**STUDY OF UNIX COMMANDS**

Ex No:1

Date:

**AIM:**

To study and execute the UNIX Commands.

**Introduction to UNIX:**

**UNIX** was developed by AT&T Bell laboratories by Ken Thompson and Dennis Ritchie with the intension of creating a portable operating system. It was finally written in C and now runs on all machines from notebooks to mainframes. The term UNIX is derived from UNICS (UNiplexed Information Computing System).It is an interactive, multiuser and multitasking operating system and it is suitable for programming and system research projects. It supports individual user, small groups or entire departments on a wide range. It manages memory and disk space.

**UNIX COMMANDS**

**1. Date Command:**

This command is used to display the current data and time.

**Syntax:**

$date

**2. Calender Command:**

This command is used to display the calendar of the year or the particular month of calendar year.

**Syntax:**

a. $cal <year>

b. $cal <month> <year>

Here the first syntax gives the entire calendar for given year & the second Syntax gives the calendar of reserved month of that year.

**3. Echo Command:**

This command is used to print the arguments on the screen.

**Syntax:**

$echo <text>

**4. Banner Command:**

It is used to display the text in ‘#’ symbol .It displays the text in the form of a banner.

**Syntax :**

$banner <arguments>

**5.’who’ Command:**

It is used to display who are the users connected to our computer currently.

**Syntax:**

$who

**6.’who am i’ Command:**

Display the details of the current working directory.

**Syntax:**

$who am i

**7.’tty’ Command:**

It will display the terminal name.

**Syntax:**

$tty

**8.’CLEAR’ Command:**

It is used to clear the screen.

**Syntax:**

$clear

**9.’MAN’ Command:**

It helps us to know about the particular command and its options & working. It is like ‘help’ command in windows.

**Syntax:**

$man <command name>

**10. LIST Command:**

It is used to list all the contents in the current working directory.

**Syntax:**

$ ls – options <arguments>

If the command does not contain any argument means it is working in the Current directory.

**Options:**

a– used to list all the files including the hidden files.

c– list all the files columnwise.

d- list all the directories.

m- list the files separated by commas.

p- list files include ‘/’ to all the directories.

r- list the files in reverse alphabetical order.

f- list the files based on the list modification date.

x-list in column wise sorted order.

**DIRECTORY RELATED COMMANDS:**

**1. Present Working Directory Command:**

To print the complete path of the current working directory.

**Syntax:**

$pwd

**2. MKDIR Command:**

To create or make a new directory in a current directory.

**Syntax:**

$mkdir <directory name>

**3. CD Command:**

To change or move the directory to the mentioned directory .

**Syntax :**

$cd <directory name>.

**4. RMDIR Command:**

To remove a directory in the current directory & not the current directory itself.

**Syntax:**

$rmdir <directory name>

**FILE RELATED COMMANDS:**

**1. CREATE A FILE:**

To create a new file in the current directory we use CAT command.

**Syntax:**

$cat > filename.

**2. DISPLAY A FILE:**

To display the content of file mentioned we use CAT command without ‘>’ operator.

**Syntax:**

$cat filename.

**3. COPYING CONTENTS:**

To copy the content of one file with another. If file doesnot exist, a new file is created and if the file exists with some data then it is overwritten.

**Syntax :**

$ cat <source filename> >> <destination filename>

**4. SORTING A FILE:**

To sort the contents in alphabetical order in reverse order.

**Syntax:**

$sort <filename >

**Option:** $ sort –r <filename>

**5. COPYING CONTENTS FROM ONE FILE TO ANOTHER:**

To copy the contents from source to destination file so that both contents are same.

**Syntax:** $cp <source filename> <destination filename>

$cp <source filename path > <destination filename path>

**6. MOVE Command:**

To completely move the contents from source file to destination file and to remove the source file.

**Syntax:**

$ mv <source filename> <destination filename>

**7. REMOVE Command:**

To permanently remove the file we use this command.

**Syntax:**

$rm <filename>

**8. WORD Command:**

To list the content count of no of lines, words, characters.

