

Lab: Windows Operating Systems and HTML

Course Listing: **CS1**

Last Updated: **Fall, 2006**

In CS1 class, we will be using the Windows Operating System (e.g., Windows 95/98/2000/NT/XP/Me) for the HTML and JavaScript portions of the course. Later, when we work with the Java programming language, we will be using the DOS operating system.

This lab will step you through the process of working with the Windows Explorer to maintain your files. It will also step you through the process of creating a simple HTML web page, showing you how to code it, store it and open it with a web browser.

If you are already familiar with the Windows, you may just want to skim this lab. However, if you are new to the PC computer or the operating systems, this lab is intended to step you through some common activities.

If you are using your laptop computer and are not logged into the St. Kate's network, you will have to modify some of the instructions that refer to the U: drive. Use the C: drive instead. Note that plugging into and logging into the St. Kate's network is different from logging onto the Web and going to the www.stkate.edu web page!

If you decide to work on the C: drive and then copy your work to the U: drive for safekeeping. If you do so, be sure to delete your work from the C: drive so another student is not tempted to cheat and use your work.

Windows Explorer

Windows Explorer is a file management program that comes on the Windows 95, Windows 98, Windows 2000 and Windows NT operating systems (these are sometimes referred to as Windows 9x/2000/NT/Me/XP). It uses a graphical user interface (GUI). This means that all interactions between you and the operating system are done through graphical icons and pictures. You use both the mouse and the keyboard to input commands to the computer.

This activity is designed to introduce you to the common Windows Explorer operations you may find yourself using in this class.

Opening the Explorer

1. Click the "Start" button at the bottom of the screen.
2. Select "Programs" from the pop-out list.
3. Select "Windows Explorer" from the pop-out list.
4. The Windows Explorer should appear (something like the figure to the right)

ALTERNATIVELY

1. Right click the "Start" button at the bottom of the screen.
2. Select "Explore" from the pop-out list.

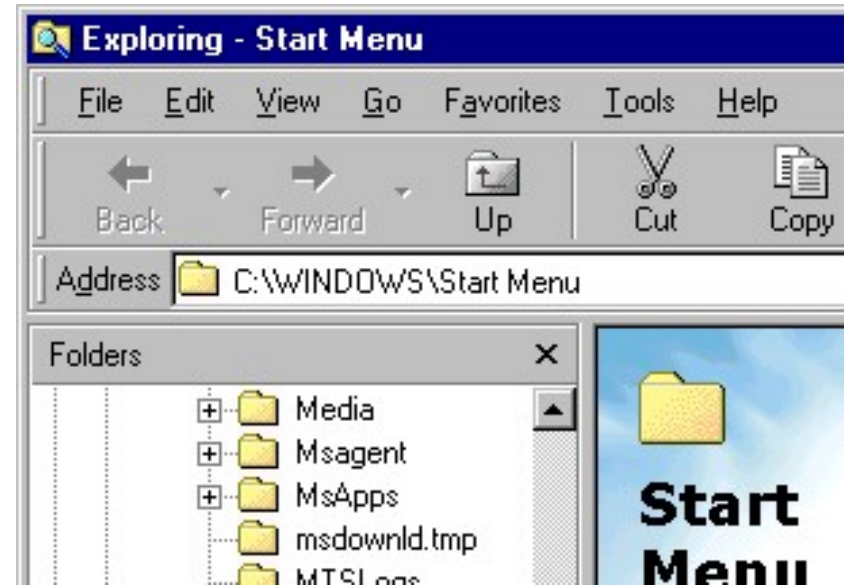
ALTERNATIVE 3

1. Hold down the Windows button (🪟)
2. Press the "E" key

Closing the Explorer

1. Select "File" from the top menu bar, then "Close" *or*
2. Click the upper right hand corner.

Windows Explorer screen



The buttons on my Explorer are good sized (e.g., Back, Front, Up, Cut buttons). Yours may be smaller ("low profile"). If you don't see the two toolbars (the one with the buttons and the one with the "Address" box), select them by clicking "View", then "Toolbars". If you move your mouse over the arrowhead on the right side, a list of available toolbars is shown. The button toolbar is called "Standard Buttons" and the Address one is called "Address Bar". Make sure there is a check next to each of these toolbars.

Notice also how my files on the right side are in a list. You can change your screen to look like this by selecting "View" from the top menu, then selecting "Details". See how the data shown is a lot like the ones that you saw in the DOS directory listing?

Orienting yourself in Explorer

There are a couple of things that you will want to note about the Windows Explorer:

Note:

In Windows, directories and subdirectories are often referred to as folders.

