# Take-Home Questions

- Which of the following are sequences? Iterables?
  strings, lists, tuples, dictionaries, sets, files
- How many bits does it take to define an ASCII character? Why is this significant?
- What does ord ('a') produce? What does the chr() function do?
- Name four string methods we used in the previous class and their purpose.
- What operator concatenates two strings? Replicates a string?
- What function provides the number of characters in a string?
- How do you create a new string without the last character of the original string? Without the first character? Reversed?
- If the variable x is a string, what does x.split(',') do? How about x.split()?
- Why is the following code considered sloppy?
  ```
  updates = set(open('c:/pydata/serverupdates.txt', 'r'))
  ```
- What are the two basic ways to create a list?
- What data types can a list contain? Must all items in a list be of the same type?
- In a two-dimensional list named my_lst, how do I access the third entry in the fifth row?
- What does x contain after executing the following: x = my_lst.sort()?
- What is an alias? How did we learn to prevent them?
- How would I remove the last item in a list and save it in variable y?
- What are the differences between the sort method and the sorted function?
- What does the splitlines method do? Where is it most useful?
- What is a tuple and how does it differ from a list?
- Are there any methods that work on a tuple?
- Where did we see tuples in previous classes? How were they used?
- What are the two basic purposes of sets.
- What kind of data can a set contain?
- What will this set contain: x = set([12, 3, 2, 12, 5, 2, 3, 12, 5])?
- Name two methods used with sets and what they accomplish.
- What data type is x if x = {1, 2, 3}? If x = {}?

# Take-Home Questions

- Have you discovered an alternative to the following comparison:
  x >= 50 and x <= 100? (See chained comparisons)
- If x = 0 or "" or [], is it True or False? What if x = 1 or " " or [4]?
- What is the structure and purpose of a dictionary?
- What does the len function produce when applied to a dictionary? The in operator?
- Why would you get a KeyError exception accessing a dictionary? What method will avoid this error?
- What type of data can reside in the key portion of a dictionary? In the value portion?
- For the dictionary dc1, what does dc1.keys() produce? dc1.values()? dc1.items()? See dictionary.views.py in DemoProgs.
- Review some of the differences between Python versions 2 and 3.