Lab 1

1. **Due** Week of October 8-11, start of your scheduled lab time.

2. **Purpose**
   1. Understand structure of a URL.
   2. Understand structure of a basic HTML document.
   3. Demonstrate skill creating HTML document and use of basic HTML tags.
   4. Prepare HTML web pages using a text editor.
   5. Develop proficiency managing personal network drive space on the department web server

3. **What you must know prior to completing this lab**

   1. Understand how to log on to the lab PC using your Camosun ID and password. Know how to log off the lab computer.
   2. Understand how to use Windows 7 environment and using its start button to find programs, use the keyboard control-alt-del to logoff.
   3. Understand how to move, resize and close any open windows in Windows 7.
   4. Understand concept of drives, drive names, folders and files.
   5. Understand how to create, move and delete folders in Windows Explorer.
   6. Understand how to perform a file search in Windows Explorer.
   7. Understand how to perform a recovery of a deleted file in Windows Explorer.
   8. Understand the difference between a text file and a binary file.
   9. Understand the difference between angle brackets < >, square brackets [ ], parenthesis ( ) and braces { }.
   10. Understand the character tilde ~, the pipe |, the back quote `, single quote ‘ and double quotes “
   11. Understand the file naming conventions in Windows Explorer.
   12. Understand the functions of control–C , control–V, control–A and control–X and their comment nomenclatures ^c, ^v, ^a, and ^x. See the Microsoft 7 keyboard shortcuts at http://support.microsoft.com/kb/126449
   13. Understand how to do a screen snapshot (printscreen) and an active window snapshot (alt-printscreen).
   14. Understand how to reference the path to a file in Windows Explorer using the backslash character \
   15. Understand how to create, save, move and delete a text file.
   16. Understand the correct usage for naming a file or folder.
   17. Understand how to open a browser (Google Chrome, Microsoft Internet Explorer or Mozilla Firefox) and enter a web address in its address bar.
   18. Understand how to search for images and information using a browser.
   19. Understand how to save images and information using a browser.

4. Overview:

You will create three HTML documents using one of the lab workstation's text editors called TextPad. There are WYSIWYG [1] HTML editors, such as Adobe's DreamWeaver, and you use them in later labs.

You build these files on your personal network drive space on a CST server (H: drive) then transfer them onto the server named **Deepblue** using a Windows application for secure file transmission named WinSCP.

Web publishing is the process of making documents available to others via the browser. You need two things to perform web publishing:

a) a computer that has access to the Internet
b) a web server (computer) where you can store your HTML documents

You also need to know the URL (Uniform Resource Locator) for your HTML documents stored on the web server.

Professional web developers employ commercial products such as Adobe DreamWeaver for example. And there are free web site development programs, namely Kompozer. DreamWeaver can be downloaded from the Adobe web site for a free 30 day trial.

One of the CST department's web servers called Deepblue is installed with the Linux operating system. The web server software running on Deepblue is called Apache, which is one of the most commonly used web servers and is free.

A student's web site URL on Deepblue will look *something* like this:

`http://deepblue.cs.camosun.bc.ca/~cst`*`xxx`*`/`

A URL[2] is formed by many parts described below:

`http:` is the **scheme** or **protocol**, defines what type of communication is needed between the web server and the browser. If you neglect to supply a scheme as a URL in your browser's address bar, http:// will be used by the browser.

`deepblue.cs.camosun.bc.ca` is the **host name**, which is composed of the web server name (deepblue). This is the same as `www.cs.camosun.bc.ca`, which happens to be the CST department web server, `deepblue`. Nearly every web server's name is "`www`" for "World Wide Web" but that is not a strict requirement. If you neglect to supply the web server name in the URL in the

[1] What You See Is What You Get.
[2] The technical BNF grammar for valid URL definitions can be found at http://www.w3.org/Addressing/URL/5_BNF.html

browser's address bar, `www` will be assumed by default. The `cs.camosun.bc.ca` portion is the **domain**. Similar to an address you would write on an envelope, the domain tells the browser where to find the web server on the Internet.[3] The **port** definition follows the host name as :*portnumber* and is optional. For the scheme `http`, the default port is assumed to be 80. The default port for `https` is 443.

The host name can be substituted for its IP address if you know it. This form is rarely used because it is harder to remember the four octets (numbers) that make up an IP address. And the IP address may change. To find a host's IP address enter the command `ipconfig` at a command shell (in Windows click on Start | Run | enter cmd).

The `/` is the web server root directory. This is like a Main Street leading into the town where this web server's material is stored. You must start at the Main Street and then take as many roads (traverse subdirectories) as needed to find the document you want.

The `~` (tilde) is an alias to your `deepblue` public_html directory[4]. You do not want to have your entire `deepblue` account contents exposed to the Internet - only those files you place in your `deepblue` account's `public_html` directory.

Never use the `public_html` folder name in a URL. It is already assumed to be in the URL when it contains the tilde character (~).

For example:

`http://deepblue.cs.camosun.bc.ca/~cst0333/index.html`
and `http://deepblue.cs.camosun.bc.ca/~cst0333`
and `http://deepblue.cs.camosun.bc.ca/~cst0333/`

are valid URLs (and they all point to the same file) but

`http://deepblue.cs.camosun.bc.ca/~cst0333/public_html`
and `http://deepblue.cs.camosun.bc.ca/cst0333/public_html`
and `http://deepblue.cs.camosun.bc.ca/~cst0333/public_html/`

are invalid URLs.

