Information Infrastructure II

INFO | 12 | | | - | Spring 20 | 4 - | Sections | 18530 & 225 | 9

Lecture 4 - 2014.01.27-2014.01.28

Instructor:
Mitja Hmeljak,
http://mypage.iu.edu/~mitja
mitja@indiana.edu

CGI hosting on the SolC web server/1

All 1211 students should have a Burrow user account by now, and ought to be able to login to the Burrow, e.g. ssh to username@silo.soic.indiana.edu.

...not able to create CGI hosting via the Homepage Management web interface?

- Create your CGI web hosting by running "make-cgi -y".
- The web interface would not be available for students who are not declared SolC majors (CSCI or INFO).

Note: the Burrow cluster *could* support running one's own web server.

This is just an "FYI", not required for the course.

For 1211, students this semester are not asked to run their own web servers.

CGI hosting on the SoIC web server/2

...the Burrow cluster could support running one's own web server?

- ... but this is just an "FYI", not required for the course.
- Note: for 1211, students this semester are **not** asked to run their own web servers.

We'll use burrow accounts

- with sharks permissions (which we all have by now), which
 means that we are allowed to run our own CGI scripts written
 in Python, to be executed on the main SoIC CGI server.
- We will not need separate servers/port numbers for I211 class use.

What is HTML?

Hyper Text Markup Language

These days, HTML can be considered a subset of XML that has formatting information built-in.

```
<html>
<head><title>Example</title></head>
<body>
<br/>
This is <i>italic</i> text and this is
<b>bold</b> text followed by
a <a href="http://www.google.com">
hyperlink</a>

</body>
</html>
```

Let's review some basic tags.

HTML documents have html as their outer container tag. Inside that, the main containers are head and <body>. head can include a <title for the page.

Connect to silo, cd to cgi-pub, open pico and save this as

basics.html

```
<html>
<head>
<title>TITLE OF PAGE</title>
</head>
<body>
CONTENT OF PAGE
</body>
</html>
```

```
Bold text: <b></b>
<br/>
Italicized text: <i></i>
```

New line:
 (this is its own closing tag)

```
<html>
<head>
    <title>TITLE OF PAGE</title>
</head>
<body>
    <b>BOLD</b>
    <br>
        <i>ITALIC</i>
</body>
</html>
```

Paragraphs: Notice the automatic spacing!

```
<html>
<head>
<title>TITLE OF PAGE</title>
</head>
<body>
Paragraph I
Paragraph 2
</body>
</html>
```

Links: Text for link

```
<html>
<head>
    <title>TITLE OF PAGE</title>
</head>
<body>
    <a href="http://www.gooogle.com">go to Google</a>
</body>
</html>
```

HTML Tables

Tables are commonly used to display information or for quick layout managing.

The outer container is . Each row is contained in >, and each cell is contained in .

```
Row I, Col I
 Row I, Col 2
 Row 2, Col I
 Row 2, Col 2
```

Row 1, Col 1 Row 1, Col 2 Row 2, Col 1 Row 2, Col 2

HTML Tables

```
If you want a border, add this:

Row I, Col I
Row I, Col 2

Row I, Col 2

Row C, Col I

Row C, Col I

Row C, Col I
```

```
Row 1, Col 1 Row 1, Col 2 Row 2, Col 1 Row 2, Col 2
```

Unlike Python, the indentation is not required. We use it for legibility.

HTML Reference Pages

- http://www.w3schools.com/html/
- http://www.w3schools.com/html/html examples.asp
- http://htmlhelp.com/reference/html40/olist.html

Basic UNIX

We can make a Python file executable on a Unix/Linux system.

Put this in the first line of the file:

#!/usr/bin/env python

(warning: to enter the above line in your file, do not copy/paste from these lecture notes)

Then, type this in the directory where the file is:

chmod a+x [filename.py]

Now you can run it by typing:

./[filename.py]

Basic UNIX

Running python files:

Make sure you're in the same directory as the python file and type python [filename.py]

For now, don't try to run anything with a GUI on a Burrow cluster machine.

HTML Table (Group Work (on silo.soic.indiana.edu!)

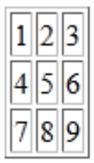
Assume you have a Python *list of lists*, where every inner list is the same length.

Example:

$$my_list = [[1,2,3],[4,5,6],[7,8,9]]$$

Write a Python 2.6 program that takes this list and writes it out to a file as an HTML table: an HTML file.

Example output:



some useful Python 2.x calls:
fileToBeOpened = open("filename", "w")
fileToBeOpened.write(some-text-string)
fileToBeOpened.close()

HTML Table (Solution)

```
my list = [[1,2,3],[4,5,6],[7,8,9]]
print my list
out = open("html table.html", "w")
out.write("<html><body>")
for sublist in my list:
  out.write("")
  for elem in sublist:
    out.write("" + str(elem) + "")
  out.write("")
out.write("</body></html>")
out.close()
print "Finished writing."
```