



Name Salma Rani

Sap Id 54194

Instructor Mam Ayesha

Subject Operating system

(Lab 5)

Task 1:

Question 1:

Run all switches with **uname** command.

-r, -m, -p, -I, -o, -a, -v, -n

And define in one line about these commands according to your understanding.

```
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

student@student-virtual-machine:~$ date
14:25:34 ت 15 ستمبر 2025 PKT
student@student-virtual-machine:~$ echo hello
hello
student@student-virtual-machine:~$ whoami
student
student@student-virtual-machine:~$ who
student tty2          2025-09-15 13:59 (tty2)
student@student-virtual-machine:~$ uname -r
6.8.0-47-generic
student@student-virtual-machine:~$ uname -m
x86_64
student@student-virtual-machine:~$ uname -p
x86_64
student@student-virtual-machine:~$ uname -l
uname: invalid option -- 'l'
Try 'uname --help' for more information.
student@student-virtual-machine:~$ uname -I
x86_64
student@student-virtual-machine:~$ uname -o
GNU/Linux
student@student-virtual-machine:~$ uname -v
#47-22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Wed Oct  2 16:16:55 UTC 2
student@student-virtual-machine:~$ uname -a
Linux student-virtual-machine 6.8.0-47-generic #47-22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Wed Oct  2 16:16:55 UTC 2 x86_64 x86_64 x86_64 GNU
student@student-virtual-machine:~$ uname -n
student-virtual-machine
student@student-virtual-machine:~$
```

One-line explanation of each switch:

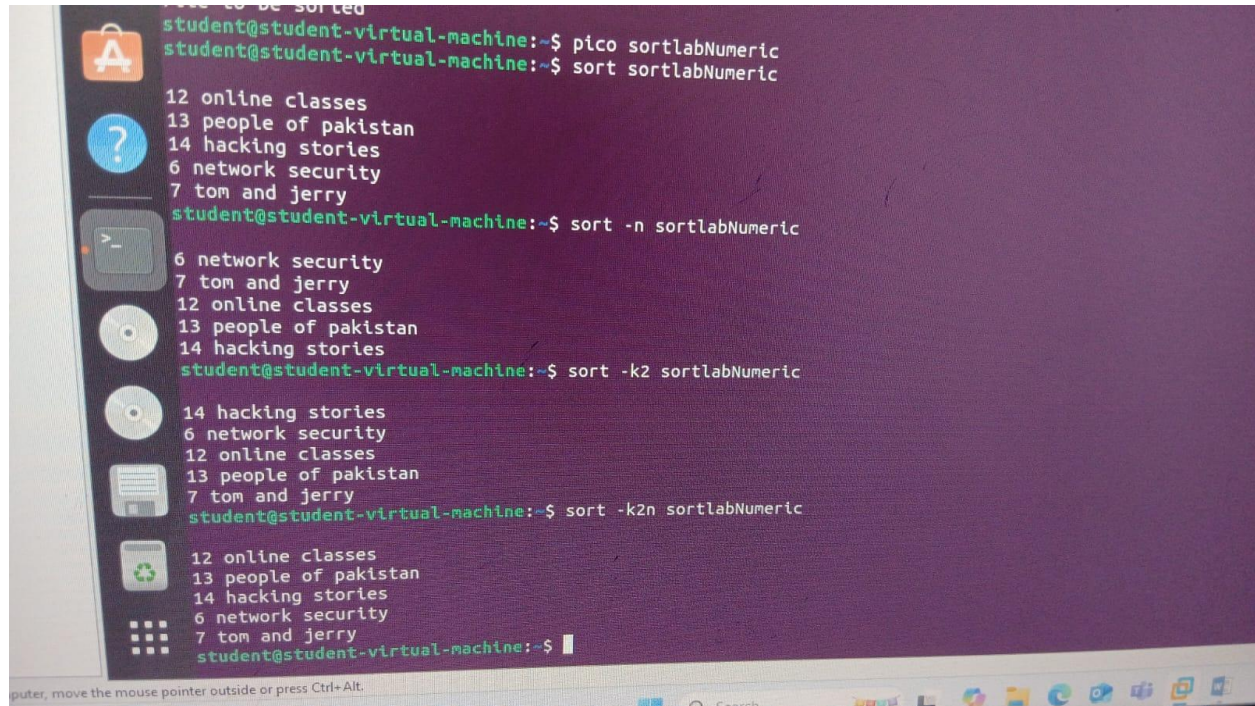
- **-r**: Displays the **kernel release** version.
- **-m**: Shows the **machine hardware name** (e.g., x86_64).
- **-p**: Prints the **processor type** (may show "unknown" on some systems).
- **-i**: Shows the **hardware platform** (may also be "unknown").
- **-o**: Displays the **operating system** (e.g., GNU/Linux).
- **-a**: Prints **all system information** in a single line (includes most other flags).
- **-v**: Shows the **kernel version** (build date and version info).
- **-n**: Displays the **network node hostname** of the system.

Task 2:

```
student@student-virtual-machine: ~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
student@student-virtual-machine:~$ pico labsort  
student@student-virtual-machine:~$ sort labsort  
  
23 years old  
3 bananas  
6 apples  
78 apples  
99 msort files  
apples on the table  
class  
end of file  
file to be sorted  
file to be sorted  
student@student-virtual-machine:~$ sort -f labsort  
  
23 years old  
3 bananas  
6 apples  
78 apples  
99 msort files  
apples on the table  
class  
end of file  
file to be sorted  
file to be sorted  
student@student-virtual-machine:~$ sort -n labsort  
  
apples on the table  
class  
end of file  
file to be sorted  
file to be sorted  
3 bananas  
6 apples  
23 years old  
78 apples  
99 msort files  
student@student-virtual-machine:~$
```

```
99 msort files  
student@student-virtual-machine:~$ sort -r labsort  
file to be sorted  
file to be sorted  
end of file  
class  
apples on the table  
99 msort files  
78 apples  
6 apples  
3 bananas  
23 years old  
  
student@student-virtual-machine:~$ sort -u labsort  
  
23 years old  
3 bananas  
6 apples  
78 apples  
99 msort files  
apples on the table  
class  
■ end of file  
■ file to be sorted  
student@student-virtual-machine:~$
```

Task 3:



The screenshot shows a terminal window with a dark purple background. On the left side, there is a vertical dock with several application icons: an orange 'A' icon, a blue circle with a white question mark, a terminal icon, two CD/DVD icons, a document icon, a recycling bin icon, and a 3x3 grid icon. The terminal text is as follows:

```
student@student-virtual-machine:~$ pico sortlabNumeric
student@student-virtual-machine:~$ sort sortlabNumeric
12 online classes
13 people of pakistan
14 hacking stories
6 network security
7 tom and jerry
student@student-virtual-machine:~$ sort -n sortlabNumeric
6 network security
7 tom and jerry
12 online classes
13 people of pakistan
14 hacking stories
student@student-virtual-machine:~$ sort -k2 sortlabNumeric
14 hacking stories
6 network security
12 online classes
13 people of pakistan
7 tom and jerry
student@student-virtual-machine:~$ sort -k2n sortlabNumeric
12 online classes
13 people of pakistan
14 hacking stories
6 network security
7 tom and jerry
student@student-virtual-machine:~$
```

At the bottom of the terminal window, there is a status bar that reads: "computer, move the mouse pointer outside or press Ctrl+Alt." On the right side of the status bar, there are several small icons for system utilities and network status.