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

**aniket@Aniket-Linux**:**~**$ passwd

Changing password for aniket.

2. Display the system’s date.

aniket@Aniket-Linux:~$ date

Tue Jan 9 03:16:23 PM IST 2024

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

**aniket@Aniket-Linux**:**~**$ wc -l /etc/passwd

49 /etc/passwd

4. Find out who else is on the system.

**aniket@Aniket-Linux**:**~**$ who

aniket tty2 2024-01-16 19:48 (tty2)

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

**aniket@Aniket-Linux:~$ cd Desktop**

**aniket@Aniket-Linux**:**~/Desktop**$ ls

Assignment1.odt **hello** hello.asm hello.o **OOP** SY 'Syllabus\_CS\_AY2023\_24 Version 7.0 Dated 4 Dec 2023.pdf' **'SY Module 4'**

**aniket@Aniket-Linux**:**~/Desktop**$ cd 'SY Module 4'

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4**$ cd OS

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ man date > mydate

6. Create a subdirectory called mydir.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ mkdir mydir

7. Move the file mydate into the new subdirectory.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ mv mydate mydir

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

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cd mydir

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS/mydir**$ cp mydate ourdate

9. List the contents of mydir.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS/mydir**$ ls

mydate ourdate

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

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS/mydir**$ ls -l ourdate

-rw-rw-r-- 1 aniket aniket 6468 Jan 16 15:33 ourdate

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

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS/mydir**$ ls -l ourdate

-rw-rw-r-- 1 aniket aniket 6468 Jan 16 15:33 ourdate

(first 3- owner permissions, then group then others)

12. Move the files in the directory mydir back to your home directory.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS/mydir**$ mv \* ~/

13. Display the first 5 lines of mydate.

**aniket@Aniket-Linux**:**~**$ head -n 5 mydate

DATE(1) User Commands DATE(1)

NAME

date - print or set the system date and time

14. Display the last 8 lines of mydate.

**aniket@Aniket-Linux**:**~**$ tail -n 8 mydate

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SEE ALSO

Full documentation <https://www.gnu.org/software/coreutils/date>

or available locally via: info '(coreutils) date invocation'

GNU coreutils 8.32 February 2022 DATE(1)

15. Remove the directory mydir.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ rmdir mydir

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ ls

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

**aniket@Aniket-Linux**:**~**$ ls -l > list

**aniket@Aniket-Linux**:**~**$ ls

**Android** **Desktop** FF\_180\_Project\_Registration\_and\_Progress\_Review\_Group5.docx **log** **Pictures** **snap** **Videos**

**'Android Studio'** **Documents** 'Group 2 FF\_180\_Project\_Registration\_and\_Progress\_Review.docx' **Music** **"PlayOnLinux's virtual drives"** **StudioProjects**

**AndroidStudioProjects** **Downloads** 'Group 4 FF\_180\_Project\_Registration\_and\_Progress\_Review.docx' mydate **Public** **Templates**

cv\_debug.log **eyrc\_hb** list ourdate result-2023-HB-0-20230914.json **trial**

**aniket@Aniket-Linux**:**~**$ cat list

total 284

drwxrwxr-x 3 aniket aniket 4096 Nov 27 19:43 Android

drwxrwxr-x 3 aniket aniket 4096 Nov 27 19:39 Android Studio

drwxrwxr-x 4 aniket aniket 4096 Jan 14 02:27 AndroidStudioProjects

-rw-r--r-- 1 aniket aniket 304 Nov 4 00:45 cv\_debug.log

drwxr-xr-x 4 aniket aniket 4096 Jan 16 15:20 Desktop

drwxr-xr-x 2 aniket aniket 4096 Sep 8 20:04 Documents

drwxr-xr-x 9 aniket aniket 4096 Jan 16 15:05 Downloads

drwxrwxr-x 4 aniket aniket 4096 Oct 10 23:51 eyrc\_hb

-rw-rw-r-- 1 aniket aniket 34909 Sep 14 14:15 FF\_180\_Project\_Registration\_and\_Progress\_Review\_Group5.docx

