

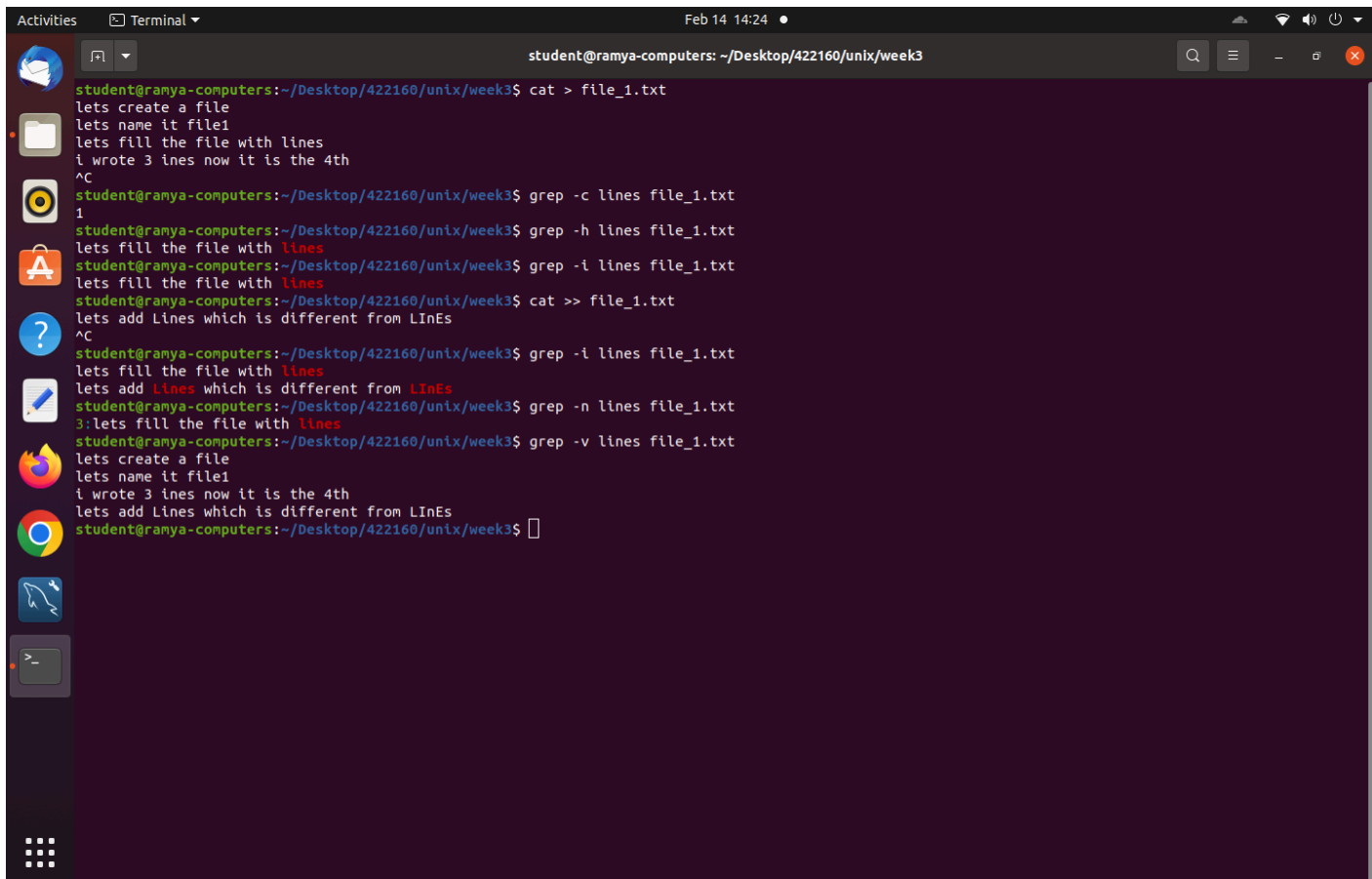
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ROLL NO.: 422160

