

Ex. No: 01

Date: 9.1.23 OSS :

## OPEN SOURCE SYSTEMS

### Introduction

#### 1. Define OSS?

OSS → open source system

open source software is a code that is designed to be publicly accessible - anyone can see, modify and distribute the code as they see fit open source software is developed in a decentralized and collaborative way, relying on peer review and community production.

#### 2. List of some oss:

GNU / Linux

Mozilla Firefox

VLC Media player

Sugar CRM

GIMP

VNC

Apache web server

Libre office

#### 3. Types of Linux Os :

Android

Arch Linux

centos

Debian

Elementary os

Fedora Linux

Centos Linux

## BASIC LINUX COMMANDS:

### 1. Syntax: pwd

Description:

pwd → print working Directory

This command is used to check the current files.

output: /home/student

### 2. Syntax: ls

Description: list the directories and files

output:

a id1 oslab.txt a

b id2 oss.txt

### 3. Syntax: ls -l

Description: list the directories and files in long format.

Output:

total 300

-rw-rw-r-- 1 student student 16 Feb 6 09:38 a

-rw-rw-r-- 1 student student 12 Feb 6 09:37 b

-rw-rw-r-- 1 student student 38 Feb 6 09:14

### 4. Syntax: clear

Description: This command is used to clear the terminal.

### 5. Syntax: Mkdir directory name

Description: This command is used to make the directory.

Example:

Mkdir file.

b. Syntax :  
rmdir directory

Description

This command is used to remove a directory.

Example

rmdir file

1. Syntax :  
cd directory name

Description :

used to change the directory

Output & Example

cd oss

/home/student/oss

8. Syntax : cat > filename

Description : used to create a file

Example : cat > a.txt

9. Syntax : cat file name

Description : Displays the content of the file

Example : cat a.txt

Output :

Hey

Hai

Hello

10. Syntax : cat filename1 > filename 2

Description : Overwritten the content of filename 1 to filename 2

Example

cat a.txt > b.txt

cat b.txt



Output :

Hey  
Hai  
Hello

11. Syntan :

cat filename 1 >> filename 2

Description :

Appends the content of filename1 to filename 2 .

Example : cat a.txt >> b.txt

output : Hey  
Hai  
Hello  
Hey  
Hai  
Hello

12. Syntan :

cp file name directory name

Description :

used to copy the file to directory

Example

cp . a.txt oss

13. Syntan :

cp filename1 filename2

Description :

copies the content of one file to another file.

Example

cp c.txt d.txt

14. Syntax: wc filename

Description: Displays the no. of words, lines, characters in the file

Example: wc a.txt

output: 3 3 10 a.txt  
line words characters

15. Syntax: wc -l filename

Description: Displays no. of lines in the file

output: 3 a.txt

16. Syntax: wc -w filename

Description: Displays no. of words in the file

output: 3 a.txt

17. Syntax: wc -m filename

Description: Displays no. of character in the file

output: 10 a.txt

18. Syntax: cal

Description: Displays the calendar of current month.

19. Syntax: cal year

Description: Displays the calendar of specified year

Example: cal 2023

20. Syntax: cal month year

Description: Displays calendar of specified month & year

Example:

cal 8 2023

21. Syntax: date

Description: Displays system date and time

Output: Monday 06 February 2023

11:30:37 AM IST

22. Syntax: head filename

Description: Displays first 10 lines of the file

Example: head a.txt

Output: Hey

Hi

Hello

23. Syntax: tail filename

Description: Displays last 10 lines of the file

Example: tail a.txt

Output: Hey

Hi

Hello

24. Syntax: head -no of lines filename

Description: Displays the no. of lines specified from the first of the file.

Example: head -1 a.txt

Output: Hey

25. Syntax: tail -no. of lines filename

Description: Displays the no. of lines specified from the last of the file.

Example: tail -1 a.txt

Output: Hello



26. Syntax: mv c.txt d.txt  
Description: move the content of one file to another file.  
Example: mv c.txt d.txt

27. Syntax: rm filename  
Description: used to remove the file  
Example: rm c.txt

28. Syntax: ls >> filename  
Description: output of one file is appended to the another file.  
Example: ls >> a.txt

29. Syntax: filename1 > filename2  
Description: output of one file is redirected to another file.  
Example: wc a.txt > c.txt

30. Syntax: cat filename | operation  
Description: output of first command will be the input for the second command.  
Example: cat c.txt | wc  
Output: 3 3 10

31. Syntax: cat filename | operation | operation  
Description: Multiple pipe commands can be used.  
Example: cat a.txt | tail -5 | wc

32. Syntax: sort filename  
Description: sorts the content of the file  
Example: sort a.txt  
Output: Hello Hey Hi

33. Syntax: `sort -r filename`

Description: Displays the contents in reversed order after sorting

Example: `sort -r a.txt`

Output: `Hi`

`Hey`

`Hello`

34. Syntax: `chmod (read, write, execute) filename`

Description: changes the mode for users, groups, others

read  $\rightarrow$  Add 4

write  $\rightarrow$  Add 2

execute  $\rightarrow$  Add 1

`-rw-rw-r--`  $\Rightarrow$  664

Example: `chmod 776 a.txt`

Output: `-rw-rw-rw-` 1 student student

16 Feb 6 09:36 a `chmod 440 a.txt`

o/p: `-r--r--` 1 student student

16 Feb 6 09:38 a

35. Syntax: `chown ownership filename`

Description: used to change the ownership

Example: `chown exam a.txt`

Output: Operation not permitted

36. Syntax: `sudo chown owner filename`

Description: only admin has the permission to change the owner, so sudo is used to become a super user to perform changing the ownership.



Example : `sudo chown exam a.txt`  
Output : `-rw-rw-r-- 1 exam student`  
16 Feb 16 09:38 9

37. Syntax :

`sudo chown user:group filename`

Description : Used to change the ownership of both the user & group.

Example : `sudo chown student : student a.txt`  
Output : `-rw-rw-r-- 1 student student`  
16 Feb 16 09:38 9

38. Syntax : `tree`

Description : Directory name is displayed along with the names of subdirectories within it.

Output :

```
├── a.txt
├── b.txt
├── c.txt
├── oslab.txt
├── osslab.
│   ├── a.txt
│   ├── b.txt
│   └── c.txt
└── oss.txt
```

1 directory , 9 files.

39. Syntax: tree path-of-the directory  
Description: Displays the subdirectory (file) names of the specified directory

Example: tree /home/student/oss/lab

output: /home/student/oss/lab

```
| a.txt  
| b.txt  
| c.txt  
| d.txt
```

0 directory, 4 files

40. Syntax: cd ..

Description: This command is used to move to the previous directory

output: student@IIP-cc2-38:~\$

41. Syntax: exit

Description: used to close the terminal window

Result:

Thus the basic Linux commands are executed and understood what is oss and list of oss and types of Linux oss.