Keegan Vaz
SE CMPN B
42

Experiment 9

Aim: A) Study of VI editor

Theory:

Three modes of operation:

a. command mode
b. insert mode
c. colon mode

B) Write shell scripts to do the following:

a. Display top 10 processes

ps -eo pid,ppid,cmd,%mem,%cpu | head;;

ps is performance monitoring tool stands for process status. The -o option of ps allows you to specify the output format, processes displayed by %mem and %cpu.

b. Display current logged in user and logname

Environment variable $USERNAME and $LOGNAME displays the details of current user

c. Display current shell, home directory, operating system type, current path, current working directory

Following commands are used to display;

i. Current Shell - $SHELL
ii. Home Directory - $HOME
iii. Operating system type – uname -o
iv. Current path - $PATH
v. Current Working Directory – $PWD

d. Display OS version, release number, kernel version

Following commands are used to display;

i. OS version - $ cat /proc/version
ii. OS release number - uname -r
iii. Kernel version - uname –v

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PROGRAM AND OUTPUT:

```
echo "Enter Choice:"
read ch
case $ch in
1) echo "top 10 processes:"
ps -eo pid,ppid,cmd,%mem,%cpu| head;;
2) echo "Currently Logged in: $USER"
echo "Currently Logged in Name: $(logname)";;
3) echo "Present Working Directory: $PWD"
echo "Shell Name: $SHELL"
echo "Home Directory: $HOME"
echo "OS TYPE:`uname -o`"
echo "Current Path: $PATH";;
4) echo "Kernel Version: `uname -v`"
echo "Release Number: `uname -r`"
echo "OS Version: `cat /proc/version`";;
esac
~
~
~
~
~
~
~
~
~
~
~
~
"Keegan42" 16L, 460C
```

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Output:

```
[liveuser@localhost ~]$ vi Keegan42
[liveuser@localhost ~]$ sh Keegan42
Enter Choice:
1
top 10 processes:
  PID  PPID CMD                         %MEM %CPU
    1     0 /usr/lib/systemd/systemd --  0.2  0.7
    2     0 [kthreadd]                   0.0  0.0
    3     2 [ksoftirqd/0]                0.0  0.0
    4     2 [kworker/0:0]                0.0  0.3
    5     2 [kworker/0:0H]               0.0  0.0
    7     2 [rcu_sched]                  0.0  0.0
    8     2 [rcu_bh]                     0.0  0.0
    9     2 [rcuos/0]                    0.0  0.0
   10     2 [rcuob/0]                    0.0  0.0
[liveuser@localhost ~]$ sh Keegan42
Enter Choice:
2
Currently Logged in: liveuser
Currently Logged in Name: liveuser
[liveuser@localhost ~]$ sh Keegan42
Enter Choice:
3
Present Working Directory: /home/liveuser
Shell Name: /bin/bash
Home Directory: /home/liveuser
```

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```
OS TYPE:GNU/Linux
Current Path: /usr/local/bin:/usr/local/sbin:/usr/bin:/usr/sbin:/bin:/sbin:/home/liveus
er/.local/bin:/home/liveuser/bin
[liveuser@localhost ~]$ sh Keegan42
Enter Choice:
4
Kernel Version: #1 SMP Thu May 21 13:10:33 UTC 2015
Release Number: 4.0.4-301.fc22.x86_64
OS Version: Linux version 4.0.4-301.fc22.x86_64 (mockbuild@bkernel02.phx2.fedoraproject
.org) (gcc version 5.1.1 20150422 (Red Hat 5.1.1-1) (GCC) ) #1 SMP Thu May 21 13:10:33
UTC 2015
```

CONCLUSION:

Learnt to use a switch case statement and explored VI editor Commands.

Post experiment exercise:

Q1: What is the use of head and tail filters?

Shell provides us the head and tail commands to print only the lines in which we are interested in. The main difference between both the commands is, head prints the lines from the beginning of the files, and tail prints the lines from the end of the files.

Q2: What is pipe in shell programming?

The pipe character | is used to connect the output from one command to the input of another.