DAT-119 – Python 1

**Homework 5**

As always, you need to write these programs *without searching online*. You can use the textbook, the Jupyter notebooks, conversations with your colleagues and me, and the approved resources; that’s all. If you get code from anywhere besides your own brain (*especially* if it comes from any approved outside resource or from reading ahead in the book), you need to cite the source in a comment.

Also, as always, **be sure to follow the style guide**, including turning in a plan with your code. Seriously, **don’t forget to plan before you code!**

1) Write a program that takes in a string from the user. Output the string in reverse, and tell them how many characters are in it.

**Example output:**

Welcome to the backwards-word maker!

Please enter a word or sentence here: i love birds!

The word or sentence you entered was 13 characters long.

Reversed, it reads:

!sdrib evol i

2) Write a program that takes in numeric grades (whole numbers between 0 and 100, inclusive) from a user and outputs the numeric average (a decimal out to a single significant digit, e.g. 85.5). It should take in as many grades as the user wants to enter, and when the user is finished, they will enter a sentinel value that you’ve chosen and communicated to them. (-1? 101? “stop”? – all fine choices; using a numeric sentinel is easier, so only go for “stop” if you want the challenge)

It should not accept invalid grade amounts.

**Example output:**

Welcome to the grade averaging program!

You'll enter as many grades as you want averaged; when finished, enter the word "stop"

Please enter a grade between 0 and 100 or the word "stop": 80

Please enter a grade between 0 and 100 or the word "stop": 75

Please enter a grade between 0 and 100 or the word "stop": 90

Please enter a grade between 0 and 100 or the word "stop": 99

Please enter a grade between 0 and 100 or the word "stop": 101

I'm sorry, that was not a valid input. Please enter a grade between 0 and 100: 100

Please enter a grade between 0 and 100 or the word "stop": 102

I'm sorry, that was not a valid input. Please enter a grade between 0 and 100: 100

Please enter a grade between 0 and 100 or the word "stop": stop

The average of the grades you've entered is: 90.7