NETWORKING & SYSTEM ADMINISTRATION LAB

Experiment No.: 3

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Batch: B
Date: 21/04/2022

Aim

Familiarization of the linux commands.

Procedure

42. read

This command is used to read the content of a line to a variable.

Syntax :- $ read <variable_name>

$ echo $variable_name

Output :-

```
student@S46:~$ read something
Hello, My name is Swetha Prakash
student@S46:~$ echo $something
Hello, My name is Swetha Prakash
```

43. locate

This command is used to locate a particular file from any directory.

Syntax :- $ locate filename.txt

Output :-

```
student@S46:~$ locate space.txt
/home/student/stardust/space.txt
```

44. find

This command is used to locate a particular file from current directory.

Syntax :- $ find filename.txt

Output :-

```
student@S46:~$ find space.txt
find: 'space.txt': No such file or directory
student@S46:~$ cd stardust
student@S46:~/stardust$ find space.txt
space.txt
```

45. grep

This command is used to search a file for a particular pattern of characters, and displays all lines that contain that pattern.

Syntax :- $ grep <word> <filename.txt>

Output :-

```
student@S46:~$ grep Find a.txt
Find more packages
```

46. df

This command is used to get a report on system disk space usage.

Syntax :- $ df

Output:-

```
student@S46:~$ df
Filesystem      1K-blocks      Used Available Use% Mounted on
udev              3989764         0   3989764   0% /dev
tmpfs              803852      3436    800416   1% /run
/dev/sda6       114460828  41838324  66765124  39% /
tmpfs             4019252    108444   3910808   3% /dev/shm
tmpfs                5120         4      5116   1% /run/lock
tmpfs             4019252         0   4019252   0% /sys/fs/cgroup
/dev/loop2            768       768         0 100% /snap/gnome-characters/741
/dev/loop3         113408    113408         0 100% /snap/core/12821
/dev/loop5           2688      2688         0 100% /snap/gnome-system-monitor/169
/dev/loop4          46080     46080         0 100% /snap/gtk-common-themes/1440
/dev/loop6            128       128         0 100% /snap/bare/5
/dev/loop7          63488     63488         0 100% /snap/core20/1376
/dev/loop8         144128    144128         0 100% /snap/gnome-3-26-1604/98
/dev/loop9         164096    164096         0 100% /snap/gnome-3-28-1804/116
/dev/loop11        224256    224256         0 100% /snap/gnome-3-34-1804/77
/dev/loop10         56960     56960         0 100% /snap/core18/2284
/dev/loop12          2688      2688         0 100% /snap/gnome-calculator/920
/dev/loop13           768       768         0 100% /snap/gnome-characters/761
/dev/loop14         56960     56960         0 100% /snap/core18/2344
/dev/loop15         63488     63488         0 100% /snap/core20/1405
/dev/loop16        302848    302848         0 100% /snap/vlc/2344
/dev/loop21          1024      1024         0 100% /snap/gnome-logs/81
/dev/loop20          2688      2688         0 100% /snap/gnome-system-monitor/174
/dev/loop18        254848    254848         0 100% /snap/gnome-3-38-2004/99
/dev/loop23        207872    207872         0 100% /snap/vlc/1397
/dev/loop19        168832    168832         0 100% /snap/gnome-3-28-1804/161
/dev/loop24           640       640         0 100% /snap/gnome-logs/106
/dev/loop22        224256    224256         0 100% /snap/gnome-3-34-1804/72
/dev/loop25          2560      2560         0 100% /snap/gnome-calculator/884
/dev/loop27        253952    253952         0 100% /snap/gnome-3-38-2004/87
/dev/loop17        540928    540928         0 100% /snap/pycharm-community/274
/dev/loop26         66816     66816         0 100% /snap/gtk-common-themes/1519
/dev/loop28        144128    144128         0 100% /snap/gnome-3-26-1604/104
tmpfs              803848        16    803832   1% /run/user/120
tmpfs              803848        52    803796   1% /run/user/1001
```

47. df -m

This command is used to see the reports in megabytes.

