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Section : A

RollNo. : 30

Experiment -2

AIM : Implement the following basic commands used in LINUX UNIX OS (Also perform all the commands with their switches).

Cut, chmod, du, diff, uniq, history, last, sort, sed, grep.

❖ Cut :

- **Command -** `cut -d "<single character>" -f n [file name]`
- **Description -** It is used to display data columnwise.
 - d " " : used to pass delimiter from which data has to be separated into columns passed in " " or ' '.
 - f n : used to pass field number to access column data.

```
cropid@cropid-VirtualBox: ~/oslab/shellScript
cropid@cropid-VirtualBox:~/oslab/shellScript$ cut -d " " -f1 file1.txt
hello
cropid@cropid-VirtualBox:~/oslab/shellScript$
```

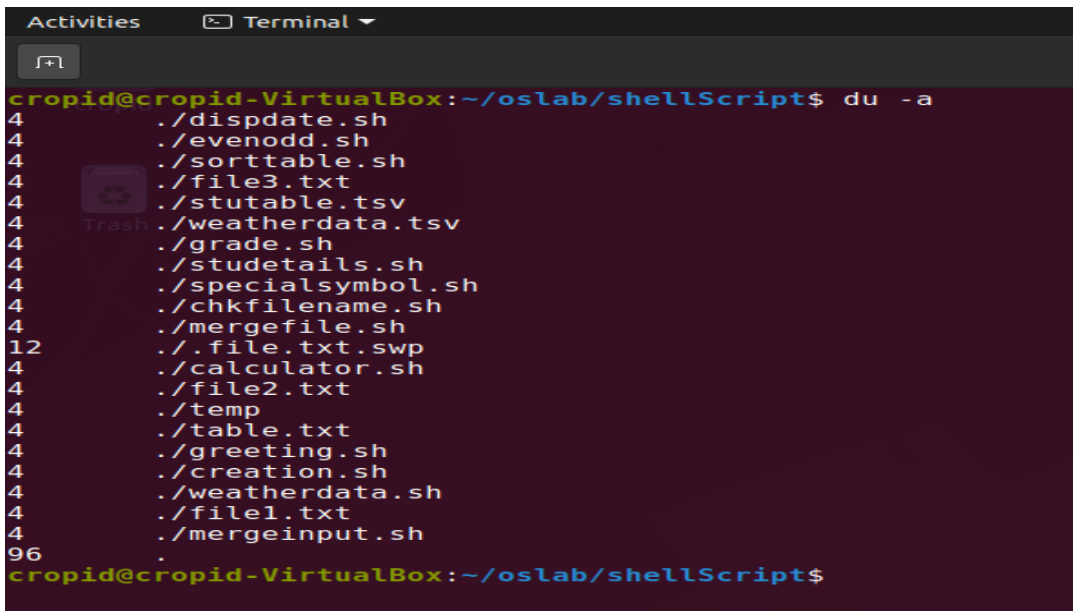
❖ Chmod :

- **Command -** `chmod +rwx [file name]` or `chmod 777 [file name]`
- **Description -** It modify the permissions for different users of a file.
 - +r or 4: used for enabling readable permissions.
 - +w or 2: used for enabling writeable permissions.
 - +x or 1: used for enabling executable permissions.

```
cropid@cropid-VirtualBox:~/oslab/shellScript$ chmod 111 evenodd.sh
cropid@cropid-VirtualBox:~/oslab/shellScript$ ls -l evenodd.sh
---x--x--x 1 cropid cropid 111 Dec  4 16:26 evenodd.sh
cropid@cropid-VirtualBox:~/oslab/shellScript$ chmod +rwxrwxr-x evenodd.sh
cropid@cropid-VirtualBox:~/oslab/shellScript$ ls -l evenodd.sh
-rw-rw-r-- 1 cropid cropid 111 Dec  4 16:26 evenodd.sh
cropid@cropid-VirtualBox:~/oslab/shellScript$
```

❖ Du :

