

Riphah International University Islamabad



Saira Kousar

55503 (CS-5)

Operating System

OS Lab # 05

Task # 01

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

student@student-virtual-machine:~$ uname -r
6.8.0-78-generic
student@student-virtual-machine:~$ uname -m
x86_64
student@student-virtual-machine:~$ uname -p
x86_64
student@student-virtual-machine:~$ uname -i
x86_64
student@student-virtual-machine:~$ uname -o
GNU/Linux
student@student-virtual-machine:~$ uname -a
Linux student-virtual-machine 6.8.0-78-generic #78-22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Wed Aug 13 14:32:06 UTC 2 x86_64 x86_64 x86_64 GNU/Linux
student@student-virtual-machine:~$ uname -v
#78-22.04.1-Ubuntu SMP PREEMPT_DYNAMIC Wed Aug 13 14:32:06 UTC 2
student@student-virtual-machine:~$ uname -n
student-virtual-machine
student@student-virtual-machine:~$
```

Commands:

1. **uname -r**

This option prints the **kernel release number** of your system.
It helps identify which kernel version your Linux is currently running.

2. **uname -m**

Displays the **machine hardware name** such as x86_64 or armv7l.
This is useful for knowing whether your system is 32-bit or 64-bit architecture.

3. **uname -p**

Shows the **processor type**, like x86_64, i686, or sometimes unknown.
It tells you the specific CPU type that your machine supports.

4. **uname -i**

Prints the **hardware platform**, for example x86_64 or unknown.
It gives an idea of the instruction set or platform architecture your system is based on.

5. **uname -o**

Displays the **operating system name**, usually GNU/Linux.
This tells you what OS kernel is being used underneath.

6. **uname -a**

Prints **all system information** in one line (kernel name, release, version, machine, processor, hardware, and OS).
It's the most detailed option to quickly check complete system properties.

7. **uname -v**

Shows the **kernel version**, including build information.
This is useful to know when the kernel was compiled or built.

8.uname -n

Prints the **network node hostname** of your computer.

This is the name by which your system is identified in a network.

Task # 02

- First create the file labSort.

```
student@student-virtual-machine:~$ nano labSort
student@student-virtual-machine:~$ sort -r labSort
File to be Sorted
file to be sorted
End of file
Class
apple on the table
99 sort files
78 apples
5 Apples
3 bananas
23 years old
```

Sort -r

```
student@student-virtual-machine:~$ sort -r labSort
File to be Sorted
file to be sorted
End of file
Class
apple on the table
99 sort files
78 apples
5 Apples
3 bananas
23 years old
```

Sort -b

```
student@student-virtual-machine:~$ sort -b labSort
23 years old
3 bananas
5 Apples
78 apples
99 sort files
apple on the table
Class
End of file
file to be sorted
File to be Sorted
```

Sort – f

```
student@student-virtual-machine:~$ sort -f labSort
23 years old
3 bananas
6 Apples
78 apples
99 sort files
apple on the table
Class
End of file
file to be sorted
File to be Sorted
```

Sort -n

```
student@student-virtual-machine:~$ sort -n labSort
apple 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 sort files
```

Sort –k

```
student@student-virtual-machine:~$ sort -k1 labSort
23 years old
3 bananas
6 Apples
78 apples
99 sort files
apple on the table
Class
End of file
file to be sorted
File to be Sorted
```

Task # 03

```
student@student-virtual-machine:~$ nano SortLabNumeric
student@student-virtual-machine:~$ sort -k1 SortLabNumeric
12   Online classes
13   People of Pakistan
14   Hacking Stories
6    Network Security
7    Tom and jerry
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 -n SortLabNumeric
6    Network Security
7    Tom and jerry
12   Online classes
13   People of Pakistan
14   Hacking Stories
```