`cst0`*xxx* represents your deepblue account ID not your Camosun logon ID – if you have not been assigned a deepblue account, contact your instructor.

[3] For Windows-based computers see the link here for a technical description how host names are "resolved" http://www.microsoft.com/technet/network/evaluate/technol/tcpipfund/tcpipfund_ch07.mspx
[4] This was configured by the Apache web server. The technical details you can read at http://httpd.apache.org/docs/1.3/urlmapping.html#user

In a URL everything after the tilde (~) is case-sensitive (but only for the `deepblue` web server because it is running Linux). Schemes and host names can be defined in either upper case or lower case – both will work.

In this lab write-up (and subsequent labs) the text "`cst0`*xxx*" is intended to represent your deepblue personal account ID.

A **file** URL looks like this:

```
file:///h:/public_html/index.html
```

This form of the URL allows the browser to bypass the web server and load up the HTML document from the defined location, here h:/public_html/index.html. Do **not** use the file URL as it does not confirm that the document is accessible via the web.

5. Resources

HTML specification: http://www.w3.org/community/webed/wiki/HTML
Course web site –definitions of terms used:
http://www.cs.camosun.bc.ca/~langs/comp140-13/notes/terms.html

6. Preparation

Read this section to get an overview of the HTML information this lab is presenting to you.

1. Open Windows Explorer and confirm that you have a H: drive available. This is your personal network drive space on the CST server. Any file you save to your H: will be backed up each night. Do not save any file of value to you on the local drive (C:) because the drive could be overwritten. It is possible to lose your new material saved on your H: drive if

    a. you accidentally overwrite or delete the file before it is backed up that evening, or
    b. the server disk fails before it has done a backup for that day.

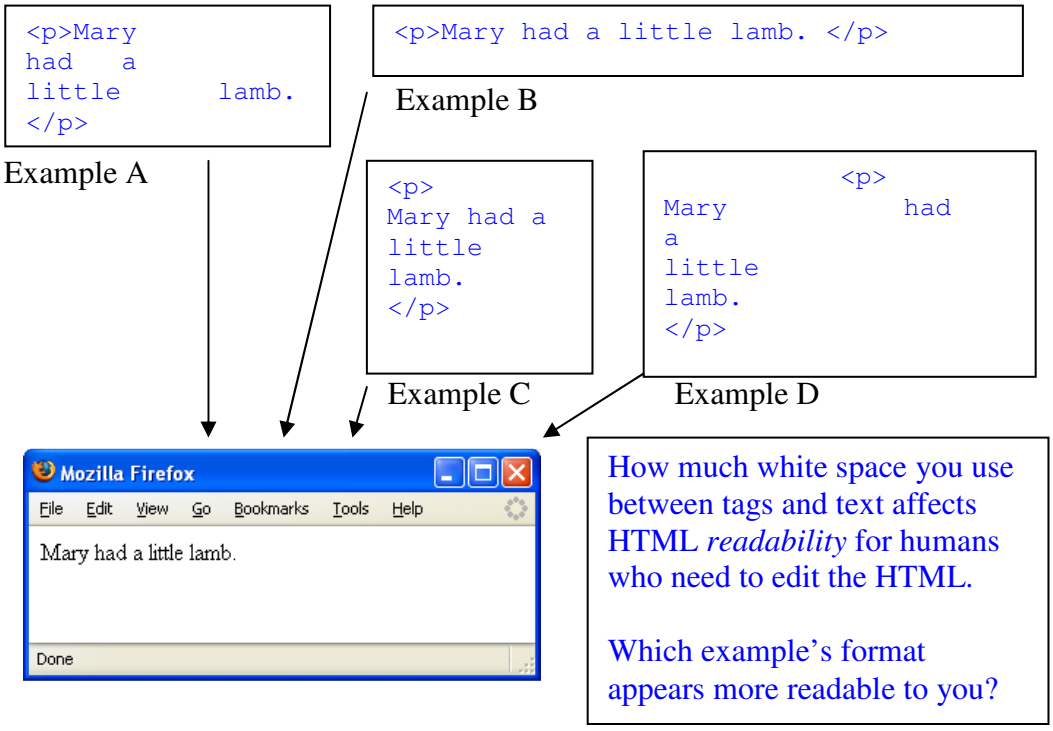
    Use a memory stick to save critical material which would take longer than 30 minutes to retype.

2. If the folder `H:\public_html` does not exist, then create it using Windows Explorer. This folder is the working location for your web site development. Eventually in this lab you will transfer the contents of this folder to your deepblue account's public_html folder so that those resources can be handled by the deepblue web server. Only files kept on your deepblue's public_html are accessible via the web. Do not put any file on your deepblue public_html you don't want the internet to see! You can practise placing your html files to the `H:\public_html` folder just to confirm the browser can open them and read them

properly and locally *not through the deepblue web server*.

3. HTML files are text files. There are no special control characters used in HTML – just human-readable text. On your CST web server, HTML files must have an extension of .htm or .html. Other types of web files such as cascading style sheet files have a .css extension. Later in this course we will discuss other ways to create HTML –those files have a different extension. Microsoft's Active Server Pages uses extensions of .asp and .aspx. The browser is responsible for figuring out how to display these different types of files to you.

4. HTML defines tags which inform the browser how to display information. The browser will ignore any white spaces you place within the HTML document between tags and text (unless you use the `<pre>` tag). For enhanced readability for web page content developers though, it is a good idea to use white space in your HTML so that others can read your raw HTML file if they need to.
The following HTML examples will all appear the same way in a browser. The `<p>` HTML tag represents the start of a paragraph text; the `</p>` tag, the end of the paragraph text.



