

Ex No: 1

Roll no : 230701074

BASIC LINUX COMMANDS

```
eshwaranm@fedora:~$ date +%m
04
eshwaranm@fedora:~$ date +%h
Apr
eshwaranm@fedora:~$ date +%d
19
eshwaranm@fedora:~$ date +%y
25
eshwaranm@fedora:~$ date +%H
16
eshwaranm@fedora:~$ date +%M
40
eshwaranm@fedora:~$ date +%S
41
eshwaranm@fedora:~$ echo I am REC student
I am REC student
eshwaranm@fedora:~$ cal jan 2021
    January 2021
Su Mo Tu We Th Fr Sa
                1  2
 3  4  5  6  7  8  9
10 11 12 13 14 15 16
17 18 19 20 21 22 23
24 25 26 27 28 29 30
31
eshwaranm@fedora:~$ bc
bc 1.07.1
Copyright 1991-1994, 1997, 1998, 2000, 2004, 2006, 2008, 2012-2017 Free Software Foundation, Inc.
This is free software with ABSOLUTELY NO WARRANTY.
For details type 'warranty'.
16/2
8
eshwaranm@fedora:~$ who
eshwaranm tty2      2025-04-19 16:35
eshwaranm pts/0    2025-04-19 16:35 (:0)
eshwaranm pts/1    2025-04-19 16:39 (:0)
eshwaranm@fedora:~$ who am i
eshwaranm pts/1    2025-04-19 16:39 (:0)
eshwaranm@fedora:~$ id
uid=1000(eshwaranm) gid=1000(eshwaranm) groups=1000(eshwaranm),10(wheel) context=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
eshwaranm@fedora:~$ tty
/dev/pts/1
eshwaranm@fedora:~$ man
What manual page do you want?
For example, try 'man man'.
eshwaranm@fedora:~$ man date
eshwaranm@fedora:~$ clear
```

```
eshwaranm@fedora:~$ ps
```

PID	TTY	TIME	CMD
2817	pts/1	00:00:00	bash
2991	pts/1	00:00:00	ps

```
eshwaranm@fedora:~$ ps -e
```