ASSIGNMENT - 01

Write shell script for searching for various patterns using grep, pr, head,tail,cut,paste,sort,uniq and tr

1.grep command



```
student@ramya-computers: ~/Desktop/422160/unix/week3
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_1.txt
lets create a file
lets name it file1
lets fill the file with lines
i wrote 3 ines now it is the 4th
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ grep -c lines file_1.txt
1
student@ramya-computers:~/Desktop/422160/unix/week3$ grep -h lines file_1.txt
lets fill the file with lines
student@ramya-computers:~/Desktop/422160/unix/week3$ grep -i lines file_1.txt
lets fill the file with lines
student@ramya-computers:~/Desktop/422160/unix/week3$ cat >> file_1.txt
lets add Lines which is different from LInEs
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ grep -i lines file_1.txt
lets fill the file with lines
lets add Lines which is different from LInEs
student@ramya-computers:~/Desktop/422160/unix/week3$ grep -n lines file_1.txt
3:lets fill the file with lines
student@ramya-computers:~/Desktop/422160/unix/week3$ grep -v lines file_1.txt
lets create a file
lets name it file1
i wrote 3 ines now it is the 4th
lets add Lines which is different from LInEs
student@ramya-computers:~/Desktop/422160/unix/week3$
```

2.pr command

The screenshot shows a terminal window on a Linux desktop. The terminal title is "student@ramya-computers: ~/Desktop/422160/unix/week3". The user has executed the following commands:

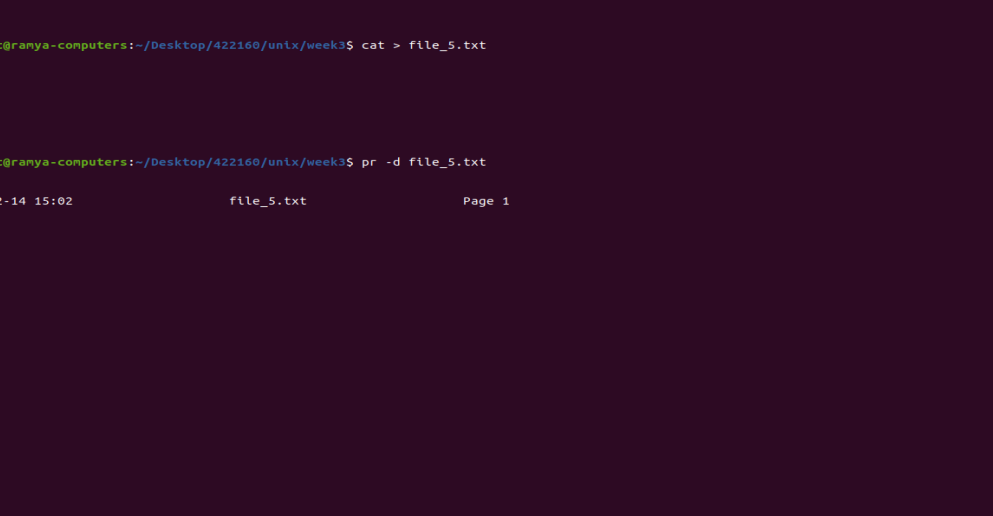
```
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_4.txt
1
2
3
4
5
6
7
8
9
AC
student@ramya-computers:~/Desktop/422160/unix/week3$ pr -4 file_4.txt
```

The output of the `pr` command is displayed on the screen:

```
2024-02-14 14:57          file_4.txt          Page 1

1                4                6                8
2                5                7                9
3
```

The desktop background is dark purple. On the left side, there is a vertical dock with several application icons: a terminal icon, a file manager icon, a Firefox icon, a Chrome icon, a LibreOffice icon, and a Dash icon at the bottom. The top of the screen shows the "Activities" menu and system status icons (network, volume, power).



