Part I:

Task 1. [CO1]: Experiment of UNIX OS and Practice with different UNIX Commands.

Aim :

To study the basic command for unix operating system

A) Is there a way to erase all files in the current directory, including all its sub-directories, using only one command
B) To Find out globally search for regular expression and print out
C) Assume that the user has write permissions in the current directory
D) To find out the root directory
E) It should support ls both without any option and with the option "-l". No other options need to be supported
F) you can disconnect/logout with the UNIX server from your console terminal
G) With the ls –l listing from first column output which n^{th} character (out of 10) represents file type?
H) Mr. XYZ working in X Company, He logged in the system at 9.00 am, now he wants to logout/ disconnect from the server. Help him to find out the command to logout from UNIX server.
I) Mr. Kavin want to search particular pattern from the file called CSE Department, help him to find out the command the search particular pattern from the specified file.
J) Mr. ABC has login the system and doing some process in it simultaneously. Now he want to display the commands used by the him since login. Help him to find out the command.
K) How will you find which operating system your system is running on in UNIX?
L) How do you know if a remote host is alive or not?
M) How do you check how much space left in current drive?
N) How do you find whether your system is 32 bit or 64 bit?
O) How to View the Contents of a File?
P) Which command is used to sort the contents of file1 and displays sorted output on the screen.

1.Date Command :
This command is used to display the current data and time.
Syntax :
$date
$date +%ch
Options : -
a = Abbrevated weekday.
A = Full weekday.
b = Abbrevated month.
B = Full month.
c = Current day and time.
C = Display the century as a decimal number.
d = Day of the month.
D = Day in „mm/dd/yy" format
h = Abbrevated month day.
H = Display the hour.
L = Day of the year.

m = Month of the year.
M = Minute.
P = Display AM or PM
S = Seconds
T = HH:MM:SS format
u = Week of the year.
y = Display the year in 2 digit.
Y = Display the full year.
Z = Time zone .
To change the format :
Syntax :
$date „+%H-%M-%S"
2.Calender Command :
This command is used to display the calendar of the year or the particular month of calendar year.
Syntax :
a.$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>
Multi line echo command :
To have the output in the same line , the following commands can be used.
Syntax : $echo <text\>text
To have the output in different line, the following command can be used.
Syntax : $echo "text
>line2
>line3"

4.Banner Command :
It is used to display the arguments in „#" symbol .
Syntax : $banner <arguments>

5.'who' Command :
It is used to display who are the users connected to our computer currently.
Syntax : $who – option"s
Options : -
H–Display the output with headers.
b–Display the last booting date or time or when the system was lastely rebooted

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 : $tty
8.'Binary' Calculator Command :
It will change the „$" mode and in the new mode, arithematic operations such as +,-,*,/,%,n,sqrt(),length(),=, etc can be performed . This command is used to go to the binary calculus mode.

Syntax :
$bc operations
^d
$
1 base –inputbase
0 base – outputbase are used for base conversions.

Base :
Decimal = 1 Binary = 2 Octal = 8 Hexa = 16

9.'CLEAR' Command :
It is used to clear the screen.
Syntax : $clear

10.'MAN' Command :

It help us to know about the particular command and its options & working. It is like „help" command in windows .
Syntax : $man <command name>

11.MANIPULATION Command :
It is used to manipulate the screen.
Syntax : $tput <argument>
Arguments :
1.Clear – to clear the screen.
2.Longname – Display the complete name of the terminal.
3.SMSO – background become white and foreground become black color.
4.rmso – background become black and foreground becomes white color.
5.Cop R C – Move to the cursor position to the specified location.
6.Cols – Display the number of columns in our terminals.

12.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.

The > symbol is redirectory we use cat command.

2.DISPLAY A FILE :

To display the content of file mentioned we use CAT command without „>" operator.

Syntax :

$cat <filename.

Options –s = to neglect the warning /error message.

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 <filename source> >> <destination filename>

$ cat <source filename> >> <destination filename> it is avoid overwriting.

Options : -

-n content of file with numbers included with blank lines.

Syntax :

$cat –n <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 screenfull 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 datas in some order.
Syntax: $sort<filename>

PIPE : It is a mechanism by which the output of one command can be channeled 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
MESG
Description: The message command is used to give permission to other users to send message to your terminal.
Syntax: $mesg y
2.Command: **WRITE**
Description: This command is used to communicate with other users, who are logged in at the same time.
Syntax: $write <user name>
3.Command: **WALL**
Description: This command sends message to all users those who are logged in using the unix server.
Syntax: $wall <message>
4.Command: **MAIL**
Description: It refers to textual information, that can be transferred from one user to another
Syntax: $mail <user name>
5.Command: **REPLY**
Description: It is used to send reply to specified user.
Syntax: $reply<user name>