Many HTML tags come as start/end pairs like `<head> </head>` and `<title> </title>`. These are also called non-empty element tags because the tags enclose some information. Note the *forward* slash at the start of the end tag.

HTML content (text, pictures, table) is rendered (displayed) within the browser window aligned on the left hand side. If you need to display any content centred or aligned on the right side of the browser window, you need to define some attributes or CSS which we discuss later in the course.

A version of HTML, called XHTML for eXtensible Hypertext Markup Language, has empty tags which appear as singles as in `<hr />` , `<br />`, `<img src="redflower.png" width="200" />`. The empty tags have a single tag which serves as both the open and close tag. In XHTML it is required for empty tags to end with a space, a forward slash and a close angle bracket. If you forget a tag's end, the browser may become confused. For this lab, use HTML format not XHTML.

Since XHTML uses case sensitive tags – always use lowercase tag names. HTML is not case sensitive but in the lab notes we will always use lowercase tag names.

5. An HTML document has a fixed structured. The first HTML tag in the document is `<html>` , which informs the browser that what follows is HTML content. A few basic HTML tags are shown below as examples:

`<html> … </html>`	Encloses an **HTML document**
`<head> … </head>`	Encloses the **header** section of HTML document
`<title> … </title>`	Encloses the **title** (used in the browser window title)
`<body> …</body>`	Encloses the **body** section of the HTML document
`<h1> … </h1>`	Encloses a **major heading** title (headings to h6)
`<p> … </p>`	Encloses a **paragraph**
`<hr>`	Shows a **horizontal line** across the browser window
` `	Forces the browser to make a **line break**
`<a` *attributes*`> … </a>`	Define an **anchor** link. The attribute used indicates the type of anchor. An anchor link uses the href attribute as in `<a href="index.html"> Click here </a>` tells the browser to open the file index.html if the text "Click here" is clicked.

`<img` *attributes* `>`	Define a graphic. The tag attributes `src` , `alt` and `title` are used as follows :
	 `<img src = "cat.gif"`
	 `alt = "A cat picture"`
	 `title = "My cat Spot" >`
	 where cat.gif is the name of the graphic. The **alt** attribute tells the browser what to show if the browser lacks the ability to display the image. The **title** attribute is the text that appears under the cursor when the mouse moves to the image. The order in which you define the attributes within a HTML tag does not matter.

Define an **unordered list** of two list items.

```
<ul>
 <li> Paint the chair <li>

 <li> Weed the garden </li>
</ul>
```

 = list item

- Paint the chair
- Weed the garden

Define an **ordered list** of three list items.

```
<ol>
 <li> Stop           </li>

 <li> Look both ways </li>

 <li> Go             </li>
</ol>
```

1. Stop
2. Look both ways
3. Go

A dictionary list of one dictionary term: apple.

```
<dl>
  <dt> Apple             </dt>
  <dd> A sweet fruit     </dd>

  <dt> Banana            </dt>
  <dd> Yellow and curved </dd>

  <dt> Cherry            </dt>
  <dd> Red with a pit    </dd>
</dl>
```

<dt> = dictionary term
<dd> = dictionary definition

Apple
    A delicious fruit
Banana
    Yellow and curved
Cherry
    Red with a pit

A two row **table** with one column

```
<table>
  <tr>
      <th> Column Header </th>
  </tr>
  <tr>
      <td> Hello         </td>
  </tr>
</table>
```

<tr> = table **row**
<th> = table **header**
<td> = table **data**

```
<!--  A comment.    -->
```

In HTML you can define a description that will not be displayed by the browser. The description is seen only when the user views the HTML source in an edit window. An HTML comment can be one or more lines but must start with the `<!--` tag and end with `-->` tag. An HTML comment must not contain two consecutive hyphens or the browser will get confused.

6. The basic HTML document structure contains these tags in this order:

```
<html>

 <head>
  <title> My Web page </title>
 </head>

 <body>
      Welcome to my web page!!
 </body>

</html>
```

The title shows the browser window title

Any content within the body appears in the browser window

7. Most browsers will accept without complaint any HTML files missing their `<html>` and `</html>` tags. An invalid HTML file could be missing all its tags and the browsers will still display the content. Also, the `<head>` … `</head>` part could be moved to below the `<body>…</body>` section (or even inside) and most browsers could still figure out how to properly display the content.

8. The `<a>` anchor HTML tag can use the `href` attribute to reference a document on another server, a document on the same server but in a different folder, the same document but in a different location, or another URL resource.

Anchor tag example 1

```
<a href="http://www.kaos.com/meetings/memoSept30.html">
View</a> the memo
```

This html defines the text **`View`** as a hyperlink and when it is clicked by the mouse (or otherwise selected), causes the browser to load a new URL – www.kaos.com

This example is an *absolute URL*; it explicitly defines the protocol (http), the server (www.kaos.com) and the root folder (/meetings).

Anchor tag example 2

```
Case load for <a href="../archive/agent99.html">Agent 99</a>
```

This html defines the text "**Agent 99**" as a link and when it is clicked by the mouse, cause the browser to load the file ../archive/agent99.html.

This is an example of a *relative URL*; it does not define a protocol or a server – only the linked document location *relative* to this document.

