

### General commands:

Command	Function
date	Used to display the current system date and time.
date + %D	Displays date only
date + %T	Displays time only
date + %Y	Displays the year part of date
date +%H	Displays the hour part of time
cal	Calendar of the current month
cal year	Displays calendar for all months of the specified year
cal month year	Displays calendar for the specified month of the year
who	Get the information about all the users currently working in the system
who am i	It is used to know in which terminal the user is currently logged on
id	It is used to display the login name.
Tty	Used to display the terminal name
uname	Displays the Operating System
uname-r	Shows version number of the OS (kernel).
uname-n	Displays domain name of the server
echo "txt"	Displays the given text on the screen
echo \$HOME	Displays the user's home directory
Bc	Basic calculator. Press <b>Ctrl+d</b> to quit
Lp file	Allows the user to spool a job along with others in a print queue.
man cmdname	Manual for the given command. Press <b>q</b> to exit
history	To display the commands used by the user since logon.
Exit	Exit from a process. If shell is the only process then logs out

### Directory commands:

Command	Function
Pwd	Path of the present working directory
mkdir dir	A directory is created in the given name under the current directory
mkdir dir1 dir2	A number of sub-directories can be created under one stroke
cd subdir	Change Directory. If the <i>subdir</i> starts with/then path starts from <b>root</b> (absolute)otherwise from current working directory.
cd	To switch to the home directory.
cd/	To switch to the root directory.
cd ..	To move back to the parent directory
rmdir subdir	Removes an empty sub-directory.

### File commands:

Command	Function
cat >filename	To create a file with some contents. To end typing press <b>Ctrl+d</b> . The >symbol means redirecting output to a file.(< for input)
cat filename	Displays the file contents.
cat >>filename	Used to append contents to a file
cp src des	Copy files to given location. If already exists, it will be overwritten
cp-isrc des	Warns the user prior to overwriting the destination file
cp-rsrc des	Copies the entire directory, all its sub-directories and files.
mv old new	To rename an existing file or directory. -i option can also be used
mv f1 f2 f3 dir	To move a group of files to a directory.
mv-v old new	Display name of each file as it is moved.
file filename	Determine the type of file
rm file	Used to delete a file or group of files. -i option can also be used
spell filename	Find the spelling errors in the file
rm*	To delete all the files in the directory.
rm-r*	Deletes all files and sub-directories
rm-f*	To forcibly remove even write-protected files
ls	Lists all files and subdirectories (blue colored) in sorted manner.
ls name	To check whether a file or directory exists.
ls name*	Short-hand notation to list out file names of a specific pattern.
ls-a	Lists all files including hidden files (files beginning with.)
ls-x dir name	To have specific listing of a directory.
ls-R	Recursive listing of all files in the subdirectories
ls-l	Long listing showing file access rights (read/write/execute-rwx for user/group/others-ugo).
cmp file1file2	Used to compare two files. Displays nothing if files are identical.
wc file	It produces a statistics of lines (l), words (w), and characters(c).
chmod perm file	Changes permission for the specified file.(r=4,w=2,x=1) chmod740filesetsallrightsforuser,readonlyforgroups and no rights for others



Date:

**Objectives:** a) To query a data file using filter commands in UNIX

b) To search for a regular expression in a file using grep command in UNIX.

**Outcome:** solve problems using filtering commands and grep commands in UNIX**Pre-request/Theme:** Students should know about File structure and File commands in UNIX.**Description:**

Filters are the central commands of the UNIX tool kit. It acts on data file where lines are *records*, *fields* delimited by a character not used by the data (mostly |, default is white space). The output is a set of records and the input file is unaltered by these commands.

Command	Function
<b>head</b>	used to display the first few records (10 records by default)
head stud	Displays first 10 records by default
head -5 stud	Displays first 5 records
head -l stud   wc -c	length of first record
<b>tail</b>	used to display the last few records (10 records by default)
tail stud	Displays last 10 records by default
tail -5 stud   tee last5	Last 5 records listed & stored in file <i>last5</i> using <i>tee</i>
<b>cut</b>	Used to extract specific fields. The <b>d</b> option specifies the delimiter and <b>f</b> for specifying the field list. The <b>c</b> option may be used if extraction is done character wise
cut -d \   -f 1,3,4 stud	Fields 1,3,4 listed
paste -d \   list1 list2	merges two cut files <i>list1</i> and <i>list2</i>
<b>sort</b>	Reorders the file as per ASCII sequence. The <b>t</b> option is used to specify delimiter and <b>k</b> option to specify the field
sort stud	Sorted on 1st column by default
sort -t \   -k 3 stud	Sort as per 3rd column
sort -c stud	Check if file is sorted using <b>c</b> option
sort -t \   -k 4,4 -k 3,3 stud	Sorting on secondary keys
sort -t \   -nr -k 4 stud	Sort on numeric field using <b>n</b> option, <b>r</b> for reverse
uniq stud	Display unique entries in a sorted file
<b>tr</b>	Translates characters. Can be used to change text case. It works with standard input <
tr '[a-z]' '[A-Z]' < stud	Changes text to upper case
<b>nl</b>	Display file content with lines numbered. The <b>s</b> option is used to specify separator
nl -s "  " stud	Displays entries numbered with separator
pr [options] <file name >	It is used to display the contents of the file by separating them into
join -a1 f1 f2	It is used to extracts common lines from two sorted files

A frequent requirement is to look for a pattern or expression in a file. UNIX handles this feature through **grep** and **egrep**. **grep** uses an regular expression to display lines that match and **egrepenables**