**Tutorial Number: 01**

**TITLE: Study Of Unix Commands**

**NAME: Bhushan Agrawal ROLLNO: 01**

**CLASS: C BRANCH: Computer BATCH: C1**

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**1. Change your password to a password you would like to use for the remainder of**

**the semester.**

**=>** bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ passwd

Changing password for bhushan.

(current) UNIX password:

Enter new UNIX password:

Retype new UNIX password:

passwd: password updated successfully

(changing password from 0811 to bhushan8)

**2. Display the system’s date.**

**=>** bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ date +%D

01/10/15

{bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ date +%F

2015-01-10 }

**3. Count the number of lines in the /etc/passwd file.**

**=>** bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:/etc$ wc passwd

37 61 1829 passwd

**4. Find out who else is on the system.**

**=>** bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ who

bhushan tty7 2015-01-10 19:42 (:0)

bhushan pts/0 2015-01-10 20:00 (:0.0)

bhushan pts/1 2015-01-10 20:01 (:0.0)

**5. Direct the output of the man pages for the date command to a file named mydate.**

**=>** bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ man date >mydate .

**6. Create a subdirectory called mydir.**

**=>** bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ mkdir mydir

**7. Move the file mydate into the new subdirectory.**

**=>** bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ mv mydate mydir/

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~/mydir$ ls

mydate

**8. Go to the subdirectory mydir and copy the file mydate to a new file called**

**ourdate**

**=>** bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~/mydir$ cp mydate ourdate

9. List the contents of mydir.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~/mydir$ ls

mydate ourdate

10. Do a long listing on the file ourdate and note the permissions.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~/mydir$ ls -l

total 16

-rw-rw-r-- 1 bhushan bhushan 6473 Jan 10 20:04 mydate

-rw-rw-r-- 1 bhushan bhushan 6473 Jan 10 20:17 ourdate

11. Display the name of the current directory starting from the root.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~/mydir$ pwd

/home/bhushan/mydir

12. Move the files in the directory mydir back to the HOME directory.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~/mydir$ mv mydate ourdate ..