The screenshot shows a Linux terminal window with a dark purple background. The window title is "Terminal". The user is logged in as "student@ramya-computers" and is in the directory "~/Desktop/422160/unix/week3". The terminal shows the following commands and output:

```
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_5.txt
11
22
33
44
55
66
\
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ pr -d file_5.txt
2024-02-14 15:02                file_5.txt                Page 1
11
22
33
44
55
66
\
```

The left sidebar of the terminal window displays a list of application icons, including a file manager, a web browser, and a terminal icon. The bottom of the window shows a taskbar with a grid of application icons.

```
Activities Terminal Feb 14 15:02
student@ramya-computers: ~/Desktop/422160/unix/week3

student@ramya-computers:~/Desktop/422160/unix/week3$ pr -n file_5.txt

2024-02-14 15:02          file_5.txt          Page 1

1  11
2  22
3  33
4  44
5  55
6  66
7  \
```

```
Activities Terminal Feb 14 15:03
student@ramya-computers: ~/Desktop/422160/unix/week3

student@ramya-computers:~/Desktop/422160/unix/week3$ pr --version
pr (GNU coreutils) 8.30
Copyright (C) 2018 Free Software Foundation, Inc.
License GPLv3+: GNU GPL version 3 or later <https://gnu.org/licenses/gpl.html>.
This is free software: you are free to change and redistribute it.
There is NO WARRANTY, to the extent permitted by law.

Written by Pete TerMaat and Roland Huebner.
student@ramya-computers:~/Desktop/422160/unix/week3$
```

```
Activities Terminal Feb 14 16:40 student@ramya-computers: ~/Desktop/422160/unix/week3
student@ramya-computers:~/Desktop/422160/unix/week3$ pr --help
Usage: pr [OPTION]... [FILE]...
Paginate or columnate FILE(s) for printing.

With no FILE, or when FILE is -, read standard input.

Mandatory arguments to long options are mandatory for short options too.
+FIRST_PAGE[:LAST_PAGE], --pages=FIRST_PAGE[:LAST_PAGE]
    begin [stop] printing with page FIRST_[LAST_]PAGE
-COLUMN, --columns=COLUMN
    output COLUMN columns and print columns down,
    unless -a is used. Balance number of lines in the
    columns on each page
-a, --across
    print columns across rather than down, used together
    with -COLUMN
-c, --show-control-chars
    use hat notation (^G) and octal backslash notation
-d, --double-space
    double space the output
-D, --date-format=FORMAT
    use FORMAT for the header date
-e[CHAR[WIDTH]], --expand-tabs[=CHAR[WIDTH]]
    expand input CHARS (TABS) to tab WIDTH (8)
-F, -f, --form-feed
    use form feeds instead of newlines to separate pages
    (by a 3-line page header with -F or a 5-line header
    and trailer without -F)
-h, --header=HEADER
    use a centered HEADER instead of filename in page header,
    -h "" prints a blank line, don't use -h""
-i[CHAR[WIDTH]], --output-tabs[=CHAR[WIDTH]]
    replace spaces with CHARS (TABS) to tab WIDTH (8)
-J, --join-lines
    merge full lines, turns off -M line truncation, no column
    alignment, --sep-string[=STRING] sets separators
-l, --length=PAGE_LENGTH
    set the page length to PAGE_LENGTH (66) lines
    (default number of lines of text 56, and with -F 63).
    implies -t if PAGE_LENGTH <= 10
-m, --merge
    print all files in parallel, one in each column,
    truncate lines, but join lines of full length with -J
-n[SEP[DIGITS]], --number-lines[=SEP[DIGITS]]
    number lines, use DIGITS (5) digits, then SEP (TAB),
    default counting starts with 1st line of input file
-N, --first-line-number=NUMBER
    start counting with NUMBER at 1st line of first
    page printed (see +FIRST_PAGE)
```

