

NETWORKING & SYSTEM ADMINISTRATION LAB**Experiment No.: 3****Aim**

Familiarization of the linux commands.

Procedure**17. cat -n**

This command is used to specify the contents with line number.

Syntax :- \$ cat -n filename

Output :

```
student@SS5:~$ cat -n a.txt
 1 subject    mark
 2 science    40
 3 english    50
 4
 5 hindi      49
 6 maths      50
```

18. cat -b

This command is used to remove the empty lines from the file.

Syntax :- \$ cat -b filename

Output :

```
student@SS5:~$ cat -b a.txt
 1 subject    mark
 2 science    40
 3 english    50
 4
 5 hindi      49
 6 maths      50
```

Name: Vismaya Mohan

Roll No: 54

Batch: B

Date: 28/3/2022

19. touch

This command is used to create an empty file.

Syntax :- \$ touch filename

Output :

```
student@S55:~$ touch b.txt
```

20. echo

This command is used to add contents to the file.

Syntax :- \$ echo content >> filename

Output :- Contents will be added to the file.

```
student@S55:~$ touch b.txt
student@S55:~$ echo subject mark with different student >> b.txt
```

21. head

This command is used to display the first 10 lines of the file by default.

Syntax :- \$ head filename

Output:

```
student@S55:~$ head a.txt
subject    mark
science    40
english    50

hindi      49
maths      50
```

```
noens      50
vismi
vysh
devika
anu
```

22. head -4 filename

This command is used to display the lines of the file to the specified number from head.

Syntax :- \$ head -n filename

Output :

```
student@S55:~$ head -4 a.txt
subject    mark
science    40
english    50
```

23. tail

This command is used to display the last 10 lines of the file by default.

Syntax :- \$ tail filename

Output :

```
student@S55:~$ tail a.txt
maths      50
vismi
vysh
devika
anu
sree
lachu
appu
achu
ammu
```

24. tail -3 a.txt

This command is used to display the lines of the file to the specified number from tail.

Syntax :- \$ tail -n filename

Output :-

```
student@S55:~$ tail -3 a.txt
appu
achu
ammu
```

25. cut -d- -f2

This command is used to cut and display the contents based on the delimiter given.

Syntax :- `$ cut -d- -f2 filename`

Output :

```
student@SS5:~$ cut -d- -f2 a.txt
subject      mark
science      40
english      50

hindi        49
maths        50
vismi
vysh
devika
anu
sree
lachu
appu
achu
ammu
```

26. rmdir :

Used to delete a directory if it is empty.

Syntax : `$ rmdir [directory name]`

Output :

```
student@SS4:~$ rmdir network
```

27.cut -b 2 [filename] : It can be used to cut parts of a line by byte position(n).

syntax : `cut -b number filename`

output:

```
student@S54:~$ cut -b 2 a.txt
u
a
n
i
a
i
y
a
t
r
i
t
b
m
i
```

28.cut --complement -c 1 [filename] :

This option instructs cut to display all the fields, bytes or characters except the selected.

Syntax : `$ cut --complement -c num [filename]`

Output :

```
student@S54:~$ cut --complement -c 1 a.txt
ubject mark
aths 50
nglished 40

indi 30
alayalam 28
ismaya
yshnavi
anya
thira
reelekshmi
ibiya
ishnu
bhijith
mmu
ichu
```

29.paste marvel1 marvel2 :

To paste the content in one file to another file.

Syntax : `$ paste file1 file2`

Output:

```
student@SS4:~$ cat > e.txt
students name
abcd
akhil
aravind
abhirami
arun
^Z
[3]+  Stopped                  cat > e.txt
student@SS4:~$ cat e.txt
students name
abcd
akhil
aravind
abhirami
arun
```

```
student@SS4:~$ paste a.txt e.txt
subject mark students name
maths    50  abcd
english  40  akhil
          aravind
hindi    30  abhirami
malayalam 28  arun
vismaya
vyshnavi
manya
athira
sreelekshmi
libiya
vishnu
abhijith
ammu
kichu
```

30.paste marvel1 marvel2 > marvel3 :

To copy the contents of two given files to a third file.

Syntax : \$ paste file1 file2 > file

Output:

```
student@SS4:~$ paste a.txt e.txt > f.txt
student@SS4:~$ cat f.txt
subject mark students name
maths    50  abcd
english  40  akhil
          aravind
hindi    30  abhirami
malayalam 28  arun
vismaya
vyshnavi
manya
athira
sreelekshmi
libiya
vishnu
abhijith
ammu
kichu
```

31. **paste -d ' - ' marvel1 marvel :**

The -d, -delimiters option allows you to specify a list of characters to be used as delimiters instead of the default TAB separator

Syntax : `$ paste -d ' - ' file1 file2`

Output:



```
student@SS4:~$ paste -d ' - ' a.txt e.txt
subject mark-students name
maths 50-abcd
english 40-akhil
-aravind
hindi 30-abhirami
malayalam 28-arun
vismaya-
vyshnavi-
manya-
athira-
sreelekshmi-
libiya-
vishnu-
abhijith-
ammu-
kichu-
```

32. **paste -d '%|' marvel1 marvel2 marvel1 :**

Two delimiters are used. The lines from the first and the second file are separated with the first character from the delimiters list. The second and the third file lines are separated with the second delimiter.

