

ADVANCED COMPUTER NETWORK

ASSIGNMENT 3

TOPIC: - Take screenshots of basic Linux commands III

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BASIC LINUX COMMANDS

1. usermod

- usermod command is used to change the properties of a user in Linux through the command line
- command-line utility that allows you to modify a user's login information
- #usermod --help
- #usermod -u 2000 Tom

```
kaj@kaj-VirtualBox:~$ sudo useradd ani
```

```
kaj@kaj-VirtualBox:~$ sudo usermod -u 2000 ani
```

```
kaj@kaj-VirtualBox:~$ sudo usermod --help
[sudo] password for kaj:
Usage: usermod [options] LOGIN

Options:
  -b, --badnames          allow bad names
  -c, --comment COMMENT   new value of the GECOS field
  -d, --home HOME_DIR     new home directory for the user account
  -e, --expiredate EXPIRE_DATE set account expiration date to EXPIRE_DATE
  -f, --inactive INACTIVE  set password inactive after expiration
                           to INACTIVE
  -g, --gid GROUP          force use GROUP as new primary group
  -G, --groups GROUPS      new list of supplementary GROUPS
  -a, --append               append the user to the supplemental GROUPS
                           mentioned by the -G option without removing
                           the user from other groups
  -h, --help                display this help message and exit
  -l, --login NEW_LOGIN    new value of the login name
  -L, --lock                 lock the user account
  -m, --move-home           move contents of the home directory to the
                           new location (use only with -d)
  -o, --non-unique          allow using duplicate (non-unique) UID
  -p, --password PASSWORD   use encrypted password for the new password
  -R, --root CHROOT_DIR      directory to chroot into
  -P, --prefix PREFIX_DIR    prefix directory where are located the /etc/* f
iles
  -s, --shell SHELL          new login shell for the user account
  -u, --uid UID              new UID for the user account
  -U, --unlock                unlock the user account
```

2. groupadd

groupadd command creates a new group account using the values specified on the command line and the default values from the system.

- #groupadd student

```
kaj@kaj-VirtualBox:~$ sudo groupadd MCA
```

3. groups

print the groups a user is in

- #groups alice

```
kaj@kaj-VirtualBox:~$ groups ani  
ani : ani  
kaj@kaj-VirtualBox:~$ groups kaj  
kaj : kaj adm cdrom sudo dip plugdev lpadmin lxd sambashare
```

```
kaj@kaj-VirtualBox:~$ sudo usermod -G MCA ani  
kaj@kaj-VirtualBox:~$ groups ani  
ani : ani MCA
```

4. groupdel

groupdel command modifies the system account files, deleting all entries that refer to group.

The named group must exist

- #groupdel marketing

```
kaj@kaj-VirtualBox:~$ sudo groupadd tree  
kaj@kaj-VirtualBox:~$ sudo groupadd plant  
kaj@kaj-VirtualBox:~$ sudo groupadd flower  
kaj@kaj-VirtualBox:~$ sudo usermod -G tree,plant,flower ani  
kaj@kaj-VirtualBox:~$ groups ani  
ani : ani tree plant flower  
kaj@kaj-VirtualBox:~$ sudo groupdel tree  
kaj@kaj-VirtualBox:~$ groups ani  
ani : ani plant flower  
kaj@kaj-VirtualBox:~$
```

5. groupmod

The groupmod command modifies the definition of the specified group by modifying the appropriate entry in the group database.

- # groupmod -n group1 group2

```
kaj@kaj-VirtualBox:~$ sudo groupmod -n tree flower  
kaj@kaj-VirtualBox:~$ groups ani  
ani : ani plant tree  
kaj@kaj-VirtualBox:~$ sudo groupmod -n AJCE tree  
kaj@kaj-VirtualBox:~$ groups ani  
ani : ani plant AJCE
```

6. chmod

- To change directory permissions of file/ Directory in Linux.
#chmod whowhatwhich file/directory
- chmod +rwx filename to add permissions.
- chmod -rwx directoryname to remove permissions.
- chmod +x filename to allow executable permissions.
- chmod -wx filename to take out write and executable permissions.
#chmod u+x test
#chmod g-rwx test
#chmod o-r test

```
kaj@kaj-VirtualBox:~$ mkdir Anilect
kaj@kaj-VirtualBox:~$ ls
abc.txt Desktop Downloads Pictures snap Videos
Anilect Documents Music Public Templates
kaj@kaj-VirtualBox:~$ ls -ld Anilect/
drwxrwxr-x 2 kaj kaj 4096 Aug 11 20:15 Anilect/
kaj@kaj-VirtualBox:~$ chmod -rwx Anilect/
kaj@kaj-VirtualBox:~$ ls -ld Anilect/
d----- 2 kaj kaj 4096 Aug 11 20:15 Anilect/
kaj@kaj-VirtualBox:~$ ls Anilect/
ls: cannot open directory 'Anilect/': Permission denied
kaj@kaj-VirtualBox:~$ chmod +rwx Anilect/
kaj@kaj-VirtualBox:~$ ls -ld Anilect/
drwxrwxr-x 2 kaj kaj 4096 Aug 11 20:15 Anilect/
kaj@kaj-VirtualBox:~$ ls Anilect/
```

7. chown

The chown command allows you to change the user and/or group ownership of a given file, directory.