3.head command

```
Activities Terminal Feb 14 15:37 student@ramya-computers: ~/Desktop/422160/unix/week3
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > list1.txt
Virginia
Connecticut
Delaware
Georgia
Maryland
Massachusetts
New Hampshire
New Jersey
New Yrk
North Carolina
Pennsylvania
Rhode Island
South Carolina
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ head list1.txt
Virginia
Connecticut
Delaware
Georgia
Maryland
Massachusetts
New Hampshire
New Jersey
New Yrk
North Carolina
student@ramya-computers:~/Desktop/422160/unix/week3$ head -n 2 list1.txt
Virginia
Connecticut
student@ramya-computers:~/Desktop/422160/unix/week3$ head -c 20 list1.txt
Virginia
Connecticut
student@ramya-computers:~/Desktop/422160/unix/week3$ head -v list1.txt
==> list1.txt <==
Virginia
Connecticut
Delaware
Georgia
Maryland
Massachusetts
New Hampshire
New Jersey
New Yrk
North Carolina
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > numbers.txt
1
```

```
Activities Terminal Feb 14 15:37 student@ramya-computers: ~/Desktop/422160/unix/week3
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > numbers.txt
1
2
3
4
5
6
7
8
9
10
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ head list1.txt numbers.txt
==> list1.txt <==
Virginia
Connecticut
Delaware
Georgia
Maryland
Massachusetts
New Hampshire
New Jersey
New York
North Carolina
==> numbers.txt <==
1
2
3
4
5
6
7
8
9
10
student@ramya-computers:~/Desktop/422160/unix/week3$ head numbers.txt > out_numbers.txt
student@ramya-computers:~/Desktop/422160/unix/week3$ cat out_numbers.txt
1
2
3
4
5
6
7
8
9
10
```

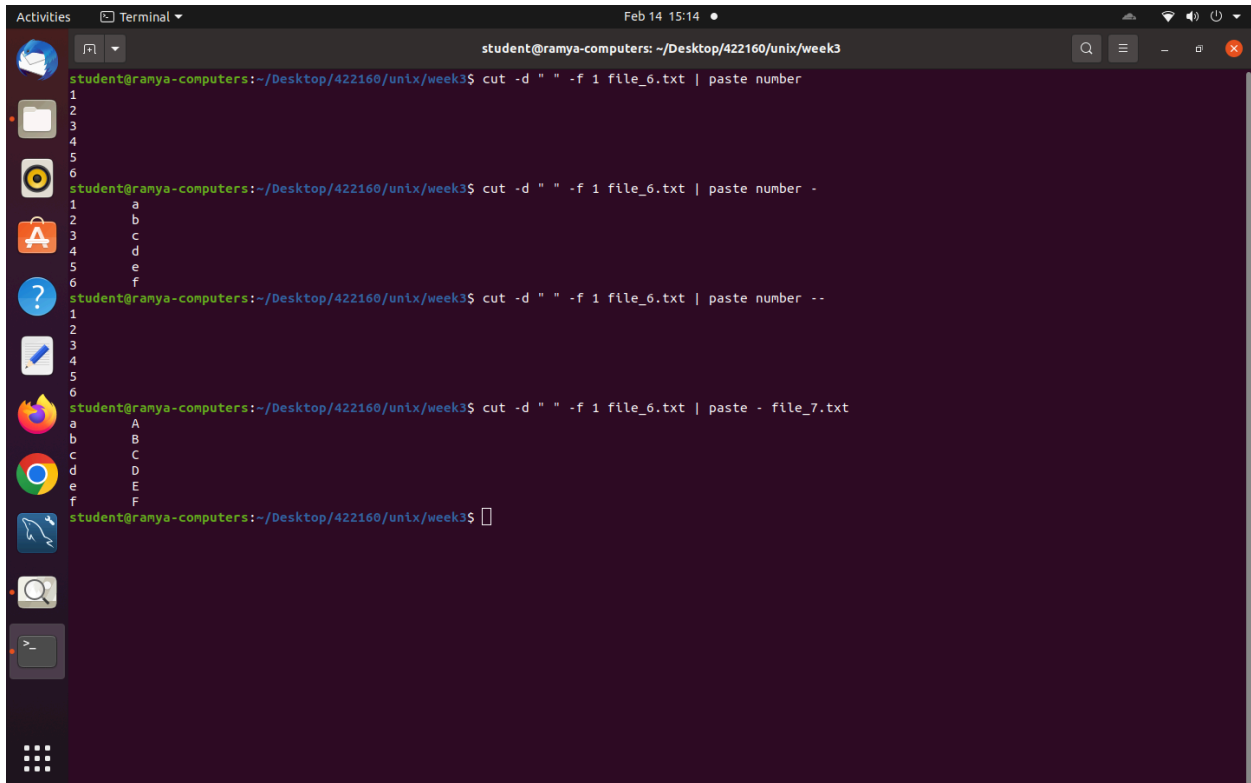
```
Activities Terminal Feb 14 15:37 student@ramya-computers: ~/Desktop/422160/unix/week3
4
5
6
7
8
9
10
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ head list1.txt numbers.txt
==> list1.txt <==
Virginia
Connecticut
Delaware
Georgia
Maryland
Massachusetts
New Hampshire
New Jersey
New York
North Carolina
==> numbers.txt <==
1
2
3
4
5
6
7
8
9
10
student@ramya-computers:~/Desktop/422160/unix/week3$ head numbers.txt > out_numbers.txt
student@ramya-computers:~/Desktop/422160/unix/week3$ cat out_numbers.txt
1
2
3
4
5
6
7
8
9
10
student@ramya-computers:~/Desktop/422160/unix/week3$
```

