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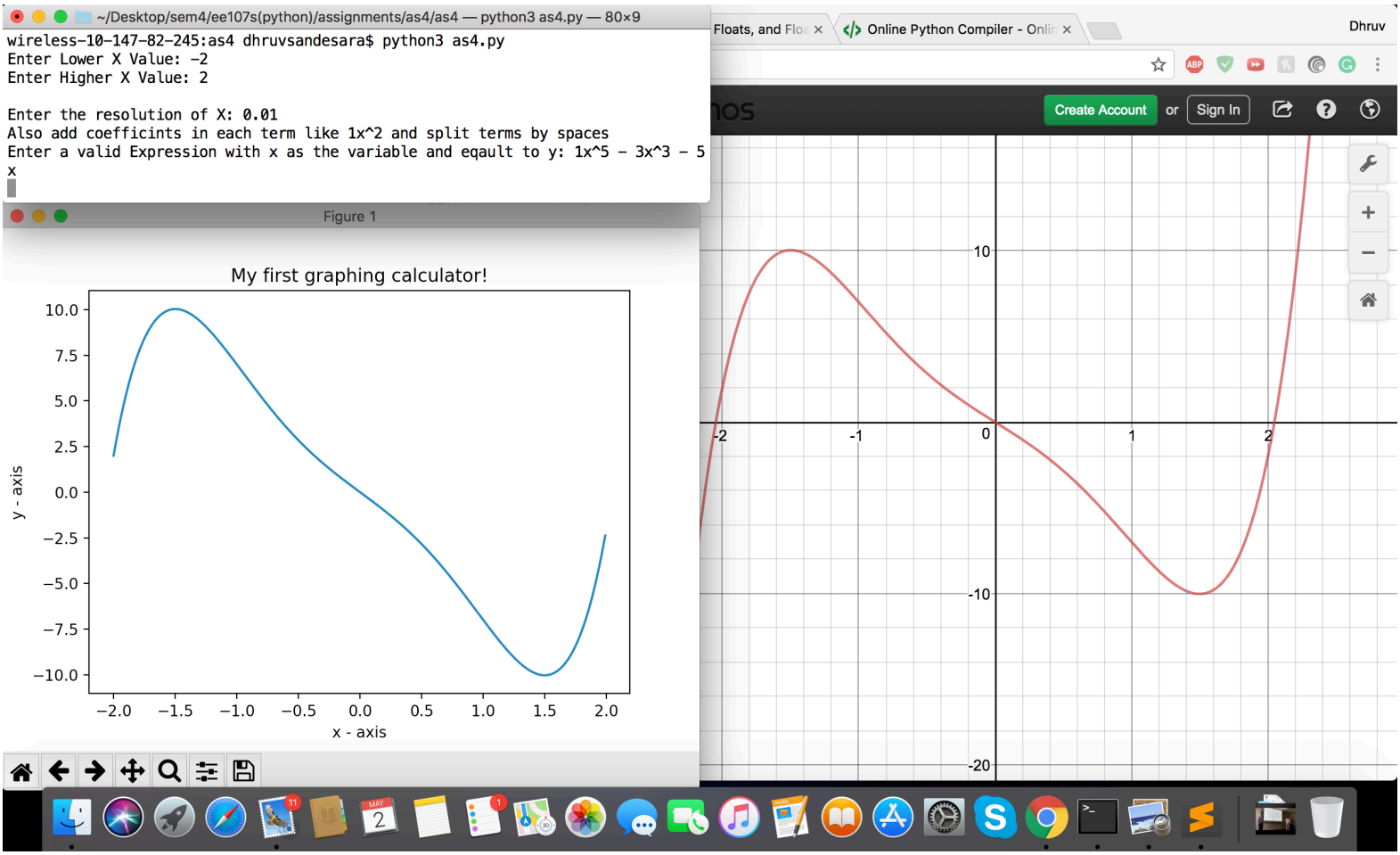
Goal: I made a graphing calculator that the example project talked about which takes in an expression as an input and outputs a graph. Also as this was one of the example project, I did not run it by the professor.

Screenshot of Working Project:



Directions on how to run the project: We open up the working directory in Terminal and then type in the command python3 as4.py. After that You input the min and the max x values you want displayed on the graph while making sure min is less than max. Next you input the resolution of x which is basically for what resolution new y values are computed. A smaller resolution gives a finer graph while higher values give jagged graphs. Next you input the expression that you want evaluated. The only constrains are that the input should be valid and each term should be separated by spaces and there must always be positive coefficient for each term and for negative coefficient separate terms by - and space. Entering this expression will display the graph with dynamic min and max y values. Also to graph the next expression, close the graph window and the program will let you input in terminal again. To quit the program just input q for the next min or max x value.

List of references: I did not use any outside sources but did use the math-plot library.

What I learned new in python: The new topics I learned were how to use the mathplot library to plot graphs in python and how importing libraries work. I also learned how lists work in array. I also had to learn how to split a string into an array by inputting a separating character. Everything else was just logical stuff that I figured out regarding how to implement parsing through the expression and computing each individual values.