**Homework 3 Hints**

1. opening a csv file
   * What are the three sections/parts of successfully opening a csv file
     + Specifying the path of the csv file to be opened.
     + Creating the TextIOWrapper: “with open(csvpath) as csvfile:” csvfile is the wrapper
     + Creating the reader object: csvreader = csv.reader(csvfile, delimiter=“,”)
   * Q: what is a delimiter?
   * How do you read the lines of a csvreader object? with the “next” function, as in: “headers = next(csvreader)”
     + What is the data type of the headers object in the above example? a list
   * How can you print the remaining data? with a loop over csvreader rows. See class examples.

2. Opening a file for writing

* How do you open a file for writing?
  + Specify the path of the csv file to be written.
  + Create a TextIOWrapper for writing: “with open(csvpath,‘w’) as csvfile:” csvfile is the wrapper.
  + Create the writer object: csvwriter = csv.writer(csvfile, delimiter=“,”)
* How do you write a new row in the file for writing? “csvwriter.writerow(listobject)”
* What does the “zip” function do? How do you use it? See activity.
* How can you take advantage of zip with csv writing? We can use a zipped object to write out the entire contents of the zipped object with “csvwriter.writerow**s**”

3. Dictionaries

* What is the format of a dictionary? Container that holds key and value pairs. Ex. student = {“name”:“Jane”, “years coding”:5}
* How do you create an empty dictionary? with empty curly braces {}
* How do you add a new key, value pair? Ex. student[‘last name’]=“Doe”

4. Getting maxima, minima and sum for lists that contain only numbers:

* max(listobject)
* min(listobject)
* sum(listobject)