**Syntax:**

$wc<filename>

**Options:**

-c – to display no of characters.

-l – to display only the lines.

-w – to display the no of words.

**9. LINE PRINTER:**

To print the line through the printer, we use lp command.

**Syntax:**

$lp <filename>

**10. PAGE Command:**

This command is used to display the contents of the file page wise & next page can be viewed by pressing the enter key.

**Syntax:**

$pg <filename>

**11. FILTERS AND PIPES**

**HEAD:**  It is used to display the top ten lines of file.

**Syntax:** $head<filename>

**TAIL:**  This command is used to display the last ten lines of file.

**Syntax:**  $tail<filename>

**PAGE:** This command shows the page by page a screenful of information is displayed after which the page command displays a prompt and passes for the user to strike the enter key to continue scrolling.

**Syntax:** $ls –a\p

**MORE:** It also displays the file page by page. To continue scrolling with more command, press the space bar key.

**Syntax:** $more<filename>

**GREP: This** command is used to search and print the specified patterns    from the   file.   Sy**ntax:**  $grep [option] pattern <filename>

**SORT:** This command is used to sort the data in some order.

**Syntax:** $sort<filename>

**PIPE:** It is a mechanism by which the output of one command can be channelled into the input of another command.

**Syntax:** $who | wc-l

**TR: The** tr filter is used to translate one set of characters from the standard inputs to another.

**Syntax:**  $tr “[a-z]”  “[A-Z]”

**COMMUNICATION THROUGH UNIX COMMANDS**

Command: MESG

  Description: The message command is used to give permission to other users to send message to your terminal.

 Syntax: $mesg y

Command: **WRITE**

Description: This command is used to communicate with other users, who are logged in at the same time.

Syntax: $write <user name>

Command: **WALL**

Description: This command sends message to all users those who are logged in   using the unix server.

Syntax: $wall <message>

Command: **MAIL**

Description: It refers to textual information, that can be transferred from one   user to another

Syntax: $mail <user name>

 Command: **REPLY**

       Description: It is used to send reply to specified user.

        Syntax: $reply<user name>

**vi EDITOR COMMANDS**

The vi editor is a visual editor used to create and edit text, files, documents and programs. It displays the content of files on the screen and allows a user to add, delete or change part of text. There are three modes available in the vi editor, they are

1. Command mode

2. Input (or) insert mode.

The vi editor is invoked by giving the following commands in UNIX prompt.

**Syntax:** $vi <filename> (or)

$vi

This command would open a display screen with 25 lines and with tilt (~) symbol at the start of each line. The first syntax would save the file in the filename mentioned and for the next the filename must be mentioned at the end.

**Options :**

1.vi +n <filename> - this would point at the nth line (cursor pos).

2.vi –n <filename> - This command is to make the file to read only to change from one mode to another press escape key.

**INSERTING AND REPLACING COMMANDS:**

To move editor from command node to edit mode, you have to press the <ESC> key. For inserting and replacing the following commands are used.

**1. ESC a Command:**

This command is used to move the edit mode and start to append after the current character.

**Syntax :** <ESC> a

**2. ESC A COMMAND :**

This command is also used to append the file , but this command append at the end of current line.

**Syntax:** <ESC> A

**3. ESC i Command:**

This command is used to insert the text before the current cursor position.

**Syntax:** <ESC> i

**4. ESC I Command:**

This command is used to insert at the beginning of the current line.

**Syntax :** <ESC> I

**5. ESC o Command:**

This command is insert a blank line below the current line & allow insertion of contents.

**Syntax:** <ESC> o

**6. ESC O Command:**

This command is used to insert a blank line above & allow insertion of contents.

**Syntax :** <ESC> O

**7. ESC r Command :**

This command is to replace the particular character with the given

                        characters.

**Syntax:** <ESC> rx Where x is the new character.

**8. ESC R Command:**

This command is used to replace the particular text with a given text.

**Syntax:** <ESC> R text

**9. <ESC> s Command:**

This command replaces a single character with a group of character.

