

Linux Practical questions — Question Paper 4

1. Print the current working directory to the terminal.
2. Create a new directory named work inside your home folder.
3. Create an empty text file named notes.txt in the work/ directory.
4. Make a copy of notes.txt named notes_backup.txt in the same folder.
5. Move notes_backup.txt to the /tmp directory.

```
ibab@IBAB-MScBDB2-Comp007:~$ pwd
/home/ibab
ibab@IBAB-MScBDB2-Comp007:~$ mkdir work
ibab@IBAB-MScBDB2-Comp007:~$ ls
backup  Desktop  DL_labs  Downloads  R  Sem-1  Sem-2  Sem-3  snap  tmp  work
ibab@IBAB-MScBDB2-Comp007:~$ cd work
ibab@IBAB-MScBDB2-Comp007:~/work$ touch notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ ls
notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ cp notes.txt notes_backup.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ ls
notes_backup.txt  notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ mv notes_backup.txt /tmp
ibab@IBAB-MScBDB2-Comp007:~/work$ ls
notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ cd
```

6. Remove notes_backup.txt from /tmp.

```
ibab@IBAB-MScBDB2-Comp007:~$ cd /tmp
ibab@IBAB-MScBDB2-Comp007:/tmp$ ls
hsperfdata_ibab
notes_backup.txt
snap-private-tmp
systemd-private-03bebe4568e345c9985389c71874ade8-apache2.service-CRmAx4
systemd-private-03bebe4568e345c9985389c71874ade8-colord.service-zjnp0j
systemd-private-03bebe4568e345c9985389c71874ade8-fwupd.service-m05gF5
systemd-private-03bebe4568e345c9985389c71874ade8-ModemManager.service-dWBUra
systemd-private-03bebe4568e345c9985389c71874ade8-polkit.service-fdtpJa
systemd-private-03bebe4568e345c9985389c71874ade8-power-profiles-daemon.service-t5hLHS
systemd-private-03bebe4568e345c9985389c71874ade8-switcheroo-control.service-GP9J0D
systemd-private-03bebe4568e345c9985389c71874ade8-systemd-logind.service-6fcHWu
systemd-private-03bebe4568e345c9985389c71874ade8-systemd-oond.service-Xp8Z1C
systemd-private-03bebe4568e345c9985389c71874ade8-systemd-resolved.service-ayIpxH
systemd-private-03bebe4568e345c9985389c71874ade8-upower.service-Xmxd4x
ibab@IBAB-MScBDB2-Comp007:/tmp$ cd
ibab@IBAB-MScBDB2-Comp007:~$ cd /tmp
ibab@IBAB-MScBDB2-Comp007:/tmp$ rm notes_backup.txt
ibab@IBAB-MScBDB2-Comp007:/tmp$ ls
hsperfdata_ibab
snap-private-tmp
systemd-private-03bebe4568e345c9985389c71874ade8-apache2.service-CRmAx4
systemd-private-03bebe4568e345c9985389c71874ade8-colord.service-zjnp0j
systemd-private-03bebe4568e345c9985389c71874ade8-fwupd.service-m05gF5
systemd-private-03bebe4568e345c9985389c71874ade8-ModemManager.service-dWBUra
systemd-private-03bebe4568e345c9985389c71874ade8-polkit.service-fdtpJa
systemd-private-03bebe4568e345c9985389c71874ade8-power-profiles-daemon.service-t5hLHS
systemd-private-03bebe4568e345c9985389c71874ade8-switcheroo-control.service-GP9J0D
systemd-private-03bebe4568e345c9985389c71874ade8-systemd-logind.service-6fcHWu
systemd-private-03bebe4568e345c9985389c71874ade8-systemd-oond.service-Xp8Z1C
systemd-private-03bebe4568e345c9985389c71874ade8-systemd-resolved.service-ayIpxH
systemd-private-03bebe4568e345c9985389c71874ade8-upower.service-Xmxd4x
ibab@IBAB-MScBDB2-Comp007:/tmp$ cd
```

