Python for Informatics

Assignment 3

"Looping, Searching, and Slicing"

Description:

1. Write a program called "process_numbers.py" that repeatedly reads numbers input by the user until the user types "done". After the user has entered "done", print out (i.e. *print*) the total, count, maximum, minimum, and average of the entered numbers.
2. Given the following python statement…

   avg_str = 'Average value read: 0.72903'

   Use the ***find()*** method and ***string slicing*** to extract the portion of the string after the colon character and then use the ***float()*** function to convert the extracted string into a floating point value. Your code should provide a "general" solution, meaning that the number you extract could be any floating point number (it may or may not be preceded by a space, it may or may not begin with "0", it may or may not end with "3", and its length is not known before your program executes). A generalized solution will successfully extract values such as "***0.72903",*** "***3.14159265359",*** "***2.81",*** etc.. In other words, your solution will not make any *a priori* assumptions regarding the format or content of the number, other than it being a floating point value that follows the colon character. Save your code in a file named "parse_float.py".

3. Read the Python document on string methods at this URL:

   https://docs.python.org/2/library/string.html#string-functions

   Spend some time playing with some of these methods. Note that the brackets ([]) in the documentation denote that the bracketed elements are optional.

Deliverable:

Two Python .py files, named "process_numbers.py" and "parse_float.py" respectively, submitted as attachments at our course shell assignment page. Please ensure that your full name is specified at the top of each file within a Python comment.

Submission Deadline:

Please see the course schedule in our syllabus for all assignment submission deadlines.