**Syntax:** <ESC> s

**10.<ESC> S Command :**

This command is used to replace a current line with group of characters. **Syntax :** <ESC> S

**CURSOR MOVEMENT IN vi :**

**1.<ESC> h :**

This command is used to move to the previous character typed. It is used to move to left of the text . It can also used to move character by character (or) a number of characters.

**Syntax :** <ESC> h – to move one character to left.

<ESC> nh – tomove ‘n’ character to left.

**2.<ESC> l :**

This command is used to move to the right of the cursor (ie) to the next character. It can also be used to move the cursor for a number of character.

**Syntax :** <ESC> l – single character to right.

<ESC> nl - ‘n’ characters to right.

**3.<ESC> j :**

This command is used to move down a single line or a number of lines.

**Syntax :**

<ESC> j – single down movement.

<ESC> nj – ‘n’ times down movement.

**4.<ESC> k :**

This command is used to move up a single line or a number of lines.

**Syntax :**

<ESC> k – single line above.

<ESC> nk – ‘n’ lines above.

**5.ENTER (OR) N ENTER :**

This command will move the cursor to the starting of next lines or a group of lines mentioned.

**Syntax :**

<ESC> enter <ESC> n enter.

**6.<ESC> + Command :**

This command is used to move to the beginning of the next line.

**Syntax :**

<ESC> + <ESC> n+

**7.<ESC> - Command :**

This command is used to move to the beginning of the previous line.

**Syntax :**

<ESC> - <ESC> n-

**8.<ESC> 0 :**

This command will bring the cursor to the beginning of the same current line.

**Syntax :**

<ESC> 0

**9.<ESC> $ :**

This command will bring the cursor to the end of the current line.

**Syntax :**

<ESC> $

**10.<ESC> ^ :**

This command is used to move to first character of first lines.

**Syntax :**

<ESC> ^

**11.<ESC> b Command :**

This command is used to move back to the previous word (or) a number of words.

**Syntax :**

<ESC> b <ESC>nb

**12.<ESC> e Command :**

This command is used to move towards and replace the cursor at last character of the word (or) no of words.

**Syntax :**

<ESC> e <ESC>ne

**13.<ESC> w Command :**

This command is used to move forward by a single word or a group of words.

**Syntax :**

<ESC> w <ESC> nw

**DELETING THE TEXT FROM vi :**

**1.<ESC> x Command :**

To delete a character to the right of current cursor positions , this command is used.

Syntax :

<ESC> x <ESC> nx

**2.<ESC> X Command :**

To delete a character to the left of current cursor positions , this command is used.

**Syntax :**

<ESC> X <ESC> nX

**3.<ESC> dw Command :**

This command is to delete a single word or number of words to the right of the current cursor position.

**Syntax :**

<ESC> dw <ESC> ndw

**4.db Command :**

This command is to delete a single word to the left of the current cursor position.

**Syntax :**

<ESC> db <ESC> ndb

**5.<ESC> dd Command :**

This command is used to delete the current line (or) a number of lines below the current line.

**Syntax :**

<ESC> dd <ESC> ndd

**6.<ESC> d$ Command :**

This command is used to delete the text from the current cursor position to the last character of the current line.

**Syntax :** <ESC> d$

**SAVING AND QUITTING FROM vi :-**

**1.<ESC> w Command :**

To save the given text present in the file.

**Syntax :** <ESC> : w

**2.<ESC> q! Command :**

To quit the given text without saving.

**Syntax :** <ESC> :q!

**3.<ESC> wq Command :**

This command quits the vi editor after saving the text in the mentioned file.

**Syntax :** <ESC> :wq

**4.<ESC> x Command :**

This command is the same as the ‘wq’ command. It saves and quits.

**Syntax :** <ESC> :x

**5.<ESC> q Command :**

This command would quit the window but it would ask for again to save the file.

**Syntax :** <ESC> : q

**CONCLUSION:**

The various Unix & Vi Editor commands were studied and executed successfully.