7. Show all files, including hidden ones, in work/.
8. Display the last 5 lines of notes.txt.

```
ibab@IBAB-MScBDB2-Comp007:~$ cd work
ibab@IBAB-MScBDB2-Comp007:~/work$ ls -al
total 28
drwxrwxr-x  2 ibab ibab  4096 Jul 18 14:34 .
drwxr-x--- 27 ibab ibab 20480 Jul 18 14:33 ..
-rw-rw-r--  1 ibab ibab    0 Jul 18 14:32 notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ vi notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ cat notes.txt
MY INTRO.

My name is Yash Priya Baid.
I am from Jaipur (Rajasthan).
I did my B.Sc. in Biotechnology from Dr. B. Lal Institute of Biotechnology (affiliated to university of Rajasthan).
My subjects of interest are - Machine Learning, Deep Learning, Bioinformatics, Computational Biology, AI.
My hobbies are - reading self-help books, watching crime thrillers, dancing, cooking, and writing blogs/articles/poems.
ibab@IBAB-MScBDB2-Comp007:~/work$ tail -5 notes.txt
My name is Yash Priya Baid.
I am from Jaipur (Rajasthan).
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My subjects of interest are - Machine Learning, Deep Learning, Bioinformatics, Computational Biology, AI.
My hobbies are - reading self-help books, watching crime thrillers, dancing, cooking, and writing blogs/articles/poems.
```

9. Find all lines with the word “success” in results.log.

```
ibab@IBAB-MScBDB2-Comp007:~/work$ touch results.log
ibab@IBAB-MScBDB2-Comp007:~/work$ vi results.log
ibab@IBAB-MScBDB2-Comp007:~/work$ cat results.log
Hello all!
After facing rejections from multiple publishers, finally my research paper regarding In-Silico repurposing of Gliptins to assess their potency in COV
ID-19 treatment got published in Medical Hypotheses (Elsevier).
This success taught me many things that the success comes when luck mingles into it.
Success requires patience, hope, belief & hardwork.
ibab@IBAB-MScBDB2-Comp007:~/work$ grep success results.log
This success taught me many things that the success comes when luck mingles into it.
ibab@IBAB-MScBDB2-Comp007:~/work$ vi notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ head -1 notes.txt
MY INTRO. (first draft)
```

10. Replace the word “draft” with “final” in notes.txt using sed.
11. Give read, write, and execute permissions to the owner of notes.txt.
12. List the permissions and ownership of all files in work/.
13. Find a file named README.md in your home directory.

```
ibab@IBAB-MScBDB2-Comp007:~/work$ head -1 notes.txt
MY INTRO. (first draft)
ibab@IBAB-MScBDB2-Comp007:~/work$ sed -i 's\draft\final\g' notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ head -1 notes.txt
MY INTRO. (first final)
ibab@IBAB-MScBDB2-Comp007:~/work$ ls -l
total 8
-rw-rw-r-- 1 ibab ibab 425 Jul 18 15:14 notes.txt
-rw-rw-r-- 1 ibab ibab 363 Jul 18 15:01 results.log
ibab@IBAB-MScBDB2-Comp007:~/work$ chmod u+rx notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ ls -l
total 8
-rwxrw-r-- 1 ibab ibab 425 Jul 18 15:14 notes.txt
-rw-rw-r-- 1 ibab ibab 363 Jul 18 15:01 results.log
ibab@IBAB-MScBDB2-Comp007:~/work$ find . -name "README.md"
./README.md
ibab@IBAB-MScBDB2-Comp007:~/work$ wc -l notes.txt
7 notes.txt
```

14.Count the total lines in notes.txt.

