CSc 3320: Systems Programming

Spring 2021

Homework

3: Total points 100

Submission instructions:

1. Create a Google doc for each homework assignment submission.
2. Start your responses from page 2 of the document and copy these instructions on page 1.
3. Fill in your name, campus ID and panther # in the fields provided. If this information is missing in your document TWO POINTS WILL BE DEDUCTED per submission.
4. Keep this page 1 intact on all your submissions. If this *submissions instructions* page is missing in your submission TWO POINTS WILL BE DEDUCTED per submission.
5. Each homework will typically have 2-3 PARTS, where each PART focuses on specific topic(s).
6. Start your responses to each PART on a new page.
7. If you are being asked to write code copy the code into a separate txt file and submit that as well.
8. If you are being asked to test code or run specific commands or scripts, provide the evidence of your outputs through a screenshot and copy the same into the document.
9. Upon completion, download a .PDF version of the document and submit the same.

Full Name: Tracy Michaels

Campus ID: tmichaels1

Panther #: 002430918

10 pts for the neatness factor of your presentation.

PART 1: 30pts

1. For each command tryout at least one example provided in **Chapter 3** of the Unix textbook. Feel free to use your own example. Show the screenshot for each command's output. Present your output in a tabular form with column 1 as index (1,2,3..), second column as the command, third as the usage, fourth as the screenshot of the output. You can just show a small snapshot for the output -- we do not need the entire screen's image.

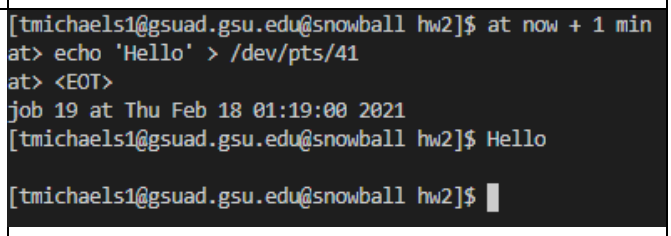
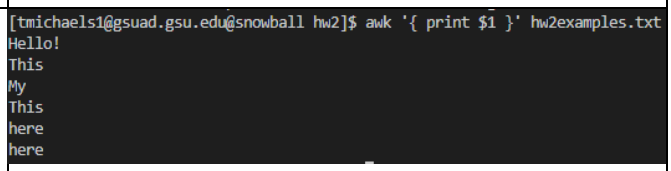
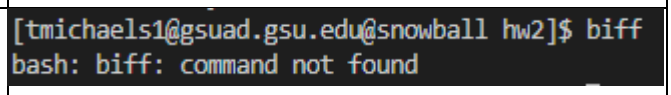
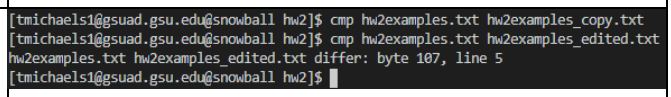
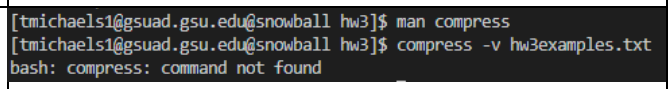
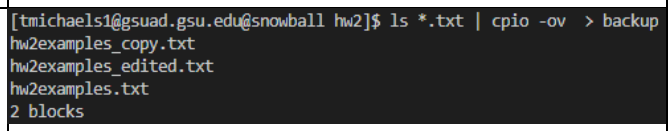
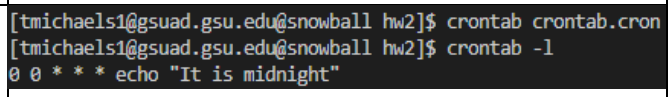
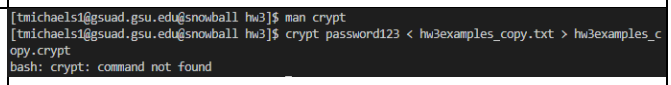
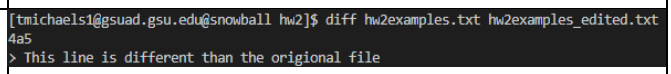
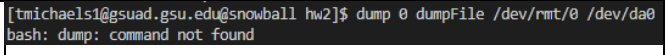
Part II : 30pts

