

# Web Design (COMP 20030)

## Practical 1

31st January 2018

Submission Deadline: Tuesday 6th February 11:55pm

### **Exercise 1**

Ensuring you use the appropriate emphasis to match, create a web page that displays the following paragraphs of text:

---

**“Somebody** once told me the world is gonna roll me. I ain't the sharpest tool in the shed. She was looking kind of dumb with her finger and her thumb, in the shape of an **"L"** on her forehead... Well the years start coming and they don't stop coming, fed to the rules and I hit the ground running. Didn't make sense not to live for fun, your brain gets smart but your head gets dumb. So much to do, so much to see, so what's wrong with taking the back streets? You'll never know if you don't go, you'll never shine if you don't glow...

*Hey now, you're an all-star, get your game on, go play. Hey now, you're a rock star, get the show on, get paid. And all that glitters is gold, only shooting stars break the **mold.**”*

---

Save this file as **q1.html** in the comp20030/practical1 folder

## Exercise 2

Create a web page that displays a nested list of items in the following structure:

---

# Menu

- Home
- Deal of the day
- Products
  - PSUs
  - Graphics Cards
  - CPUs
  - Monitors
  - Cases
  - Other
- Help
  - About Us
  - Contact

---

Include the “menu” title with appropriate emphasis and size, page centered text can be achieved with the `<center>` tag, though this is no longer supported since CSS is now used to center text (which will be covered in a future lecture).

Save this file as **q2.html** in the comp20030/practical1 folder

### Exercise 3

Create a web page that displays a table, where each row refers to a module you are taking this semester. The table should have 3 columns and each item in the *module code* column should hyperlink to the module's page on the UCD website as this example shows:

---

Module Code	Module Name	Type
<a href="#">COMP20030</a>	Web Design	Elective
<a href="#">HUM10030</a>	Intro to Arts	Core
<a href="#">PHTY20090</a>	Intro to Massage	Elective

---

Add a fourth column to the above table for "Semester", this will cover all rows since these modules all lie in the second semester:

---

Module Code	Module Name	Type	Semester
<a href="#">COMP20030</a>	Web Design	Elective	2
<a href="#">HUM10030</a>	Intro to Arts	Core	
<a href="#">PHTY20090</a>	Intro to Massage	Elective	

---

Remember to match your text formatting and emphasis to the above examples!

Save this file as **q3.html** in the comp20030/practical1 folder

#### **Exercise 4**

- Create a web page that displays a **form**
- The form should have two textboxes. These two text boxes should have default values which read “firstname” and “surname” respectively.
- Add a drop down list with the values: undergraduate, postgraduate, and alumni. This should have an accompanying label with the value “status”.
- Two radio buttons labelled “continuing” and “not continuing”. The radio button for “continuing” should be checked by default.
- Add a range, with values between 0 and 100, and a label stating “satisfaction level”.
- The form should have a submit button. The form need not have any action or method. When the submit button is pressed nothing should happen.
- All elements of the form should have appropriate names.

Below the form, insert the UCD logo:

<http://www.radiokerry.ie/wp-content/uploads/sites/16/UCD-logo.gif>

Separate the form from the logo with a *horizontal rule*, download the logo and place it in a subfolder of your practical called “media” e.g. (comp20030/practical1/media). Have the image link to the ucd website homepage [www.ucd.ie](http://www.ucd.ie) and make sure the *alt* attribute should read “UCD crest”.

Save this file as **q4.html** in the comp20030/practical1 folder

#### **Exercise 5**

Download the media file (exercise5) from Moodle and extract the zip to your practical1/media folder.

Place the single video of the bear on your web page (both formats). The video should have controls.

