

Name:	DHIR VIJAY SURTI
Roll No:	57
Class/Sem:	SE/IV
Experiment No.:	1
Title:	Implement file management and I/O management techniques.
Date of Performance:	
Date of Submission:	
Marks:	
Sign of Faculty:	



Aim: Explore the internal commands of Linux.

Objective:

Execute various internal commands of linux

Theory:

ps - report a snapshot of the current processes. ps displays information about a selection of the active processes.

cal — displays a calendar and the date of Easter

date - print or set the system date and time, Display the current time in the given FORMAT, or set the system date.

rm - remove files or directories

mkdir - make directories , Create the DIRECTORY(ies), if they do not already exist.rmdir - remove empty directories

cat - concatenate files and print on the standard output

wc - print newline, word, and byte counts for each file, Print newline, word, and byte counts for each FILE, and a total line if more than one FILE is specified.

ls - list directory contents

ls [OPTION]... [FILE]...



Vidyavardhini's College of Engineering and Technology Department of Artificial Intelligence & Data Science

List information about the FILEs (the current directory by default). Sort entries alphabetically.

-l:use a long listing format

chmod - change file mode bits

chmod changes the file mode bits of each given file according to mode, which can be either a symbolic representation of changes to make, or an octal number representing the bit pattern for the new mode bits.

chown - change file owner and group

chown changes the user and/or group ownership of each given file. If only an owner (a user name or numeric user ID) is given, that user is made the owner of each given file, and the files' group is not changed. If the owner is followed by a colon and a group name (or numeric group ID), with no spaces between them, the group ownership of the files is changed as well.

pwd - print name of current/working directory.

Print the full filename of the current working directory.

umask - set file mode creation mask, umask() sets the calling process's file mode creation mask (umask) to mask & 0777 (i.e., only the file permission bits of mask are used), and returns the previous value of the mask.

OUTPUT:

```
buntumubuntu-HP-Elite-Tower-600-69-Desktop-PC: $ pwd
buntu@ubuntu-HP-Elite-Tower-600-G9-Desktop-PC: 5 is
buntu@ubuntu-HP-Eltte-Tower-600-G9-Desktop-PC: $ ls -1
               ubuntu ubuntu 4096 Mar
                                                   2023
drwxr-xr-x 2 ubuntu ubuntu 4096 Mar
                                                   2023
 rwxr-xr-x 2 ubuntu ubuntu 4096 Mar 8
rwxr-xr-x 2 ubuntu ubuntu 4096 Mar 8
rwxr-xr-x 3 ubuntu ubuntu 4096 Sep 25
                                                   2023
                                                   2823
  wxr-xr-x 2 ubuntu ubuntu 4096 Har
      ---- 4 ubuntu ubuntu 4096 Mar 28
drwxr-xr-x 2 ubuntu ubuntu 4096 Mar
drwxr-xr-x 2 ubuntu ubuntu 4096 Mar
                                                   2823
buntugubuntu-HP-Elite-Tower-600-G9-Desktop-PC:-$ 1s -a
    .bash_history .bashrc
                                                                                      .profile
                                                                                                          .sudo_as_admin_succes
    .bash_logout
 buntugubuntu-HP-Elite-Tower-500-G9-Desktop-PC: $ date
Wednesday 10 January 2024 02:49:21 PM IST
Jbuntu@ubuntu-HP-Elite-Tower-600-G9-Desktop-PC: $ time
real
         8m8.886s
         8m8.888s
ubuntumubuntu-HP-Ellte-Tower-600-09-Desktop-PC: $ cal
Command 'cal' not found, but can be installed with:
udo apt install ncal
```



Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

```
mtububunta-HP-Ellte-Inwer-BOS-Ga-Deiktop-PC: $ 1s
a ubuntumubunta-MP-Elite-Tower-855-G7-Decktop-PC: $ touch abc uhuntumubunta-MP-Elite-Tower-855-G9-Decktop-PC: $ is
whentypubonts PP.Elte.Tower.800.G9.Desktop.PC: $ 1s

a abc Desktop des Desmonts Deshlock North Michael Michael

desktop des Desmonts Deshlock North Michael

desktop des Desmonts Desktop Aug de Ossaktop PC: $ touch hello.text

ubuntupubonts PP.Elte.Tower.800.G9.Desktop.PC: $ touch hello.text

ubuntupubonts PP.Elte.Tower.800.G9.Desktop.PC: $ touch hello.text

cat: hello.tet: No such file or directory

ubuntupubonts PP.Elte.Tower.800.G9.Desktop.PC: $ touch hello.txt

ubuntupubonts PP.Elte.Tower.800.G9.Desktop.PC: $ la

a abc Desktop des Desmonts Downsons bello.text hello.txt

ubuntupubonts PP.Elte.Tower.800.G9.Desktop.PC: $ la

a abc Desktop des Desmonts Downsons bello.text hello.txt

ubuntupubonts PE.Elte.Tower.800.G9.Desktop.PC: $ la

a bc Desktop des Desmonts Downsons bello.text hello.txt
 a abc Disking des Besternis Boundeds hello.text hello.tx:
ubuntubuhuntu-RP-Elitu-Town-886-69-Denktop-PC: 5 cat>>hello.txt
 ubuntopubonta-PP-Ellte-Tewer-806-69-Desktop-PC: $ TRIALScathello.txthl.txt
TRIAL.txtht.txt: command not found
ubuntopubunta-8P-Ellte-Tewer-806-69-Desktop-PC: $ TRIALScathello.txthltxt
 TRIAL.txthitxt: command not found ubentumubants.HP Elice Tower 600 GP Decktop PC: $ TRIAL$ cat hello.txt hi.txt
 TRIALS: command not found ubuntugubuntu-HP-Ellic-Tower-600-69-peaktop:PC: 5 free
                                            total used free
7805760 1092768 4972768
2097148 8 2097148
                                                                                                                                                                            shared buff,cache avallable
453050 1740240 0800750
  ubentaBubunta-MP-Ellice-Tower-SCS-GS-Desktop-PC: 5 echo
 ubuntugubunta-HP-Ellte-Tower-600-69-Deaktop-PC: $ cd TRIAL
ubootugubunta-HP-Ellte-Tower-600-69-Deaktop-PC:-/mcNL$ cat hrllo.txt ht.txt
cat: hllo-kxt: No such file or directory
cat: hl.txt: No such file or directory
ubuntupubuntu-HP-Ellte-Tower-600-G9-Desktop-PC: | MIALS cd -
ubuntupubuntu-HP-Ellte-Tower-600-G9-Desktop-PC: y cd TRIAL
whentupubuntu-HP-Ellte-Tower-600-G9-Desktop-PC: y mia S Louch hello-ixt
ubuntupubuntu-HP-Ellte-Tower-600-G9-Desktop-PC: / MIALS Louch hello-ixt
ubuntupubuntu-HP-Ellte-Tower-600-G9-Desktop-PC: / MIALS Louch hello-ixt
ubuntugubunts-HP-Eite-Tower-800-09-Desktop-PC: MINA $ touc hi.txt

Connand 'touc' not found, did you mean:
convand 'touch' from deb cornutils (8.32-4.1ubuntul)

Try: sudo apt install edeb names
ubuntugubunts-HP-Eite-Tower-800-09-Desktop-PC: MINA $ touch hi.txt
ubuntugubunts-HP-Eite-Tower-800-09-Desktop-PC: MINA $ cat>>helio.txt hi.txt
ubuntugubunts-HP-Eite-Tower-800-09-Desktop-PC: MINA $ cat>>helio.txt hi.txt
ubuntugubunts-HP-Eite-Tower-800-09-Desktop-PC: MINA $ cat>>helio.txt hi.txt
ubunt@ubunt:-HP-Elite-Tower-655-GF-Decktop-PC: S mkdlr
mkdfr: missing operand
Try 'rkdir --help' for more information.
obunt@ubunt:-HP-Elite-Tower-600-GP-besktop-PC: S mkdlr doc
obunt@ubunt:-HP-Elite-Tower-600-GP-besktop-PC: S cd TRIAL
ubunt@ubunt:-HF-Elite-Tower-600-GP-besktop-PC: S cd TRIAL
