Section: A Roll no: 422141

1)grep:

1>grep -c pattern filename~ this prints only a count of the lines that match the pattern(words,nums,charcs).

2>grep -h pattern filename ~ display the matched lines, but do not display the filenames . 3>grep -i pattern filename ~ ignores case for matching.

4>grep -n pattern filename ~ display the matched lines and their line numbers. 5>grep -v pattern filename ~ this prints out all the lines that do not matches the pattern.

```
akshaya@Akshayas-MacBook-Pro ~ % cat > new.txt
unix lab
roll no: 422141
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unix lab
roll no: 422141
section: A
akshaya@Akshayas-MacBook-Pro ~ % grep -c lines new.txt
akshaya@Akshayas-MacBook-Pro ~ % grep -c lines file.txt
akshaya@Akshayas-MacBook-Pro ~ % cat > newfile.txt
lines
lines
new lines
akshaya@Akshayas-MacBook-Pro ~ % grep -c lines newfile.txt
akshaya@Akshayas-MacBook-Pro ~ % grep -h lines newfile.txt
lines
lines
new lines
akshaya@Akshayas-MacBook-Pro ~ % grep -i lines newfile.txt
lines
lines
new lines
akshaya@Akshayas-MacBook-Pro ~ % grep -n lines newfile.txt
1:lines
2:lines
3:new lines
akshaya@Akshayas-MacBook-Pro ~ % grep -v lines newfile.txt
akshaya@Akshayas-MacBook-Pro ~ % cat >> newfile.txt
unix lab
os
akshaya@Akshayas-MacBook-Pro ~ % grep -v lines newfile.txt
unix lab
os
akshaya@Akshayas-MacBook-Pro ~ %
```

2. uniq command:

1>uniq -c filename~ it tells how many times a line was repeated by displaying a number asaprefix with the line

2>uniq -d filename ~ it only prints the repeated lines and not the lines which arent repeated

3>uniq -f N - ~ -skip fields(N): it allows you to skip N fields (a field is a group of characters, delimited by whitespace) of a line before determining the uniqueness of a line

. 4>uniq -i - \sim -ignore case :By default , comparisons done are case sensitive but with option(i) case insensitive comparisons can be made

5>uniq -s N - ~ skip chars(N): it doesn't compare the first N characters of each line while determining

uniqueness.this is like the -f option but it skips the individual characters rather thanfields

6>uniq -u ~ -unique : it allows you to print only unique lines

7>uniq -z ~ -zero terminated: it will make a line end with 0 bytes(NULL),instead of a newline

8>uniq -w N ~ check chars(N) ~iit only compares N characters in line x`

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Anthonographic reference for the collection N coll r resulted

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special limit

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this is now lime

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3)tr command

1>cat filename | tr [a-z] [A-Z] ~ converts lower case characters to upper case characters

2>cat filename |tr [:lower:] [:upper:] ~ converts lower case characters to upper case characters 3>echo "sentence" | tr [:space:] '\t' ~ translates white-space characters to tabs 4>\$ tr "{}" "()" newfile.txt~ translates braces into parenthesis.

5>echo "sentence" | tr -s " "~ to squeeze a sequence of repetitive characters using -s option 6>tr -s " " <<< "sentence" ~to squeeze a sequence of repetitive characters using -s optionbut using a string here

7>echo "sentence" | tr -d W~ to delete specified characters using -d option. 8>tr -d W <<< "sentence" ~ to delete specified characters using -d option using a string here. 9>echo "sentence containing digits" | tr -d [:digit:]~to remove all the digits from string. 10>tr -d [:digit:] <<< "sentence containing digits" ~ to remove all the digits from string . 11>echo "sentence containing digits" | tr -cd [:digit:]~complement the sets using -c option . 12>tr -cd [:digit:] <<< "sentence containing digits" ~ complement the sets using -c option

```
welcome to unix lab akshaya@Akshayas-MacBook-Pro ~ % tr '[' '[]' < file3.txt > file4.txtakshaya@Akshayas-MacBook-Pro ~ % tr '[' '[]' < file3.txt > file4.txtakshaya@Akshayas-MacBook-Pro ~
```

4)pr command:

1>pr -k filename ~ we can print the content in k columns.

2>pr -d filename ~ to double paces input,reduces clutter -d option is used.

3>pr -n filename \sim to provide the number lines which helpps in debugging the code -noption is used .4>pr - -help \sim it gives the detail of all options of pr.