-rw-rw-r-- 1 aniket aniket 117798 Sep 14 14:12 Group 2 FF\_180\_Project\_Registration\_and\_Progress\_Review.docx

-rw-rw-r-- 1 aniket aniket 43770 Sep 14 14:11 Group 4 FF\_180\_Project\_Registration\_and\_Progress\_Review.docx

-rw-rw-r-- 1 aniket aniket 0 Jan 16 21:11 list

drwxrwxr-x 3 aniket aniket 4096 Jan 4 15:06 log

drwxr-xr-x 2 aniket aniket 4096 Sep 8 20:04 Music

-rw-rw-r-- 1 aniket aniket 6468 Jan 16 15:23 mydate

-rw-rw-r-- 1 aniket aniket 6468 Jan 16 15:33 ourdate

drwxr-xr-x 4 aniket aniket 4096 Nov 27 12:28 Pictures

lrwxrwxrwx 1 aniket aniket 38 Nov 27 00:21 PlayOnLinux's virtual drives -> /home/aniket/.PlayOnLinux//wineprefix/

drwxr-xr-x 2 aniket aniket 4096 Sep 8 20:04 Public

-rw-rw-r-- 1 aniket aniket 540 Sep 14 23:34 result-2023-HB-0-20230914.json

drwx------ 12 aniket aniket 4096 Jan 10 15:58 snap

drwxrwxr-x 3 aniket aniket 4096 Nov 27 19:54 StudioProjects

drwxr-xr-x 2 aniket aniket 4096 Sep 8 20:04 Templates

drwxrwxr-x 2 aniket aniket 4096 Jan 9 15:56 trial

drwxr-xr-x 3 aniket aniket 4096 Sep 9 00:05 Videos

17. 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.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat > capitals1

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^C

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat > capitals2

Chennai Bangalore Agartala Itanagar Shillong

^C

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat > capitals3

Amritsar Amaravati Kochi Kavaratti Port Blair

^C

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat capitals1 capitals2 capitals3 > capitals

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ more capitals

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Amritsar Amaravati Kochi Kavaratti Port Blair

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

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat capitals2 >> capitals

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat capitals

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Chennai Bangalore Agartala Itanagar Shillong

Amritsar Amaravati Kochi Kavaratti Port Blair

Chennai Bangalore Agartala Itanagar Shillong

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

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ chmod 666 capitals

(r-4, w-2, x-1)

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

changes and try to save it. What happens ?

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ chmod 400 capitals

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat capitals1 >> capitals

bash: capitals: Permission denied

21. 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.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ alias cat\_capitals='cat capitals1 capitals2 capitals3 > capitals'

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ source ~/.bashrc

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat\_capitals

bash: capitals: Permission denied

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ chmod 600 capitals

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat\_capitals

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat capitals

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

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4**$ find ~/ -name mydate

/home/aniket/mydate

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4**$ cd

**aniket@Aniket-Linux**:**~**$ grep -o -i 'the' mydate | wc -l

31

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

**aniket@Aniket-Linux**:**~**$ grep -o -i 'date' mydate | wc -l

41

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

**aniket@Aniket-Linux**:**~**$ grep -v 'i' mydate

DATE(1) User Commands DATE(1)

NAME

SYNOPSIS

date [OPTION]... [+FORMAT]

DESCRIPTION

-d, --date=STRING

--debug

--rfc-3339=FMT

-r, --reference=FILE

-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

%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)

%q quarter of year (1..4)

%S second (00..60)

%t a tab

%Y year

EXAMPLES

$ date --date='@2147483647'

DATE STRING

AUTHOR

REPORTING BUGS

COPYRIGHT

SEE ALSO

25. List the words of 4 letters from the file mydate.

**aniket@Aniket-Linux**:**~**$ grep -o -w '\w\{4\}' mydate

DATE

User

DATE

NAME

date

date

time

date

date

time

Etc….