Anchor tag example 3

```
<a href="#footer"> Go to the end </a>
```

This html defines the text "**Go to the end**" as a link and when it is clicked by the mouse, cause the browser to find the anchor name "`footer`" in the current document. That anchor link is defined with `<a name= "footer">` ... `</a>` tags.

Anchor tag example 4

```
<a href="mailto:jsmith@myhost.ca"> JSMITH@MYHOST.CA </a>
```

This html defines the text "**JSMITH@MYHOST.CA**" as a MailTo e-mail process. To reduce spam for this address you should not explicitly define the address this way.

9. Many tags have optional attributes. For example the `<img>` tag

```
<img src="dog.png" alt="picture of my dog">
```

There is alternate text shown in the browser if the picture can't display.

10. A **table** element is a commonly used HTML structure that displays information in fixed-size rows and columns. The term **cell** refers to the square intersecting a row and column. The **border** is the width in pixels surrounding the whole table.

```
<table border="1">
      <tr>
         <th> Year    </th>
         <th> Average </th>
      </tr>

      <tr>
         <td> 2009    </td>
         <td> 14.3    </td>
      </tr>

      <tr>
          <td> 2010   </td>
          <td> 17.2   </td>
      </tr>

      <tr>
          <td> 2011   </td>
          <td> 18.0   </td>
      </tr>
</table>
```

Year	Average
2009	14.3
2010	17.2
2011	18.0

By default the text within a table's cells is aligned to the left but that can be altered by defining the `align="right"` attribute inside the `<tr>` tag for the table row, or inside the `<td>` tag for just the cell.

Also, the width of each table column is determined by default by the widest text content within a cell for that column

Normally HTML tables will have the same number of cells in each row and column. If they do not, it may mean you have forgotten to define a `<td> ... </td>` element in a table row.

```
<table border="1">

 <tr align="right">
  <td> Mary had a </td>
  <td> little     </td>
  <td> lamb       </td>
 </tr>

 <tr>
   <td align="right"> Its </td>
   <td> fleece was       </td>
   <td> white            </td>
   <td> as snow          </td>
 </tr>

 <tr>
   <td> The end </td>
 </tr>

</table>
```

In the above example the first row and third row appear to be missing cells because the second row has more cells than them. One approach to correct this table display is to use the HTML entity ` ` (non-breaking space) within a `<td>`.

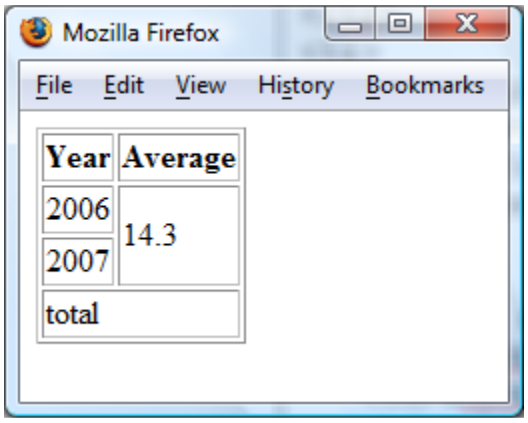
```
<table border="1">

 <tr align="right">
  <td> Mary had a </td>
  <td> little     </td>
  <td> lamb       </td>
  <td>       </td>
 </tr>

 <tr>
   <td align="right"> Its </td>
   <td> fleece was        </td>
   <td> white             </td>
   <td> as snow           </td>
 </tr>

 <tr>
   <td> The end  </td>
   <td>     </td>
   <td>     </td>
   <td>     </td>
 </tr>

</table>
```

Adjusting the column widths to be equal using the `width` attribute.

```
<table border="1">

 <tr align="right">
  <td width="25%"> Mary had a </td>
  <td width="25%"> little     </td>
  <td width="25%"> lamb       </td>
  <td width="25%">       </td>
 </tr>

 <tr>
   <td align="right"> Its </td>
   <td> fleece was        </td>
   <td> white             </td>
   <td> as snow           </td>
 </tr>

 <tr>
   <td> The end  </td>
   <td>     </td>
   <td>     </td>
   <td>     </td>
 </tr>

</table>
```

There are many options to the table definition that allow you to adjust spacing within the cells and between cells. You can also "merge" cells using the attributes `rowspan` and `colspan`.

```
<table border= "1">

  <tr>
    <th> Year    </th>
    <th> Average </th>
  </tr>

  <tr>
     <td> 2006              </td>
     <td rowspan="2"> 14.3 </td>
  </tr>

  <tr>
     <td> 2007 </td>
  </tr>

  <tr>
     <td colspan="2"> total </td>
  </tr>

</table>
```



11. There are other HTML elements such as frames and forms. We discuss them later.

12. Text which needs to be presented exactly as it is entered in HTML (with the spacing intact) can be entered using the `<pre>` … `</pre>` tags. The text will be displayed using a typewriter font known as `COURIER`. The `<pre>` HTML tag isn't used very often – CSS will do the job better.

