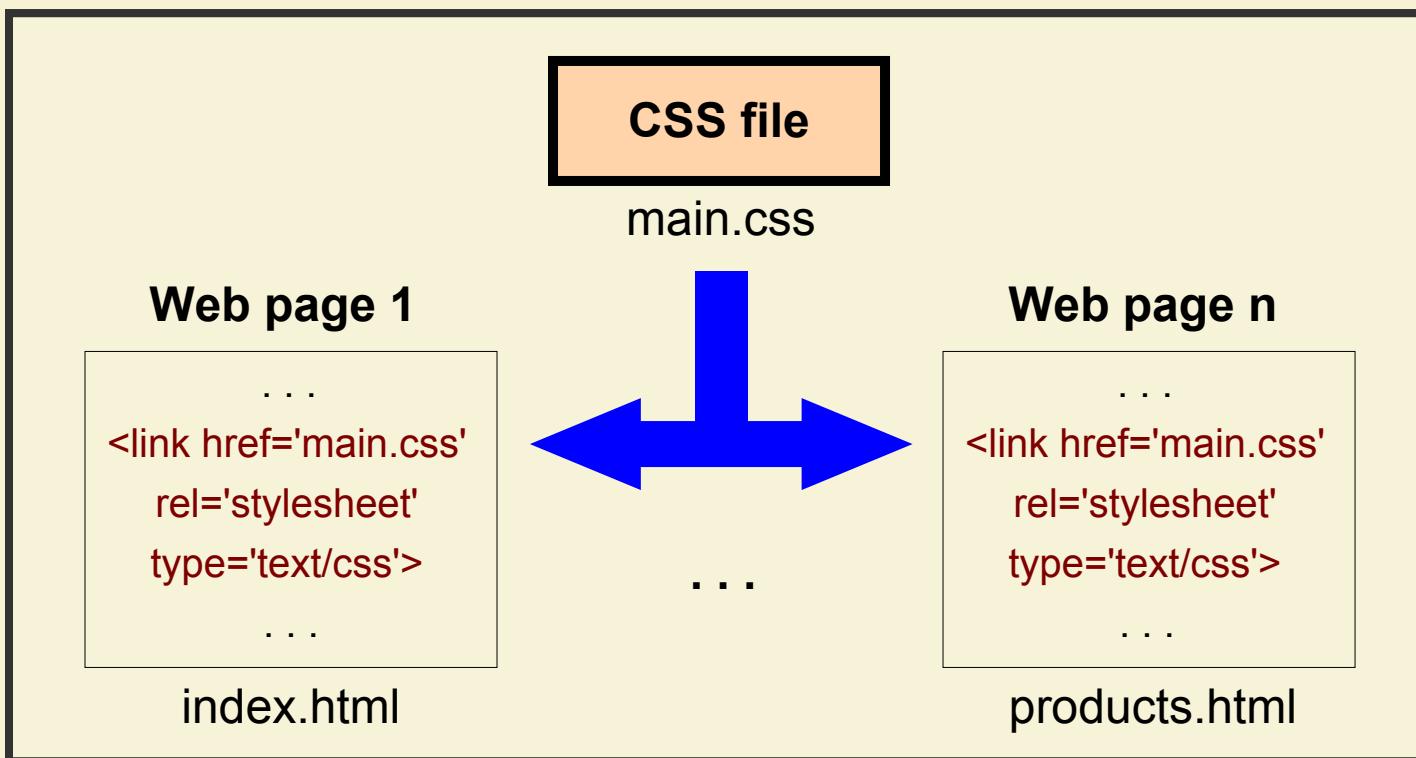
THE GENERAL CONCEPT

We separate the **information** in the web page
from the **visual properties** used to display it

Information + **Style** = **Visual Output**

1 CSS FILE, MULTIPLE WEB PAGES

One CSS file can be used by multiple pages



LINKING TO A CSS FILE

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

```
<head>
    <title>Demonstration of Linking to a Style File</title>
    <link href="html_example_css_file.css" rel="stylesheet" type="text/css">
</head>
```

```
<body>
```

... elements which use the style rules go here ...

```
</body>
```

```
</html>
```

SIMPLE HTML FILE

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

```
<head>
    <title>Demonstration of Linking to a Style File</title>
    <link href="html_example_css_file.css" rel="stylesheet" type="text/css">
</head>
```

```
<body>
    <h1>My first heading</h1>
    <p>My first paragraph</p>
    <h1>My second heading</h1>
    <p>My second paragraph</p>
</body>
```

```
</html>
```

