

# INFORMATION SCHOOL BOOT CAMP

## Session Four: Structures of the Internet

### September 27, 2001

## LAB EXERCISE: CREATING A STUDENT WEB SITE

### A. Setting up an HTML File

For this workshop, to effectively introduce the concept of HTML code, you are going to be building a Web page from scratch. We will be constructing the text using the Notepad program and will periodically view the presentation in Explorer as we proceed.

1. To open Notepad from the desktop, select:  
**Start > Programs > Accessories > Notepad**
2. Prior to typing anything in the blank document, begin first by saving the file:
  - Select: **File > Save As**
  - Save in: **A Drive (if you've brought a disk) or C Drive and create a personal folder with your name**
  - File name: **mypage.html**
  - Save as type: **all files**

### B. Starting to Code

Once a file has been saved, it is now possible to now begin writing the document. Previously, we examined source code on other Web pages. Your Web page will be designed in the same way as you write your own source code.

#### 1. Tags

For this exercise, keep in mind the discussion about creating tags for Web pages from the "General Information and UW Student Web Site Details" handout. In order for a browser to format your file properly, it's necessary to provide formatting instructions in the form of tags. Remember that tags must occur in pairs at the beginning and end of a particular command, and that angle brackets should be placed on either side of the commands. An end tag is marked by having a forward slash before the command.

```
<command> [the start tag]
This is where your text goes [text typed in]
</command> [the end tag]
```

HTML is not case sensitive, meaning that you can have either upper case or lower case and the browser will understand your command. However, for consistency we will be using all lower case for our tag commands.

## **2. Defining HTML**

The first action needed is to convey to the computer that the document being created is to be in HTML. To do that, the following tags should be inserted:

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

These tags will go at the top and bottom of the HTML document. All of the content will fall in between these tags.

## **3. Adding a Title**

The next step required is to supply the page with a title to identify whose page it is:

```
<title>Your Name's Home Page</title>
```

This command will tell the browser to write this statement in the title bar.

## **4. Formatting the Head and Body of the Document**

The body tag is rather complex so, for our purposes, we will approach it in stages.

a. What you have written so far should look like this:

```
<html>
<title>Your Name's Home Page</title>
</html>
```

b. The pair of tags defining the *head* of the document can be wrapped around the title tag:

```
<html>
<head><title>Your Name's Home Page</title></head>
</html>
```

*Note: If we were to add metadata to this page it would be in a <meta> tag in the documents head.*

c. The pair of tags defining the *body* are to be added under the title line:

```
<html>
<head><title>Your Name's Home Page</title></head>
<body>
</body>
</html>
```

d. Next, we will add *color instructions*, using hexadecimal codes, for the browser, which are part of the body start tag. For this exercise, we are only going to use the same color scheme as the sample web page used in the demonstration; they may easily be changed later. Remember, the commands for color changes need to be made in the body tag to show up properly.

◦ Background color

```
<body bgcolor="0084A5">
```

This will turn our background color blue. Notice straight quotation marks have been used. Part of the reason why we work in Notepad is that smart quotes [“ ”] confuse the browser. Always make sure that you close your quotation marks and that there is no space between the command, the equal sign, and the value.

◦ Text Color

```
<body bgcolor="0084A5" text="FFFFFF">
```

This will turn the text white

◦ Link Color

```
<body bgcolor="0084A5" text="FFFFFF" link="FFFF10">
```

This will make links that the user hasn't yet followed appear yellow.

◦ Viewed Link Color

```
<body bgcolor="0084A5" text="FFFFFF" link="FFFF10" vlink="E0E0E0">
```

This will make viewed links appear grey.

When you close a body tag it is unnecessary to repeat all the color information. The </body> tag is sufficient.

d. Beginning Text

With the color schemes defined, we can now begin inserting text, starting with a heading:

**Your Name's Home Page**

This is what's going to appear at the actual top of your page of contents. Of course, it can say whatever you decide; in following the directions of this exercise, it is simply coincidental the chosen heading is identical to the title bar.

e. *Save your work.*

## C. Viewing our Work

We've now reached a point where we can actually watch what's going on as we're working. After opening up Internet Explorer, type in the URL of your file into the address bar. It should look like this:

**C:\yourfile\mypage.html**

## D. Continuing to Code: More Text Formatting

### 1. Heading Size

Notice that the size of your text is pretty small. We're going to increase it to the maximum height. The <h#> tag, for heading numbers, is a way to increase font size easily. One (1) is largest and six (6) is smallest:

```
<h1>Your Name's Home Page</h1>
```

### 2. Centering

The default setting for HTML is to justify the text to the left. To center the text, insert the command:

```
<h1><center>Your Name's Home Page</center></h1>
```

Save your work and refresh your browser to see the change.