ubunt@ubunt:-HF-Elite-Tower-600-GP-besktop-PC: PHINES Cd...
ubuntugubunti-HP-Elite-Tower-803-G9-Desktop-PC: //hlm $ cd/

abvitugubunti-HP-Elite-Tower-808-C9-Desktop-PC: //hlm $ cd/

bash: cd/: No such file of directory

ubuntugubunti-HP-Elite-Tower-803-G9-Desktop-PC: $ cd/

ubuntugubunti-HP-Elite-Tower-803-G9-Desktop-PC: $ cd/
 ubuntupubuntu-HF-Elite-Tawer-800-09-besktop-PC: $ touch a ubuntupubunta-RF-Elite-Tawer-800-09-besktop-PC: $ is
      Anning on Deciment Configure And Pictics Tuble one Property Tells Video buntugulusts-MF-Elite-Temps-eth-G9-Decktop-Ec! 5 touch abc buntugulusts-MF-Elite-Tower-600-G9-Decktop-PC: 5 ls
obuntupubunt: IP Elite Town 655 G9 Desktop Pt: S cat hello text cat: hello text: No such file or directory ubuntupubunt: IP Elite Town 655 G9 Desktop Pt: S touch hello text cat: hello text: No such file or directory ubuntupubunt: IP Elite Town 850 G9 Desktop Pt: S touch hello text ubuntupubunt: IP Elite Town 850 G9 Desktop Pt: S touch hello txt ubuntupubunt: IP Elite Town 850 G9 Desktop Pt: S touch hello txt ubuntupubunt: IP Elite Town 850 G9 Desktop Pt: S tat hello txt ubuntupubunt: IP Elite Town 850 G9 Desktop Pt: S tat hello txt ubuntupubunt: IP Elite Town 850 G9 Desktop Pt: S cat > hello txt ubuntupubunt: IP Elite Town 850 G9 Desktop Pt: S cat > hello txt how are you?
 mow are you?
Where are you?
 ubuntupubunt: HP Elite Tower 800 G9 Briktop PC: $ TRIALScathello.txthl.txt
TRIAL:txthl.txt: command not found
ubuntipubunt, NE Filte-Town- 600-60-Desktop-PC: 5 TRIALScathello txthitxt
IMIALLXXthixXXI commend not found
IMLALIXEDITE: command not found ubunifyubunire.PP-filte-found-gp-pritup-PC: $ TRIALS cat hello.txt bi.txt TRIALS: command not found ubunifyubunire.Ellie-found-sco-Gp-briktop-PC: $ free total used free shared buffycache available Meni 7805700 1092700 4972700 453055 1140240 6090750 5wap: 2007148 8 1097148 ubunifyubunire.PP-Ellie-found-sco-Gp-briktop-PC: $ eche
    buntagabunta-AP-Elite-Taker-688-GS-Decktop-PC: 5 🗍
```



Vidyavardhini's College of Engineering and Technology

Department of Artificial Intelligence & Data Science

```
The control of the co
```

Conclusion:

What Do you mean by System calls?

System calls are fundamental interfaces between a user application and the operating system. When a program running in user mode requires access to system resources or services that only the operating system can provide, it must make a system call. This allows the program to transition from user mode tokernel mode, where the operating system resides, and request the necessary action.

System calls provide a standardized way for applications to interact with the underlying hardware and operating system functionalities. Examples of operations that typically require system calls include readingfrom or writing to files, creating new processes, allocating memory, managing hardware devices, and performing network communication.

Each operating system has its own set of system calls, and they are usually exposed to user programs through a set of functions provided by the operating system's application programming interface (API). Insummary, system calls are crucial for enabling user applications to utilize the full capabilities of the underlying operating system and hardwar