SIMPLE CSS FILE

```
h1 { color:purple }  
p { color:blue }
```

My first heading

My first paragraph

My second heading

My second paragraph

COMMONLY USED STYLE PROPERTIES

- `color` for text color
- `background` for background color
- `font-family` for text fonts
- `font-size` for text sizes
- `text-align` for text alignment

DEFINING STYLE AT THE TOP OF THE PAGE

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

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

... style rules for this web page go here ...

```
    </style>
  </head>
```

```
<body>
```

... elements which use the style rules go here ...

```
</body>
```

```
</html>
```

SIMPLE EXAMPLE

```
<html>
  <head>
    <style>
      h1 {color:purple}
      p {color:blue}
    </style>
  </head>
  <body>
    <h1>My first heading</h1>
    <p>My first paragraph</p>
    <h1>My second heading</h1>
    <p>My second paragraph</p>
  </body>
</html>
```

嵌入`<head>`的第一种方法

My first heading

My first paragraph

My second heading

My second paragraph

USE A UNIQUE ID

Every element can have an `id` attribute

`id` has no effect for visual display

```
<html>
  <body>
    <ul id="rainbowColors">
      <li id="red">Red</li>
      <li id="orange">Orange</li>
      <li id="yellow">Yellow</li>
      <li id="green">Green</li>
      <li id="blue">Blue</li>
      <li id="indigo">Indigo</li>
      <li id="violet">Violet</li>
    </ul>
  </body>
</html>
```

- Red
- Orange
- Yellow
- Green
- Blue
- Indigo
- Violet

USING ID FOR STYLE

You can use `#id` for select the target of the style rule

```
#theElementID {color: red}
```

STYLE USING ID <HEAD> PART

```
<html>
  <head>
    <style>
      #rainbowColors {background: grey}
      #red {background: red}
      #orange {background: orange}
      #yellow {background: yellow}
      #green {background: green}
      #blue {background: blue}
      #indigo {background: indigo}
      #violet {background: violet}
    </style>
  </head>
```

可以应用在下一页的slide里，结合用
嵌入<head>的第二种方法

STYLE USING ID <BODY> PART

```
<body>
  <ul id="rainbowColors">
    <li id="red">Red</li>
    <li id="orange">Orange</li>
    <li id="yellow">Yellow</li>
    <li id="green">Green</li>
    <li id="blue">Blue</li>
    <li id="indigo">Indigo</li>
    <li id="violet">Violet</li>
  </ul>
</body>
</html>
```

- Red
- Orange
- Yellow
- Green
- Blue
- Indigo
- Violet

USING CLASS

Make your own rule, apply to anything

One rule can be used for multiple elements

CLASS EXAMPLE

```
<html>
  <head>
    <style>
      .zappy {color:purple; background:yellow}
      .wow {color:blue; background:lightgrey}
    </style>
  </head>
  <body>
    <h1 class="zappy">My first heading</h1>
    <p class="wow">My first paragraph</p>
    <h1 class="wow">My second heading</h1>
    <p class="zappy">My second paragraph</p>
  </body>
</html>
```

My first heading

My first paragraph

My second heading

My second paragraph

USING MULTIPLE CLASSES

One element can use multiple classes

MULTIPLE CLASS EXAMPLE

```
<html>
  <head>
    <style>
      .zappy {color:blue}
      .spicy {color:red}
      .wow {background:lime}
      .lol {background:lightgrey}
    </style>
  </head>
  <body>
    <p class="zappy wow">My first paragraph</p>
    <p class="zappy lol">My second paragraph</p>
    <p class="spicy wow">My third paragraph</p>
    <p class="spicy lol">My fourth paragraph</p>
  </body>
</html>
```

组合用法

My first paragraph

My second paragraph

My third paragraph

My fourth paragraph

MORE ON STYLE

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AFTER THIS PRESENTATION

- You'll be able to use inline style
- You'll know what pseudo-classes are and how to use them
- You'll appreciate the priorities of style rules

STYLE PROPERTIES WE WILL LOOK AT

Pseudo-classes link

visited

hover

active

empty

INLINE STYLE

A style rule which directly applies to a particular element

```
<p style="text-align:right">Welcome.</p>
```

方法3，放在`<body>`，针对特定的element进行操作

```
<html>
  <head>
    <style>
      li {background:yellow} 所有的li背景都是黄色的
    </style>
  </head>
  <body>
    <ul>
      <li>One</li>
      <li>Two</li>
      <li style="background:purple">Three</li> 这个li专门是紫色的
      <li>Four</li>
    </ul>
  </body>
</html>
```