4.tail command

```
Activities Terminal Feb 14 15:45 student@ramya-computers: ~/Desktop/422160/unix/week3
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_9.txt
This is a sample file
This is the end of the file
2
4
5
..
..
hello
hi
world
unix
we can add data
1
2
4
4
60
.
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ tail file_9.txt
hi
world
unix
we can add data
1
2
4
4
60
.
student@ramya-computers:~/Desktop/422160/unix/week3$ tail -n 3 file_9.txt
4
60
.
student@ramya-computers:~/Desktop/422160/unix/week3$ tail -f file_9.txt
hi
world
unix
we can add data
1
2
4
4
60
.
```

```
Activities Terminal Feb 14 15:45 student@ramya-computers: ~/Desktop/422160/unix/week3
4
4
60
.
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ tail file_9.txt
hi
world
unix
we can add data
1
2
4
4
60
.
student@ramya-computers:~/Desktop/422160/unix/week3$ tail -n 3 file_9.txt
4
60
.
student@ramya-computers:~/Desktop/422160/unix/week3$ tail -f file_9.txt
hi
world
unix
we can add data
1
2
4
4
60
.
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ tail -c file_9.txt
tail: invalid number of bytes: 'file_9.txt'
student@ramya-computers:~/Desktop/422160/unix/week3$ tail -c 50 file_9.txt
hello
hi
world
unix
we can add data
1
2
4
4
60
```

5.cut command



A terminal window titled "student@ramya-computers: ~/Desktop/422160/unix/week3" showing the execution of the 'cut' command. The terminal has a dark purple background. On the left, there is a vertical sidebar with icons for various applications. The terminal output shows the following commands and their results:

```
student@ramya-computers:~/Desktop/422160/unix/week3$ cut -d " " -f 1 file_6.txt | paste number
1
2
3
4
5
6
student@ramya-computers:~/Desktop/422160/unix/week3$ cut -d " " -f 1 file_6.txt | paste number -
1      a
2      b
3      c
4      d
5      e
6      f
student@ramya-computers:~/Desktop/422160/unix/week3$ cut -d " " -f 1 file_6.txt | paste number --
1
2
3
4
5
6
student@ramya-computers:~/Desktop/422160/unix/week3$ cut -d " " -f 1 file_6.txt | paste - file_7.txt
a      A
b      B
c      C
d      D
e      E
f      F
student@ramya-computers:~/Desktop/422160/unix/week3$
```

