Class: CS2040  
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Professor: Dr. Hasker  
Date: 3/16/2022  
Assignment: Lab 2

What did you learn from doing this lab?  
I learned a wide variety of things about ruby during this lab. I learned how to work really well with the .each method. I also learned about various types of variations on the .each method. Furthermore, I learned about getters and setters in Ruby. The last main thing I learned about was method chaining and how it works very similar to python in that you can endlessly chain functions together.  
Besides ruby fundamentals I also got a refresher on Domain design and Object-Oriented design in general. Without OOP, this lab would have been very challenging.

What did you find challenging about the lab?

One thing I found challenging was creating the reformatted output file. Specifically, having only 8 words per line was a hard thing to figure out. However using the .each\_slice method, I was able to fix this problem. Another challenge I faced was when I was making bigrams, I was able to implement it in while loop, however that was against the requirements, so after about an hour of googling, I was able to find the each\_cons() method, which does exactly what I was doing in the while loop. It was very satisfying to be able to replace 10 lines of code with a one liner.

What would you recommend changing if this lab is reused in future years?

One thing that I noticed when writing the line numbers to the output, I realized that esubmit only cares about what line the first word is in. This is most of the time ok, however when a bigram spans across two lines, it does not say (1, 2) it still should simply say 1. Clarifying in the lab writeup that you should only be worried about the line number of the first word, would be a good idea, or change it so that you have to specify both lines, when a bigram is multi-lined. This would increase the difficulty a little bit for an already difficult lab in my opinion. Maybe you could implement this as a bonus part for students that want to go above and beyond.