- One
- Two
- Three
- Four

CONTEXT CONTROL

- You can apply a style rule to a specific context

```
ul li {color: red}
```

- Here the style rule is applied to all `li` that are inside a `ul`

```
<html>
  <head>
    <style>
      ul li {background:yellow}
    </style>
  </head>
  <body>
    <ul>
      <li>One</li>
      <li>Two</li>
      <li>Three</li>
      <li>Four</li>
    </ul>
    <ol>
      <li>One</li>
      <li>Two</li>
      <li>Three</li>
      <li>Four</li>
    </ol>
  </body>
</html>
```

将ul下的li里设置背景

- One
- Two
- Three
- Four

1. One
2. Two
3. Three
4. Four

PSEUDO-CLASSES

- Pseudo-classes are classes with some kind of 'intelligence'

```
h1:hover {color: red}
```

- When the mouse moves over any h1
the text temporarily changes to red

user put their mouse over heading h1, color改为read
用户把鼠标放在h1上，颜色就变为红色

以下均为“`<a>`”下的element

- link means a link

```
a:link {color: red}
```

- visited means a link that has been visited

```
a:visited {color: red}
```

- active means a link that is currently being followed

```
a:active {color: red}
```

- empty means an empty element

```
p:empty {color: red}
```

```
<html>
  <head>
    <style>
      a:link {background:yellow}
      a:visited {background:pink}
      a:hover {background:lightgreen}
      a:active {background:purple} ←
      li:empty {background:brown}
    </style>
  </head>
  <body>
    <a href="http://www.google.com">Google</a>
    <a href="http://www.cnn.com">CNN</a>
    <a href="http://www.twitter.com">Twitter</a>
    <a href="http://www.facebook.com">Facebook</a>
    <ol>
      <li>One</li>
      <li>Two</li>
      <li>Three</li>
      <li></li>
    </ol>
  </body>
</html>
```

点击的一瞬间变成紫色

[Google](#) [CNN](#) [Twitter](#) [Facebook](#)

1. One
2. Two
3. Three
4. 

Click here to open the example

TABLES

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AFTER THIS PRESENTATION

- You'll able to construct a table

TABLES

HTML tables are a way to get a structured layout

To do this, several different tags work together

ELEMENTS WE WILL LOOK AT

The structure <table> <thead> <tbody>

The header <th>

The body <tr> <td>

STYLE PROPERTIES WE WILL LOOK AT

Table borders	border
Table width	width
Table height	height
Vertical alignment	vertical-align
Table padding	padding

TABLE STRUCTURE

```
<table>
  <thead>
    <tr> <th>...</th> <th>...</th> <th>...</th> </tr>
  </thead>
  <tbody>
    <tr> <td>...</td> <td>...</td> <td>...</td> </tr>
    <tr> <td>...</td> <td>...</td> <td>...</td> </tr>
  </tbody>
</table>
```

<tr>: table row

<th>: column

<td>: table data, sometimes is box

A SIMPLE EXAMPLE

```
<table>
  <thead>
    <tr> <th>Skills</th> <th>Difficulty</th> <th>My Level</th> </tr>
  </thead>
  <tbody>
    <tr> <td>HTML</td> <td>Easy</td> <td>Some</td> </tr>
    <tr> <td>CSS</td> <td>Medium</td> <td>A little</td> </tr>
    <tr> <td>JavaScript</td> <td>Hard</td> <td>Zero</td> </tr>
  </tbody>
</table>
```

A SIMPLE EXAMPLE

Skills	Difficulty	My Level
HTML	Easy	Some
CSS	Medium	A little
JavaScript	Hard	Zero

COMMONLY USED STYLE PROPERTIES

- `color` for text color
- `text-align` for horizontal text alignment
- `border` for table borders
- `width` for table width
- `height` for table height
- `vertical-align` for vertical text alignment
- `padding` for table padding