Underneath the video place an iframe which displays the following page:

<http://en.m.wikipedia.org/wiki/Bear>

Save this file as **q5.html** in the comp20030/practical1 folder

## Important Notes

- To aid your own organisation, you should create a folder called 'comp20030' in which you will save all practicals for this course. Create a subfolder of this folder called 'practical1' and save all this week's questions there.
- Upgrading from notepad or textedit is highly recommended. [Notepad++](#) for Windows or [TextWrangler](#) for Mac are good places to start.
- **All tags should be closed properly.** Also, tags should be opened and closed in the [correct order](#).
- In all of the exercises, you must create a full HTML document, i.e. use the HTML template provided, with your own content in the <title>...</title> and <body>...</body> tags. Every page has to have the <!DOCTYPE ...> declaration at the top to comply with the HTML specification.
- When saving new versions of web pages, you can click the "Refresh" button in your browser to instantly see the new version. This will save you having to close your browser and open the file again each time.
- To aid marking, please put your name and student number as a html comment within your code.

## Submission Instructions

Create a zip file of the folder containing all of this week's solutions.

In Windows you can select the "Practical1" folder, right click and choose send to > Compressed (zipped) archive.

In Mac OS X, you can select the "Practical1" folder, right click and choose Archive.

Name your zip file in the format of "name–practical1– studentnumber.zip", replacing name and studentnumber with your own name and student number. e.g.

"Bloggs,Joe–practical1–12345678". Upload your zip file using the Practical 1 submission form available on [Moodle](#).

## Additional Information

HTML 5 (the most recent release of the markup language) is designed to provide structure to the content of web pages. It achieves this by using tags that are interpreted by different browsers.

Historically, HTML and XHTML have typically provided tags to affect the appearance of web pages, from colours, to blinking text, to font type. Many of these have now become deprecated and their use is highly discouraged. This is because, as websites get greater volumes of content, managing large amounts of stylistic html becomes increasingly difficult. In practice, web designers attempt to separate the style and structure of their pages. Check out [www.w3schools.com/tags/](http://www.w3schools.com/tags/) to obtain a complete list of html tags, including whether they are obsolete, or entirely new.

Non deprecated tags that change typography include:

<code>&lt;strong&gt;...&lt;/strong&gt;</code>	to indicate stronger text
<code>&lt;em&gt;...&lt;/em&gt;</code>	to indicate emphasised text
<code>&lt;u&gt;...&lt;/u&gt;</code>	to underline text
<code>&lt;mark&gt;...&lt;/mark&gt;</code>	to indicate highlighted (relevant) text

Note that, to a certain extent, the way in which these tags change the way text looks is incidental. We tell browsers what we mean through markup, and it is up to browsers to determine how that should change the way text is displayed (if at all).

`<h1>...</h1>`

Headings not only change typographic emphasis (and size) but provide semantic significance. They are typically used by search engines to understand the most important aspects of your web page. As such they should only be used for headings, and not merely to make text big or

`<h2>...</h2>`

**bold.** Headings are numbered from 1 to 6, with 1 being most and 6 being least important.

```
<h3>...</h3>
```

Beyond those tags that describe the significance of particular pieces text, an additional set of basic layout tags are provided. These include:

`<p>...</p>` These tags denote a paragraph, and place a blank line after the paragraph has ended to separate it from the next.

`<br />` This is a self-closing tag which identifies a break. That is, wherever a break tag appears, the current line of text is ended, and a new line started.

Furthermore, HTML provides layout tags for presenting lists of information. In lectures you have seen how to mark-up three kinds of lists: ordered lists, unordered lists and description lists (consult your lecture notes for examples [here](#)).

Because of the lack of stylistic aspects of HTML5, the pages created in this practical aren't much to look at. But that's okay. HTML is merely the skeleton upon which complicated pages are built. In the next practical we can see how the appearance of pages can be changed using CSS.

What's the difference between `<i>` and `<em>`, and `<b>` and `<strong>`? Not much, but [this](#) is useful reading.

## HTML 5 Template

The DOCTYPE definition tells the browser which version of HTML you are using in your page. The doctype below indicates that HTML 5 is being used.