### 3. Line Breaks

HTML has a default for word wrapping meaning that if you were to continue typing, despite indicating distinct paragraphs into Notepad, the browser won't know where to break unless it is told. This is directed by inserting a line break tag `<br>`:

```
<h1><center>Your Name's Home Page</center></h1><br>
<br>
<h3>Hi! I'm My Name and this is my homepage.<br>
<br>
</h3>
```

### 4. Italics

Text can be italicized by adding an `<i>` tag:

```
<h3>Hi! I'm My Name and this is <i>my</i> homepage.<br>
```

### 5. Horizontal Rule

A line that cuts across the whole page to divide text into sections may be inserted using the `<hr>` tag:

```
<hr>
<br>
<h3>Hi! I'm My Name and this is my homepage.<br>
<br>
```

Check the [www.w3schools.com](http://www.w3schools.com) web site to see how to resize the horizontal rule.

Save and refresh your work.

## E. Lists

Lists can be created in HTML to show outlines and/or bulleted text. For this exercise, we are going to develop an unordered list, i.e. bulleted text, by applying the `<ul>` and `<li>` tags:

```
<h3>Hi! I'm Eric Riley and this is my homepage.<br>
<br>
This page is still under construction but in the future it will contain:<br>
<ul>
<li>information about my courses
<li>extracurricular activities
<li>links to fun things
</ul>
```

The `<li>` tag before each line item instructs the browser where to place the bullets.

Notice that the default is for round bullets. To change the appearance of the bullet, it's necessary to indicate a particular type or shape. To change all of the bullets, put the name of the type in the `<ul>` tag; to alter individual bullets, insert the bullet type in the `<li>` tag:

```
<ul type=square>
```

Save and refresh your work.

## **F. Linking**

Perhaps the most important and useful element of web design is the ability to create hyperlinks between web documents. In our document, we are going to insert three links using the <a href> tag.

1. First, add this text after the unordered list to set up the area:

```
<br>
<hr>
<br>
<h2>Links to Important Resources</h2><br>
```

2. The first link we're going to put in is for the Google search engine:

```
<a href="http://www.google.com">Google</a><br>
```

The resulting text between the <a href="..."> and the </a> will be colored according to our previous instructions in the body tag and an underline will separate it from other text.

3. Save and Refresh

4. The second link will be to your Web Pine email login:

```
Login for <a href="https://webpine.washington.edu">Webpine</a><br>
```

Notice that a space has been placed before the link tag. It's important to remember that the tag won't put a space in automatically. Spacing needs to remain consistent by the web designer.

5. Save and Refresh

6. The last link will be to Tully's Coffee's site:

```
and if you're interested in a little <a href="http://www.tullys.com/">
C8H10N4O2</a><br>
<br>
```

7. To link to an email address, use the same link tag with a little different value in the quotes:

```
If you'd like to contact me, you can reach me at
<a href="mailto:eriley@u.washington.edu">eriley@u.washington.edu</a>
<br>
```

## **G. Difficulties of HTML**

### **1. Subscription of letters**

Because it's standard procedure to subscript the numbers in a chemical compound such as  $C_8H_{10}N_4O_2$  that used for "caffeine" in the Tully's Coffee link, it is necessary to insert that defining tag around each number:

- Insert the tag before the first number:

```
C<sub>8</sub>H10N4O2
```

- Next, highlight the tag using either the mouse or by striking the shift and arrow keys simultaneously.
- To copy the tag, hit “Ctrl” (control) and “C” at the same time.
- Place the cursor in the appropriate places (i.e., before each number for the start tag and after each number for the end tag) and use “Ctrl” and “V” to insert the tag.
- After incorporating the tags, return to the end tags and place a “/” as necessary.
- The finished line should appear like this in Notepad:  
**C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub></a><br>**

## **2. Capturing and Inserting Images**

A number of different images can be utilized in web pages. To keep things simple in this exercise, we will make use of an image of a book that is currently on the instructor’s page (as seen below under “Final Product”).

