**Individual HW 1: Body Mass Index (BMI)**

(10 points) Write an HTML page called ***bmi.html*** which will contain a form. The form should have three text fields (use the *text* type for the *input* element) and one submit button, labeled “Calculate BMI”. One text field gets the weight of the person (in pounds), one text field gets the feet part of height and another gets the inches part of height.

(20 points) The form’s action URL should be a Python CGI called ***bmi.cgi***. Write this program so that it reads the values from the text fields and then calculates the BMI of a person. (I don’t endorse BMI as a measure of health, but it’s a common programmatic calculation).

If the values of the text field are numbers, then the CGI should return a page of the form

Your weight is X lbs.

Your height is Y feet Z inches. Your BMI is Result.

where X, Y and Z are the values from the text fields and Result is the result of the calculation.

Formula for calculating BMI:

BMI = (weight(lbs)\*703)/( height(in)\*height(in) )

Use the conversion: 1 feet = 12 inches

(10 points) In case the user does not provide a *number* in any one of the text fields, or enters something other than a number, your CGI page should return a web page with an error message.

(10 points) In addition to their BMI, print out which category this puts them in. <http://en.wikipedia.org/wiki/Body_mass_index#Categories>

Check http://cgi.soic.indiana.edu/~johfdunc/bmi.html for how the application should work. Take note of the decimal places in the resulting page!

**Individual HW 2: Address List**

(10 points) Create a HTML form ***address.html*** to collect people’s names and addresses. Include 5 textboxes:

1- name

2- address line 1

3- address line 2

4- city

5- zip code

Also include a submit button, a reset button, and a drop down menu with all the states in the US.

(40 points) Create ***address.cgi*** to collect and store the address data from ***address.html*** into a text file called ***address.txt*** . If the user leaves any field blank (except for address line 2), your ***address.cgi*** should display an error message and not add any data to the file. Otherwise, it should add a new row. The ***address.txt*** file should look like this:

Name, Address1, Address2, City, State, Zip

J Duncan, 901 E 10th street,,Bloomington,Indiana,47408

Jane Smith, 901 E 10th street, Box 27, Bloomington, IN, 47408

John Cooper, 105 S. Woodlawn Ave, Apt 2, Bloomington, IN 4740

…

Remember to use the “a” (append) mode to write to the text file. You should not erase previously entered data. Create the text file with the header information only first. Do not add data to the file when an error occurs.

(10 point BONUS) Modify ***address.cgi*** so that it prints out the information currently in address.txt as a nicely formatted table. Include the information just submitted if it was valid.

Check http://cgi.soic.indiana.edu/~johfdunc/address.html for how the application (without bonus) should work. After submitting an address, the new data can be seen here: <http://cgi.soic.indiana.edu/~johfdunc/address.txt>

**Submission**

Upload your programs (.py) to Oncourse under Assignments -> Assignment 6 (Individual) as ***.cgi*** and ***.html*** files. Name your files ***YourUsername\_A6\_bmi.cgi, YourUsername\_A6\_bmi.html, YourUsername\_A6\_address.cgi,*** and ***YourUsername\_A6\_address.html***

Include the following information as a comment at the top of the file you submit:

 Your name

 Your group number

Test your code on a wide range of inputs!