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Class/ Sem: SE/IV
Experiment No. 1
Title: Explore the internal commands of Linux.
Date of Performance:
Date of Submission:
Marks:
Sign:



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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]...



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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:

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buntumubuntu-HP-Elite-Tower-600-69-Desktop-PC: $ pwd
buntugubuntu-HP-Ellte-Tower-600-G9-Desktop-PC: 5 ls
buntugubuntu-HP-Eltte-Tower-600-G9-Desktop-PC: $ ls -1
total 36
drwxr-xr-x 2 ubuntu ubuntu 4096 Mar
                                                 2023
                                                 2023
                                                 2023
drwxr-xr-x 3 ubuntu ubuntu 4096 Sep 25 10:18
drwxr-xr-x 2 ubuntu ubuntu 4096 Mar
                                                 2023
       ---- 4 ubuntu ubuntu 4896 Mar 28
                                                 2023
                                                 2823
drwxr-xr-x 2 ubuntu ubuntu 4896 Mar
 rwxr-xr-x 2 ubuntu ubuntu 4096 Mar
 buntugubuntu-HP-Elite-Tower-600-G9-Desktop-PC: $ ls -a
    .bash_history
.bash_logout
                      .bashrc
                                                                                  .profile
                                                                                                      .sudo_as_admin_succes
        ubuntu-HP-Flite-Tower-680-G9-Desktop-PC: $ date
Wednesday 10 January 2024 02:49:21 PM IST
ubuntu@ubuntu-HP-Elite-Tower-600-G9-Desktop-PC: $ time
         8m8.888s
Duntumubuntu-MP-Elite-Tower-600-G9-Desktop-PC: $ cal
Command 'cal' not found, but can be installed with:
udo apt install neal
```



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buntugubuntu-HP-ETite-Tower-808-69-Desktop-PC: $ 18
   a ubuntugubantu-RP-Elite-Tower-808-69-Desktop-PC: $ touch abc ubuntugubantu-RP-Elite-Tower-808-69-Desktop-PC: $ ls
 a abc Destrop des Bessens Debitods Facts Bichers Mills and Template THEAL Vision Destrop For S Late Place Towar - 500 - 69 - Desktop For S Cat hello.text cat: hello.text: No such file or directory ubuntumubuntum. Filte-Towar - 500 - 69 - Desktop For S Cat hello.text ubuntumubuntum. Filte-Towar - 500 - 69 - Desktop For S Cat hello.text ubuntumubuntum For Elite-Towar - 500 - 69 - Desktop For S Cat hello.text ubuntum University For S Cat hello.t
         buntugubuntu-RP-Elite-Tower-650-69-Denktop-PC: $ cat>>hella.txt
   How are you?
Where are you?
  ubuntumubuntu-mP-Ellte-Tower-RDB-G9-Desktop-PC: $ TRIALScathello.txthl.txt
TRIAL.txthl.txt: command not found
ubuntumubuntu-MP-Ellte-Tower-ROB-G9-Desktop-PC: $ TRIALScathello.txthitxt
TRIAL.txthitxt: command not found
ubuntumubuntu-MP-Ellte-Tower-RDB-G9-Desktop-PC: $ TRIALS cat hello.txt hi.txt
   TRIALS: command not found ubuntugubuntu HF-Ellte-Tower-808-G9-Desktop-HC: 5 free
                                                                                                                                                                                                                                                                                     shared buff/cache avallable