USING STYLE

```
<html>
  <head>
    <style>
      table, td, th {border:1px solid black; padding:15px}
      td {color:purple}
    </style>
  </head>
  <body>
    <table>
      <tr><th>Menu</th><th>Price</th></tr>
      <tr><td>Snail pizza</td><td>$15</td></tr>
      <tr><td>Creative curry</td><td>$10</td></tr>
      <tr><td>Sloppy salmon</td><td>$20</td></tr>
    </table>
  </body>
</html>
```

padding: 距离边框15px

Menu	Price
Snail pizza	\$15
Creative curry	\$10
Sloppy salmon	\$20

CLASS RULES

```
<html>
  <head> <style>
    table, td, th {border: 1px solid green; width:50%; text-align:center}
    .profit {text-align:left; background-color:lightblue}
    .zero {text-align:center; background-color:yellow}
    .loss {text-align:right; background-color:red}
  </style> </head>
  <body>
    <table>
      <tr><th>Product</th><th>Income</th><th>Cost</th><th>Difference</th></tr>
      <tr><td>Laptops</td><td>$300</td><td>$100</td><td class="profit">$200</td></tr>
      <tr><td>Stationary</td><td>$150</td><td>$150</td><td class="zero">$0</td></tr>
      <tr><td>Chairs</td><td>$50</td><td>$300</td><td class="loss">$250</td></tr>
    </table>
  </body>
</html>
```

CLASS RULES

Product	Income	Cost	Difference
Laptops	\$300	\$100	\$200
Stationary	\$150	\$150	\$0
Chairs	\$50	\$300	\$250

POSITIONING EXAMPLE

```
<html>
  <head>  <style>
    table, td {border:1px solid black; width:80%; height:80%}
    td {width:33.33%; height:33.33%}
    .t {vertical-align:top} .m {vertical-align:middle} .b {vertical-align:bottom}
    .l {text-align:left} .c {text-align:center} .r {text-align:right}
  </style>  </head>
  <body>
    <table>
      <tr><td class="t l">1</td><td class="t c">2</td><td class="t r">3</td></tr>
      <tr><td class="m l">4</td><td class="m c">5</td><td class="m r">6</td></tr>
      <tr><td class="b l">7</td><td class="b c">8</td><td class="b r">9</td></tr>
    </table>
  </body>
</html>
```

1	2	3
4	5	6
7	8	9

USING AN HTML EDITOR

File ▾ Edit ▾ Insert ▾ View ▾ Format ▾ Table ▾ Tools ▾



p

DIV AND SPAN

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AFTER THIS PRESENTATION

- You'll appreciate the role of <div> and how to use it
- You'll appreciate the role of and how to use it

ELEMENTS WE WILL LOOK AT

For a large area <div>

For a few words

STYLE PROPERTIES WE WILL LOOK AT

font-size font-family

background position

top left

width

DIV

div has no default style

div has no default meaning

HTML developers can use it for any purpose

UNDERSTANDING DIV

```
<p>This is a paragraph before the div</p>

<div>
This is a div with no style
</div>

<p>This is a paragraph in the middle</p>

<div style="background:lightblue">
This is a div with a blue background
</div>
```

This is a paragraph before the div

This is a div with no style

This is a paragraph in the middle

This is a div with a blue background

EXAMPLES

```
<p>This is a paragraph before the div</p>

<div style="background:yellow; font-size:16pt; font-family:courier">
This is a div with a yellow background
</div>

<p>This is a paragraph in the middle</p>

<div style="background:lightblue; font-size:18pt;
    font-family:Arial; width:50%">
This is a div with a blue background
</div>
```

This is a paragraph before the div

This is a div with a yellow background

This is a paragraph in the middle

This is a div with a blue background

POSITIONING AN ELEMENT

Like many elements, a div can be put anywhere

Use position: absolute with top:xxx and left:yyy

top and left refer to the top left corner of the div

top:0 and left:0 means the div is in the top left corner

ABSOLUTE POSITION

```
<div style="background:yellow; font-size:16pt; font-family:courier;  
position:absolute; top:60px; left:60px">  
This is a div with a yellow background  
</div>
```

```
<div style="background:lightblue; font-size:18pt;  
position:absolute; top:92px; left:80px">  
This is a div with a blue background  
</div>
```

This is a div with a yellow
background

This is a div with a blue
background

RELATIVE POSITION

position: relative sets the position
relative to the normal position

RELATIVE POSITION

```
<p>This is a paragraph</p>

<div style="background:yellow; font-size:14pt; font-family:courier;
            position:relative; top:-20px; left:-20px">
    This is a div with a yellow background
</div>
```

This is a paragraph
his is a div with a yellow
ackground

SPAN

Like `div`, `span` has no default style

span is used for a few words

EXAMPLES OF SPAN

```
<p>This is not span text <span>but this is</span> and this isn't</p>  
<p>This is not span text <span style="background:yellow">but this is</span>  
and this isn't</p>
```

: 对一个字符串进行操作

This is not span text but this is and this
isn't

This is not span text **but this is** and this
isn't