

Advanced Web Development and Web Scraping
Fall 2018
Assignment #6 – Python programming

1. Store your first name, last name, and the number of courses you are taking in 3 different variables. Then output a statement of the form

Mary Smith is taking 4 classes

where *Mary*, *Smith*, and *4* are stored in the 3 variables.

2. Create a list that contains the courses you are taking. Then output each course using the following format (note that the numbers are part of the output):

The courses I am taking are:

1. *CSC 315*
2. *CSC 360*
3. *CSC 450*

3. Consider the opening text from the Python tutorial (<https://docs.python.org/3/tutorial/>), provided as a string in the hw6.py file. Create a list that contains the following words: *Python*, *free*, *the*. Iterate through the list and output how many times each of these words appears in the text. Note that you are searching for any occurrence of the string, not necessary a word, so *free* will be counted even if it appears in *freely*. However, capitalization should be ignored. The easiest way to do this is to convert everything to lower case.
4. Create a Python dictionary for at least 4 courses that allows someone to look up the time of the course. For example, looking up *CSC-360* would return *MWF, 2:00 – 2:50*. Use the *input* function to prompt the user to enter a course, and either return the time the course is offered or *Course not found* if the course is not in the dictionary.

5. One of our class exercises was to create an element of dictionaries, that included the *tag*, *id*, and *text*. Create a *list* of dictionaries, to store information from the following tags:

```
<div id = "section1"> This is section 1 </div>
<div id = "information"> Additional information </div>
<h1 id = "heading">Welcome to my Homepage </h1>
```

- a) Iterate through the list and output the elements in an HTML format, as above.
- b) Use the *input* function to allow the user to enter an id, and print out the information for the corresponding element as follows:

```
tag: h
id: heading
text: Welcome to my Homepage
```

Print a message such as *There are no matching elements* if an element with the specified id is not in the dictionary.