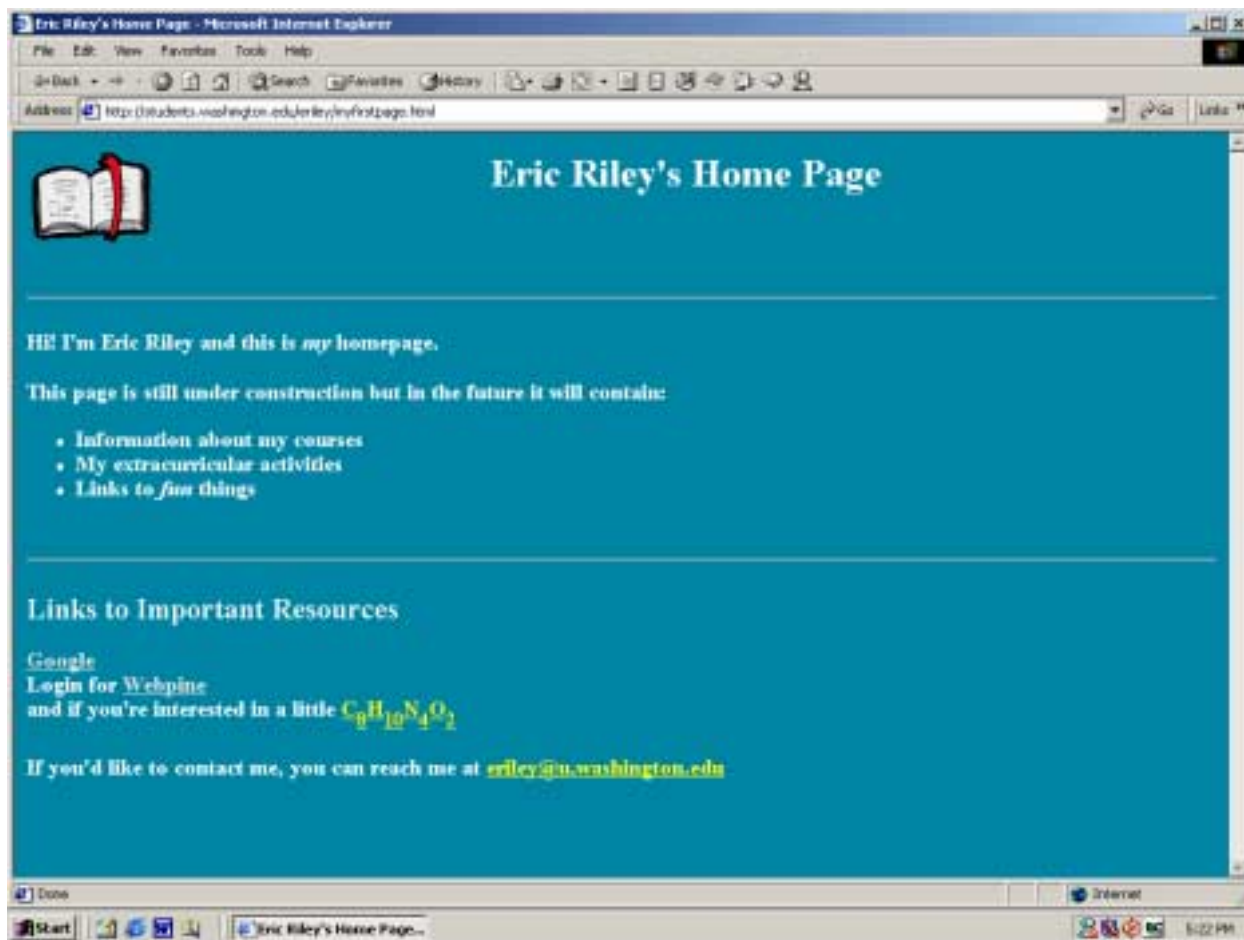
- Use your Browser to go to Eric Riley’s page at:  
**<http://students.washington.edu/eriley/myfirstpage.html>**
- Move your cursor over the image of the book and right click on it.
- At the pop up menu, select **Save picture as** and select the exact same file as your html document. Remember the file name assigned to the object, “book.gif,” and save the image.
- To place the image at the top of your page, insert the following under the body tag:  
**<br>**

Notice that when you refresh the text is displaced below the image. Let’s align the image and the text to the left side of the screen:

**<br>**

**Note:** Always be careful when pulling images from other sites. Images are copyright protected just like text based works. Always make sure that before you capture an image that you have permission to do so.

## I. Final Product



The final code should look in total like this:

```
<html>
<head><title>Eric Riley's Home Page</title></head>
<body bgcolor="0084A5" text="FFFFFF" link="FFFF10" vlink="E0E0E0">
<br>
<h1><center>Eric Riley's Home Page</center></h1><br>
<hr>
<br>
<h3>Hi! I'm Eric Riley and this is <i>my</i> homepage.<br>
<br>
This page is still under construction but in the future it will contain:<br>
<ul type=square>
<li>Information about my courses
<li>My extracurricular activities
<li>Links to fun things
</ul>
<br>
<hr>
<br>
<h2>Links to Important Resources</h2>
<a href="http://www.google.com">Google</a><br>
Login for <a href="https://webpine.washington.edu">Webpine</a><br>
and if you're interested in a little <a href="http://www.tullys.com/">
C<sub>8</sub>H<sub>10</sub>N<sub>4</sub>O<sub>2</sub></a><br>
<br>
If you'd like to contact me, you can reach me at
<a href="mailto:eriley@u.washington.edu">eriley@u.washington.edu</a>
<br>
</h3>
</body>
</html>
```

## J. Taking it Public

In order for others to see the web page we've just created, it needs to be placed into a space suitable for the purpose of viewing. This entails FTP-ing the file into your public\_html folder.

- After saving everything and closing it all down, open up the Secure FTP to Dante:  
**Start > Programs > FTP Clients > SSH Secure FTP > Secure FTP Dante**
- Enter your UW NetID and your password.
- Open your public HTML folder
- Initially, the book image needs to be uploaded. To do this, click the 'up' arrow and find the image "book.gif" in the C drive, and then click 'upload.'
- The properties associated with the image have to be changed to ensure that it will launch properly so that people can see it

- Right click on the object.
- Go to properties.
- Check all of the 'Read' and 'Execute' boxes. Leave only 'Write' options for yourself.
- Click 'OK'.

◦ Now upload your HTML file, and change the properties as instructed above.

**Congratulations! You're now officially wired!**