PID	TTY	TIME	CMD
1	?	00:00:01	systemd
2	?	00:00:00	kthreadd
3	?	00:00:00	pool_workqueue_release
4	?	00:00:00	kworker/R-rcu_gp
5	?	00:00:00	kworker/R-sync_wq
6	?	00:00:00	kworker/R-slub_flushwq
7	?	00:00:00	kworker/R-netns
8	?	00:00:00	kworker/0:0-cgroup_destroy
9	?	00:00:00	kworker/0:0H-events_highpri
10	?	00:00:00	kworker/0:1-events
11	?	00:00:00	kworker/u512:0-events_unbound
12	?	00:00:00	kworker/R-mm_percpu_wq
13	?	00:00:00	kworker/u512:1-ipv6_addrconf
14	?	00:00:00	rcu_tasks_kthread
15	?	00:00:00	rcu_tasks_rude_kthread
16	?	00:00:00	rcu_tasks_trace_kthread
17	?	00:00:00	ksoftirqd/0
18	?	00:00:00	rcu_preempt
19	?	00:00:00	rcu_exp_par_gp_kthread_worker/1
20	?	00:00:00	rcu_exp_gp_kthread_worker
21	?	00:00:00	migration/0
22	?	00:00:00	idle_inject/0
23	?	00:00:00	cpuhp/0
24	?	00:00:00	cpuhp/1
25	?	00:00:00	idle_inject/1
26	?	00:00:00	migration/1
27	?	00:00:00	ksoftirqd/1
29	?	00:00:00	kworker/1:0H-events_highpri
30	?	00:00:00	cpuhp/2
31	?	00:00:00	idle_inject/2
32	?	00:00:00	migration/2
33	?	00:00:00	ksoftirqd/2
35	?	00:00:00	kworker/2:0H-events_highpri
36	?	00:00:00	cpuhp/3
37	?	00:00:00	idle_inject/3
38	?	00:00:00	migration/3
39	?	00:00:00	ksoftirqd/3
41	?	00:00:00	kworker/3:0H-events_highpri
42	?	00:00:00	kworker/u513:0-flush-btrfs-1
43	?	00:00:00	kworker/u514:0-flush-btrfs-1
46	?	00:00:00	kdevtmpfs

```

2899 ?      00:00:00 kworker/0:2
2900 ?      00:00:00 kworker/3:0-events
2904 ?      00:00:00 kworker/u520:11-ttm
2905 ?      00:00:00 kworker/u520:15-ttm
2906 ?      00:00:00 kworker/2:0-events
2942 ?      00:00:00 kworker/u516:0+events_unbound
2947 ?      00:00:00 kworker/u521:9-ttm
2948 ?      00:00:00 kworker/u521:11-ttm
2949 ?      00:00:00 kworker/u521:13-ttm
2950 ?      00:00:00 kworker/u521:14-ttm
2951 ?      00:00:00 kworker/u521:16
2966 ?      00:00:00 kworker/u520:16
2992 pts/1  00:00:00 ps
eshwaran@fedora:~$ ps -aux
USER      PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root         1  0.3  0.3 63584 25452 ?        Ss   16:35   0:01 /usr/lib/systemd/systemd --switched-root --system --deserialize=51 rhgb
root         2  0.0  0.0      0     0 ?        S    16:35   0:00 [kthreadd]
root         3  0.0  0.0      0     0 ?        S    16:35   0:00 [pool_workqueue_release]
root         4  0.0  0.0      0     0 ?        I<   16:35   0:00 [kworker/R-rcu_gp]
root         5  0.0  0.0      0     0 ?        I<   16:35   0:00 [kworker/R-sync_wq]
root         6  0.0  0.0      0     0 ?        I<   16:35   0:00 [kworker/R-slub_flushwq]
root         7  0.0  0.0      0     0 ?        I<   16:35   0:00 [kworker/R-netns]
root         8  0.0  0.0      0     0 ?        I    16:35   0:00 [kworker/0:0-cgroup_destroy]
root         9  0.0  0.0      0     0 ?        I<   16:35   0:00 [kworker/0:0H-events_highpri]
root        10  0.0  0.0      0     0 ?        I    16:35   0:00 [kworker/0:1-events]
root        11  0.0  0.0      0     0 ?        I    16:35   0:00 [kworker/u512:0-events_unbound]
root        12  0.0  0.0      0     0 ?        I<   16:35   0:00 [kworker/R-mm_percpu_wq]
root        13  0.0  0.0      0     0 ?        I    16:35   0:00 [kworker/u512:1-ipv6_addrconf]
root        14  0.0  0.0      0     0 ?        I    16:35   0:00 [rcu_tasks_kthread]
root        15  0.0  0.0      0     0 ?        I    16:35   0:00 [rcu_tasks_rude_kthread]
root        16  0.0  0.0      0     0 ?        I    16:35   0:00 [rcu_tasks_trace_kthread]
root        17  0.0  0.0      0     0 ?        S    16:35   0:00 [ksoftirqd/0]
root        18  0.0  0.0      0     0 ?        I    16:35   0:00 [rcu_preempt]
root        19  0.0  0.0      0     0 ?        S    16:35   0:00 [rcu_exp_par_gp_kthread_worker/1]
root        20  0.0  0.0      0     0 ?        S    16:35   0:00 [rcu_exp_gp_kthread_worker]
root        21  0.0  0.0      0     0 ?        S    16:35   0:00 [migration/0]
root        22  0.0  0.0      0     0 ?        S    16:35   0:00 [idle_inject/0]
root        23  0.0  0.0      0     0 ?        S    16:35   0:00 [cpuhp/0]
root        24  0.0  0.0      0     0 ?        S    16:35   0:00 [cpuhp/1]
root        25  0.0  0.0      0     0 ?        S    16:35   0:00 [idle_inject/1]
root        26  0.1  0.0      0     0 ?        S    16:35   0:00 [migration/1]
root        27  0.0  0.0      0     0 ?        S    16:35   0:00 [ksoftirqd/1]
root        29  0.0  0.0      0     0 ?        I<   16:35   0:00 [kworker/1:0H-events_highpri]
root        30  0.0  0.0      0     0 ?        S    16:35   0:00 [cpuhp/2]
root        31  0.0  0.0      0     0 ?        S    16:35   0:00 [idle_inject/2]
root        32  0.1  0.0      0     0 ?        S    16:35   0:00 [migration/2]
root        33  0.0  0.0      0     0 ?        S    16:35   0:00 [ksoftirqd/2]