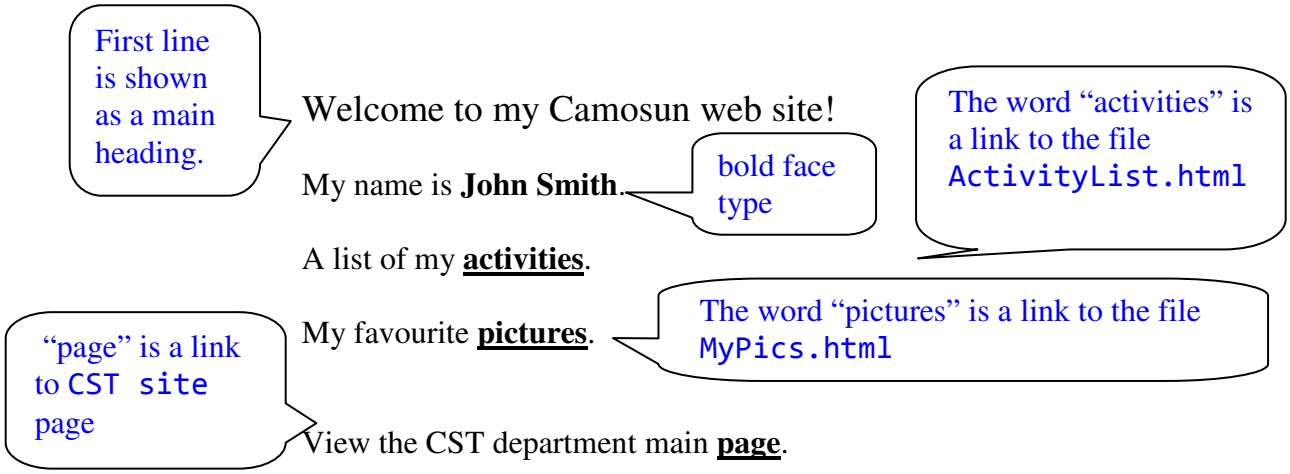
```
<pre>
  @  @  @
@ @\@/@ @
 @|@|@|@
 \\\|///
  \\|//
   \|/
   =&=
   /|\
</pre>
```

7. Description

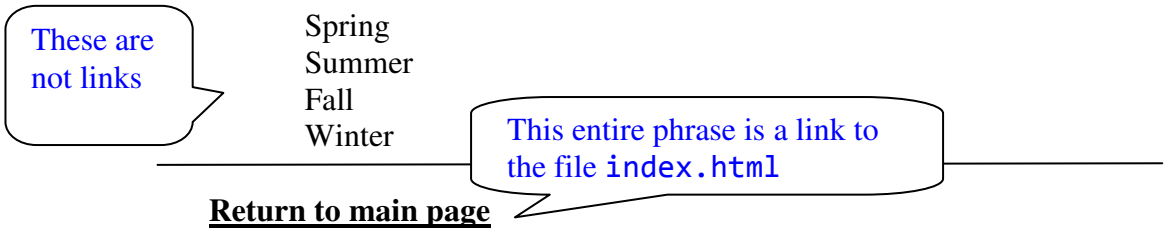
Read this section for a **description** of what you will be doing in this lab. A complete process write-up follows this section.

1. Use the TextPad application on the lab computer to create three HTML files named `index.html`, `ActivityList.html` and `MyPics.html` (note the case) and save them on your `H:\public_html` folder. This process will work easier if you keep your source HTML file open, save your file, then reload the web address in the browser. TextPad is preferable to Windows NotePad because TextPad supports syntax highlighting, a handy feature which displays HTML tags, comments, text and attributes in different colours.
   Find three images on the internet you like (nothing that would offend anyone) and save them in your folder `H:\public_html\images`. If you need to, use MS Paint or some other picture editing application to scale the pictures down to a reasonable viewing size.

2. The `index.html` file must be a properly formed HTML file containing links to the HTML files `ActivityList.html` and `MyPics.html`. In the browser your main web page (`index.html`) may look something like this:



3. The `ActivityList.html` file shows an unordered list of activities similar to this:



4. The `MyPics.html` file shows three graphics pictures similar to the following. You will use a table definition for the pictures. The image files must be stored in a subfolder of `public_html` called `images`.

   Some favourite pictures:

1. 

2. 

3. 

Table of three rows and one column. Use any border size you like.

Return to main page

This entire phrase is a link to the file `index.html`

5. Test that your web pages are all working correctly in the browser by opening the file `H:\public_html\index.html`.

6. If your web pages appear correct in the browser, then you will transfer them using a program called WinSCP to your deepblue account.

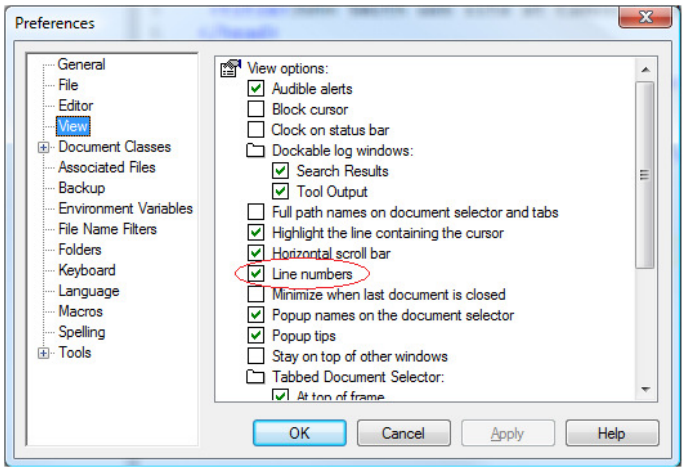
8. Process

Follow these steps to complete the lab work.

1. Click on the four coloured Windows Start button in the lower left of the screen. Right click on Computer on the right side and select Open. Find the H: drive entry and double click on it to open it up. If there is not a folder named `public_html` under H:, then create one by right clicking under H:, select New, then select Folder. Change the new folder name from "New Folder" to `public_html`. Within the `public_html` folder create a new folder called `images`.

