Khoi Nguyen
804993073

Lab 1C Report

Test Number	Simpsh	Bash/dash
1	./simpsh --profile --creat --append --rdwr i.txt --creat --wronly e.txt --pipe --command 0 0 1 echo lol --command 0 3 1 factor 100 --command 2 0 1 cat --creat --wronly o.txt --command 0 4 1 wc -l > t1.txt;	echo "lol" > i.txt | factor 100 >> i.txt | wc -l < i.txt > o.txt
2	./simpsh --profile --creat --append --rdwr o.txt --creat --wronly e.txt --pipe --pipe --command 0 3 1 echo cs 111 --command 2 0 1 wc -c --command 0 0 1 date > t2.txt	echo "cs 111" | wc -c > o.txt | date >> o.txt | wc -l < o.txt > line.txt
3	./simpsh --profile --creat --rdwr o.txt --creat --wronly err.txt --pipe --pipe --pipe --command 0 3 1 ls --command 2 5 1 sort --command 4 7 1 tr [:lower:] [:upper:] --command 6 0 1 grep '8' > t3.txt	ls | sort | tr [:lower:] [:upper:] | grep '8' > o.txt

Performance

Simpsh	Bash	Dash
User | Sys 0m0.001s | 0m0.001s 0m0.002s | 0m0.001s 0m0.000s | 0m0.002s Avg: .0010s | .0013s	User | Sys 0m0.001s | 0m0.005s 0m0.000s | 0m0.005s 0m0.001s | 0m0.004s Avg: .0007s | .0047s	User | Sys 0.00s | 0.00s 0.00s | 0.00s 0.00s | 0.00s Avg: 0.00s | 0.00s
User | Sys 0m0.002s | 0m0.001s 0m0.000s | 0m0.002s 0m0.000s | 0m0.002s Avg:	User | Sys 0m0.001s | 0m0.006s 0m0.001s | 0m0.006s 0m0.002s | 0m0.004s Avg:	User | Sys 0.00s | 0.00s 0.00s | 0.00s 0.00s | 0.00s Avg:

.0007s | .0017s	.0013s | .0053s	0.00s | 0.00s
User | Sys 0m0.000s | 0m0.003s 0m0.003s | 0m0.000s 0m0.002s | 0m0.001s Avg: .0017s | .0013s	User | Sys 0m0.003s | 0m0.007s 0m0.001s | 0m0.008s 0m0.003s | 0m0.006s Avg: .00023s | .0070s	User | Sys 0.00s | 0.00s 0.00s | 0.00s 0.00s | 0.00s Avg: 0.00s | 0.00s

Conclusion:

Using dash, I was unable to get higher precision for timing so according to the data i have collected, dash provides the smallest average user and system data, making dash the fastest shell out of the three. Next after that would be the simpleton shell I have created. This shell almost always takes 50% or less time than than the bash shell. The exception for this is test 1 where the simpleton shell take .0003 seconds on average of user time longer than the bash shell. However for the most part, using three different test cases,