# Homework 5

You must complete this assignment *without searching online*. You can use our class recordings, the textbook up to the current chapter, the Jupyter notebooks, conversations with your colleagues and me, and the approved resources; that’s all. This assignment should be completed with only the techniques we’ve covered in class so far. If you get code from anywhere besides your own brain, 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. Using a loop, output the string in reverse, and tell them how many characters are in it.

**Example output:** (Green is for user input, and I removed some double-spaces.)

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:** (Green is for user input, and I removed some double-spaces.)

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": 104

I'm sorry, that was not a valid input. Please enter a grade between 0 and 100: 103

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": 79

Please enter a grade between 0 and 100 or the word "stop": -5

I'm sorry, that was not a valid input. Please enter a grade between 0 and 100: 55

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

The average of the grades you've entered is: 77.8

3) Read chapter 4. Bring your questions to class next week!