2. Click on the Windows Start button and select All Programs | TextPad to start the TextPad application.

    a. Click on Configure | Preferences. Select the View preference on the left side of the dialog. Make sure the line numbers option is checked.



b. If you need to adjust the font used by TextPad edit window, click on Configure | Preferences. Select the Document Classes preference and the HTML submenu. The default font of Courier and font size can be altered for HTML files.

3. Click on File | Save As and save the file as `H:\public_html\index.html`

   Enter the following HTML. The amount of spaces you enter between words and the HTML tags is not important. The browser will truncate extra white space in the display window. The amount of spacing you provide in the HTML document enhances its readability and helps others to understand the document structure. Substitute the name `John Smith` on lines 2, 5 and 9 with **your name**. Do not enter the left hand row numbers – they are shown here to label the lines of HTML. The HTML comment on lines 2-3 is information the browser will ignore but serves to help identify the origin and purpose of the document.

```
1   <html>
2   <!-- By  John Smith
3        October 2, 2013 -->
4   <head>
5    <title> John Smith web site at Camosun College </title>
6   </head>
7   <body>
8          <h1>Welcome to my Camosun web site! </h1>
9              My name is John Smith. <br>
10             A list of my
11                <a href="ActivityList.html">
12                Activities
13            </a>.<br>
14  </body>
15  </html>
```

4. Save this file. You just created an HTML document that will serve as the main page to your personal web site at Camosun. For now this file contains one hypertext link: your `ActivityList.html` file, which you have not yet created.

   In later steps you will add links to point to your pictures page and another link to point to the CST department main page.

   Use your browser to open this page locally to confirm it is displaying correctly with no error messages. In TextPad there is a View | In Browser option.

5. Make a new file in TextPad and enter the following HTML. Provide different activities if you prefer.

```
1   <html>
2   <head>
```

```
<!-- By John Smith
     October 2, 2013 -->
  <title>Carpe Diem</title>
</head>
<body>
 <h2> My 2013 activities </h2>
     <p> Spring
        <ul>
           <li> bought a kayak </li>
           <li> got wet a lot  </li>
        </ul>
     </p>
     <p> Summer
        <ul>
           <li> went to a concert in Vancouver </li>
           <li> travelled to Oregon in August  </li>
        </ul>
     </p>
     <p> Fall
        <ul>
           <li> learned how to make sushi </li>
           <li> took a climbing course    </li>
        </ul>
     </p>
     <p> Winter
      <ul>
        <li> adopted a Golden Retriever named Scout</li>
        <li> trained Scout to fetch slippers       </li>
      </ul>
     </p>
     <hr>
      <a href="index.html">Return to main page</a>
 </body>
 </html>
```

Save this file as `H:\public_html\ActivityList.html`

6. Download or create any picture files you like into your H: drive `public_html/images` folder. If an image file name contains spaces, modify the file name to replace any spaces with an underscore (_). You can import a picture into MS Paint if you want to resize it.

7. The `MyPics.html` file can be constructed in TextPad as follows. This page makes use of a common HTML structure called a table which helps align content visually into rows and columns.

```
<html>
<head>
```

```
3   <!--  By John Smith
4         October 2, 2013 -->
5      <title>My Favourite Pictures</title>
6   </head>
7    <body>
8                 My top three favourite pictures:
9                 <table>
10                    <tr> <td> 1. </td>
11                         <td>  <img src="images/mydog.jpg"
12                                 alt="picture of my dog">
13                         </td>
14                    </tr>
15                    <tr> <td> 2. </td>
16                         <td>  <img src="images/mylake.jpg"
17                                 alt="scenery from a lake">
18                         </td>
19                    </tr>
20                    <tr> <td> 3. </td>
21                         <td>  <img src="images/skiing.jpg"
22                               alt="photo of a fast skier">
23                         </td>
24                    </tr>
25                <table>
26                <a href="index.html">Return to main page</a>
27    </body>
28    </html>
```

The picture files you downloaded into your folder `h:\public_html\images`

it's **src** *for source* not scr - don't forget the equal sign

8. Save the file `MyPics.html` in your `H:\public_html` folder

9. Add in the line `My Favourite pictures` to your `index.html` page and make the word `pictures` a link to the HTML file `MyPics.html`.

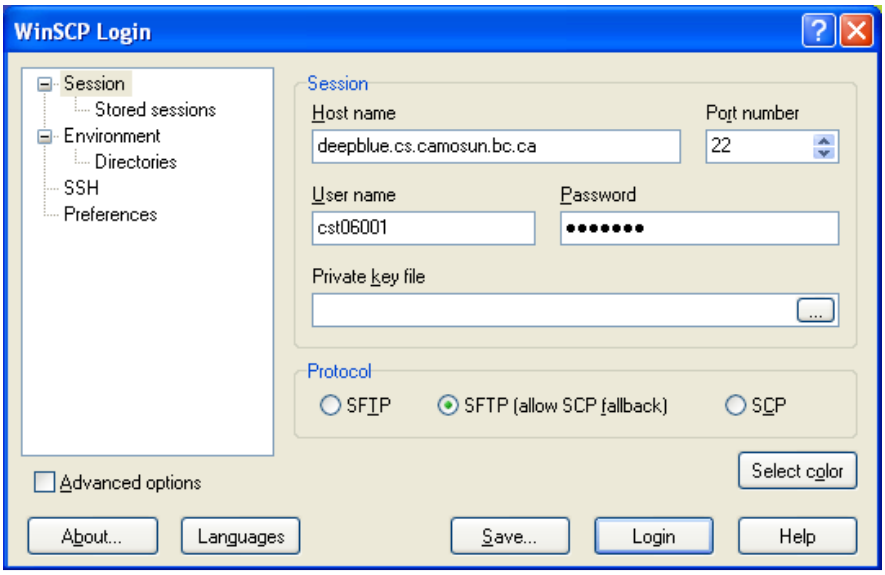
10. Add in the last link – to the CST department page (the URL is `http://www.cs.camosun.bc.ca`) on the `index.html` page.

