

CMPSCI 120 Fall 2011
Lab #6
Professor William T. Verts

Setting Up

Go to the class site and download to a folder on your computer either the file called **BurgersPC.zip** or **BurgersMac.zip**, depending on which type of computer you use, and then unpack its contents into the same folder. There is a single Python program called **burgers.py** stored inside.

Logging in and Renaming Files

As you did in the previous assignments, log in to the UNIX server. Change into the `public_html` directory and create a new folder called `cgi-bin`, setting its permissions as shown below:

1. `cd public_html` (Change into the Web nest)
2. `mkdir cgi-bin` (Create a folder for scripts)
3. `chmod a+rx cgi-bin` (Set permissions)
4. `ls -al` (View the files)

At this point you should see two files inside `public_html`, one called `cmpsci120` and the other called `cgi-bin`, both with the permissions set to `rwxr-xr-x`. The folder `cgi-bin` is a folder with a special name where we will store the `burgers.py` file.

Moving and Editing the Script

Using WinSCP or Fugu as you did in the previous assignment, copy the `burgers.py` file into the `public_html/cgi-bin` folder of your UNIX account on the `elsrv3` server. Set the permissions to `rwxr-xr-x` on the `burgers.py` file to make it runnable.

Log into your UNIX account and then change into the `public_html/cgi-bin` folder. Using emacs, edit the `burgers.py` file to replace the two occurrences of Dr. Bill's with your own name (one is in the `<TITLE>...</TITLE>` line and the other is in the `<H1>...</H1>` line). Be very careful to NOT modify any other text in the Python program, and don't change any of the prices! When you are done editing the text, exit emacs with `Ctrl`x`Ctrl`c.

For reference, the text of the script is shown starting on the next page. The parts you are to change are underlined.

```

#!/usr/bin/python

#-----
# (C) May 12, 2008 -- Dr. William T. Verts
#-----

import cgi
form = cgi.FieldStorage()

#-----

print "Content-type: text/html\n"
print ""
print "<HTML>"
print "    <HEAD>"
print "        <TITLE>Dr. Bill's On-Line Restaurant</TITLE>"
print "    </HEAD>"
print ""
print '    <BODY BGCOLOR="#00FFFF">'
print "        <H1>Dr. Bill's Restaurant</H1>"

#-----

Total = 0

if form.has_key("Sandwich"):
    Sandwich = form["Sandwich"].value.upper()
    Price = 0
    if (Sandwich == "HAMBURGER"):
        Price = 0.99
    if (Sandwich == "CHICKENBURGER"):
        Price = 1.29
    if (Sandwich == "FISHBURGER"):
        Price = 1.79
    print "<B>" + Sandwich + "</B> = $" + str(Price) + "<BR>"
    Total = Total + Price

if form.has_key("Cheese"):
    Price = 0.25
    print "Cheese = $" + str(Price) + "<BR>"
    Total = Total + Price

if form.has_key("Guacamole"):
    Price = 0.40
    print "Guacamole = $" + str(Price) + "<BR>"
    Total = Total + Price

if form.has_key("Lettuce"):
    print "Lettuce<BR>"

if form.has_key("Tomatoes"):
    print "Tomatoes<BR>"

if form.has_key("Pickles"):
    print "Pickles<BR>"

if form.has_key("Onions"):

```

```

    print "Onions<BR>"

if form.has_key("Mustard"):
    print "Mustard<BR>"

if form.has_key("Ketchup"):
    print "Ketchup<BR>"

if form.has_key("Drink"):
    Drink = form["Drink"].value.upper()
    Price = 0
    if Drink == "COLA":
        Price = 0.79
    if Drink == "TEA":
        Price = 1.19
    if Drink == "COFFEE":
        Price = 1.29
    print "<B>" + Drink + "</B> = $" + str(Price) + "<BR>"
    Total = Total + Price

if form.has_key("Sides"):
    Sides = form["Sides"].value.upper()
    Price = 0
    if Sides == "FRIES":
        Price = 0.59
    if Sides == "ONION RINGS":
        Price = 0.99
    if Sides == "COLE SLAW":
        Price = 0.49
    if Sides == "SALAD":
        Price = 1.29
    print "<B>" + Sides + "</B> = $" + str(Price) + "<BR>"
    Total = Total + Price

#-----

print "    <BR>"
print "    <B>YOUR TOTAL IS $" + str(Total) + "</B><BR>"
print "    </BODY>"
print "</HTML>"