6.paste command

```
student@ramya-computers: ~/Desktop/422160/unix/week3
student@ramya-computers:~/Desktop/422160/unix/week3$ cat file_6.txt
cat: file_6.txt: No such file or directory
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_6.txt
a
b
c
d
e
f
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_7.txt
A
B
C
D
E
F
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > number
1
2
3
4
5
6
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ paste number file_6.txt file_7.txt
1      a      A
2      b      B
3      c      C
4      d      D
5      e      E
6      f      F
student@ramya-computers:~/Desktop/422160/unix/week3$ paste number file_6.txt file_7.txt
1      a      A
2      b      B
3      c      C
4      d      D
5      e      E
6      f      F
student@ramya-computers:~/Desktop/422160/unix/week3$ paste -d "|" number file_6.txt file_7.txt
paste: file_7.txt: No such file or directory
student@ramya-computers:~/Desktop/422160/unix/week3$ paste -d "|" number file_6.txt file_7.txt
1|a|A
2|b|B
3|c|C
4|d|D
5|e|E
6|f|F
```

```
4      d      D
5      e      E
6      f      F
student@ramya-computers:~/Desktop/422160/unix/week3$ paste number file_6.txt file_7.txt
1      a      A
2      b      B
3      c      C
4      d      D
5      e      E
6      f      F
student@ramya-computers:~/Desktop/422160/unix/week3$ paste -d "|" number file_6.txt file_7.txt
paste: file_7.txt: No such file or directory
student@ramya-computers:~/Desktop/422160/unix/week3$ paste -d "|" number file_6.txt file_7.txt
1|a|A
2|b|B
3|c|C
4|d|D
5|e|E
6|f|F
student@ramya-computers:~/Desktop/422160/unix/week3$ paste -d "|," number file_6.txt file_7.txt
1|a,A
2|b,B
3|c,C
4|d,D
5|e,E
6|f,F
student@ramya-computers:~/Desktop/422160/unix/week3$ paste -s -d ":" number file_6.txt file_7.txt
1:2:3:4:5:6
a:b:c:d:e:f
A:B:C:D:E:F
student@ramya-computers:~/Desktop/422160/unix/week3$ cat file_7.txt | paste
A
B
C
D
E
F
student@ramya-computers:~/Desktop/422160/unix/week3$ cat file_7.txt | paste - -
A      B
      C
      D
      E
      F
student@ramya-computers:~/Desktop/422160/unix/week3$ paste - - <file_7.txt
A      B      C
D      E      F
student@ramya-computers:~/Desktop/422160/unix/week3$
```


7.sort command

```
Activities Terminal Feb 14 15:28 student@ramya-computers: ~/Desktop/422160/unix/week3
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_8.tat
This file has no contents
This file is created today
This file sed for showing sorting
This is the end of the file
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ sort file_8.txt
sort: cannot read: file_8.txt: No such file or directory
student@ramya-computers:~/Desktop/422160/unix/week3$ sort file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ sort - file_8.tat
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -n file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -r file_8.tat
This is the end of the file
This file is created today
This file has no contents
This file sed for showing sorting
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -u file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -k 1 file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -k 10 file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file.txt
We can create,concatanate,delete,merge etc with the help of cat cmdmad
this file is just used as an example
cat is a helpful cmdmad
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -k 4 file.txt
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -k 4 file.txt
We can create,concatanate,delete,merge etc with the help of cat cmdmad
cat is a helpful cmdmad
this file is just used as an example
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -f file.txt
cat is a helpful cmdmad
this file is just used as an example
We can create,concatanate,delete,merge etc with the help of cat cmdmad
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -S 40 file_8.txt
sort: cannot read: file_8.txt: No such file or directory
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -S 40 file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -S 4 file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -S 2 file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -M file_8.tat
This file sed for showing sorting
This file has no contents
This file is created today
This is the end of the file
student@ramya-computers:~/Desktop/422160/unix/week3$ sort newfile.txt file.txt > newfile.txt
student@ramya-computers:~/Desktop/422160/unix/week3$ sort -d -f file.txt
cat is a helpful cmdmad
this file is just used as an example
We can create,concatanate,delete,merge etc with the help of cat cmdmad
student@ramya-computers:~/Desktop/422160/unix/week3$
```