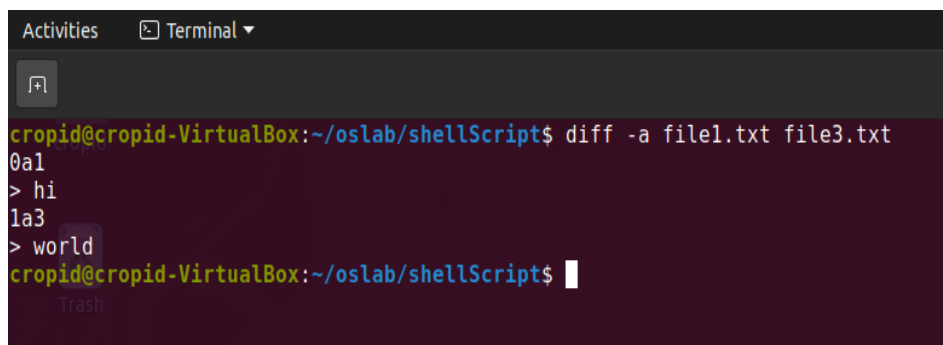
- **Command -** du [file name]
- **Description -** It estimate file disk usage.
 - a : List all files and directories size.



```
Activities Terminal
cropid@cropid-VirtualBox:~/oslab/shellScript$ du -a
4      ./dispddate.sh
4      ./evenodd.sh
4      ./sorttable.sh
4      ./file3.txt
4      ./stutable.tsv
4      ./weatherdata.tsv
4      ./grade.sh
4      ./studetails.sh
4      ./specialsymbol.sh
4      ./chkfilename.sh
4      ./mergefile.sh
12     ./file.txt.swp
4      ./calculator.sh
4      ./file2.txt
4      ./temp
4      ./table.txt
4      ./greeting.sh
4      ./creation.sh
4      ./weatherdata.sh
4      ./file1.txt
4      ./mergeinput.sh
96     .
cropid@cropid-VirtualBox:~/oslab/shellScript$
```

❖ Diff :

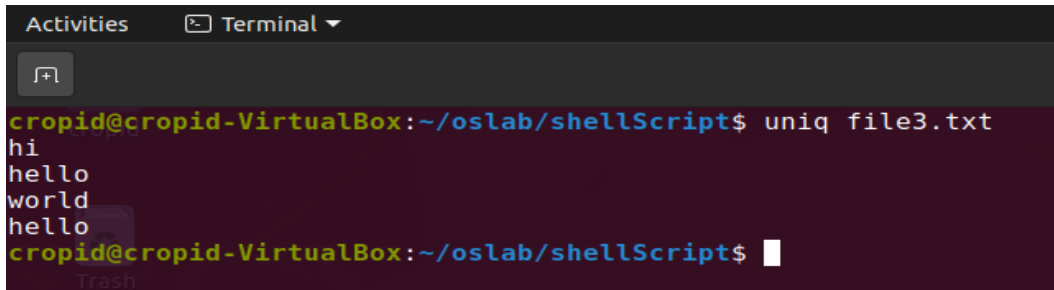
- **Command -** diff <options> [file name1] [file name2]
- **Description -** Compare files line by line and output different lines.
 - a : Take all data of files as text.



```
Activities Terminal
cropid@cropid-VirtualBox:~/oslab/shellScript$ diff -a file1.txt file3.txt
0a1
> hi
1a3
> world
cropid@cropid-VirtualBox:~/oslab/shellScript$
```

❖ Uniq:

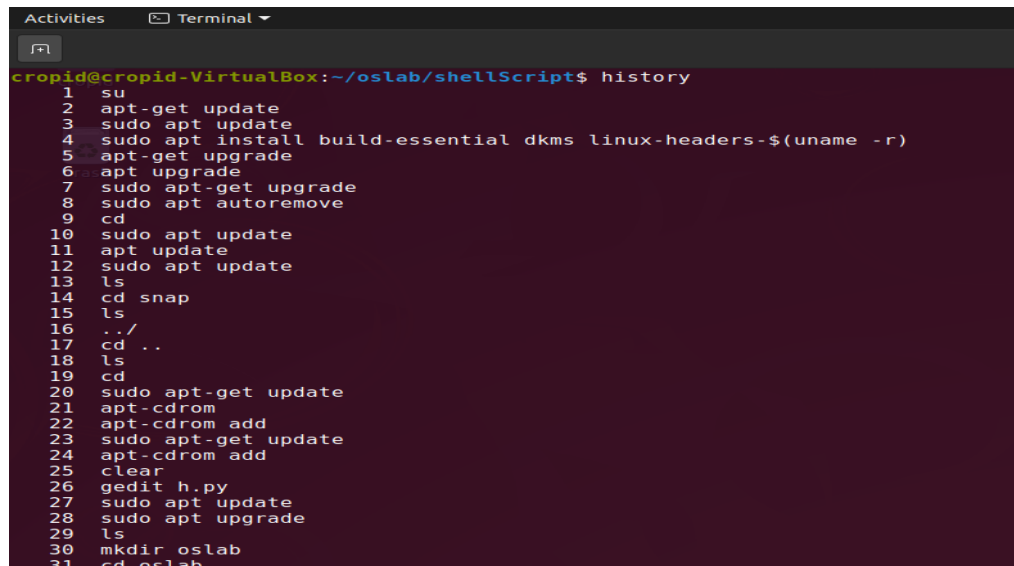
- Command - `uniq [file name]`
- Description - It filters out the repeated lines in a file.



A terminal window titled 'Terminal' showing the execution of the `uniq` command. The prompt is `cropid@cropid-VirtualBox:~/oslab/shellScript$`. The command `uniq file3.txt` has been entered, and the output is displayed: `hi`, `hello`, `world`, and `hello`. The prompt is now `cropid@cropid-VirtualBox:~/oslab/shellScript$`.

