**File Handling commands**

• **mkdir** – make directories

Usage: mkdir [OPTION] DIRECTORY...

eg. mkdir prabhat

**• ls** – list directory contents

Usage: ls [OPTION]... [FILE]...

eg. ls, ls l,

ls prabhat

• **cd** – changes directories

Usage: cd [DIRECTORY]

eg. cd prabhat

* **pwd -**print name of current working directory

Usage: pwd

• **vim** – Vi Improved, a programmers text editor

Usage: vim [OPTION] [file]...

eg. vim file1.txt

**cp** – copy files and directories

Usage: cp [OPTION]... SOURCE DEST

eg. cp sample.txt sample\_copy.txt

cp sample\_copy.txt target\_dir

 **mv** – move (rename) files

Usage: mv [OPTION]... SOURCE DEST

eg. mv source.txt target\_dir

mv old.txt new.txt

**rm** remove

files or directories

Usage: rm [OPTION]... FILE...

eg. rm file1.txt , rm rf some\_dir

• **find** – search for files in a directory hierarchy

Usage: find [OPTION] [path] [pattern]

eg. find file1.txt, find name file1.txt

**• history** – prints recently used commands

Usage: history

**Pattern**

A Pattern is an expression that describes a set of strings which is used to give a concise description

of a set, without having to list all elements.

eg. ab\*cd matches anything that starts with ab and ends with cd etc.

ls \*.txt – prints all text files

**Text Processing**

**• cat** – concatenate files and print on the standard output

Usage: cat [OPTION] [FILE]...

eg. cat file1.txt file2.txt

cat n file1.txt

**• echo** – display a line of text

Usage: echo [OPTION] [string] ...

eg. echo I love India

echo $HOME

**• wc** print

the number of newlines, words, and bytes in files

Usage: wc [OPTION]... [FILE]...

eg. wc file1.txt

wc L file1.txt

**sort** – sort lines of text files

Usage: sort [OPTION]... [FILE]...

eg. sort file1.txt

sort r file1.txt

**System Administration**

• **chmod** – change file access permissions

Usage: chmod [OPTION] [MODE] [FILE]

eg. chmod 744 calculate.sh

• **chown** – change file owner and group

Usage: chown [OPTION]... OWNER[:[GROUP]] FILE...

eg. chown remo myfile.txt

**su** – change user ID

Usage: su [OPTION] [LOGIN]

eg. su remo, su

• **passwd** – update a user’s authentication tokens(s)

Usage: passwd [OPTION]

eg. Passwd

• **who** – show who is logged on

Usage: who [OPTION]

eg. who , who b, who q

Process management

**ps –** report a snapshot of the current processes

Usage: ps [OPTION]

eg. ps, ps el

• kill – to kill a process(using signal mechanism)

Usage: kill [OPTION] pid

eg. kill 9

**Archival**

**tar** – to archive a file

Usage: tar [OPTION] DEST SOURCE

eg. tar cvf

/home/archive.tar /home/original tar xvf/home/archive.tar

**• zip** – package and compress (archive) files

Usage: zip [OPTION] DEST SOURSE

eg. zip original.zip original

**• unzip** – list, test and extract compressed files in a ZIP archive

Usage: unzip filename

eg. unzip original.zip

* **du** – estimate file space usage

Usage: du [OPTION]... [FILE]...

eg. du

**• df** – report filesystem disk space usage

Usage: df [OPTION]... [FILE]...

eg. df

**• quota** – display disk usage and limits

Usage: quota [OPTION]

eg. quota v

**Advanced Commands**

**• reboot** – reboot the system

Usage: reboot [OPTION]

eg. reboot

**• poweroff** – power off the system

Usage: poweroff [OPTION]

eg. Poweroff

**SHELL PROGRAMS**

**SEARCHING A SUBSTRING IN GIVEN TEXT**

**PROGRAM:**

echo Enter main string:

read main

l1=`echo $main | wc -c`

l1=`expr $l1 - 1`

echo Enter sub string:

read sub

l2=`echo $sub | wc -c`

l2=`expr $l2 - 1`

n=1

m=1

pos=0

while [ $n -le $l1 ]

do

a=`echo $main | cut -c $n`

b=`echo $sub | cut -c $m`

if [ $a = $b ]

then

n=`expr $n + 1`

m=`expr $m + 1`

pos=`expr $n - $l2`

r=`expr $m - 1`

if [ $r -eq $l2 ]

then

break

fi

else

pos=0

m=1

n=`expr $n + 1`

fi

done

echo Position of sub stringin main string is $pos

**OUTPUT:**

Enter main string:

