OSL-Assignment 2
Vidhi Binwal
22070122249
CSE-C3 (2022-26)
Sem IV

OSL - Assignment # 2

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Class :- CSE-C3
Sem :- IV (2022-26)
Title :- Basic shell commands

* AIM :- Demonstrate the use of basic Shell commands.
* HARDWARE / SOFTWARE :- Ubuntu
* THEORY :-

(i) pwd : It stands for "print working directory". When we run this command, it outputs the current working directory in the terminal.

(ii) ls : The 'ls' command in a shell is used to list the contents of a directory. When we run this command without any arguments, it displays the names of files and subdirectories in the current directory.

(iii) cd : It stands for "change directory". It is used to change the current working directory. We can navigate to different directories within the file system

(iv) touch : It is used to create empty files and update the access and modification timestamps of existing files.

(v) mkdir : It is used to create a new directory (folder). It is useful for organizing files and managing the structure of our file system by creating new directories as needed.

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(vi) cat: It is used to concatenate and display the contents of one or more files. It's commonly used to create, concatenate and display files.

(vii) rm: The 'rm' command in a shell is used to remove or delete files and directories.

(viii) bc:- The 'bc' command in a shell is a calculator that performs arithmetic operations. It stands for "basic calculator". It can be used interactively or by providing it with a file containing the mathematical expressions to evaluate.

(ix) tty: It stands for "teletypewriter" and is used to print the file name of the terminal connected to the standard input.

(x) who: Used to display information about users who are currently logged into the system. It provides details like the username, terminal, login time and originating IP address.

(xi) man: Used to display the manual (documentation) pages for a given command or topic. Stands for "manual".

(xii) date: Used to display the current date and time, and it can also be used to set the system date and time.

(xiii) history: Used to display a list of previously executed commands in the current shell session. It provides a history of commands that you have entered, along with their corresponding line numbers.

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(xiv) ps: Used to display information about currently running processes. It provides a snapshot of the processes running in the system at the time the command is executed.

(xv) time: Used to measure the execution time of a command or a shell script. Tells about the real-time, user CPU time, and system CPU time used by the command or script.

(xvi) head: used to print the first N lines of a file. It accepts N as input and the default value of N is 10.

(xvii) tail : used to print the last n-1 lines of a file.

(xviii) cp: Used to copy files or directories from one location to another. It accepts the source file/directory and destination file/directory.

(xlx) sort : Used to sort the contents of files.

(xx) wc: used to count the number of characters or words in a file.

(xxi) chmod: Used to change the permissions of a file or directory. It stands for "change mode" (+w write, +r for read etc.)

* CONCWSION:

We were able to understand and work with fundamental shell commands. These can help lay a solid basis for using them, while handling files and system administration.

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**OUTPUT (Screenshots)**

**pwd**

```
student@student-VirtualBox:~$ pwd
/home/student
```

**ls**

```
student@student-VirtualBox:~$ ls
compareString  Desktop    Downloads     Music     Public  Templates
concatenation  Documents  lengthString  Pictures  snap    Videos
```

**cd**

```
student@student-VirtualBox:~$ cd Music
```

**touch**

```
student@student-VirtualBox:~/Music$ touch doc.txt
student@student-VirtualBox:~/Music$ ls
doc.txt
```

**cat**

```
student@student-VirtualBox:~/Music$ cat doc.txt
student@student-VirtualBox:~/Music$ ls
doc.txt
```

**mkdir**

```
student@student-VirtualBox:~/Music$ mkdir note
student@student-VirtualBox:~/Music$ ls
doc.txt  note
```

**rm**

```
student@student-VirtualBox:~/Music$ rm doc.txt
student@student-VirtualBox:~/Music$ ls
note
```

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**bc**

```
student@student-VirtualBox:~/Music$ bc
bc 1.07.1
Copyright 1991-1994, 1997, 1998, 2000, 2004, 2006, 2008, 2012-2017 Free Software
 Foundation, Inc.
This is free software with ABSOLUTELY NO WARRANTY.
For details type `warranty'.
89+35
124
25*6
150
8<10
1
120/5
24
^C
(interrupt) use quit to exit.
quit
```

**tty**

```
student@student-VirtualBox:~/Desktop$ tty
/dev/pts/0
```

**who**

```
student@student-VirtualBox:~/Desktop$ who
student  tty2         2024-01-24 13:58 (tty2)
```

**ps**

```
student@student-VirtualBox:~/Desktop$ ps
    PID TTY          TIME CMD
   6278 pts/0    00:00:00 bash
   6324 pts/0    00:00:00 ps
```