Syntax :- $ df -m

Output :-

```
student@S46:~$ df -m
Filesystem     1M-blocks  Used Available Use% Mounted on
udev               3897     0      3897   0% /dev
tmpfs               786     4       782   1% /run
/dev/sda6        111779 40858     65201  39% /
tmpfs              3926   106      3820   3% /dev/shm
tmpfs                 5     1         5   1% /run/lock
tmpfs              3926     0      3926   0% /sys/fs/cgroup
/dev/loop2            1     1         0 100% /snap/gnome-characters/741
/dev/loop3          111   111         0 100% /snap/core/12821
/dev/loop5            3     3         0 100% /snap/gnome-system-monitor/169
/dev/loop4           45    45         0 100% /snap/gtk-common-themes/1440
/dev/loop6            1     1         0 100% /snap/bare/5
/dev/loop7           62    62         0 100% /snap/core20/1376
/dev/loop8          141   141         0 100% /snap/gnome-3-26-1604/98
/dev/loop9          161   161         0 100% /snap/gnome-3-28-1804/116
/dev/loop11         219   219         0 100% /snap/gnome-3-34-1804/77
/dev/loop10          56    56         0 100% /snap/core18/2284
/dev/loop12           3     3         0 100% /snap/gnome-calculator/920
/dev/loop13           1     1         0 100% /snap/gnome-characters/761
/dev/loop14          56    56         0 100% /snap/core18/2344
/dev/loop15          62    62         0 100% /snap/core20/1405
/dev/loop16         296   296         0 100% /snap/vlc/2344
/dev/loop21           1     1         0 100% /snap/gnome-logs/81
/dev/loop20           3     3         0 100% /snap/gnome-system-monitor/174
/dev/loop18         249   249         0 100% /snap/gnome-3-38-2004/99
/dev/loop23         203   203         0 100% /snap/vlc/1397
/dev/loop19         165   165         0 100% /snap/gnome-3-28-1804/161
/dev/loop24           1     1         0 100% /snap/gnome-logs/106
/dev/loop22         219   219         0 100% /snap/gnome-3-34-1804/72
/dev/loop25           3     3         0 100% /snap/gnome-calculator/884
/dev/loop27         248   248         0 100% /snap/gnome-3-38-2004/87
/dev/loop17         529   529         0 100% /snap/pycharm-community/274
/dev/loop26          66    66         0 100% /snap/gtk-common-themes/1519
/dev/loop28         141   141         0 100% /snap/gnome-3-26-1604/104
tmpfs               786     1       785   1% /run/user/120
tmpfs               786     1       785   1% /run/user/1001
/dev/loop29         111   111         0 100% /snap/core/12834
```

48. du

This command is used to check how much space a file or directory takes.

Syntax :- $ du

Output :-

```
student@S46:~$ df -m
Filesystem      1M-blocks   Used Available Use% Mounted on
udev                 3897      0      3897   0% /dev
tmpfs                 786      4       782   1% /run
/dev/sda6          111779  40858     65201  39% /
tmpfs                3926    106      3820   3% /dev/shm
tmpfs                   5      1         5   1% /run/lock
tmpfs                3926      0      3926   0% /sys/fs/cgroup
/dev/loop2              1      1         0 100% /snap/gnome-characters/741
/dev/loop3            111    111         0 100% /snap/core/12821
/dev/loop5              3      3         0 100% /snap/gnome-system-monitor/169
/dev/loop4             45     45         0 100% /snap/gtk-common-themes/1440
/dev/loop6              1      1         0 100% /snap/bare/5
/dev/loop7             62     62         0 100% /snap/core20/1376
/dev/loop8            141    141         0 100% /snap/gnome-3-26-1604/98
/dev/loop9            161    161         0 100% /snap/gnome-3-28-1804/116
/dev/loop11           219    219         0 100% /snap/gnome-3-34-1804/77
/dev/loop10            56     56         0 100% /snap/core18/2284
/dev/loop12             3      3         0 100% /snap/gnome-calculator/920
/dev/loop13             1      1         0 100% /snap/gnome-characters/761
/dev/loop14            56     56         0 100% /snap/core18/2344
/dev/loop15            62     62         0 100% /snap/core20/1405
/dev/loop16           296    296         0 100% /snap/vlc/2344
/dev/loop21             1      1         0 100% /snap/gnome-logs/81
/dev/loop20             3      3         0 100% /snap/gnome-system-monitor/174
/dev/loop18           249    249         0 100% /snap/gnome-3-38-2004/99
 Document Viewer
/dev/loop23           203    203         0 100% /snap/vlc/1397
/dev/loop19           165    165         0 100% /snap/gnome-3-28-1804/161
/dev/loop24             1      1         0 100% /snap/gnome-logs/106
/dev/loop22           219    219         0 100% /snap/gnome-3-34-1804/72
/dev/loop25             3      3         0 100% /snap/gnome-calculator/884
/dev/loop27           248    248         0 100% /snap/gnome-3-38-2004/87
/dev/loop17           529    529         0 100% /snap/pycharm-community/274
/dev/loop26            66     66         0 100% /snap/gtk-common-themes/1519
/dev/loop28           141    141         0 100% /snap/gnome-3-26-1604/104
tmpfs                 786      1       785   1% /run/user/120
tmpfs                 786      1       785   1% /run/user/1001
/dev/loop29           111    111         0 100% /snap/core/12834
```