This is a shell pgm

Enter sub string:

shell

Position of sub stringin main string is 11

**MENU BASED MATH CALCULATOR**

**PROGRAM:**

echo “ Menu Based Calculator”

echo "Enter the Operands"

read a

read b

echo "Enter the Operator"

read o

case $o in

"+" ) echo “$a + $b” = `expr $a + $b`;;

"-" ) echo “$a + $b” = `expr $a - $b`;;

"\*" ) echo “$a + $b” = `expr $a \* $b`;;

"/" ) echo “$a + $b” = `expr $a / $b`;;

\* ) echo " Inavlid Operation"

esac

**OUTPUT:**

Menu Based Calculator

Enter the Operands

4

6

Enter the Operator

+

4 + 6 = 10

**CONVERTING ALL FILENAMES FROM LOWERCASE TO UPPERCASE**

**PROGRAM**

for i in \*

do

echo Before Converting to uppercase the filename is

echo $i

j=`echo $i | tr '[a-z]' '[A-Z]'`

echo After Converting to uppercase the filename is

echo $j

mv $i $j

done

**OUTPUT**

Before Converting to upper case the filename is

cse.sh

After Converting to uppercase the filename is

CSE.SH

**PRINTING PATTERN USING LOOP STATEMENT**

**PROGRAM**

echo "Enter the Limit "

read n

echo "Pattern"

for (( i = 1 ; i < $n ; i++ ))

do

for (( j = 1 ; j <= i ; j++ ))

do

echo -n " $ "

done

echo " "

done

**OUTPUT**

Enter the Limit

3

Pattern

$

$ $

$ $ $

**CONVERTING THE FILENAME FROM UPPERCASE TO LOWERCASE**

**PROGRAM**

echo –n “Enter the Filename”

read filename

if [ ! -f $filename ];

then

echo “Filename $filename does not exists”

exit 1

fi

tr ‘[A-Z]’ ‘[a-z]’ < $filename

**OUTPUT**

Enter the Filename

CSE.sh

cse.sh

**SHOWING VARIOUS SYSTEM INFORMATION**

**PROGRAM**

echo "SYSTEM INFORMATION"

echo “Hello ,$LOGNAME”

echo “Current Date is = $(date)”

echo “User is ‘who I am’”

echo “Current Directory = $(pwd)”

echo "Network Name and Node Name = $(uname -n)"

echo "Kernal Name =$(uname -s)"

echo "Kernal Version=$(uname -v)"

echo "Kernal Release =$(uname -r)"

echo "Kernal OS =$(uname -o)"

echo “Proessor Type = $(uname -p)”

echo “Kernel Machine Information = $(uname –m)”

echo "All Information =$(uname -a)"

**OUTPUT**

SYSTEM INFORMATION

Hello, 3CSE-A

Current date is = Mar 17 08:38:58 IST 2014

Kernal Name = Linux

User is Who I am

Current Directory = 11scs122

Network name and Node name = linuxmint

Kernal Versio n= #1-Ubuntu SMP Fri Apr 16 08:10:02 UTC 2010

Kernal OS = GNU/Linux

kernal release =2.6.32-21-generic

Kernal Processor Type = 2.6.33.85.fcl3.i686.PAE

Kernal All Information = Linux main lab 2.6.33.85.fcl.3 i686.PAE

= #1-Ubuntu SMP Fri Apr 16 08:10:02 UTC 2010

I686 i686 i686 GNU/Linux