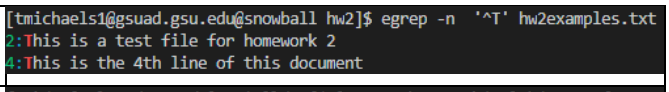
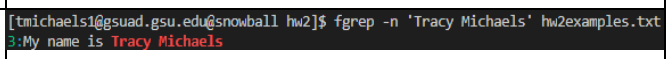
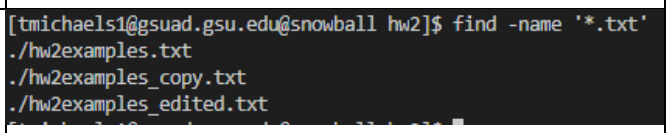
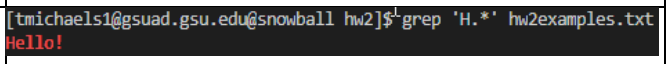
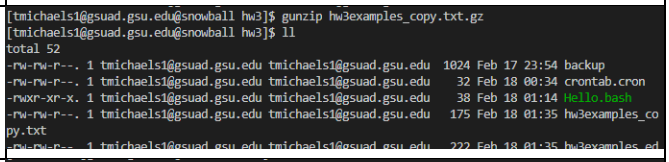
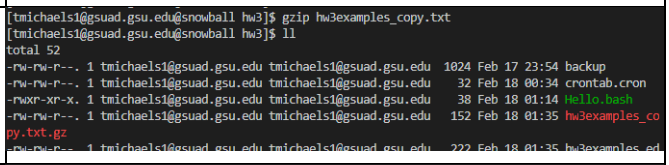
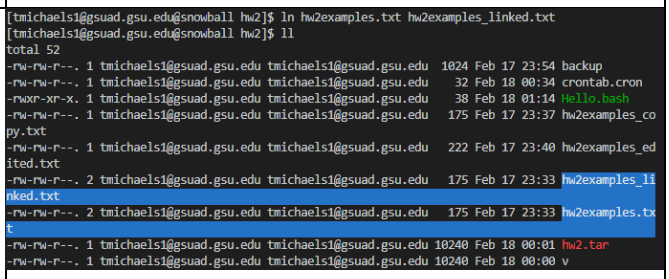
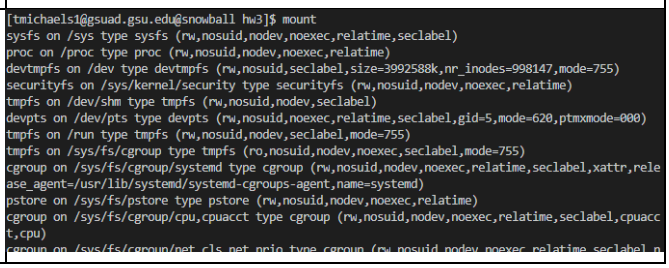
2. For each command tryout at least one example provided in **Chapter 4** of the Unix textbook. Feel free to use your own example. Show the screenshot for each command's output. Present your output in a tabular form with column 1 as index (1,2,3..), second column as the command, third as the usage, fourth as the screenshot of the output. You can just show a small snapshot for the output -- we do not need the entire screen's image.