26. 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.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat > mystates

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**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ paste mystates capitals > result.txt

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat result.txt

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**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$

27. Use the cut command to print the 1 st and 3 rd columns of the /etc/passwd file for all students in this class.

**aniket@Aniket-Linux**:**~**$ cut -f1,3 /etc/passwd

root:x:0:0:root:/root:/bin/bash

daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin

bin:x:2:2:bin:/bin:/usr/sbin/nologin

sys:x:3:3:sys:/dev:/usr/sbin/nologin

sync:x:4:65534:sync:/bin:/bin/sync

games:x:5:60:games:/usr/games:/usr/sbin/nologin

man:x:6:12:man:/var/cache/man:/usr/sbin/nologin

lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin

mail:x:8:8:mail:/var/mail:/usr/sbin/nologin

news:x:9:9:news:/var/spool/news:/usr/sbin/nologin

uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin

proxy:x:13:13:proxy:/bin:/usr/sbin/nologin

www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin

backup:x:34:34:backup:/var/backups:/usr/sbin/nologin

list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin

irc:x:39:39:ircd:/run/ircd:/usr/sbin/nologin

gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin

nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin

systemd-network:x:100:102:systemd Network Management,,,:/run/systemd:/usr/sbin/nologin

systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd:/usr/sbin/nologin

messagebus:x:102:105::/nonexistent:/usr/sbin/nologin

systemd-timesync:x:103:106:systemd Time Synchronization,,,:/run/systemd:/usr/sbin/nologin

syslog:x:104:111::/home/syslog:/usr/sbin/nologin

\_apt:x:105:65534::/nonexistent:/usr/sbin/nologin

tss:x:106:113:TPM software stack,,,:/var/lib/tpm:/bin/false

uuidd:x:107:116::/run/uuidd:/usr/sbin/nologin

systemd-oom:x:108:117:systemd Userspace OOM Killer,,,:/run/systemd:/usr/sbin/nologin

tcpdump:x:109:118::/nonexistent:/usr/sbin/nologin

avahi-autoipd:x:110:119:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/nologin

usbmux:x:111:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin

dnsmasq:x:112:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin

kernoops:x:113:65534:Kernel Oops Tracking Daemon,,,:/:/usr/sbin/nologin

avahi:x:114:121:Avahi mDNS daemon,,,:/run/avahi-daemon:/usr/sbin/nologin

cups-pk-helper:x:115:122:user for cups-pk-helper service,,,:/home/cups-pk-helper:/usr/sbin/nologin

rtkit:x:116:123:RealtimeKit,,,:/proc:/usr/sbin/nologin

whoopsie:x:117:124::/nonexistent:/bin/false

sssd:x:118:125:SSSD system user,,,:/var/lib/sss:/usr/sbin/nologin

speech-dispatcher:x:119:29:Speech Dispatcher,,,:/run/speech-dispatcher:/bin/false

fwupd-refresh:x:120:126:fwupd-refresh user,,,:/run/systemd:/usr/sbin/nologin

nm-openvpn:x:121:127:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin

saned:x:122:129::/var/lib/saned:/usr/sbin/nologin

colord:x:123:130:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/nologin

geoclue:x:124:131::/var/lib/geoclue:/usr/sbin/nologin

pulse:x:125:132:PulseAudio daemon,,,:/run/pulse:/usr/sbin/nologin

gnome-initial-setup:x:126:65534::/run/gnome-initial-setup/:/bin/false

hplip:x:127:7:HPLIP system user,,,:/run/hplip:/bin/false

gdm:x:128:134:Gnome Display Manager:/var/lib/gdm3:/bin/false

aniket:x:1000:1000:Aniket,,,:/home/aniket:/bin/bash

\_flatpak:x:129:137:Flatpak system-wide installation helper,,,:/nonexistent:/usr/sbin/nologin

28. Count the number of people logged in and also trap the users in a file using the tee command.

**aniket@Aniket-Linux**:**~**$ who | tee logged\_users | wc -l

1

29. Convert the contents of mystates into uppercase.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ tr '[:lower:]' '[:upper:]' < mystates > mystates\_uppercase

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ cat mystates\_uppercase

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30. Create any two files & display the common values between them.

**aniket@Aniket-Linux**:**~/Desktop/SY Module 4/OS**$ grep -F -f capitals result.txt

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