```

Quick Test

Once you are back in UNIX, inside the `cgi-bin` folder, you can test the script manually by typing `burgers.py` at the command line. You should get an immediate response that looks like the following (with your name instead of mine):

```
Content-type: text/html
```

```
<HTML>
  <HEAD>
    <TITLE>Dr. Bill's On-Line Restaurant</TITLE>
  </HEAD>

  <BODY BGCOLOR="#00FFFF">
    <H1>Dr. Bill's Restaurant</H1>
    <BR>
    <B>YOUR TOTAL IS $0</B><BR>
  </BODY>
</HTML>
```

If you do not get this immediate response, you should check things like file permissions, whether the `burgers.py` file exists, was FTP'ed over correctly, etc. When the script is activated by our Web form, it will return a page containing a lot more code, which will be rendered on screen as a direct response to us clicking the “submit” button.

Adding the Form Code to Default.html

In the previous assignment we created a page called `Default.html`, which itself contained the code from an even earlier assignment. Change up and over into the `cmpsci120` page and start to edit that default page with `emacs`.

(Make sure there is a `
` tag between the “Welcome” text and the button you created in an earlier assignment that pointed to Dr. Bill’s Page. When viewed, the page will show the text and the button centered on separate lines.)

Position the insertion point just above the `</BODY>` tag in the existing page and hit `Enter` a couple of times to open up some blank space (do not delete any of the previous code). Type in the following code, exactly as you see it here, except that you must replace the blank in the `FORM` tag with your own username and the blank in the `<H1>` tag with your name:

```
<FORM METHOD="POST"
  ACTION="http://elsrv3.cs.umass.edu/~_____/cgi-bin/burgers.py">
  <INPUT TYPE="reset" VALUE="Reset All">