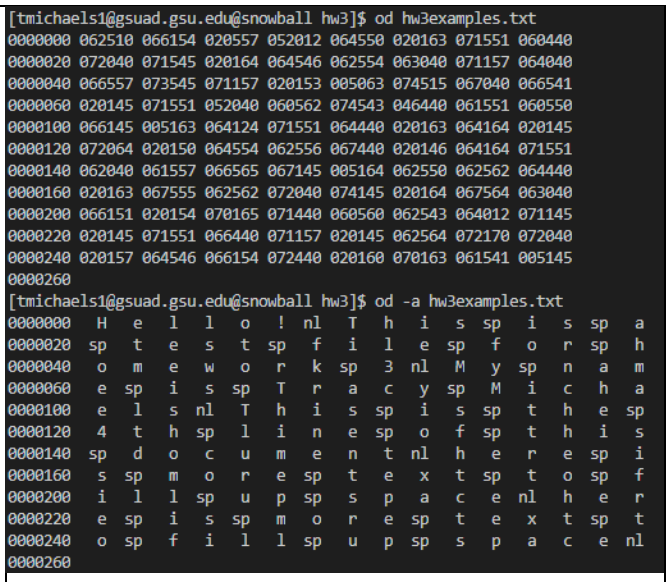
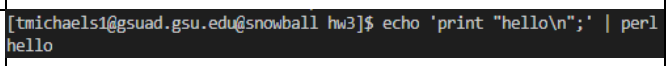
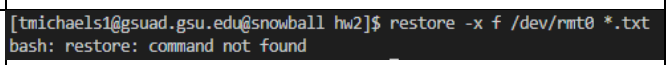
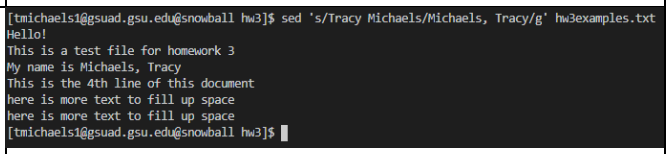
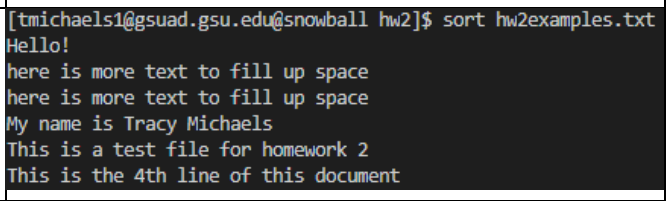
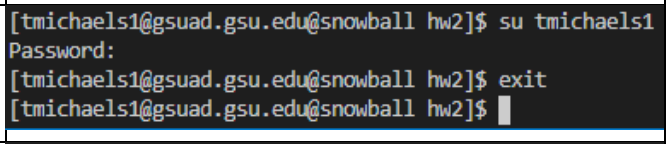
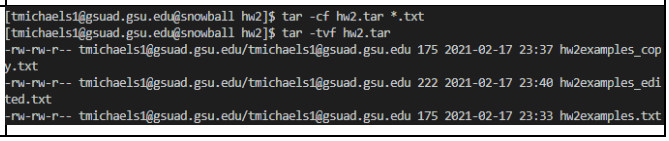
Part III : 30pts

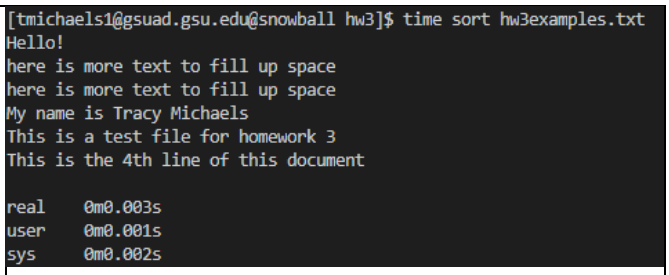
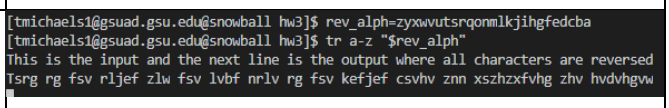
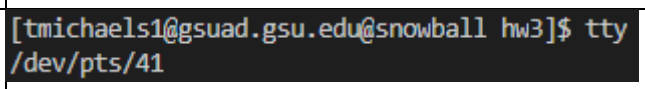
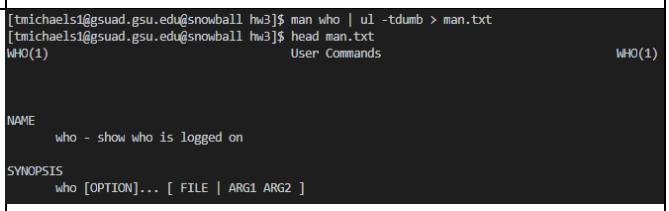
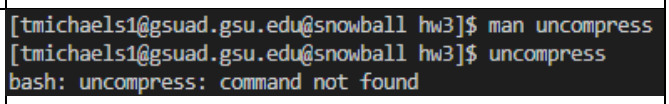
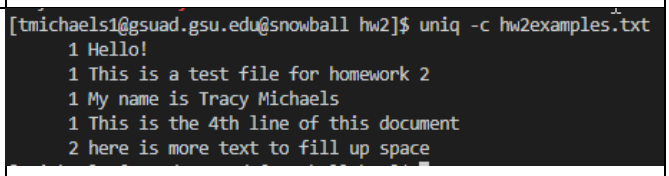
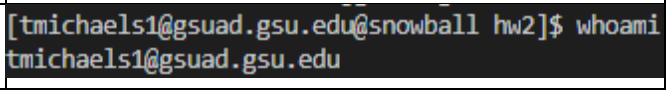
3. For each command tryout at least one example provided in **Chapter 5** of the Unix textbook. Feel free to use your own example. Show the screenshot for each command's output. Present your output in a tabular form with column 1 as index (1,2,3..), second column as the command, third as the usage, fourth as the screenshot of the output. You can just show a small snapshot for the output -- we do not need the entire screen's image.