- The left side of the Explorer lists the drives and folders (directories). You can expand and collapse the folders under each drive by single-clicking the + or – marker next to the drive. You can also double-click the name of the drive to collapse or expand it.
- The right side of the Explorer lists the contents of the highlighted drive or folder. Folders and files that are contained within are listed. The exact information listed is determined by the View option selected.
- The line across the top labeled “Address” shows the Path for the folder or file you are currently viewing. Make sure you understand what this translates to in terms of drives and folders.

Windows Explorer Screen



Here is another view of my Explorer. You can see the + marker next to the CSCI111Mail folder and the – markers next to the My Documents and CSCI106 folders.

You can also see the contents of my CSCI106 folder (see the address listed above in the Address box?). I've got a couple of Microsoft Word documents and one image file called “diskdrive.jpg”.

Note: The pictures use the CSCI106 directory, but yours will be CSCI111.

Navigating the Directories (Explorer)

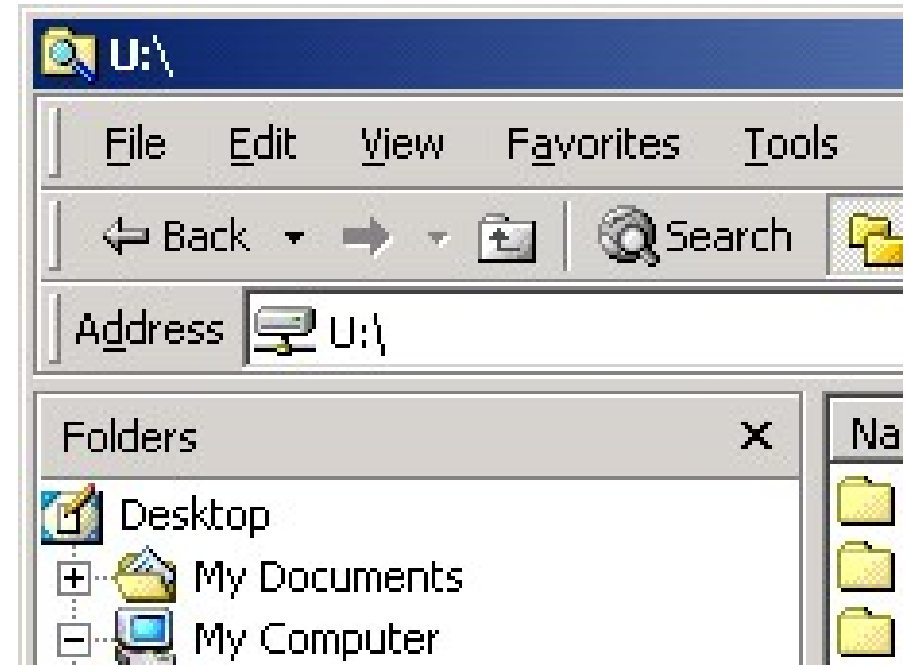
Changing the drive

1. If you logged on, you should have a U: drive available to you, as opposed to a C: drive that is on the computer.
2. Change to the U: drive by scrolling to the "U:" item in the listing on the left and clicking on it. The contents of the U drive should be listed to the right.
3. Change back to the C: drive by scrolling to the "C:" item in the listing and clicking on it.

Changing to the root directory

1. Each drive has a root. Change to the root of the C: drive by selecting only the "C:" item. The contents of the root drive are listed in the right portion of the Explorer.
2. Change back to the U: drive.

Explorer Screen



This is what my Explorer window looks like when I have the root of the U: drive selected. See how I have a CSCI106 directory here (see listing on the right)?

Directory Maintenance (Explorer)

Creating a directory

1. Select the drive or directory that will contain the new directory. For example, select the U: drive.
2. Create a directory by selecting "File" from the top menu bar, then "New", then "Folder". A new folder appears with the name "New Folder". Type in your new name "CSCI111".

ALTERNATIVELY

1. Right click in an empty portion of the right side of the Explorer. A pop up menu appears, listing "New" as one of the items. Select "New", then "Folder". A new folder appears with the name "New Folder". You can type in your new name, "CSCI111"

You can refresh the listing of the files and folders by selecting "View" from the top menu bar, then "Refresh".

