

Topic: Analysis, Testing

Points: 10

Due: Friday April 19 @ 10 AM. Submit to the Homework 2 D2L dropbox

Once your Project 3 application works completely and correctly, perform an analysis. Run the program 10 times for each of the three parse and seven print methods of your project on a platform of your choice.

You can use the provided *cexec* program to automate your trials. Versions for acad and PC are available. Fill in a spreadsheet with the execution times, in microseconds, for each of the 100 trials, recording parse and print times.

Your data should be well-labeled and organized in a readable manner. Your results must include the average and median time separately for each of the data input and print functions. Graphs/charts are recommended. Below your data, include the platform on which the test occurred, number of users (one if you are on your PC) and the time of day. Write a substantive statement regarding which input method and which print method is fastest, if one is clearly faster, and on what basis you drew your conclusion. Note any extenuating factors you believe may have affected your data.

Then, repeat the analysis for your top two finishers (label which ones they are).

Fill in another sheet in your workbook with these results and note platform, number of users, and time, and describe your results.

Timing program execution is imprecise on a computer that isn't dedicated to the experiments. Test your program on the machine named **mcgonagall** (this machine is used very lightly) or better still, your PC.

- You must ssh to mcgonagall from acad if off campus.

mcgonagall is another Unix/Linux box that is lightly used and therefore more likely to produce dependable results. It can only be reached directly on campus or via VPN. But you can get to it once logged in on acad by issuing:

```
ssh mcgonagall
```

The file system that you use on acad is replicated on mcgonagall.

The cexec automation example will be demonstrated in class.