PART 1: 30pts

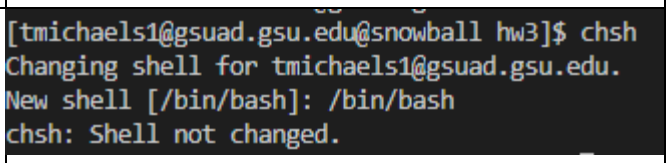
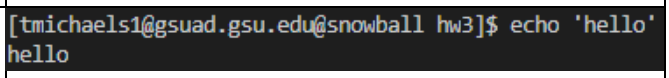
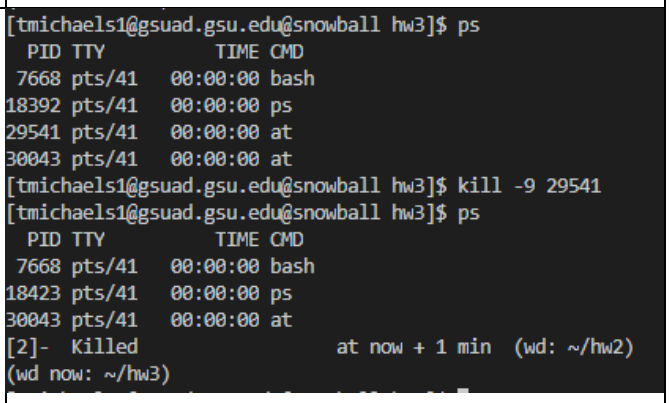
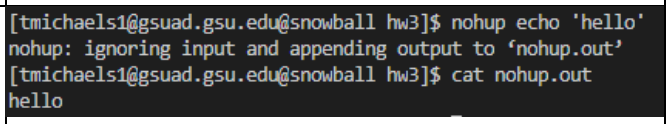
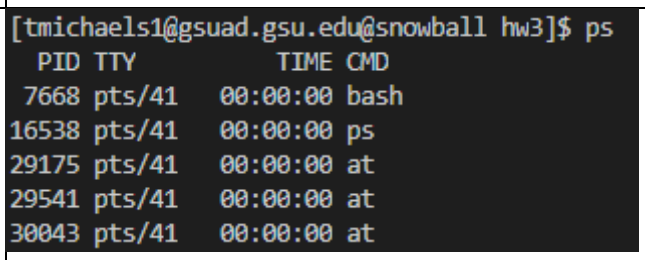
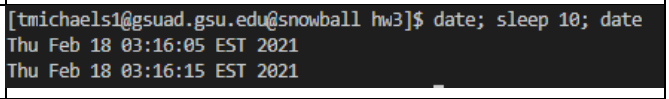
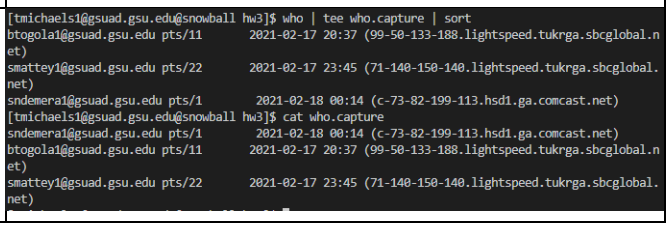
	Utility	Usage	Screenshot
1	at	Schedule a one time commands or script	
2	awk	Text processing that scans lines of an inputs and performs actions on every matching like based on defined criteria	
3	biff	Enable and disable instant mail notifications (not installed)	
4	cmp	Compares two files for equality, if they're exactly the same it returns 0 and displays nothing and if they're different returns 1 and displays first occurrence of deviation	
5	compress	Replaces file with a compressed version and appends a .Z to the end of the file name (I can read the man page for this utility but when I try to use it I get a command not found error	
6	cpio	Allows you to create archive files from files or directories in a single backup volume; useful for small quantities of data	
7	crontab	Creates a schedule for which a series of jobs are to be executed periodically	
8	crypt	Creates a key-encoded version of a text file (command cannot be found though I had no trouble reading the man page for it)	
9	diff	Compares two files and displays the differences between them	
10	dump	Creates a dumpFile from a specified file system as a way to perform a for of back up (dump doesn't seem to be installed on the server and since I do not have sudo privileges I am unable to install it)	