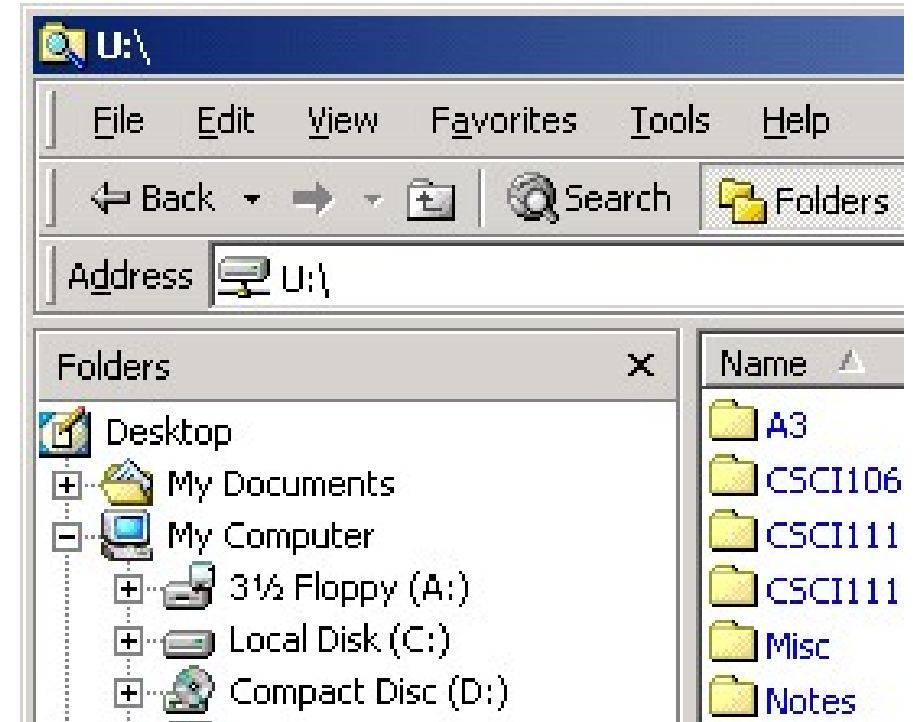
Changing directories

1. Change to one of the new directories you created by double clicking the folder name. Be careful: if you don't double click fast enough, the computer will assume you want to edit your folder name.
2. Since the folders are new, nothing is listed in either folder.
3. Change back to the root of the U: drive.

Deleting a directory

1. Remove the CSCI111 directory by highlighting the directory with your mouse by moving your cursor over the mouse and clicking the name one time. Press the "Del" key or click the "Delete" button located in the button toolbar. You also could just right-click the mouse over the highlighted folder name. From the pop-up menu, select "Delete".

Windows Explorer Screen after directory created



This is what my screen looks like when I add the Test106 directory to my U: drive.

Before leaving this part of the lab, re-create the CSCI111 directory. It will be used in future parts of this lab.

File Handling (Explorer)

Let's start a program using the Windows interface.

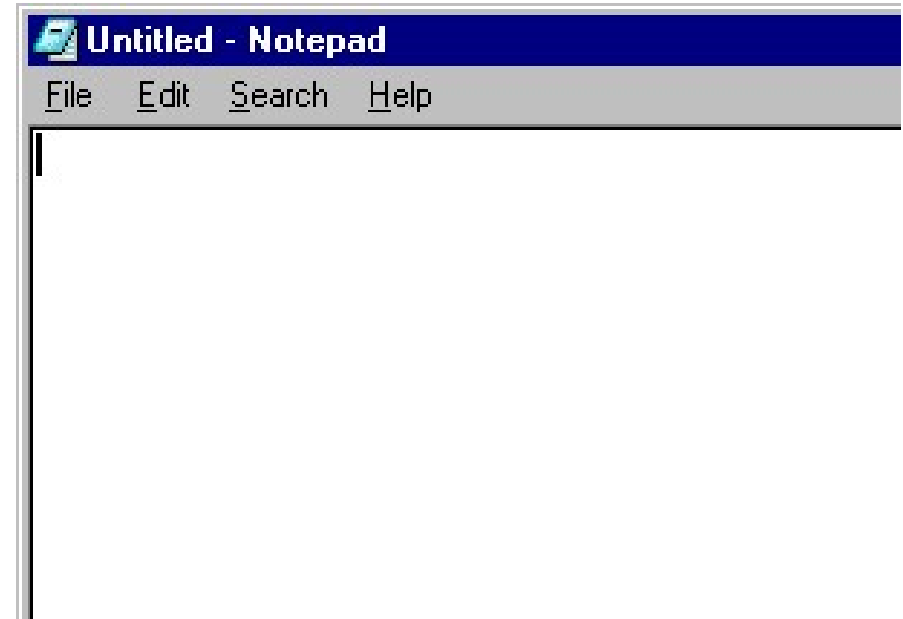
Starting a program

To make an HTML file, we need to use a text editor. Text editors are different from word processors (like Microsoft Word). Word processors store text formatting, page information, etc. A text editor saves only the text of the document, nothing else like bolding, font size, etc. In fact, only through markup languages like HTML could any formatting actually be stored with a document.

