EXPT 0 | NAME: Ram Bhutada SE3-06 | Page No.: | Date: 23/11/2021 | YOUVA

Assignment No - 1

Aim: To study basic unix commands

1) mkdir: The mkdir command allows the user to create directories. This command can create multiple directories at once as well as set permission & directories.

Ex: $ mkdir Ds
$ ls
Os

2) cp: cp stands for copy. This command is used to copy files or group of files or directory. It creates an exact image of file on disk with different file name.

3) Pwd: The pwd command stands for print working directory. It displays the directory in which we are currently in the output.

Eg: $ pwd
output: /home/Ram

4) Who: The who command displays all the users who have logged into system currently.

Eg: $ who
Output: Ram xyz 2022.01.23 22:10

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5) rm : rm stands for remove . It is a command for removing files and direc
Syntax : rm [files or directories]

6) mv : Mv command stands for 'move' and simply moves a file from a direct to another directory.

7) cd : cd stands for change directory. changes your current directory to specified directory.
eg : $ cd OS

8) Is : The Is command is used to list of directories in linux and other uni based operating system . It simply displays the content of directory.
eg : $ Is
OS

9) Cat : cat command allows us to create single or multiple files view, content of file, concatenate files and redirect output in terminal or files.

10) Chdir : chdir changes the current working directory of calling process to directory specified in path

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Assignment NO-2

Aim: TO study basic unix commands.

Theory:

① chgrp: Change group of file

It is used to change the group ownership of file or directory.

② cw: change command

changes the word the cursor is on from the cursor to the lowercase end of word.

③ yw: Copy & paste command.

Copies the current word from the character the lowercase w cursor is on, untill the end of word.

④ x: Deleting characters

Deleting the character before the cursor location.

⑤ gzip: compress files

It is used to compress file so that they take less space.

⑥ chown: change ownership

This command allows you to change user and group ownership of given files, directory or symbolic link.

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(VII) Editing files: (A)
Inserts text at end of current line.

(VIII) chmod: changing the access permissi
It can view access permission of all
files and directories in current working
directory.

(IX) : set nu : Set commands
Display lines with line number on th
left side.

(X) gzcat : Search zip file.
let you look at a gzipped file without
actually having to unzip it.

Conclusion: Hence we have understood the
concept of file operations and Vi
editor.

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Assignment No - 3

Aim: To study process managment and memory management.

(i) ps: The ps command is used to view currently running processes on the system. It helps us to determine which process is doing what in our system, how much memory it is using, how much CPU space it occupies, User ID, command name, etc.

(ii) fg: The fg command, is a command that moves a background processes on your current linux shell to the foreground.

(iii) pkill: Pkill command-line utility that sends signals to processes of a running program based on given criteria. The processes can be specified by their full or partial names, a user running the process, or other attribute.

(iv) Renice: Renice command alters the nice value of one or more running processes. The nice value is the decimal value of system scheduling priority of a process.

(V) htop : This command allow user to monitor the system's vital resources process in red-time.
Ex: htop [-dChuSV]

(VI) vmstat : It is a performance monitoring of system as it given information processes, memory paging, block IO and CPU scheduling.
Ex: vmstat [options] [delay [count]]

(VII) Sar : It displays results on output sc addition result can be stored in by -o filename option. It will sh CPU monitoring activity if any flag is specified by user
Ex: $ Sar -[options] time interval number of tim

(VIII) ~~Pagesize~~ Proc : It contains a bunch of info about your system's memory, including amount available and amount free on two lines.

(IX) killall : The killall command used for killing any process on the system based on given name. command will terminate the processes forcibly a specified name matches.

(X) df : The df command is used to display information to file systems about total space

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Assignment No-4

Aim: Input first name, middle name, last name through shell create dir with middle name, create file containing name roll no and batch with first name, copy contents to file with last name, check it if there is diff btw 2 files and count no. of words, char and lines from 2nd line.

Code:
```
echo $1
echo $2
echo $3
mkdir $2
echo "Ram" >> $1
echo "06" >> $1
echo "SII" >> $1

cat $1

cp Ram Bhutada
diff Ram Bhutada >patch

wc -l Bhutada
wc -w Bhutada
wc -c Bhutada
```

Output :

[redacted] Ram
B Dinesh
Bhutada
06
Sri
06 Bhutada
06 Bhutada
1

Feature learnt : Implementation of Basic Linux commands can be understood from this p statement.

mkdir - Creates a directory
cat - Used to print content of file Output stream.

cp - Copy contents of one file to anoth
diff - To print the difference in contents of files into a given patch file.

wc - l - count no. of lines in a file
-w - count no. of words in a file
-c - count the no. of characteristic in

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b-#

Assignment No-5[A]

Aim: To input number of sides and length of side of a regular polygon. Validate the two and compute perimeter and area.

Feature learnt: Following arithmetics operators are used to operate on variables in shell.

(i) 'C+' Addition: Adds the value.
(ii) '-' Subtraction: Subtracts RH operand from LH operand.
(iii) '*' Multiplication: Multiply value.
(iv) '/' Division: Divides LH operand from RH operand.
(v) '%' Modulus: Returns Reminder
(vi) '=' Assignment: Assign value.
(vii) '==' Equality: Compare two numbers, if same, return true.
(viii) '!=' Not equal: Compare two numbers, if same returns false.

They should written like [$a == $b] with space between brackets.

CODE: #!/bin/sh
echo "Enter no. of sides="
read sides

echo "Enter length of sides"
read len.

```
if test $len -lt 1
then
echo "length cannot be <1"
fi
if test $sides -lt 3
then
echo "No. of sides cannot be <3 for regular"
else
perimeter=$((sides * $len))
area=$((sides * $len * $len))
echo "Perimeter = $perimeter"
echo "Area = $area"
fi
```

Output:

```
Enter no. of sides
4
Enter length of sides
2
perimeter = 8
Area = 4
perimeter = 8
Area = 4.
```

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Assignment no-5(B)

Aim: Write a shell program to find cost price by given selling price and either @ loss or profit price.

Featured learned:
read (-p) : In catching a word of input, we used to write type demething and hit space : to understand output before read '-d'. The '-p' option allows a message to be displayed before reading from std up input.

If = This block will process if specified condition is true.

If-else = If specified cond' is not true in if part then else part will be execute.

echo = used for displaying lines of text on string which are passed as assignment.

Code: read -p " Enter the selling price :" s
read -p "Enter the price :" a
if [$a -de $s]
then
c = $(($s-$a))
echo "It's a profit of $s rs"
else
c = $(($a-$s))
echo " It's a loss of $s rs".
fi

Output : ./ass3.sh (calling) or (running)

Enter the selling price : 20

Enter the price : 10

Profit : 10