❖ History:

- Command - `history`
- Description - Used to display previously executed commands.



A terminal window titled 'Terminal' showing the output of the `history` command. The prompt is `cropid@cropid-VirtualBox:~/oslab/shellScript$`. The command `history` has been entered, and the output is a list of 31 commands, numbered 1 through 31. The commands include `su`, `apt-get update`, `sudo apt update`, `sudo apt install build-essential dkms linux-headers-$(uname -r)`, `apt-get upgrade`, `apt upgrade`, `sudo apt-get upgrade`, `sudo apt autoremove`, `cd`, `sudo apt update`, `apt update`, `sudo apt update`, `ls`, `cd snap`, `ls`, `./`, `cd ..`, `ls`, `cd`, `sudo apt-get update`, `apt-cdrom`, `apt-cdrom add`, `sudo apt-get update`, `apt-cdrom add`, `clear`, `gedit h.py`, `sudo apt update`, `sudo apt upgrade`, `ls`, `mkdir oslab`, and `cd oslab`.

❖ Last:

- Command - `last <options>`
- Description - It list all users logged in and out.
 - x : It display info of system entries and run level changes.

```
Activities Terminal
croid@croid-VirtualBox:~/oslab/shellScript$ last
croid :0 Sun Dec 5 10:16 gone - no logout
reboot system boot 5.11.0-41-generi Sun Dec 5 10:14 still running
croid :0 Sat Dec 4 14:39 - down (08:17)
reboot system boot 5.11.0-41-generi Sat Dec 4 14:37 - 22:56 (08:18)
croid :0 Fri Dec 3 14:08 - down (11:10)
reboot system boot 5.11.0-41-generi Fri Dec 3 14:07 - 01:19 (11:11)
croid :0 Thu Dec 2 18:41 - down (01:31)
reboot system boot 5.11.0-41-generi Thu Dec 2 18:40 - 20:12 (01:32)
croid :0 Wed Dec 1 08:29 - down (01:24)
reboot system boot 5.11.0-41-generi Wed Dec 1 08:27 - 09:54 (01:26)
croid :0 Tue Nov 30 21:17 - down (01:01)
reboot system boot 5.11.0-41-generi Tue Nov 30 21:15 - 22:18 (01:03)
croid :0 Tue Nov 30 20:40 - down (00:35)
reboot system boot 5.11.0-40-generi Tue Nov 30 20:38 - 21:15 (00:36)
croid :0 Thu Nov 25 09:04 - crash (5+11:34)
reboot system boot 5.11.0-40-generi Thu Nov 25 09:02 - 21:15 (5+12:12)
croid tty5 Thu Nov 25 08:29 - down (00:33)
croid tty3 Thu Nov 25 08:19 - down (00:43)
croid :0 Thu Nov 25 08:14 - down (00:48)
reboot system boot 5.11.0-40-generi Thu Nov 25 08:12 - 09:02 (00:49)
croid :0 Wed Nov 24 20:48 - crash (11:24)
reboot system boot 5.11.0-40-generi Wed Nov 24 20:47 - 09:02 (12:15)
croid :0 Wed Nov 24 08:02 - down (01:46)
```

❖ Sort :

- **Command -** `sort <options> [file name]`
- **Description -** It outputs the data of a file in a sorted manner.
 - k n** : Used to specify sorting sequence(using which column data is sorted).
 - r** : Used to sort in descending order.

```
Activities Terminal
croid@croid-VirtualBox:~/oslab/shellScript$ sort -k3 stutable.tsv
dharmesh 4 18
khushal 5 18
ram 6 18
sudeep 10 18
tanmay 8 18
aryan 1 19
sandeep 9 19
vaibhav 7 19
bikas 2 20
binod 3 21
croid@croid-VirtualBox:~/oslab/shellScript$ sort -k3 -r stutable.tsv
binod 3 21
bikas 2 20
vaibhav 7 19
sandeep 9 19
aryan 1 19
tanmay 8 18
sudeep 10 18
ram 6 18
khushal 5 18
dharmesh 4 18
croid@croid-VirtualBox:~/oslab/shellScript$
```

❖ Sed :

- **Command -** `sed <options> [file]`
- **Description -** Stream editor.

❖ Grep :

- **Command -** `grep [search string] [file name]`
- **Description -** It search the given string in the provided data source and output the which match which passed string.

```
Activities  Terminal ▾  
[+]  
cropid@cropid-VirtualBox:~/oslab/shellScript$ cat file3.txt  
hi  
hello  
world  
hello  
cropid@cropid-VirtualBox:~/oslab/shellScript$ grep "hello" file3.txt  
hello  
hello  
cropid@cropid-VirtualBox:~/oslab/shellScript$
```