If you've never used a text editor, use the **Notepad** program. You can open this by selecting "Programs" from the Start menu, then "Accessories", then "Notepad".

Alternatively, you can use the **Wordpad** program instead of the Notepad program (my personal favorite). You can open this program by selecting "Programs" from the Start menu, then "Accessories", then "Wordpad".

Notepad Screen



This is what I saw when I opened Notepad. Notice how it looks like a blank piece of paper. When you type on it, however, it does not do any of the fancy word processing stuff that Word would do, such as word wrap. You will need to put in all carriage returns. That is, you will need to press the Enter key when you want a new line to be created.

Creating an HTML file

Creating a new file

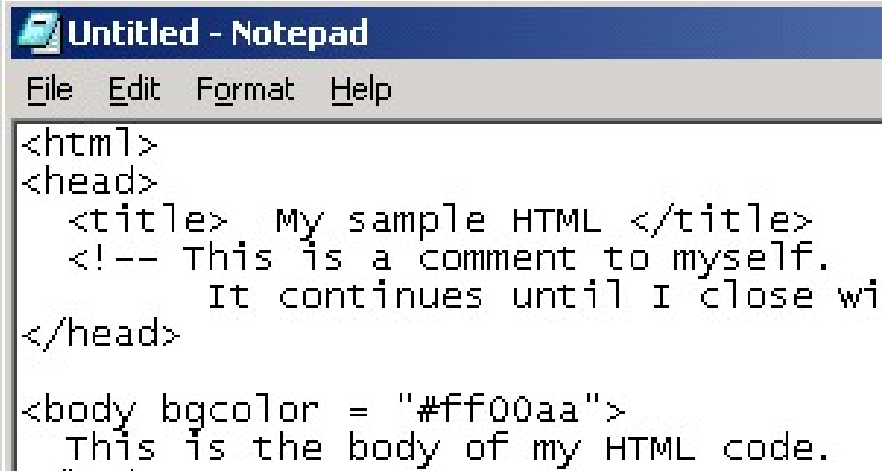
1. Now that the Notepad is open, create a new file by selecting "File" from the top menu bar, then "New". If you just opened the Notepad and started with an empty sheet of paper, nothing new will happen. If, however, you had writing in the paper, the information should disappear and you will be left with a blank sheet.
2. Type the following in the blank sheet of paper:

```
<html>
<head>
  <title> My sample HTML </title>
  <!-- This is a comment to myself.
        It continues until I close with a
greater than sign -->
</head>

<body bgcolor = "#ff00aa">
  This is the body of my HTML code.
</body>
</html>
```

3. Save this file by selecting "File" from the top menu bar, then "Save As". When presented with the mini-Explorer, change to the U: drive and then the CSCI111 directory. Select the "Save as type" value to be "Any file". Type in the name "OSSample.html" then select Save.
4. Quit Notepad by selecting "File" from the top menu bar, then "Exit" or by clicking the x on the upper right hand corner.
5. Do a listing on the U:\CSCI111 drive. You should see your new HTML file listed.

Notepad Screen with HTML code

A screenshot of the Notepad application window titled "Untitled - Notepad". The window has a menu bar with "File", "Edit", "Format", and "Help". The text area contains the following HTML code:

```
<html>
<head>
  <title> My sample HTML </title>
  <!-- This is a comment to myself.
        It continues until I close wi
</head>

<body bgcolor = "#ff00aa">
  This is the body of my HTML code.
```

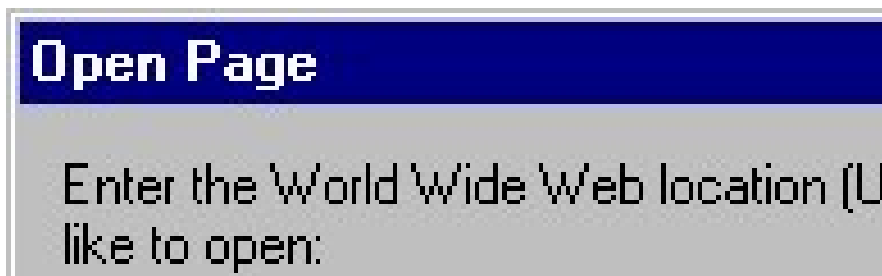
I typed the text on the left into a clean sheet of paper in Notepad. I didn't "wrap around" the text (that is, "greater than sign" is not on a separate line), but I could have. HTML doesn't care how I format things in general, as long as the text "wrapping around" is not between quotations.