  <INPUT TYPE="submit" VALUE="Submit Your Order"><BR>

  <H1>_____ 's On-Line Restaurant</H1>
```

```

<TABLE BORDER>
  <TR>
    <TD VALIGN="TOP">
      <H2>Sandwich</H2>
      <INPUT TYPE="radio" NAME="Sandwich"
        VALUE="Hamburger" CHECKED>Hamburger<BR>
      <INPUT TYPE="radio" NAME="Sandwich"
        VALUE="Chickenburger">Chickenburger<BR>
      <INPUT TYPE="radio" NAME="Sandwich"
        VALUE="Fishburger">Fishburger<BR>
    </TD>

    <TD VALIGN="TOP">
      <H2>Extras</H2>
      <INPUT TYPE="checkbox" NAME="Cheese" >Cheese (Extra)<BR>
      <INPUT TYPE="checkbox" NAME="Guacamole">Guacamole (Extra)<BR>
      <INPUT TYPE="checkbox" NAME="Lettuce" >Lettuce<BR>
      <INPUT TYPE="checkbox" NAME="Tomatoes" >Tomatoes<BR>
      <INPUT TYPE="checkbox" NAME="Pickles" >Pickles<BR>
      <INPUT TYPE="checkbox" NAME="Onions" >Onions<BR>
      <INPUT TYPE="checkbox" NAME="Mustard" >Mustard<BR>
      <INPUT TYPE="checkbox" NAME="Ketchup" >Ketchup<BR>
    </TD>

    <TD VALIGN="TOP">
      <H2>Drink</H2>
      <INPUT TYPE="radio" NAME="Drink"
        VALUE="Water" CHECKED>Water (Free)<BR>
      <INPUT TYPE="radio" NAME="Drink"
        VALUE="Cola">Cola<BR>
      <INPUT TYPE="radio" NAME="Drink"
        VALUE="Tea">Iced Tea<BR>
      <INPUT TYPE="radio" NAME="Drink"
        VALUE="Coffee">Coffee<BR>
    </TD>

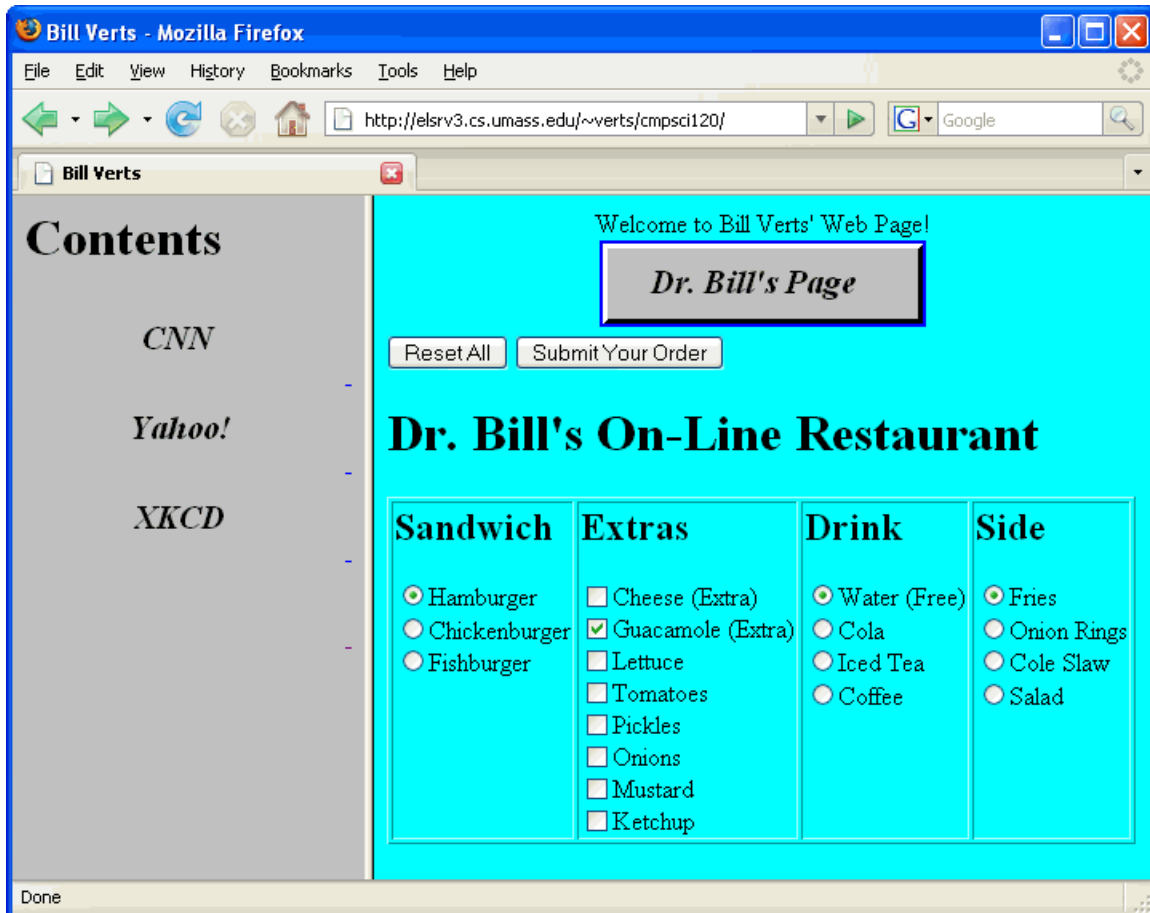
    <TD VALIGN="TOP">
      <H2>Side</H2>
      <INPUT TYPE="radio" NAME="Sides"
        VALUE="Fries" CHECKED>Fries<BR>
      <INPUT TYPE="radio" NAME="Sides"
        VALUE="Onion Rings" >Onion Rings<BR>
      <INPUT TYPE="radio" NAME="Sides"
        VALUE="Cole Slaw">Cole Slaw<BR>
      <INPUT TYPE="radio" NAME="Sides"
        VALUE="Salad">Salad<BR>
    </TD>
  </TR>
</TABLE>
</FORM>

```

Save your changes and exit emacs with `Ctrl`x`Ctrl`c.

