

SYSTEM DESIGN LAB

Experiment no: 2

Date: 25/ 04/2021

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Roll no: 4

MCA S4

- a) Familiarize linux commands for Redirection and Piping**
- b) Familiarize linux commands for administration level tasks-
useradd, usermod, userdel, passwd**

a. Redirection of Standard output/input or Input - Output redirection

Mostly all command gives output on screen or take input from keyboard, but in Linux it's possible to send output to file or to read input from file. For e.g. \$ ls command gives output to screen; to send output to file of ls give command , \$ ls > filename. It means put output of ls command to filename. There are three main redirection symbols >, >>, <

(1) > Redirector Symbol Syntax: Linux-command > filename

To output Linux-commands result to file. Note that If file already exist, it will be overwritten else new file is created. For e.g. To send output of ls command give \$ ls > myfiles Now if 'myfiles' file exist in your current directory it will be overwritten without any type of warning. (What if I want to send output to file, which is already exist and want to keep information of that file without losing previous information/data?, For this Read next redirector)

(2) >> Redirector Symbol Syntax: Linux-command >> filename

To output Linux-commands result to END of file. Note that If file exist , it will be opened and new information / data will be written to END of file, without losing previous information/data, And if file is not exist, then new file is created. For e.g. To send output of date command to already exist file give \$ date >> myfiles

(3) < Redirector Symbol Syntax: Linux-command < filename

To take input to Linux-command from file instead of key-board. For e.g. To take input for cat command give \$ cat < myfiles

```
anagha@DESKTOP-UPC86F2:~$ sudo su
[sudo] password for anagha:
root@DESKTOP-UPC86F2:/home/anagha# cd one
root@DESKTOP-UPC86F2:/home/anagha/one# ls -l
total 0
drwxr-xr-x 1 root root 4096 Apr 18 19:55 anagha
-rw-r--r-- 1 root root  29 Apr 20 20:53 file1.txt
-rw-r--r-- 1 root root   4 Apr 18 20:02 str2.txt
-rw-r--r-- 1 root root  55 Apr 20 20:40 str3.txt
-rw-r--r-- 1 root root  35 Apr 18 20:18 test.txt
drwxr-xr-x 1 root root 4096 Apr 18 19:32 two
root@DESKTOP-UPC86F2:/home/anagha/one# ls >myfiles
root@DESKTOP-UPC86F2:/home/anagha/one# date >>myfiles
root@DESKTOP-UPC86F2:/home/anagha/one# cat <myfiles
anagha
file1.txt
myfiles
str2.txt
str3.txt
test.txt
two
Sat Apr 24 15:10:00 IST 2021
```

```
root@DESKTOP-UPC86F2:/home/anagha/one# cat file1.txt
car
root@DESKTOP-UPC86F2:/home/anagha/one# echo bike >>file1.txt
root@DESKTOP-UPC86F2:/home/anagha/one# cat file1.txt
car
bike
root@DESKTOP-UPC86F2:/home/anagha/one# echo lorry >>file1.txt
root@DESKTOP-UPC86F2:/home/anagha/one# cat file1.txt
car
bike
lorry
root@DESKTOP-UPC86F2:/home/anagha/one# echo boat >file1.txt
root@DESKTOP-UPC86F2:/home/anagha/one# cat file1.txt
boat
root@DESKTOP-UPC86F2:/home/anagha/one# cat <file1.txt
boat
root@DESKTOP-UPC86F2:/home/anagha/one#
```

Pips

A pipe is a way to connect the output of one program to the input of another program without any temporary file.

A pipe is nothing but a temporary storage place where the output of one command is stored and then passed as the input for second command. Pipes are used to run more than two commands (Multiple commands) from same command line. Syntax: command1 | command2

Command using Pips	Meaning or Use of Pipes
<pre>root@DESKTOP-UPC86F2:/home/anagha# echo hello hello root@DESKTOP-UPC86F2:/home/anagha# echo hello wc -l 1</pre>	Here output of echo command is given as input to wc command So that it will print number of lines of text.
<pre>root@DESKTOP-UPC86F2:/home/anagha# echo hello tr 'h' 'H' tr 'o' 'O' Hello</pre>	Here output of echo command is given as input to tr command So that it will replace a particular character with another.

Here output of cat command is given as input to wc command So that it will print the number of lines and words in a line of the file. It will also sort the lines of text in the file using sort command. It searches for a particular pattern of characters in the file with the input from cat command

```
anagha@DESKTOP-UPC86F2:~/one$ cat test.txt
Check
this
out
Command
Line
Prompt
anagha@DESKTOP-UPC86F2:~/one$ cat test.txt | wc -l
6
anagha@DESKTOP-UPC86F2:~/one$ cat test.txt | wc -w
6
anagha@DESKTOP-UPC86F2:~/one$ cat test.txt | sort
Check
Command
Line
Prompt
out
this
anagha@DESKTOP-UPC86F2:~/one$ cat test.txt | grep 'this'
this
```