5>pr - -version ~ to print the version number of command pr

output:

akshaya@Akshayas-MacBook-Pro ~ % Is -I example.txt

-rw-r--r-- 1 akshaya staff 48 Feb 18 21:53 example.txt akshaya@Akshayas-MacBook-Pro ~ % echo "This is line 1. This is line 2.This is line 3." > example.txt fold -w 20 example.txt

This is line 1. This is line 2. This is line 2. This is line 3. akshaya@Akshayas-MacBook-Pro ~ % awk '1; {print ""}' example.txtThis is line 1. This is line 2.

This is line 3.

5)paste command:

1>paste file1 file2 file 3 ~ without any option paste merges the files in parallel. The pastecommand writes corresponding lines from the files with tab as a deliminator on the terminal .

2>paste -d "|" file1 file2 file3 ~ it prints even if any character is specified. 3>paste -d "|,"

file1 file2 file3 ~ it prints even multi characters are specified.

4>paste -s file1 file2 file3 AND paste -s -d ":" file1 file2 file3 ~ we can merge the file in sequentially manner using the -s option. It reads all the lines from a single file and mergesall these lines into a single line with each line separated by tab . and these single lines are separated by newline.

5>cat file1 | paste - - (or) paste - - - < file~ the paste command can also be used to merge Nconsecutive lines from file into a single line.here N can be specified by specifying number hyphens(-) after paste.

6>cut -d " " -f 1 file1 | file2 file3 ~cut command is used with -f option for cutting out first field of state and output is piipelined with paste command having one filename and insteadof second file name hyphen is specified (if hyphen is not specified the input fromshell is not pasted)

7>cut -d " " -f 1 file1 | paste - file2 ~ ordering of pasting can be changed by altering thelocation of hyphen

```
output:
akshaya@Akshayas-MacBook-Pro ~ % clear
akshaya@Akshayas-MacBook-Pro ~ % cat > file6.txt a
С
d
е
f
g
h
akshaya@Akshayas-MacBook-Pro ~ % cat > file7.txt A
В
С
D
Ε
F
G
Н%
            akshaya@Akshayas-MacBook-Pro ~ % cat number cat: number: No such file or
directory akshaya@Akshayas-MacBook-Pro ~ % cat > number 1
2
3
4
5
6
7
8%
            akshaya@Akshayas-MacBook-Pro ~ % paste number file6.txtfile7.txt
1 a A
2 b B
3 c C
4 d D
5 e E
6fF
7 g G
8 h H
akshaya@Akshayas-MacBook-Pro ~ % paste -d "|," number file6.txtfile7.txt
1|a,A
```

```
2|b,B
3|c,C
4|d,D
5le,E
6|f,F
7|g,G
8|h,H
akshaya@Akshayas-MacBook-Pro ~ % paste -d "|," number file6.txtfile7.txt
1|a,A
2|b,B
3|c,C
4|d,D
5|e,E
6|f,F
7|g,G
8|h,H
akshaya@Akshayas-MacBook-Pro ~ % paste -s "|," number file6.txtfile7.txt
paste: |,: No such file or directory
12345678abch
                % akshaya@Akshayas-MacBook-Pro~%paste < file6.txt
usage: paste [-s] [-d delimiters] file ... akshaya@Akshayas-MacBook-Pro ~ % cat file7.txt | paste
usage: paste [-s] [-d delimiters] file ... akshaya@Akshayas-MacBook-Pro ~ % cat file7.txt
Α
В
С
D
Ε
F
G
Н%
             akshaya@Akshayas-MacBook-Pro ~ % cat file7.txt | paste--A B
CD
\mathsf{E}\,\mathsf{F}
GH
akshaya@Akshayas-MacBook-Pro ~ % cat file7.txt | paste - - A B
CD
ΕF
GH
akshaya@Akshayas-MacBook-Pro ~ % cut -d " " -f 1 file7.txt | pastenumber
1
2
3
4
5
6
7
akshaya@Akshayas-MacBook-Pro ~ % cat file7.txt | paste - - A B
CD
\mathsf{E}\,\mathsf{F}
G<sub>H</sub>
akshaya@Akshayas-MacBook-Pro ~ %
```

7. head command:

• Displays the first few lines of a file. Command used: head filename • Display a specific number of lines: Command used: head -n 10 filename

```
output:
GΗ
akshaya@Akshayas-MacBook-Pro ~ % cat file7.txt | paste - - A B
CD
\mathsf{E}\,\mathsf{F}
GΗ
akshaya@Akshayas-MacBook-Pro ~ % cut -d " " -f 1 file7.txt | pastenumber
1
2
3
4
5
6
7
8
akshaya@Akshayas-MacBook-Pro ~ % cat file7.txt | paste - - A B
CD
ΕF
GH
akshaya@Akshayas-MacBook-Pro ~ % lear
zsh: command not found: lear
akshaya@Akshayas-MacBook-Pro ~ % clear
akshaya@Akshayas-MacBook-Pro ~ % head file2.txt head: file2.txt: No such file or
directory akshaya@Akshayas-MacBook-Pro ~ % head file6.txt a
b
С
d
е
f
g
akshaya@Akshayas-MacBook-Pro ~ % head new.txt unix lab
roll no: 422141
sectuon: A
unix lab
roll no: 422141
section: A
akshaya@Akshayas-MacBook-Pro ~ % head -n 2 new.txt unix lab
roll no: 422141
akshaya@Akshayas-MacBook-Pro ~ %
```

8.Tail

- Displays the last few lines of a file. Command used: tail filename
- Display a specific number of lines: Command used: tail -n 10 filename Follow the growth of a

```
file (similar to tail -f): Command used: tail -f filename
output:
akshaya@Akshayas-MacBook-Pro ~ % head file2.txt head: file2.txt: No such file or
directory akshaya@Akshayas-MacBook-Pro ~ % head file6.txt a
b
С
d
е
f
g
akshaya@Akshayas-MacBook-Pro ~ % head new.txt unix lab
roll no: 422141
sectuon: A
unix lab
roll no: 422141
section: A
akshaya@Akshayas-MacBook-Pro ~ % head -n 2 new.txt unix lab
roll no: 422141
akshaya@Akshayas-MacBook-Pro ~ % clear
akshaya@Akshayas-MacBook-Pro ~ % tail new.txt unix lab
```

roll no: 422141 sectuon: A unix lab roll no: 422141

section: A akshaya@Akshayas-MacBook-Pro ~ % tail -n 2 new.txt roll no: 422141

section: A

section: A

akshaya@Akshayas-MacBook-Pro ~ % tail -f new.txt unix lab

roll no: 422141 sectuon: A unix lab roll no: 422141

9.Sort

- Sort a file alphabetically: Command used: sort filename
- Sort a file numerically: Command used: sort -n filename
- Sort a file in reverse order: Command used: sort -r filename Sort a file and remove duplicate

lines: Command used: sort -u filename

Sort a file based on a specific column (using space as the delimiter): Command used: sort -k filename

• Sort a file in a case-insensitive manner: Command used: sort -f filename • Sort lines in memory for faster sorting: Command used: sort -S filename • Sort based on the month abbreviation (e.g., Jan, Feb, Mar): Command used: sort -Mfilename

```
output:
Last login: Sun Feb 18 21:55:40 on ttys000 akshaya@Akshayas-MacBook-Pro ~ %
sort new.txt roll no: 422141
roll no: 422141
section: A
sectuon: A
unix lab
unix lab
akshaya@Akshayas-MacBook-Pro ~ % sort -n new.txt roll no: 422141
roll no: 422141
section: A
sectuon: A
unix lab
unix lab
akshaya@Akshayas-MacBook-Pro ~ % sort -r new.txt unix lab
unix lab
sectuon: A
section: A
roll no: 422141
roll no: 422141
akshaya@Akshayas-MacBook-Pro ~ % sort -u new.txt roll no: 422141
section: A
sectuon: A
unix lab
akshaya@Akshayas-MacBook-Pro ~ % sort -k new.txt sort: -k new.txt: Invalid argument
akshaya@Akshayas-MacBook-Pro ~ % sort -k 1 new.txt roll no: 422141
roll no: 422141
section: A
sectuon: A
unix lab
unix lab
akshaya@Akshayas-MacBook-Pro ~ % sort -k 10 new.txt roll no: 422141
roll no: 422141
section: A
```

sectuon : A unix lab unix lab

akshaya@Akshayas-MacBook-Pro ~ % sort -f new.txt roll no: 422141

roll no: 422141 section: A sectuon: A unix lab unix lab

akshaya@Akshayas-MacBook-Pro ~ % sort -m new.txt unix lab

roll no: 422141 sectuon : A unix lab

roll no: 422141 section: A