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8 Jan, 2022

CSE13s Winter 2022
Assignment 1: Getting Acquainted with UNIX and C
Design Document

Description:

Using provided C code (collatz.c) graph the output of the program using gnu plot with a bash script.

What I will be using:

This assignment will be using gnuplot and a bash script to execute.

Pseudo Bash script:

Commands that we will be using and workflow:

- head is going to output by default the first ten lines of the inputted file to stdout
- need to use the make file to create an executable and clean and format the provided code
- after the executable is created use the executable to run the program with correct inputs
- using the output of the program use gnuplot to plot the output
- there will be three different kinds of graphs that will be plotted
 - The length of Collatz sequences starting from $n \in \{2, \dots, 10000\}$
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 - The maximum values for Collatz sequences starting from $n \in \{2, \dots, 10000\}$
 - using line graphing function in gnuplot
 - A histogram of Collatz sequence lengths starting from $n \in \{2, \dots, 10000\}$
 - using histogram graphing function in gnuplot

Presentation of data:

In the writeup of the assignment there will be three graphs describing in depth what was done and how I decided to do certain actions. The writeup will be presented in pdf format and submitted with photos using google docs to pdf.