453056 1740240 6009756
                                total used
7805760 1092760
                                                                                                                                                                                           free
4972760
    Swap: 2097148 6 2097148
ubuntw@ubuntu-HP-Ellte-Tower-EDB-G9-Desktop-PC: $ ocho
    ubuntugubuntu-HP-Filte-Tower-606-69-Deaktop-PC: 5 cd TRIAL
 ubuntupubuntu-HP-Elite-Inwer-800-G9-Deuktop-PC: $ cd TRIAL
ubuntupubuntu-HP-Elite-Inwer-800-G9-Deuktop-PC: $ mills cat hrllo.txt hi.txt
cat: hrllo.txt: No such file or directory
cat: hi.txt: No such file or directory
ubuntupubuntu-HP-Elite-Inwer-800-G9-Deuktop-PC: $ cd TRIAL
ubuntu@ubuntu-MP-Elite-Tower-808-69-Desktop-Pt.
Connand 'touch' from deb coreutils (8.32-4.1ubuntu1)
Try: sudo apt install <deb name>
ubuntu@ubuntu-HP-Elite-Tower-608-69-Desktop-Pt: //FEA S touch ht.txt
ubuntu@ubuntu-HP-Elite-Tower-608-69-Desktop-Pt: //FEA S cat hello.txt hi.txt
ubuntu@ubuntu-HP-Elite-Tower-608-69-Desktop-Pt: //FEA S cat hello.txt hi.txt
ubuntu@ubuntu-HP-Elite-Tower-608-69-Desktop-Pt: //FEA S cat->hello.txt hi.txt
ubuntu@ubuntu-HP-Elite-Tower-808-69-Desktop-Pt: //FEA S cat->hello.txt hi.txt
ubuntu@ubuntu-HP-Elite-Tower-808-69-Desktop-Pt: //FEA S cat->hello.txt hi.txt
 Ubontumbuntu-HP-Elite-Tower-Mod-GG-Desktop-PC: 5 mkdlr doc obuntumbuntu-HP-Elite-Tower-MOG-GG-Desktop-PC: 5 mkdlr doc obuntumbuntu-HP-Elite-Tower-MOG-GG-Desktop-PC: 5 mkdlr TRIAL ubuntumbuntu-HP-Elite-Tower-MOG-GG-Desktop-PC: 5 cd TRIAL ubuntumbuntu-HP-Elite-Tower-MOG-GG-Desktop-PC: 7000-5 cd.
  ubuntupubuntu-HP-Elite-Tower-800-09-Desktop-PC: / Co (MIA. ubuntupubuntu-HP-Elite-Tower-800-09-Desktop-PC: / HBLD $ cd..: command not found ubuntupubuntu-HP-Elite-Tower-800-09-Desktop-PC: / HBLD $ cd/bash: cd/: No such file or directory ubuntupubuntu-HP-Elite-Tower-800-09-Desktop-PC: / HBLD $ cd/ubuntupubuntu-HP-Elite-Tower-800-09-Desktop-PC: / S cd/ubuntupubuntu-HP-Elite-Tower-800-09-Desktop-PC: / S cd/
         Duntugubuntu-HF-Ellte-Tower-600-G9-Desktop-PC: $ touch a buntugubuntu-HP-Ellte-Tower-600-G9-Desktop-PC: $ ls
    a ubuntupuluatu-HF-Ellis-Tower-600-09-Desktop-PC: $ touch abc ubuntupuluatu-HF-Elite-Tower-600-09-Desktop-PC: $ is
ubuntupubuntu-MP-Elite-Tower-808-69-Desktop-PC: $ TRIALScathello.txthl.txt
TRIAL.txthl.txt: command not found
ubuntupubuntu-MP-Elite-Tower-808-69-Desktop-PC: $ TRIALScathello.txthltxt
TRIAL.txthltxt: command not found
ubuntupubuntu-MP-Elite-Tower-808-69-Desktop-PC: $ TRIALS cat hello.txt hl.txt
   TRIAL txthitxt: command Not 1000.

TRIAL txthitxt: command Not 1000.

TRIALS: command not found

TRIAL: txthitxt: command Not 1000.

TRIAL: txthitxthitxt: command Not 1000.

TRIAL: txthitxthitxthitxthitxthitxth
    total used free share
Meni 7805700 1092700 4972700 45305
Swap: 2697148 2697148
ubantusunutu NF Elite-Towar 600-09-Delitop FC; $ eche
                 intugubuntu-NF-Elite-Tower-600-G9-Desktop-PC: 5
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Type Channel and the Company of the
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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