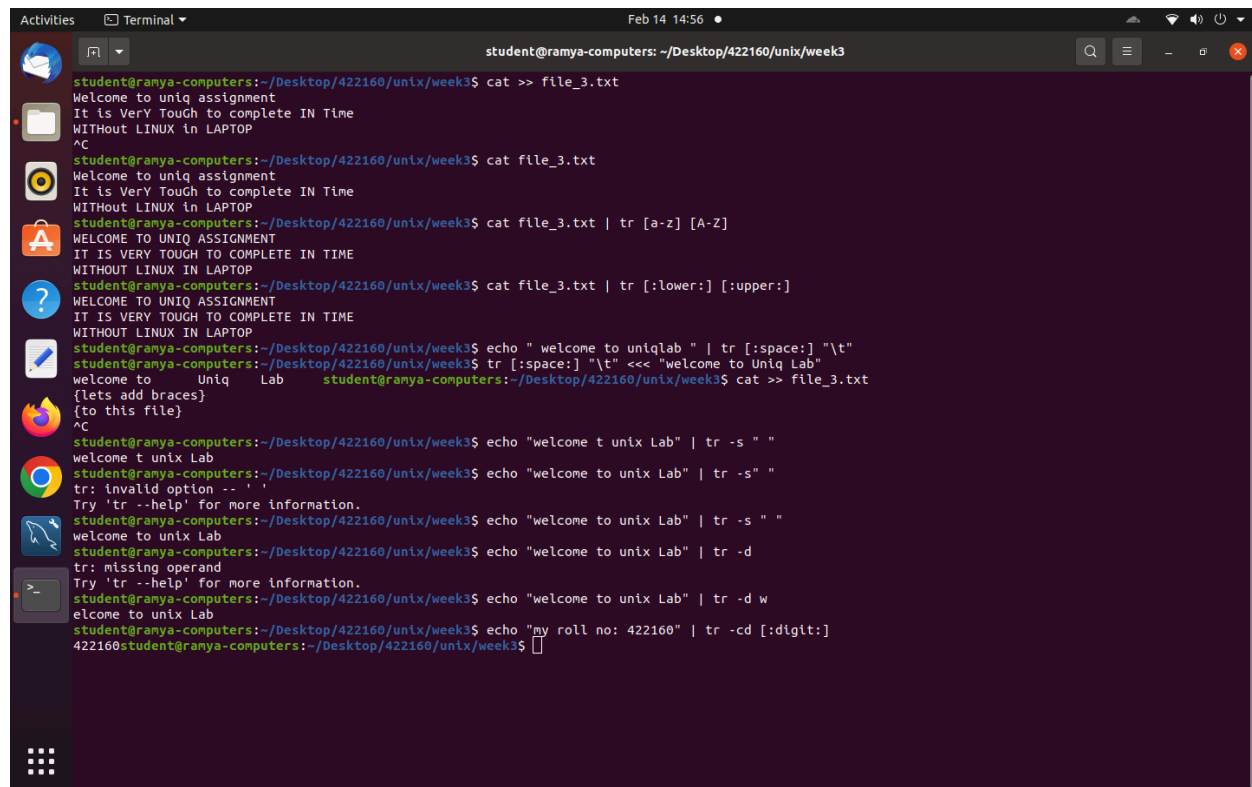
8.uniq command

```
student@ramya-computers: ~/Desktop/422160/unix/week3$ cat
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_2.txt
lets create second file file_2.txt
lets write repeated lines
this is repeated line
this is repeated line
this is repeated line
i want to know uniq command works or not
i want to know uniq command works or not
lets try sub options
lets try sub options
this is repeated line
lets try sub options
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ cat > file_3.txt
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -c file_2.txt
^C
1 lets create second file file_2.txt
1 lets write repeated lines
3 this is repeated line
2 i want to know uniq command works or not
2 lets try sub options
1 this is repeated line
1 lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -d file_2.txt
this is repeated line
i want to know uniq command works or not
lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -fn file_2.txt
uniq: N: Invalid number of fields to skip
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -fn file_2.txt
uniq: N: Invalid number of fields to skip
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -f2 file_2.txt
lets create second file file_2.txt
lets write repeated lines
this is repeated line
i want to know uniq command works or not
lets try sub options
this is repeated line
lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -i file_2.txt
lets create second file file_2.txt
lets write repeated lines
this is repeated line
i want to know uniq command works or not
```

```
student@ramya-computers: ~/Desktop/422160/unix/week3

lets try sub options
this is repeated line
lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -l file_2.txt
lets create second file file_2.txt
lets write repeated lines
this is repeated line
i want to know uniq command works or not
lets try sub options
this is repeated line
lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -s 3 file_2.txt
lets create second file file_2.txt
lets write repeated lines
this is repeated line
i want to know uniq command works or not
lets try sub options
this is repeated line
lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -u file_2.txt
lets create second file file_2.txt
lets write repeated lines
this is repeated line
lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -z file_2.txt
lets create second file file_2.txt
lets write repeated lines
this is repeated line
this is repeated line
this is repeated line
i want to know uniq command works or not
i want to know uniq command works or not
lets try sub options
lets try sub options
this is repeated line
lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ uniq -w 3 file_2.txt
lets create second file file_2.txt
this is repeated line
i want to know uniq command works or not
lets try sub options
this is repeated line
lets try sub options
student@ramya-computers:~/Desktop/422160/unix/week3$ ^C
student@ramya-computers:~/Desktop/422160/unix/week3$
```