13. List all the files in your HOME directory.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ ls -a

. resume.dat.old

.. rss.dat

02\_intro\_to\_emacs rss.dat.old

127.0.0.1:8000 settings.dat

.adobe settings.dat.old

.android share

.appletviewer .smex-items

.armagetronad .speech-dispatcher

a.sh .sqlite\_history

a.sh~ .ssh

.aspell.en.prepl .swp

.aspell.en.pws Templates

backup.emacs.d .thunderbird

.bash\_history .tor

.bash\_logout Ubuntu One

.bashrc .vidalia

.BillardGL.conf.v7 Videos

.blobby wallpapers

.bluefish workspace

.cache .Xauthority

Calibre Library .Xauthority.0I541W

.cellwriter .Xauthority.1Q1K4W

.codeblocks .Xauthority.2GUX2W

.compiz .Xauthority.2OPF3W

.config .Xauthority.2UYM4W

cookies.txt .Xauthority.35CN3W

.dbus .Xauthority.3B492W

Desktop .Xauthority.3RF21W

dht.dat .Xauthority.50L01W

dht.dat.old .Xauthority.5JRG3W

dht\_feed.dat .Xauthority.6CJI4W

dht\_feed.dat.old .Xauthority.7ELB3W

.dmrc .Xauthority.7LJ43W

Documents .Xauthority.86661W

Downloads .Xauthority.8V6L2W

.dreamchess .Xauthority.97B21W

.easystroke .Xauthority.983J2W

.emacs.d .Xauthority.9Y0C3W

examples.desktop .Xauthority.ATWL4W

.gconf .Xauthority.BGTY3W

gedit-3.9.9 .Xauthority.BXBY4W

.git .Xauthority.CTTG2W

.gitconfig .Xauthority.D4C41W

.gksu.lock .Xauthority.D55C2W

.gnome2 .Xauthority.EK5Y4W

.gnome2\_private .Xauthority.EW1H4W

.gnupg .Xauthority.F39A2W

.gphoto .Xauthority.FER52W

.gstreamer-0.10 .Xauthority.FJPD3W

.gvfs .Xauthority.H91B2W

hts-cache .Xauthority.HIUG2W

hts-in\_progress.lock .Xauthority.HMNT4W

hts-log.txt .Xauthority.KVIR2W

.ICEauthority .Xauthority.L0EF4W

.icedtea .Xauthority.LJYL2W

.icons .Xauthority.NFOP3W

.ido.last .Xauthority.NN5X2W

install\_flash\_player\_11\_linux.x86\_64 .Xauthority.O55C2W

.IntelliJIdea13 .Xauthority.OUYK2W

.java .Xauthority.POKU2W

.lesshst .Xauthority.QGH23W

libgraph-1.0.2 .Xauthority.RJOW3W

.local .Xauthority.T0FQ3W

.macromedia .Xauthority.TICO3W

.mozilla .Xauthority.TOTZ1W

Music .Xauthority.TQR02W

mydate .Xauthority.TXTB3W

mydir .Xauthority.V67I4W

.nemiver .Xauthority.VQF73W

NEW .Xauthority.W7TF4W

.onboard .Xauthority.WPEJ1W

ourdate .Xauthority.WTZX3W

Pictures .Xauthority.XRD51W

.pki .Xauthority.XW051W

.profile .Xauthority.Y8JW3W

Public .xsession-errors

resume.dat .xsession-errors.old

14. Display the first 5 lines of mydate.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ head mydate -n 5

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15. Display the last 8 lines of mydate.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ tail mydate -n 8

info coreutils 'date invocation'

should give you access to the complete manual.

GNU coreutils 8.20 October 2012 DATE(1)

16. Remove the directory mydir.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ rmdir mydir/

17. Redirect the output of the long listing of files to a file named list.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ ls -l >list

18. Select any 5 capitals of states in India and enter them in a file named capitals1.

Choose 5 more capitals and enter them in a file named capitals2. Choose 5 more

capitals and enter them in a file named capitals3. Concatenate all 3 files and

redirect the output to a file named capitals.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat > capitals1

Mumbai

Delhi

Hyderabad

Jaipur

Chennai

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat > capitals2

Srinagar

Guwahati

Kolkata

Patna

Chandigarh

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat > capitals3

Panaji

Gandhinagar

Shimla

Ranchi

Bengaluru

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat capitals1 capitals2 capitals3 >> capitals

19. Concatenate the file capitals2 at the end of file capitals.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat capitals2 >> capitals

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat capitals

Mumbai

Delhi

Hyderabad

Jaipur

Chennai

Srinagar

Guwahati

Kolkata

Patna

Chandigarh

Panaji

Gandhinagar

Shimla

Ranchi

Bengaluru

Srinagar

Guwahati

Kolkata

Patna

Chandigarh

20. Redirect the file capitals as an input to the command “wc –l”.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ wc -l < capitals

20

21. Give read and write permissions to all users for the file capitals.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ ls -l capitals

-rw-rw-r-- 1 bhushan bhushan 167 Jan 10 23:51 capitals

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ chmod 666 capitals

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ ls -l capitals

-rw-rw-rw- 1 bhushan bhushan 167 Jan 10 23:51 capitals

22. Give read permissions only to the owner of the file capitals. Open the file, make

some changes and try to save it. What happens ?

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ chmod 400 capitals

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ ls -l capitals

-r-------- 1 bhushan bhushan 167 Jan 10 23:51 capitals

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat > capitals

bash: capitals: Permission denied

23. Create an alias to concatenate the 3 files capitals1, capitals2, capitals3 and

redirect the output to a file named capitals. Activate the alias and make it run.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ alias "bka=cat capitals1 capitals2 capitals3 > capitals"

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ bka

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat capitalsMumbai

Delhi

Hyderabad

Jaipur

Chennai

Srinagar

Guwahati

Kolkata

Patna

Chandigarh

Panaji

Gandhinagar

Shimla

Ranchi

Bengaluru

24. What are the environment variables PATH, HOME and TERM set to on your

terminal ?