11	egrep	Search for a pattern using extended regular expressions	
12	fgrep	Search for a pattern using a fixed string	
13	find	Recursively searches through file path to find files that match a pattern for either the name, permission flags, file type, …etc depending on options passed	
14	grep	Search for a pattern using basic regex	
15	gunzip	Uncompresses a file that was created with either gzip or compress utilities	
16	gzip	Replaces file with its compressed version and appends a .gz to the end of the filename	
17	ln	Creates hard and symbolic links between files	
18	mount	Allows you to mount a file system. Passing no arguments displays list of currently mounted devices.	

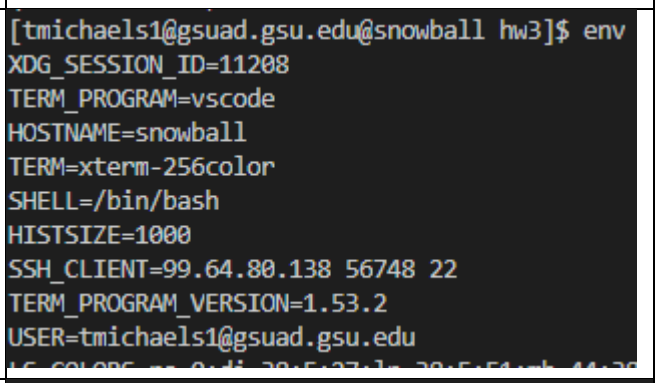
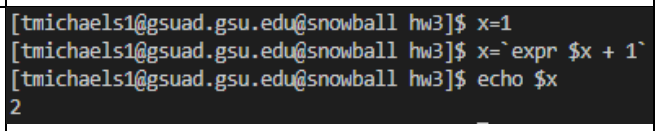
19	od	Stands for Octal Dump, allows you to look at the raw file contents	
20	perl	Stands for Practical Extraction Report Language. Originally used for scanning files and extracting information, but has grown into a general-purpose programming language	
21	restore	Restore a set of files from a previous dump file. (as I was unable to create a dump file I am unable to use this utility as well)	
22	sed	This utility is a stream editor which scans one or more files and performs an editing action on all of the lines that match a regex pattern	
23	sort	Sorts lines in input in ascending or descending order based on options passed to it	
24	su	Stands for substitute user. Allows you to run commands with a substitute user and group id, with no arguments it defaults to root	
25	tar	Creates and accesses tar archive files	

26	time	Reports the execution time of any command	
27	tr	Maps the character set of the input to that of the output	
28	tty	Itentifies the name of your teminal and displays pathname	
29	ul	Removes underlining from characters so it displays properly in the terminal	
30	umount	Unmounts a previously mounted file system (unable to perform because of permissions)	
31	uncompress	Uncompress files compressed using the compress command (wasn't able to use the compress command)	
32	uniq	Displays contents of file with all repeated lines collapsed into one line	
33	whoami	Displays users name	

Part II : 30pts

	Utility	Usage	Screenshot
1	chsh	Allows you to change the default login shell	
2	echo	Displays arguments of this utility to the standard output	
3	kill	Terminates a process	
4	nohup	Makes commands immune to hangup and terminate signals	
5	ps	Lists process status information within current shell	
6	sleep	Causes shell to sleep for a specified number of seconds	
7	tee	Copes its standard input to the specified files and to its standard output	

Part III : 30pts

	Utility	Usage	Screenshot
1	env	Assigns values to specified environment variables	
2	expr	Evaluates an expression and sends the result to the standard output	
3	test	Returns a 0 exit code if expression evaluates to true and a nonzero exit status if it evaluates to false