Testing

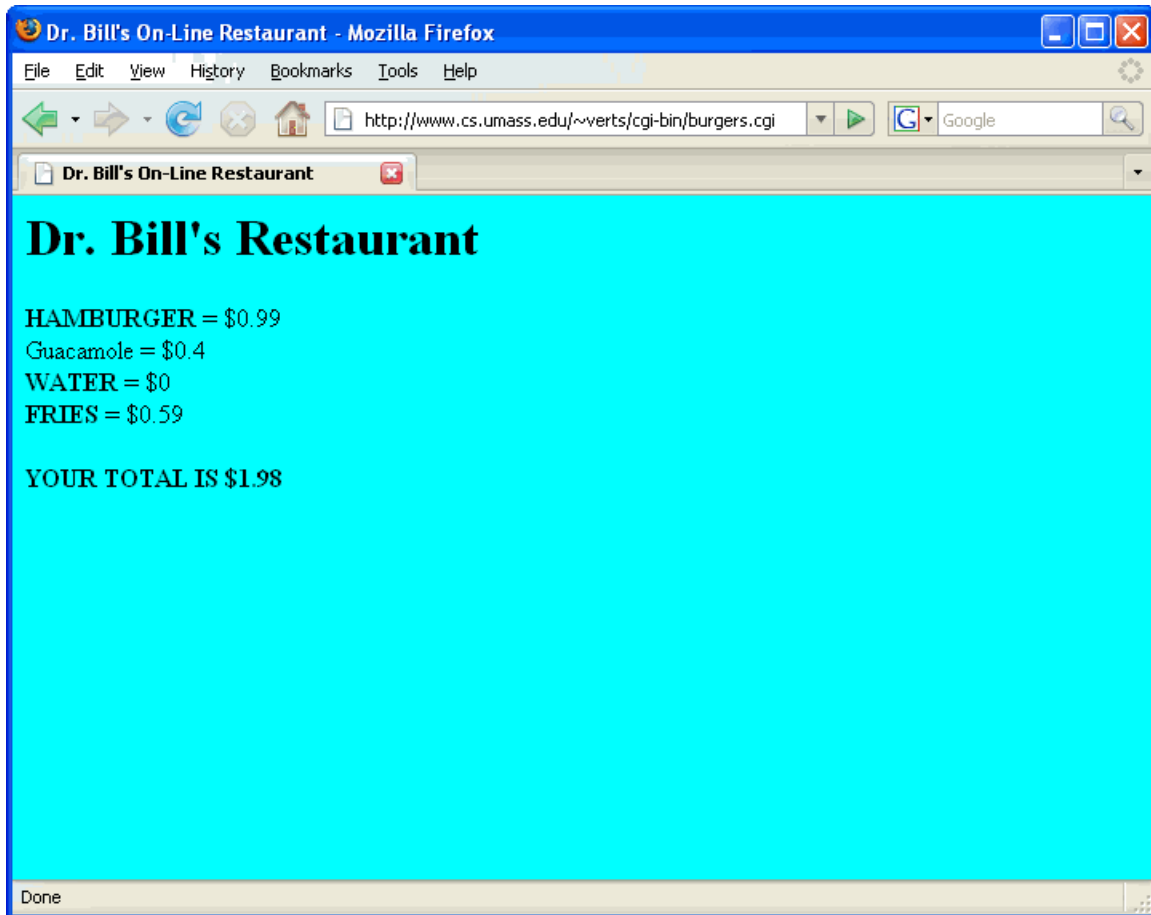
Point your browser at your regular home page. With all the changes, the appearance should be as in the following screen (Guacamole would not be checked as shown here, and your name should be in place of mine in the restaurant name and title bar of the browser):



When you select any of the given options and click the Submit Your Order button, you should get a response screen.

NOTE: Due to security issues, we do not have permission to run these scripts from off-campus. You **MUST** try this from an on-campus browser! However, I've also tried to run my scripts while connected to the OIT wireless access points, and they currently do not work from there. The scripts work fine from the computers in my office, which have a wired connection. I have a request in to our system people to see if we can fix this, but at the present time I recommend trying from a wired connection, such as in the DuBois Library (or in my office during my office hours).

Here is a correct response screen for a hamburger and fries with extra guacamole, and water to drink:



If You Get Stuck

If you miss any of the instructions, you may need to go back and fix certain things. Possible problems include omitting certain file permissions, or copying files into the wrong place. Please email me or the TA if you need help.

If you cannot get your Python script to run, use mine temporarily by changing the ACTION= section of the FORM tag to use my username instead of yours. This will help you debug your HTML code. However, **you will lose points** if you leave in the link to my page instead of changing it back to yours.

The Final Modifications

I now want to include a **Turkeyburger**, costing \$2.19, to the sandwich menu, and **relish** (free), to the extras menu. Modify the two documents appropriately. Make sure everything works correctly.

What To Turn In

When your pages are correct and visible on the Web, send an email message to **both** the TAs **and** to the **literacy@cs.umass.edu** account. The subject line must be set to the exact phrase **CMPSCI 120 ASSIGNMENT #6** and the body of the message must contain your name, your username, and your fully specified URL.