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ echo $PATH

/usr/lib/lightdm/lightdm:/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ echo $HOME

/home/bhushan

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ echo $TERM

xterm

25. Find out the number of times the string “the” appears in the file mydate.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ grep -c "the" mydate

20

26. Find out the line numbers on which the string “date” exists in mydate.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ grep -n "date" mydate

6: date - print or set the system date and time

9: date [OPTION]... [+FORMAT]

10: date [-u|--utc|--universal] [MMDDhhmm[[CC]YY][.ss]]

13: Display the current time in the given FORMAT, or set the system date.

15: -d, --date=STRING

19: like --date once for each line of DATEFILE

22: output date/time in ISO 8601 format. TIMESPEC='date' for date

24: date and time to the indicated precision.

30: output date and time in RFC 2822 format. Example: Mon, 07 Aug

34: output date and time in RFC 3339 format. TIMESPEC='date', 'sec‐

35: onds', or 'ns' for date and time to the indicated precision.

62: %c locale's date and time (e.g., Thu Mar 3 23:05:25 2005)

68: %D date; same as %m/%d/%y

72: %F full date; same as %Y-%m-%d

124: %x locale's date representation (e.g., 12/31/99)

143: By default, date pads numeric fields with zeroes. The following

162: Convert seconds since the epoch (1970-01-01 UTC) to a date

164: $ date --date='@2147483647'

168: $ TZ='America/Los\_Angeles' date

172: $ date --date='TZ="America/Los\_Angeles" 09:00 next Fri'

175: The --date=STRING is a mostly free format human readable date string

177: even "next Thursday". A date string may contain items indicating cal‐

178: endar date, time of day, time zone, day of week, relative time, rela‐

179: tive date, and numbers. An empty string indicates the beginning of the

180: day. The date string format is more complex than is easily documented

187: Report date bugs to bug-coreutils@gnu.org

190: Report date translation bugs to <http://translationproject.org/team/>

199: The full documentation for date is maintained as a Texinfo manual. If

200: the info and date programs are properly installed at your site, the

203: info coreutils 'date invocation'

27. Print all lines of mydate except those that have the letter “i” in them.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ grep -v "i" mydate

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SYNOPSIS

date [OPTION]... [+FORMAT]

DESCRIPTION

-d, --date=STRING

-r, --reference=FILE

-R, --rfc-2822

2006 12:34:56 -0600

--rfc-3339=TIMESPEC

2006-08-07 12:34:56-06:00

-s, --set=STRING

FORMAT controls the output. Interpreted sequences are:

%A locale's full weekday name (e.g., Sunday)

%B locale's full month name (e.g., January)

%d day of month (e.g., 01)

%D date; same as %m/%d/%y

%e day of month, space padded; same as %\_d

%F full date; same as %Y-%m-%d

%h same as %b

%H hour (00..23)

%I hour (01..12)

%j day of year (001..366)

%k hour, space padded ( 0..23); same as %\_H

%l hour, space padded ( 1..12); same as %\_I

%m month (01..12)

%N nanoseconds (000000000..999999999)

%S second (00..60)

%t a tab

%Y year

+05:30)

EXAMPLES

$ date --date='@2147483647'

DATE STRING

such as "Sun, 29 Feb 2004 16:21:42 -0800" or "2004-02-29 16:21:42" or

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SEE ALSO

command

28. List 5 states in north east India in a file mystates. List their corresponding

capitals in a file mycapitals. Use the paste command to join the 2 files.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat > mystates

Assam

Tripura

Mizoram

Sikkim

Nagaland

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cat > mycapitals

Guwahati

Agartala

Aizawl

Gangtok

Kohima

bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ paste mystates mycapitals

Assam Guwahati

Tripura Agartala

Mizoram Aizawl

Sikkim Gangtok

Nagaland Kohima

29. Use the cut command to print the 1st and 3rd columns of the /etc/passwd file for

all students in this class.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ cut -c 1,3 /etc/passwd

ro

de

bn

ss

sn

gm

mn

l:

mi

nw

uc

po

ww

bc

ls

ic

ga

nb

lb

ss

ms

aa

ub

ds

wo

kr

rk

se

lg

aa

cl

pl

hl

sn

bu

tj

db

30. Count the number of people logged in and also trap the users in a file using the

tee command.

=> bhushan@bhushan-HP-Pavilion-g6-Notebook-PC:~$ who | wc -l | tee count

3