```

```
eshwaranm@fedora:~$ uname -n
fedora
eshwaranm@fedora:~$ uname -r
6.11.4-301.fc41.x86_64
eshwaranm@fedora:~$ uname -s
Linux
eshwaranm@fedora:~$ uname -v
#1 SMP PREEMPT_DYNAMIC Sun Oct 20 15:02:33 UTC 2024
eshwaranm@fedora:~$ uname -a
Linux fedora 6.11.4-301.fc41.x86_64 #1 SMP PREEMPT_DYNAMIC Sun Oct 20 15:02:33 UTC 2024 x86_64 GNU/Linux
eshwaranm@fedora:~$ pwd
/home/eshwaranm
eshwaranm@fedora:~$ mkdir recces
eshwaranm@fedora:~$ rmdir recces
eshwaranm@fedora:~$ mkdir reccse
eshwaranm@fedora:~$ cd reccse
eshwaranm@fedora:~/reccse$ ls
eshwaranm@fedora:~/reccse$ ls -l
total 0
eshwaranm@fedora:~/reccse$ ls -a
.  ..
eshwaranm@fedora:~/reccse$ cat -rec
cat: invalid option -- 'r'
Try 'cat --help' for more information.
eshwaranm@fedora:~/reccse$ cat >rec
Hi this is Dhekshath From RECeshwaranm@fedora:~/reccse$ cat rec
Hi this is Dhekshath From RECeshwaranm@fedora:~/reccse$ rm reccse
rm: cannot remove 'reccse': No such file or directory
eshwaranm@fedora:~/reccse$ rm rec
eshwaranm@fedora:~/reccse$ who |wc -l
3
eshwaranm@fedora:~/reccse$ who | tee sample | wc -l
3
eshwaranm@fedora:~/reccse$ chmod u-wx college
chmod: cannot access 'college': No such file or directory
eshwaranm@fedora:~/reccse$
eshwaranm@fedora:~/reccse$ chmod 761 college
chmod: cannot access 'college': No such file or directory
eshwaranm@fedora:~/reccse$
eshwaranm@fedora:~/reccse$ who; date
eshwaranm tty2          2025-04-19 16:35
eshwaranm pts/0         2025-04-19 16:35 (:0)
eshwaranm pts/1         2025-04-19 16:39 (:0)
Sat Apr 19 04:54:07 PM IST 2025
eshwaranm@fedora:~/reccse$ who || date
eshwaranm tty2          2025-04-19 16:35
eshwaranm pts/0         2025-04-19 16:35 (:0)
eshwaranm pts/1         2025-04-19 16:39 (:0)
eshwaranm@fedora:~/reccse$
```



```

eshwaranm@fedora:~$ who $$ date
eshwaranm pts/2      2025-04-19 17:08 (:0)
eshwaranm@fedora:~$ pws
bash: pws: command not found...
eshwaranm@fedora:~$ pts
bash: pts: command not found...
eshwaranm@fedora:~$ free -t

```

	total	used	free	shared	buff/cache	available
Mem:	8074724	2179720	4675332	29368	1495836	5895004
Swap:	8074236	0	8074236			
Total:	16148960	2179720	12749568			

```

eshwaranm@fedora:~$ ps -e

