

SM Lab5

Task 1

a. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ grep -n battery battery-life_amazon_kindle.txt.data

1: After I plugged it in to my USB hub on my computer to charge the battery the charging cord design is very clever !

2: After you have paged thru a 500, page book one, page, at, a, time to get from Chapter 2 to Chapter 15, see how excited you are about a low battery and all the time it took to get there !

4: After 1 year you pay \$80 plus shipping to send the device to Amazon and have the Kindle REPLACED, not the battery changed out .

5: The fact that Kindle 2 has no SD card capability and the battery is not user, serviceable is not an issue with me .

b. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ grep -i -e "good" -e "bad" -e "worst" battery-life_amazon_kindle.txt.data

Battery life is very good, even with the wireless on constantly .

Good thing the nook boasts a removable back cover, because the store clerk had to take it off to remove the battery for a hard restart .

, Battery life seems a bit longer but the K1 was good too .

c. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ grep "amazing.&" battery-life_amazon_kindle.txt.data

And the long battery life is amazing !

The battery life seems amazing .

d. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ grep -n [0-9] battery-life_amazon_kindle.txt.data hotel service.data

battery-life_amazon_kindle.txt.data:2: After you have paged thru a 500, page book one, page, at, a, time to get from Chapter 2 to Chapter 15, see how excited you are about a low battery and all the time it took to get there !

battery-life_amazon_kindle.txt.data:3: NO USER REPLACEABLE BATTERY, , Unless you buy the extended warranty for \$65 .

hotel service.data:34: It's rated 4, stars, but I also stayed at an equivalently rated Marriott while in London, and a 3, star Holiday Inn Express in Scotland, and the service and rooms were much better at the other locations .

hotel service.data:36: Excellent location next to Gloucester Road tube station that has 3 train lines making getting around London really easy .

e. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm labv4\$ grep -o "[^a-zA-Z0-9\n]" hotel\ service.data

battery-life_amazon_kindle.txt.data

battery-life_amazon_kindle.txt.data:'

Battery-life_amazon_kindle.txt.data:,

battery-life_amazon_kindle.txt.data:\$

hotel service.data:.

hotel service.data:!

f. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ grep -ic -e "good" -e "bad" -e "worst"

battery-life_amazon_kindle.txt.data

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g. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ cat battery-life_amazon_kindle.txt.data | tr -s '[:punct:][:space:]' '\n' | sort | uniq -ci | sort -n | tail -1

147 the

h. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ grep -ioe "good" -ioe "bad" -ioe "better" -ioe "worst"

battery-life_amazon_kindle.txt.data | sort -n | uniq -ic

3 better

3 good

j. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ grep -ice "service" -ice "services" hotel\ service.data

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k. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm lab4\$ grep -oe "good" -oe "bad" -oe "better" -oe "worst" hotel\ service.data | sort | uniq -c | head -1

70 good

Task 2

**a. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm
lab4\$ grep -oe "good" -oe "bad" -oe "worst" hotel\ service.data
battery-life_amazon_kindle.txt.data | sort | uniq -c
2 battery-life_amazon_kindle.txt.data:good
1 hotel service.data:bad
70 hotel service.data:good**

**b. akshala@akshala-HP-Laptop-15-bs1xx:~/Documents/IIITD/sm
lab4\$ df | sort -nr**

udev	4011284	0	4011284	0%	/dev
tmpfs	808304	1996	806308	1%	/run
tmpfs	808300	56	808244	1%	/run/user/1000
tmpfs	808300	16	808284	1%	/run/user/121
tmpfs	5120	4	5116	1%	/run/lock
tmpfs	4041512	72908	3968604	2%	/dev/shm
tmpfs	4041512	0	4041512	0%	/sys/fs/cgroup
Filesystem	1K-blocks	Used	Available	Use%	Mounted on
/dev/sda5	463257400	8944116	430711416	3%	/
/dev/sda2	98304	29082	69222	30%	/boot/efi
/dev/loop9	2304	2304	0	100%	/snap/gnome-calculator/238
/dev/loop8	14848	14848	0	100%	/snap/gnome-logs/37
/dev/loop7	13312	13312	0	100%	/snap/gnome-characters/117
/dev/loop6	3840	3840	0	100%	/snap/gnome-system-monitor/54
/dev/loop5	2432	2432	0	100%	/snap/gnome-calculator/199
/dev/loop4	13312	13312	0	100%	/snap/gnome-characters/124
/dev/loop3	14848	14848	0	100%	/snap/gnome-logs/43
/dev/loop2	43264	43264	0	100%	/snap/gtk-common-themes/701

/dev/loop16	90112	90112	0	100%	/snap/core/5328
/dev/loop15	2304	2304	0	100%	/snap/gnome-calculator/222
/dev/loop14	14848	14848	0	100%	/snap/gnome-logs/40
/dev/loop13	35584	35584	0	100%	
/snap/gtk-common-themes/319					
/dev/loop12	89088	89088	0	100%	/snap/core/4917
/dev/loop1	144384	144384	0	100%	
/snap/gnome-3-26-1604/70					
/dev/loop11	3840	3840	0	100%	/snap/gnome-system-monitor/57
/dev/loop10	13312	13312	0	100%	
/snap/gnome-characters/103					
/dev/loop0	3840	3840	0	100%	/snap/gnome-system-monitor/51

Task 3

Advantages of grep commands-

1. Grep is used for searching and finding files.
2. Grep can be used to count the number of lines in a file.
3. Grep can be used to find the frequency of a word occurring in a text file.
4. Grep can be used to search a string recursively in all the directories.
5. A given file can be searched for a string using grep.
6. Patterns can be seen very easily using grep. Line numbers can also be printed alongside using grep which makes it even easier to recognise patterns.

Limitations of grep commands-

1. It is difficult to find the most frequently occurring word in a file using grep.
2. Grep command can be used properly only along with piping. Many tasks cannot be performed just by using grep.

Advantages of pipe commands-

1. Multiple operations can be performed in a single line. Work can be done more quickly. For `abc | def` the output of `abc` is the input for `def`. It transfers the result of one command to another.
2. It is a very powerful tool.
3. It allows simplicity and better understanding.
4. Many tasks can be performed using piping commands which cannot be performed just by using the commands separately.

Limitations of pipe command-

1. It is difficult to handle two or more files simultaneously. We can not use piping commands for comparing the output of commands for two distinct files.
2. Sometimes piping commands can get very complicated.