Syntax : `$ paste -d '%|' file2 file 1`

Output:

```

student@SS4:~$ paste -d '|' a.txt e.txt f.txt
subject|mark|students name|subject|mark|students name
maths|50|abcd|maths|50|abcd
english|40|akhil|english|40|akhil
%aravind|aravind
hindi|30|abhirami|hindi|30|abhirami
malayalam|28|arun|malayalam|28|arun
vismaya|vismaya
vyshnavi|vyshnavi
manya|manya
athira|athira
sreelekshmi|sreelekshmi
libiya|libiya
vishnu|vishnu
abhijith|abhijith
ammu|ammu
kichu|kichu

```

33. paste -s marvel1 marvel2:

This command will merge all lines from the given file in separated lines.

Syntax : \$ paste -s file 1 file2

Output:

```

student@SS4:~$ paste -s a.txt e.txt
subject mark maths 50 english 40 hindi 30 malayalam 28 vismaya vyshnavi manya athira sreelekshmi libiya
vishnu abhijith ammu kichu
students name abcd akhil aravind abhirami arun

```

34. more name :

The more command displays the first section of the file. By pressing the “ENTER” key, we can scroll line by line, all the way to the bottom of the file.

Syntax : \$ more filename


```
student@SS4:~$ more name
```

GNU General Public License (GNU GPL) in 1989. By the early 1990s, many of the programs required in an operating system (such as libraries, compilers, text editors, a command-line shell, and a windowing system) were completed, although low-level elements such as device drivers, daemons, and the kernel, called GNU Hurd, were stalled and incomplete.[43]

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Although not released until 1992, due to legal complications, development of 386BSD, from which NetBSD, OpenBSD and FreeBSD descended, predated that of Linux.

Linus Torvalds has stated on separate occasions that if the GNU kernel or 386BSD had been available at the time (1991), he probably would not have created Linux.[45][46]

Creation

In 1991, while attending the University of Helsinki, Torvalds became curious about operating systems.[47] Frustrated by the licensing of MINIX, which at the time limited it to educational use only,[44] he began to work on his own operating system kernel, which eventually became the Linux kernel.

Torvalds began the development of the Linux kernel on MINIX and applications written for MINIX were also used on Linux. Later, Linux matured and further Linux kernel development took place on Linux systems.[48] GNU applications also replaced all MINIX components, because it was advantageous to use the freely available code from the GNU Project with the fledgling operating system; code licensed under the GNU GPL can be reused in other computer programs as long as they also are released under the same or a compatible license. Torvalds initiated a switch from his original license, which prohibited commercial redistribution, to the GNU GPL.[49] Developers worked to integrate GNU components with the Linux kernel, making a fully functional and free operating system.[50]

Naming

5.25-inch floppy disks holding a very early version of Linux

Linus Torvalds had wanted to call his invention "Freax", a portmanteau of "free", "freak", and "x" (as an allusion to Unix). During the start of his work on the system, some of the project's makefiles included the name "Freax" for about half a year. Torvalds had already considered the name "Linux",

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To facilitate development, the files were uploaded to the FTP server (ftp.funet.fi) of FUNET in September 1991. Ari Lemmke, Torvalds' coworker at the Helsinki University of Technology (HUT), who was one of the volunteer administrators for the FTP server at the time, did not think that "Freax" was a good name, so he named the project "Linux" on the server without consulting Torvalds.[51] Later, however, Torvalds consented to "Linux".

According to a newsgroup post by Torvalds,[11] the word "Linux" should be pronounced (/ˈlɪnʊks/ (audio speaker iconlisten) LIN-uks) with a short 'i' as in 'print' and 'u' as in 'put'. To further demonstrate how the word "Linux" should be pronounced, he included an audio guide (audio speaker iconlisten (help·info)) with the kernel source code.[52] However, in this recording, he pronounces 'Linux' (/ˈlɪnʊks/ (audio speaker iconlisten) LEEN-uks with

--More--(40%)

35. more -3 name :

Used to type the number of lines(num) to display per screen.

Syntax : \$more -num filename

```
student@554:~$ more +3 name
Linux (/ˈlɪnʊks/ (audio speaker iconlisten) LEE-nuoks or /ˈlɪnʊks/ LIN-uuks)[11] is a family of open-source Unix-like operating systems based
on the Linux kernel,[12] an operating system kernel first released on September 17, 1991, by Linus Torvalds.[13][14][15] Linux is typically p
ackaged in a Linux distribution.
--More--(4%)
```

36. more +3 name :

This option displays the text after the specified number of lines of the document.

Syntax : \$ more + num filename

```
student@554:~$ more +3 name
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ten (help·info)) with the kernel source code.[52] However, in this recording, he pronounces 'Linux' (/ˈlɪnʊks/ (audio speaker iconlisten) LEE-nuoks) wi
th a short but close unrounded front vowel.
```

37. more -s name :

This option squeezes multiple blank lines into one single blankline.

Syntax : \$ more -s filename

Output:


```
student@554:~$ more -s name
```

GNU General Public License (GNU GPL) in 1989. By the early 1990s, many of the programs required in an operating system (such as libraries, compilers, text editors, a command-line shell, and a windowing system) were completed, although low-level elements such as device drivers, daemons, and the kernel, called GNU Hurd, were stalled and incomplete.[43]

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