49. wc -l

This command is used to count the number of lines from a file.

Syntax :- $ wc -l <filename.txt>

Output :-

```
student@S46:~$ wc -l a.txt
16 a.txt
```

50. wc -w

This command is used to count the number of words from a file.

Syntax :- $ wc -w <filename.txt>

Output :-

```
student@S46:~$ wc -w a.txt
137 a.txt
```

51. wc -c

This command is used to count the number of characters from a file.

Syntax :- $ wc -c <filename.txt>

Output :-

```
student@S46:~$ wc -c a.txt
738 a.txt
```

52. wc -m

This command is used to count the number of bytes from a file.

Syntax :- $ wc -m <filename.txt>

Output :-

```
student@S46:~$ wc -m a.txt
738 a.txt
```

53. grep -i

This command is used for a case insensitive search and display.

Syntax :- $ grep -i <word> <filename.txt>

Output :-

```
student@S46:~$ grep -i packAGE a.txt
PIP is a package manager for Python packages
A package contains all the files you need for a module
Downloading a package is very easy
Open the command line interface and tell PIP to download the package you want
Once the package is installed, it is ready to use
Import the "camelcase" package into your project
Find more packages
Press y and the package will be removed
Use the list command to list all the packages installed on your system
```

54. grep -v

This command is used for an inverted search and display.

Syntax :- $ grep -v <word> <filename.txt>

Output :-

```
student@S46:~$ grep -v package a.txt
The try block lets you test a block of code for errors
The except block lets you handle the error
The else block lets you execute code when there is no error

Since the try block raises an error, the except block will be executed

Without the try block, the program will crash and raise an error
```

55. cat file | grep

This command is used for a case insensitive search.

Syntax :- $ cat <filename.txt> | grep <word>

Output :-

```
student@S46:~$ cat a.txt | grep error
The try block lets you test a block of code for errors
The except block lets you handle the error
The else block lets you execute code when there is no error
Since the try block raises an error, the except block will be executed
Without the try block, the program will crash and raise an error
```

56. grep -A1

This command is used to display the line after the word.

Syntax :- $ grep -A1 <word> <filename.txt>

Output :-

```
student@S46:~$ grep -A1 Galaxy star.txt
Galaxy
Supercluster
```

57. grep -B1

This command is used to display the line before the word.

Syntax :- $ grep -B1 <word> <filename.txt>

Output :-

```
student@S46:~$ grep -B1 Galaxy star.txt
Alpha Centauri
Galaxy
```

58. grep -C1

This command is used to display the line before and after the word.

Syntax :- $ grep -C1 <word> <filename.txt>

Output :-

```
student@S46:~$ grep -C1 Galaxy star.txt
Alpha Centauri
Galaxy
Supercluster
```