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>COMP20030 HTML5 Template</title>
</head>
<body>
This is a test page
```



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

Note the indentation. All HTML should be properly indented. If you are unsure how to do so (or wish to save time) tools like [FreeFormatter.com](http://FreeFormatter.com) can do it for you.

Type this text into your text editor and save it as test.html  
Congratulations: you have made your first (albeit basic) web page!

## Using Absolute and Relative links effectively

- Absolute links give the full address of the target link or image  
e.g. <a href="http://www.ireland.com">
- Relative links give the address relative to the current page  
e.g. <a href="news\_folder/news.html"> or <img src = "flower.jpg"/>

(In the above example the news\_folder folder would have to be in the same location as the web page containing the link; while news.html would be found within the news\_folder folder.

**You should always use relative links unless linking to external content.**

### Example:

-  is a correct absolute link.
-  **is not**. Even if, by chance, this link works for you (because you happen to have an image of that name at that particular location on your computer), it is unlikely to work for anyone else. This is because any browser accessing that page will look in its own C:/ drive (if it even has one) for that particular image. Even if the image is in the *same* location as the web page

- the webpage knows nothing about that because it has been specified an absolute address.

## Tables: Colspan and Rowspan

Creating a cell that "spans" across a number of columns or rows is possible using the **colspan** and the **rowspan** properties in a TD tag.

The **colspan** attribute creates a cell that "spans" across a number of cells in a row. This makes the cell longer across, not down, since it is crossing Columns, not Rows. e.g.:

```
<table>
<caption>my hypertext table</caption>
<th> My header </th>
<th> My header 2 </th>
<tr>
<td>row 1 cell 1</td>
<td>row 1 cell 2</td>
</tr>
<tr>
<td colspan="2">row 2 cell 1</td>
</tr>
</table>
```

The code above produces:

row 1 cell 1	row 1 cell 2
row 2 cell 1	

*(borders added for clarity)*

Note that we are missing a `<td>` element in the second row of the table. Since the first cell of the second row is going to take up the room of 2 cells using **colspan="2"**, it also takes the place of the cell in the coding. So that one cell is actually taking up the space of 2 cells.

The **rowspan** attribute is very similar to colspan, but it works in the opposite direction. While colspan goes across columns, rowspan goes across rows.

```

<table>
<caption>my hypertext table</caption>
<th> My header </th>
<th> My header 2 </th>
<tr>
<td rowspan="2">row 1 cell 1</td>
<td>row 1 cell 2</td>
</tr>
<tr>
<td>row 2 cell 2</td>
</tr>
</table>

```

This produces:

row 1 cell 1	row 1 cell 2
	row 2 cell 2

Note again that we are missing a <td> element in the second row of the table. The first cell of the second row is gone. This is because the first cell of the first row is using that space via the rowspan.

## Forms

HTML provides the means to build forms in order to collect user input. Different inputs can be used for taking in different types of data.

The <form> element defines a HTML form:

```

<form>
<input type="radio" name="sex" value="male"/>Male<br />
<input type="radio" name="sex" value="female"/>Female<br />
<input type="radio" name="sex" value="other"/>Other
</form>

```

HTML *by itself* provides no means to effectively use information provided by a user in a html form. We will look at scripting languages that can make use of such information in later practicals however!

## iframes

```

<iframe src="http://www.ucd.ie/" title="university college dublin website"
width="400" height="400">iframes are disabled </iframe>

```

iframes are used to display pages within pages. This can obviously be a very powerful tool – if you need to display the contents of another webpage that you don't control, or have access to the api or web feed of, iframes may be the only solution to the particular problem. You may be familiar with companies using iframes to display google maps on their websites. A much more complicated example would be your UCD Connect Gmail account which uses multiple iframes.

However, iframes must be used with caution. The iframe is an embedded window which displays webpages, and little more. Neither the page containing the iframe, nor the page displayed within the iframe will ordinarily know anything about one another; meaning that the web page referenced by the iframe may change appearance (or size), or even go offline, yet the iframe will be oblivious to such changes. Iframes can introduce accessibility issues, and crucially, in terms of search engine optimization, search engine crawlers will be blind to the contents of iframes within your pages.

### **Further reading/resources**

While [w3schools](#) is not a perfect resource, it is ideally suited for people beginning to learn web development due to the volume of easy to read and understand material.

For authoritative information look at  
[www.webplatform.org/](http://www.webplatform.org/)

For more advanced content look at  
[css-tricks.com/](http://css-tricks.com/)  
[developer.mozilla.org](http://developer.mozilla.org)  
[www.html5rocks.com/en/](http://www.html5rocks.com/en/)