```

PID	TTY	TIME	CMD
1	?	00:00:01	systemd
2	?	00:00:00	kthreadd
3	?	00:00:00	pool_workqueue_release
4	?	00:00:00	kworker/R-rcu_gp
5	?	00:00:00	kworker/R-sync_wq
6	?	00:00:00	kworker/R-slub_flushwq
7	?	00:00:00	kworker/R-netns
9	?	00:00:00	kworker/0:0H-events_highpri
10	?	00:00:00	kworker/0:1-cgroup_destroy
11	?	00:00:00	kworker/u512:0-events_unbound
12	?	00:00:00	kworker/R-mm_percpu_wq
13	?	00:00:00	kworker/u512:1-ipv6_addrconf
14	?	00:00:00	rcu_tasks_kthread
15	?	00:00:00	rcu_tasks_rude_kthread
16	?	00:00:00	rcu_tasks_trace_kthread
17	?	00:00:00	ksoftirqd/0
18	?	00:00:00	rcu_preempt
19	?	00:00:00	rcu_exp_par_gp_kthread_worker/1
20	?	00:00:00	rcu_exp_gp_kthread_worker
21	?	00:00:00	migration/0
22	?	00:00:00	idle_inject/0
23	?	00:00:00	cpuhp/0
24	?	00:00:00	cpuhp/1
25	?	00:00:00	idle_inject/1
26	?	00:00:00	migration/1
27	?	00:00:00	ksoftirqd/1
29	?	00:00:00	kworker/1:0H-events_highpri
30	?	00:00:00	cpuhp/2
31	?	00:00:00	idle_inject/2
32	?	00:00:00	migration/2
33	?	00:00:00	ksoftirqd/2
35	?	00:00:00	kworker/2:0H-events_highpri
36	?	00:00:00	cpuhp/3
37	?	00:00:00	idle_inject/3

```

3501 ?      00:00:00 kworker/u514:4-flush-btrfs-1
3502 ?      00:00:00 kworker/1:0-events
3503 ?      00:00:00 systemd-nsresou
3504 ?      00:00:00 systemd-userwor
3507 ?      00:00:00 systemd-nsresou
3508 ?      00:00:00 systemd-nsresou
3509 ?      00:00:00 systemd-userwor
3510 ?      00:00:00 systemd-nsresou
3511 ?      00:00:00 systemd-userwor
3512 ?      00:00:00 systemd-nsresou
3517 ?      00:00:00 kworker/u520:0-ttm
3518 ?      00:00:00 kworker/u520:1-ttm
3519 ?      00:00:00 kworker/u518:0-ttm
3536 ?      00:00:00 kworker/u519:0-ttm
3537 ?      00:00:00 kworker/u519:1-ttm
3538 ?      00:00:00 kworker/u519:2-ttm
3539 ?      00:00:00 kworker/u519:5-ttm
3541 ?      00:00:00 kworker/u519:6-ttm
3547 ?      00:00:00 kworker/2:1-events
3550 ?      00:00:00 kworker/u513:1-btrfs-endio-write
3572 ?      00:00:00 kworker/u521:0-ttm
3573 ?      00:00:00 kworker/u518:2-ttm
3574 ?      00:00:00 kworker/u518:3-ttm
3575 ?      00:00:00 kworker/u518:4-ttm
3576 ?      00:00:00 kworker/u518:5-ttm
3577 ?      00:00:00 kworker/u518:7-ttm
3578 ?      00:00:00 kworker/u518:8-ttm
3579 ?      00:00:00 kworker/u518:9-ttm
3580 ?      00:00:00 kworker/u518:10
3581 ?      00:00:00 kworker/u518:11
3582 ?      00:00:00 kworker/u519:7-ttm
3583 ?      00:00:00 kworker/u519:8-ttm
3584 ?      00:00:00 kworker/u519:9-ttm
3585 ?      00:00:00 kworker/u519:10-ttm
3586 ?      00:00:00 kworker/u519:11-ttm
3587 ?      00:00:00 kworker/u519:12-ttm
3588 ?      00:00:00 kworker/u519:13-ttm
3589 ?      00:00:00 kworker/u519:14-ttm
3590 ?      00:00:00 kworker/u519:15-ttm
3594 ?      00:00:00 kworker/3:2-events_freezable_pwr_efficient
3596 pts/2    00:00:00 bash
3634 ?      00:00:01 packagekitd
3649 ?      00:00:00 kworker/u515:2-flush-btrfs-1
3651 pts/2    00:00:00 ps

eshwaranm@fedora:~$ vmstst
bash: vmstst: command not found...
eshwaranm@fedora:~$ vmstat
procs -----memory----- --swap-- -----io---- -system-- -----cpu-----
 r b swpd free buff cache si so bi bo in cs us sy id wa st gu
 1 0   0 4672904 4644 1491332 0 0 334 156 561 2 1 1 98 0 0 0
eshwaranm@fedora:~$