11. To confirm you have entered your HTML content correctly, open a browser (Chrome will do) to your `H:\public_html\index.html` and verify the links on all of the web pages are displaying properly and the links work correctly.

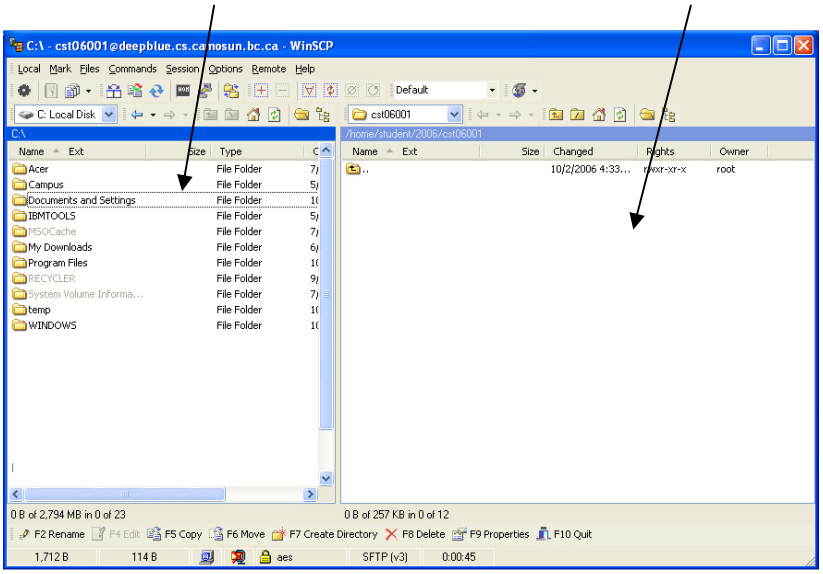
12. Once your HTML web pages are confirmed to be working correctly in the browser, upload the contents of your `H:\public_html` folder to your deepblue account. Check with your instructor to confirm your deepblue account is available. Start by opening the WinSCP application found in the Windows Start menu under the WinSCP folder.

    For Host name enter: `deepblue.cs.camosun.bc.ca`
    For user name enter your `cstxxx` deepblue account
    For password enter your deepblue password (last 6 digits of your Camosun

account)
Then click on Login to connect. You may get a warning about unknown certificate which you can ignore by clicking Yes.



The WinSCP application allows you to transfer files and folders between your local workstation (C: and H: drives) and the deepblue account.

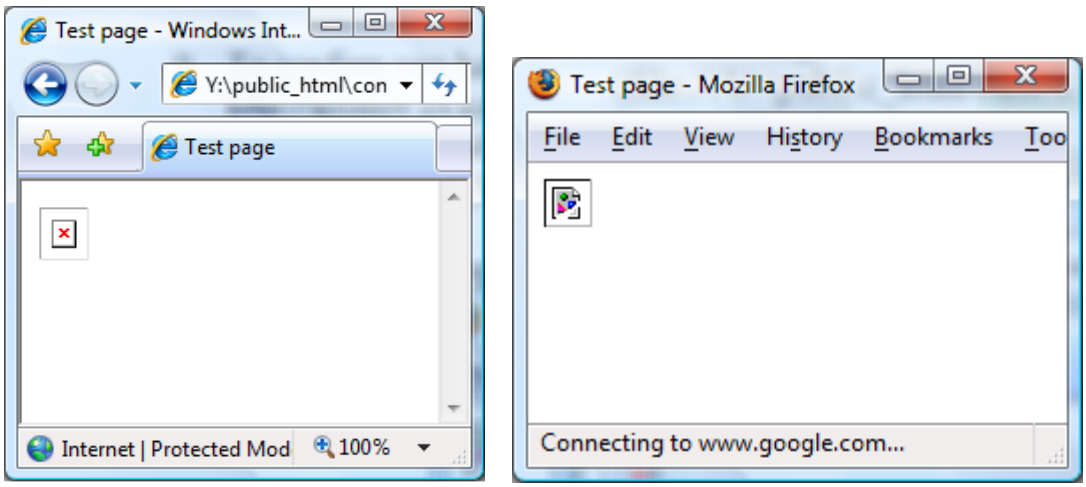


The panels allow you to select files (click on them) and then drag and drop them to the folder destination. Open the left panel to your `H:\public_html` folder. Open the right panel to your deepblue `public_html` folder. Click all the `H:\public_html` files and image folder and then drag them all to your deepblue panel to complete the copy.

13. After the transfer, enter `http://deepblue.cs.camosun.bc.ca/~cst`*xxx* / to view your web page (where cstxxx is your personal deepblue account).

Do not use the file URL (`file:///H:\public_html\index.html`) to check if your web page is working in the browser.

If the browser displays one or more of your images like this:



then check the image files are located in `H:\public_html\images` and were copied to deepblue correctly. Confirm the names of those image files match the ones you defined in the html `<img>` tag as `<img src= "images/`*imagefilename*`">`. Make sure the `<img>` tag attribute is spelled as `src` (for source) not `scr`.