Viewing an HTML file

If we want to look at the HTML file that we have created, we need to start up a web browser.

Starting a program using an icon

1. You already learned how to run a program using the Start menu and from the Explorer ("Open a file" item above). Now run the Netscape Navigator by double clicking on the icon on the desktop labeled "Netscape Navigator".
2. Once open, you can open the HTML file you created by selecting "File" from the top menu bar, then "Open Page". The screen below appears.
3. Click the "Choose File" button. This opens up a mini-explorer. Select the HTML file you created in U:\CSCI111.
4. After selecting the file in the mini-Explorer, the path information is filled into the blank space. Click the "Open" button. This will open the HTML file you just created (see diagram on right).



Netscape Screen with HTML page displayed



My display comes out a nice hot pink. Is the color just hideous to you? You can change it by adjusting the following line in your HTML file (you will need to open Notepad, then the HTML file—do not open from the Explorer):

```
<body bgcolor = "#ff00aa">
```

The values for the background color are given in concentrations of Red, Green and Blue.

- The first two characters (ff in this example) stand for the concentration of Red light
- The second two characters (00 in this example) stand for the concentration of Green light
- The last two stand for the concentration of Blue light (aa in this example).

The values assigned can range from 00 to ff (If you're not familiar with Hexadecimal notation, please ask). White is represented by "#ffffff" (all colors required at full concentration) while black is represented by "#000000".

Try changing the color, the text displayed, the title and saving the new information. Then reload the HTML file by clicking the "Reload" button. You don't need to exit the Notepad editor, but you do need to remember to save the changes you make.

More File Handling (Explorer)

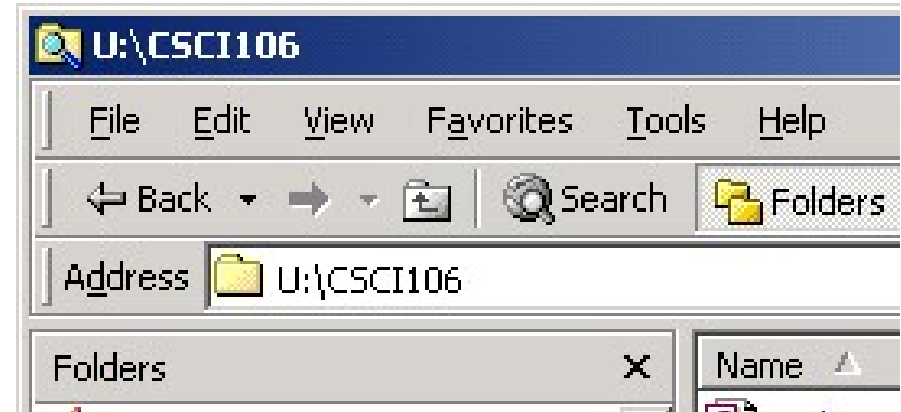
Copying a file

1. Create a copy of the OSSample.html file by highlighting it in the listing. This can be done by single clicking the name in the list. Do not double-click the file. Double clicking it means "open the file" which will cause the Web browser to open.
2. Next press the Copy button at the top of the Explorer. Alternatively, you can press the right mouse button (right click) while the mouse is over the Sample.html file. A menu appears. Select "Copy" from the list of choices.
3. Next press the Paste button at the top of the Explorer. Alternatively, you can right click anywhere other than the highlighted file. Select "Paste" from the list of choices.
4. A file should appear named "Copy of OSSample.html"

Renaming a file

1. If you want to change the name of a file (for example, our copy of the OSSample.html file), first single-click the file to rename. In this case, the file titled "Copy of OSSample.html" should be highlighted.
2. Select "File" from the top menu bar, then "Rename". Alternatively, you can right-click the highlighted file and select the "Rename" item.
3. The file name changes to allow you to type a new name for the file. Be careful, depending on how your Explorer setting are set, you may be able to change the extension of the file as well (that is, change the ".html"). Be sure only what you want to be changed is actually changed.
4. When you are finished and the name is correct, press the Enter key. If you want to cancel and return to the original name, press the Esc key.

Explorer Screen



This is what my Explorer looks like when I made my copy.

Note:

Notice that I have the extension of the files listed. The extensions are the .html or the .txt part of the file name.

If your display does not show this, you can get them to appear by doing the following:

1. selecting "View" then "Folder Options" from the Windows Explorer top menu bar.
2. Select the "View" tab and uncheck the item "Hide file extensions for known file types".
3. Click the OK button

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