9.tr command



```
student@ramya-computers: ~/Desktop/422160/unix/week3
student@ramya-computers:~/Desktop/422160/unix/week3$ cat >> file_3.txt
Welcome to uniq assignment
It is VerY Tough to complete IN Time
WITHOUT LINUX in LAPTOP
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ cat file_3.txt
Welcome to uniq assignment
It is VerY Tough to complete IN Time
WITHOUT LINUX in LAPTOP
student@ramya-computers:~/Desktop/422160/unix/week3$ cat file_3.txt | tr [a-z] [A-Z]
WELCOME TO UNIQ ASSIGNMENT
IT IS VERY TOUGH TO COMPLETE IN TIME
WITHOUT LINUX IN LAPTOP
student@ramya-computers:~/Desktop/422160/unix/week3$ cat file_3.txt | tr [:lower:] [:upper:]
WELCOME TO UNIQ ASSIGNMENT
IT IS VERY TOUGH TO COMPLETE IN TIME
WITHOUT LINUX IN LAPTOP
student@ramya-computers:~/Desktop/422160/unix/week3$ echo " welcome to unqlab " | tr [:space:] "\t"
student@ramya-computers:~/Desktop/422160/unix/week3$ tr [:space:] "\t" <<< "welcome to Uniq Lab"
welcome to      Uniq      Lab      student@ramya-computers:~/Desktop/422160/unix/week3$ cat >> file_3.txt
{lets add braces}
{to this file}
^C
student@ramya-computers:~/Desktop/422160/unix/week3$ echo "welcome t unix Lab" | tr -s " "
welcome t unix Lab
student@ramya-computers:~/Desktop/422160/unix/week3$ echo "welcome to unix Lab" | tr -s " "
tr: invalid option -- ' '
Try 'tr --help' for more information.
student@ramya-computers:~/Desktop/422160/unix/week3$ echo "welcome to unix Lab" | tr -s " "
welcome to unix Lab
student@ramya-computers:~/Desktop/422160/unix/week3$ echo "welcome to unix Lab" | tr -d
tr: missing operand
Try 'tr --help' for more information.
student@ramya-computers:~/Desktop/422160/unix/week3$ echo "welcome to unix Lab" | tr -d w
elcome to unix Lab
student@ramya-computers:~/Desktop/422160/unix/week3$ echo "my roll no: 422160" | tr -cd [:digit:]
422160student@ramya-computers:~/Desktop/422160/unix/week3$
```