Hand In / Demonstration:

A. Confirm with the instructor that your HTML files are working properly in the browser (enter the URL `http://deepblue.cs.camosun.bc.ca/~cst`*xxx* in the address bar of the browser) [10 marks] and answer the following questions. [15 marks] (Question 16 does not count towards marks.) All your lab links must be working correctly or you will lose 0.5 mark for each nonworking link up to a maximum of 2.5 marks. All images defined in your `MyPics.html` file must be shown.

B. Send the instructor an email message (langs@camosun.ca) with the subject "Comp 140 – Lab 1" no later than the due date. In the body of the message provide the URL to your web site (must be absolute URL format `http://deepblue.cs.camosun.bc.ca/~cst`*xxx*) and an attachment (text file only – not MS Word format) of the answers or in the email message body to the following questions. If you send me a non-text file attachment, I will email the message back to you reminding you it must be sent as a text file.

1. What are two valid URLs to your Camosun web site main page on deepblue? (Hint: one has the IP address to the web server – click on Start | Run and enter **`cmd`** to start a command window. Enter the command

`ping deepblue.cs.camosun.bc.ca` to determine the connection status of that host and its IP address (look for four numbers separated by periods).

2. What is the **absolute** URL to the first picture in your `images` folder?

3. Does it matter in the browser if you specify a URL as upper case or lower case?

4. What happens in the browser if the HTML document defines the `<head>…</head>` element after the `<body>...</body>` element?

5. What happens in the browser if you use the HTML bold element `<b>` within the definition of the `<title>` element?

6. What happens in the browser when the HTML end tags are not defined in balanced order? For example,

```
<b>This is <i>not</b> in order </i>.
```

   The end tag for bold occurs before the end tag for italics.

7. What happens when you remove the `<html>` start tag in one of the HTML files, then load it up in the browser?

8. What happens when you point the browser to an HTML file that does not exist in your `public_html` folder?

9. Rename your `index.html` file to `index.dat`. What happens when you point your browser to this file?

10. Edit your `index.html` file and put lots of white space between the words. Does the browser show the white space you entered?

11. Edit one of your HTML files and insert a space within the `<body>` tag (in front of the word body). What happens when you refresh this file in the browser?

12. What are two likely problems with this absolute URL? (assume cst099 is a valid student account)

```
deepblue.cs.camosun.bc/~cst099/public_html/images/MyDogSpot.jpg
```

13. Create a file called `textfile.txt` containing the single line "Hello, world!" Save the file on `H:\public_html`. What happens when you point your browser to this file?

14. Load your deepblue main page URL `http://deepblue.cs.camosun.bc.ca/~cst`*xxx*. Bookmark this web page in the browser. In your deepblue account rename your `index.html` file to

`Index.html`. Click on your home page bookmark to reload your home page. What was the result?

15. What are two significant features of an HTML table? Hint: consider how the browser displays it – review the section **Preparation**.

16. [Extra] Browsers are able to associate a small image with a web page and display it in the browser address bar and Favourites menu. These little images are called **fav-icons**, short for favourites icons. To create a sample fav-icon for your web site, point the browser to this URL

    `http://www.cs.camosun.bc.ca/~langs/comp140-13/images/smiley.ico`

    and save this image into your H: `public_html/images` folder.

    Within the head section of your `index.html` document (the line following the `</title>` tag), enter

    ```
    <link rel  = "icon"
          href = "images/smiley.ico"
          type = "image/x-icon" />
    ```

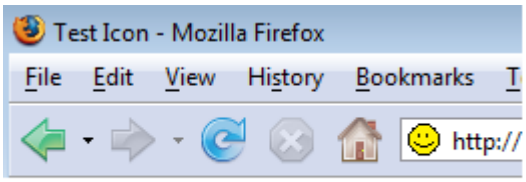
    For compatibility with Microsoft's Internet Explorer browser, add Microsoft's proprietary syntax as well

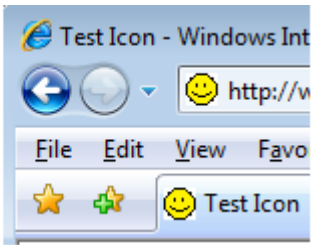
    ```
    <link rel  = "shortcut icon"
          href = "images/smiley.ico"
          type = "image/x-icon" />
    ```

    Use WinSCP to copy the updated `index.html` and the smiley.ico file to deepblue. Open the index.html page in the browser using the URL

    `http://deepblue.cs.camosun.bc.ca/~cst`*xxx*

    and the icon image should appear in the browser's address bar.





    You can create your own 16 pixel by 16 pixel image in PNG format using Windows Paint and use the free ico converter at `http://www.convertico.com/` to convert the PNG format image into the required ICO format (at least for Microsoft Internet Explorer). Some web sites

offer free images. Nearly all web sites for images have some kind of terms of use clause meaning that you can probably use the images for non-commercial use without attribution. If you find any cool web sites for icons, let me know!

`http://tango.freedesktop.org/Tango_Icon_Library`

`http://www.iconfinder.net/`

[Extra] Point the browser to the URL `http://web-sniffer.net`. This is a web site that displays HTTP Request Header and Response Header information.

On the screen where you are prompted, enter the URL `http://deepblue.cs.camosun.bc.ca/~cst`*xxx* and click on the Submit button.
Examine the HTTP Request Header information to determine our web server's IP address. What value for Server was shown under the HTTP response Header?