- #chown Tom Test

```
kaj@kaj-VirtualBox:~$ ls -ld Anilect/
drwxrwxr-x 2 kaj kaj 4096 Aug 11 20:15 Anilect/
kaj@kaj-VirtualBox:~$ sudo chown ani Anilect
kaj@kaj-VirtualBox:~$ ls -ld Anilect/
drwxrwxr-x 2 ani kaj 4096 Aug 11 20:15 Anilect/
```

8. id

id command in Linux is used to find out user and group names and numeric ID's (UID or group ID) of the current user.

- #id

```
kaj@kaj-VirtualBox:~$ id ani
uid=2000(ani) gid=1002(ani) groups=1002(ani)
```

9. ps

The ps command, short for Process Status, is a command line utility that is used to display or view information related to the processes running in a Linux system.

- PID – This is the unique process ID
- TTY – This is the type of terminal that the user is logged in to
- TIME – This is the time in minutes and seconds that the process has been running
- CMD – The command that launched the process

```
#ps -a
```

```
kaj@kaj-VirtualBox:~$ ps
    PID TTY          TIME CMD
  3504 pts/0        00:00:00 bash
  3811 pts/0        00:00:00 ps
kaj@kaj-VirtualBox:~$ ps -a
    PID TTY          TIME CMD
  767 tty2        00:00:00 gnome-session-b
  3812 pts/0        00:00:00 ps
kaj@kaj-VirtualBox:~$ █
```

10.top

top command is used to show the Linux processes. It provides a dynamic real-time view of the running system

- #top -u rose

```
3812 pts/0        00:00:00 ps
kaj@kaj-VirtualBox:~$ top

top - 20:27:08 up  1:02,  1 user,  load average: 0.00, 0.00, 0.00
Tasks: 181 total,   1 running, 180 sleeping,   0 stopped,   0 zombie
%Cpu(s):  1.7 us,  0.3 sy,  0.0 ni, 97.9 id,  0.0 wa,  0.0 hi,  0.0 si,  0.0 st
MiB Mem :  972.2 total,   123.1 free,   536.2 used,   312.9 buff/cache
MiB Swap:  448.4 total,   135.4 free,   313.0 used.   286.5 avail Mem

      PID USER      PR  NI    VIRT    RES    SHR S %CPU %MEM     TIME+ COMMAND
  912 kaj      20   0 4012928 195844 66660 S  2.3 19.7  0:57.89 gnome-
 3411 kaj      20   0 411380  48376 36600 S  0.7  4.9  0:06.45 gnome-
 3516 root     20   0     0     0     0 I  0.3  0.0  0:01.92 kworker+
 3815 kaj      20   0 21440  3708  3176 R  0.3  0.4  0:00.09 top
  1 root     20   0 165880  9280  5360 S  0.0  0.9  0:02.05 systemd
  2 root     20   0     0     0     0 S  0.0  0.0  0:00.00 kthread+
  3 root     0 -20     0     0     0 I  0.0  0.0  0:00.00 rCU_gp
  4 root     0 -20     0     0     0 I  0.0  0.0  0:00.00 rCU_pa+
  6 root     0 -20     0     0     0 I  0.0  0.0  0:00.00 kworker+
  9 root     0 -20     0     0     0 I  0.0  0.0  0:00.00 mm_per+
 10 root    20   0     0     0     0 S  0.0  0.0  0:00.00 rCU_ta+
 11 root    20   0     0     0     0 S  0.0  0.0  0:00.00 rCU_ta+
 12 root    20   0     0     0     0 S  0.0  0.0  0:00.42 ksofti+
 13 root    20   0     0     0     0 I  0.0  0.0  0:01.00 rCU_sc+
 14 root    rt   0     0     0     0 S  0.0  0.0  0:00.05 migrat+
 15 root   -51   0     0     0     0 S  0.0  0.0  0:00.00 idle_i+
 16 root    20   0     0     0     0 S  0.0  0.0  0:00.00 cpuhp/0
 17 root    20   0     0     0     0 S  0.0  0.0  0:00.00 kdevtm+
 18 root     0 -20     0     0     0 I  0.0  0.0  0:00.00 netns
```