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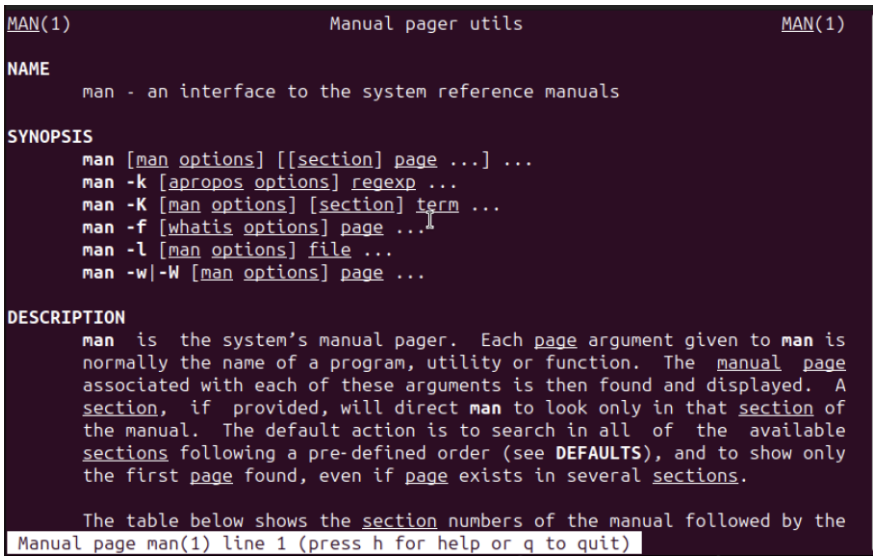
**man**



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**date**

```
shilpi@ubuntu1:~$ date
Fri Jan 26 04:06:14 PM UTC 2024
shilpi@ubuntu1:~$ date +%h
Jan
shilpi@ubuntu1:~$ date +%m
01
shilpi@ubuntu1:~$ date +%Y
2024
shilpi@ubuntu1:~$ ^C
bash: :s^C: substitution failed
shilpi@ubuntu1:~$ date +%y
24
shilpi@ubuntu1:~$ date +%p
PM
shilpi@ubuntu1:~$ date +%d
26
shilpi@ubuntu1:~$ date +%A
Friday
shilpi@ubuntu1:~$ date +%B
January
```

**wc**

```
shilpi@ubuntu1:~$ wc note
 4 14 62 note
```

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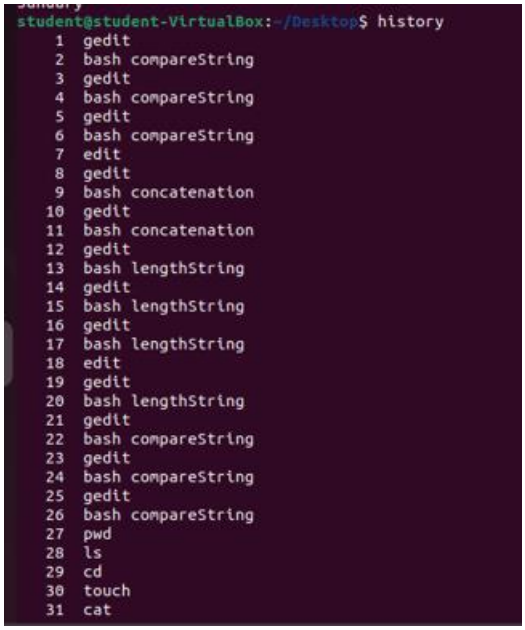
**history**




**time**


**head**

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```
shilpi@ubuntu1:~$ cat > sample.txt
hello
how has your day been
what is your name
how old are you
shilpi@ubuntu1:~$ head -2 sample.txt
hello
how has your day been
```

**tail**

```
shilpi@ubuntu1:~$ tail -3 sample.txt
how has your day been
what is your name
how old are you
```

**cp**

```
shilpi@ubuntu1:~$ cp sample.txt note
```

**sort**

```
shilpi@ubuntu1:~$ sort note
hello
how has your day been
how old are you
what is your name
shilpi@ubuntu1:~$ wc note
 4 14 62 note
```

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**chmod**

```
shilpi@ubuntu1:~$ chmod +r note
shilpi@ubuntu1:~$ chmod +w note
shilpi@ubuntu1:~$ chmod +x note
```

**CONCLUSION**