```

```

3572 ?      00:00:00 kworker/u518:2-ttm
3573 ?      00:00:00 kworker/u518:3-ttm
3574 ?      00:00:00 kworker/u518:4-ttm
3575 ?      00:00:00 kworker/u518:5-ttm
3576 ?      00:00:00 kworker/u518:7-ttm
3577 ?      00:00:00 kworker/u518:8-ttm
3578 ?      00:00:00 kworker/u518:9-ttm
3579 ?      00:00:00 kworker/u518:10
3580 ?      00:00:00 kworker/u518:11
3581 ?      00:00:00 kworker/u519:7-ttm
3582 ?      00:00:00 kworker/u519:8-ttm
3583 ?      00:00:00 kworker/u519:9-ttm
3584 ?      00:00:00 kworker/u519:10-ttm
3585 ?      00:00:00 kworker/u519:11-ttm
3586 ?      00:00:00 kworker/u519:12-ttm
3587 ?      00:00:00 kworker/u519:13-ttm
3588 ?      00:00:00 kworker/u519:14-ttm
3589 ?      00:00:00 kworker/u519:15-ttm
3590 ?      00:00:00 kworker/3:2-events_freezable_pwr_efficient
3594 ?      00:00:00 bash
3596 pts/2   00:00:00 bash
3634 ?      00:00:01 packagekitd
3649 ?      00:00:00 kworker/u515:2-flush-btrfs-1
3651 pts/2   00:00:00 ps

eshwaranm@fedora:~$ vmstst
bash: vmstst: command not found...
eshwaranm@fedora:~$ vmstat
procs -----memory----- --swap-- -----io---- -system-- -----cpu-----
 r b swpd free buff cache si so bi bo in cs us sy id wa st gu
 1 0  0 4672904 4644 1491332 0 0 334 156 561 2 1 1 98 0 0 0

eshwaranm@fedora:~$ df
Filesystem      1K-blocks      Used Available Use% Mounted on
/dev/nvme0n1p3 51377152 4472040 46311000 9% /
devtmpfs         4096          0      4096 0% /dev
tmpfs            4037360      12    4037348 1% /dev/shm
tmpfs            1614948     1780    1613168 1% /run
tmpfs            1024          0      1024 0% /run/credentials/systemd-network-generator.service
tmpfs            1024          0      1024 0% /run/credentials/systemd-udev-load-credentials.service
tmpfs            1024          0      1024 0% /run/credentials/systemd-journald.service
tmpfs            1024          0      1024 0% /run/credentials/systemd-tmpfiles-setup-dev-early.service
tmpfs            1024          0      1024 0% /run/credentials/systemd-sysctl.service
tmpfs            1024          0      1024 0% /run/credentials/systemd-tmpfiles-setup-dev.service
tmpfs            4037364        4    4037360 1% /tmp
/dev/nvme0n1p3 51377152 4472040 46311000 9% /home
/dev/nvme0n1p2 996780     275900    652068 30% /boot
tmpfs            1024          0      1024 0% /run/credentials/systemd-tmpfiles-setup.service
tmpfs            1024          0      1024 0% /run/credentials/systemd-vconsole-setup.service
tmpfs            1024          0      1024 0% /run/credentials/systemd-resolved.service
tmpfs            807472       116    807356 1% /run/user/1000

eshwaranm@fedora:~$ ping 172.16.0.23
PING 172.16.0.23 (172.16.0.23) 56(84) bytes of data.

```



```
eshwaranm@fedora:~$ ifconfig
ens160: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 192.168.73.129  netmask 255.255.255.0  broadcast 192.168.73.255
    inet6 fe80::8746:1aa5:9f9d:efb0  prefixlen 64  scopeid 0x20<link>
    ether 00:0c:29:9d:8d:9e  txqueuelen 1000  (Ethernet)
    RX packets 35376  bytes 51187206 (48.8 MiB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 5719  bytes 347037 (338.9 KiB)
    TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING>  mtu 65536
    inet 127.0.0.1  netmask 255.0.0.0
    inet6 ::1  prefixlen 128  scopeid 0x10<host>
    loop txqueuelen 1000  (Local Loopback)
    RX packets 76  bytes 6652 (6.4 KiB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 76  bytes 6652 (6.4 KiB)
    TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```