15.Show only unique lines in notes.txt.

```
ibab@IBAB-MScBDB2-Comp007:~/work$ vi notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ wc -l notes.txt
8 notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ sort notes.txt | uniq

I am from Jaipur (Rajasthan).
I did my B.Sc. in Biotechnology from Dr. B. Lal Institute of Biotechnology (affiliated to university of Rajasthan).
My hobbies are - reading self-help books, watching crime thrillers, dancing, cooking, and writing blogs/articles/poems.
MY INTRO. (first final)
My name is Yash Priya Baid.
My subjects of interest are - Machine Learning, Deep Learning, Bioinformatics, Computational Biology, AI.
ibab@IBAB-MScBDB2-Comp007:~/work$ sort notes.txt | uniq | wc -l
7
```

16.Display all running processes on your machine.

```
ibab@IBAB-MScBDB2-Comp007:~/work$ cd
ibab@IBAB-MScBDB2-Comp007:~$ top

top - 15:26:57 up 6:20, 1 user, load average: 0.93, 0.57, 0.39
Tasks: 353 total, 1 running, 351 sleeping, 0 stopped, 1 zombie
%Cpu(s): 0.5 us, 0.2 sy, 0.0 ni, 99.3 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 15682.0 total, 7570.2 free, 3553.0 used, 4997.9 buff/cache
MiB Swap: 7813.0 total, 7813.0 free, 0.0 used. 12129.0 avail Mem

  PID USER      PR  NI   VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
 19007 ibab       20   0 3402368 718312 152980 S   3.0   4.5   1:38.84 Isolated Web Co
  1520 avahi      20   0   9364    5200   4084 S   1.3   0.0   0:16.80 avahi-daemon
  1684 root       20   0 336632   18996  16052 S   1.3   0.1   0:57.63 NetworkManager
  2384 snap_da+ 20   0 2158952 512292 44304 S   1.0   3.2   2:59.57 mysqld
  1419 systemd+ 20   0   17560    7500   6732 S   0.3   0.0   0:06.78 systemd-oomd
  3717 ibab      20   0 4922808 326844 140944 S   0.3   2.0   6:34.15 gnome-shell
top - 15:27:03 up 6:20, 1 user, load average: 0.94, 0.58, 0.39
Tasks: 352 total, 3 running, 348 sleeping, 0 stopped, 1 zombie
%Cpu(s): 0.9 us, 4.2 sy, 0.0 ni, 94.8 id, 0.0 wa, 0.0 hi, 0.1 si, 0.0 st
MiB Mem : 15682.0 total, 7571.0 free, 3552.1 used, 4997.8 buff/cache
MiB Swap: 7813.0 total, 7813.0 free, 0.0 used. 12129.9 avail Mem

  PID USER      PR  NI   VIRT    RES    SHR S  %CPU  %MEM    TIME+  COMMAND
 17627 root       20   0        0         0        0 R  54.2   0.0   2:19.24 kworker/u48:1+events_unbound
```

17.Find the PID of the apache2 process.

18.Kill a process using its PID.

```
ibab@IBAB-MScBDB2-Comp007:~$ pidof apache2
2027 2026 2023
ibab@IBAB-MScBDB2-Comp007:~$ kill 2027
```

19. Compress notes.txt using gzip.

20. Show the command history for your user session.

```
ibab@IBAB-MScBDB2-Comp007:~$ cd work
ibab@IBAB-MScBDB2-Comp007:~/work$ gzip notes.txt
ibab@IBAB-MScBDB2-Comp007:~/work$ ls
notes.txt.gz  README.md  results.log
ibab@IBAB-MScBDB2-Comp007:~/work$ history
 998  cd
 999  sudo apt update
1000  sudo apt -y upgrade
1001  sudo apt -y install r-base
1002  cd Downloads/
1003  sudo apt -y install r-base
1004  wget https://download1.rstudio.org/electron/jammyamd64/rstudio-2023.06.1-524-amd64.deb
1005  wget https://download1.rstudio.org/electron/jammy/amd64/rstudio-2023.06.1-524-amd64.deb
1006  ls
1007  sudo apt install -f ./rstudio-2023.06.1-524-amd64.deb
1008  ls
1009  sudo apt -y install r-base-dev
1010  R
1011  cd
```