

Operating System

com301P

Programming

Assignment

Lab - 1

By :

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Used text files:

A screenshot of a dark-themed code editor window. The title bar shows "1.c" and the file path "~/Documents/sem-5/OS/Lab/lab1/folder". The menu bar includes "Open", "Save", and other standard icons. The code area contains the following C program:

```
#include<stdio.h>

int main(){
    printf("Hello world!\n");
    return 0;
}
```

The status bar at the bottom right shows "Ln 5, Col 14" and "INS".

A screenshot of a dark-themed text editor window. The title bar shows "1.txt" and the file path "~/Documents/sem-5/OS/Lab/lab1/folder". The menu bar includes "Open", "Save", and other standard icons. The text area contains a paragraph about operating system market share:

The dominant desktop operating system is Microsoft Windows with a market share of around 82.74%. macOS by Apple Inc. is in second place (13.23%), and the varieties of Linux are collectively in third place (1.57%). In the mobile sector (including smartphones and tablets), Android's share is up to 70% in the year 2017. According to third quarter 2016 data, Android's share on smartphones is dominant with 87.5 percent with also a growth rate of 10.3 percent per year, followed by Apple's iOS with 12.1 percent with per year decrease in market share of 5.2 percent, while other operating systems amount to just 0.3 percent. Linux distributions are dominant in the server and supercomputing sectors. Other specialized classes of operating systems, such as embedded and real-time systems, exist for many applications.

The status bar at the bottom right shows "Plain Text", "Tab Width: 8", "Ln 1, Col 214", and "INS".

A single-tasking system can only run one program at a time, while a multi-tasking operating system allows more than one program to be running in concurrency. This is achieved by time-sharing, where the available processor time is divided between multiple processes. These processes are each interrupted repeatedly in time slices by a task-scheduling subsystem of the operating system. Multi-tasking may be characterized in preemptive and co-operative types. In preemptive multitasking, the operating system slices the CPU time and dedicates a slot to each of the programs. Unix-like operating systems, such as Solaris and Linux-as well as non-Unix-like, such as AmigaOS-support preemptive multitasking. Cooperative multitasking is achieved by relying on each process to provide time to the other processes in a defined manner. 16-bit versions of Microsoft Windows used cooperative multi-tasking; 32-bit versions of both Windows NT and Win9x used preemptive multi-tasking.

Single-user operating systems have no facilities to distinguish users, but may allow multiple programs to run in tandem.[6] A multi-user operating system extends the basic concept of multi-tasking with facilities that identify processes and resources, such as disk space, belonging to multiple users, and the system permits multiple users to interact with the system at the same time. Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources to multiple users. |

The screenshot shows a dark-themed text editor window. The title bar reads "4.txt" and "Save". The file path is "~Documents/sem-5/OS/Lab/lab1/folder". The main content area displays the following text:
The quick brown fox jumps over the lazy dog
The quick brown fox jumps over the lazy dog
The quick brown fox jumps over the lazy dog
The quick brown fox jumps over the lazy dog
Search Results
Web results

Saving file "/home/thegamingbot/Documents/sem-5/OS/Lab/l... Plain Text ▾ Tab Width: 8 ▾ Ln 10, Col 1 ▾ INS

The screenshot shows a dark-themed text editor window. The title bar reads "a.txt" and "Save". The file path is "~Documents/sem-5/OS/Lab/lab1/folder". The main content area displays the following text:
Gujarat
Uttar Pradesh
Kolkata
Bihar
Jammu and Kashmir

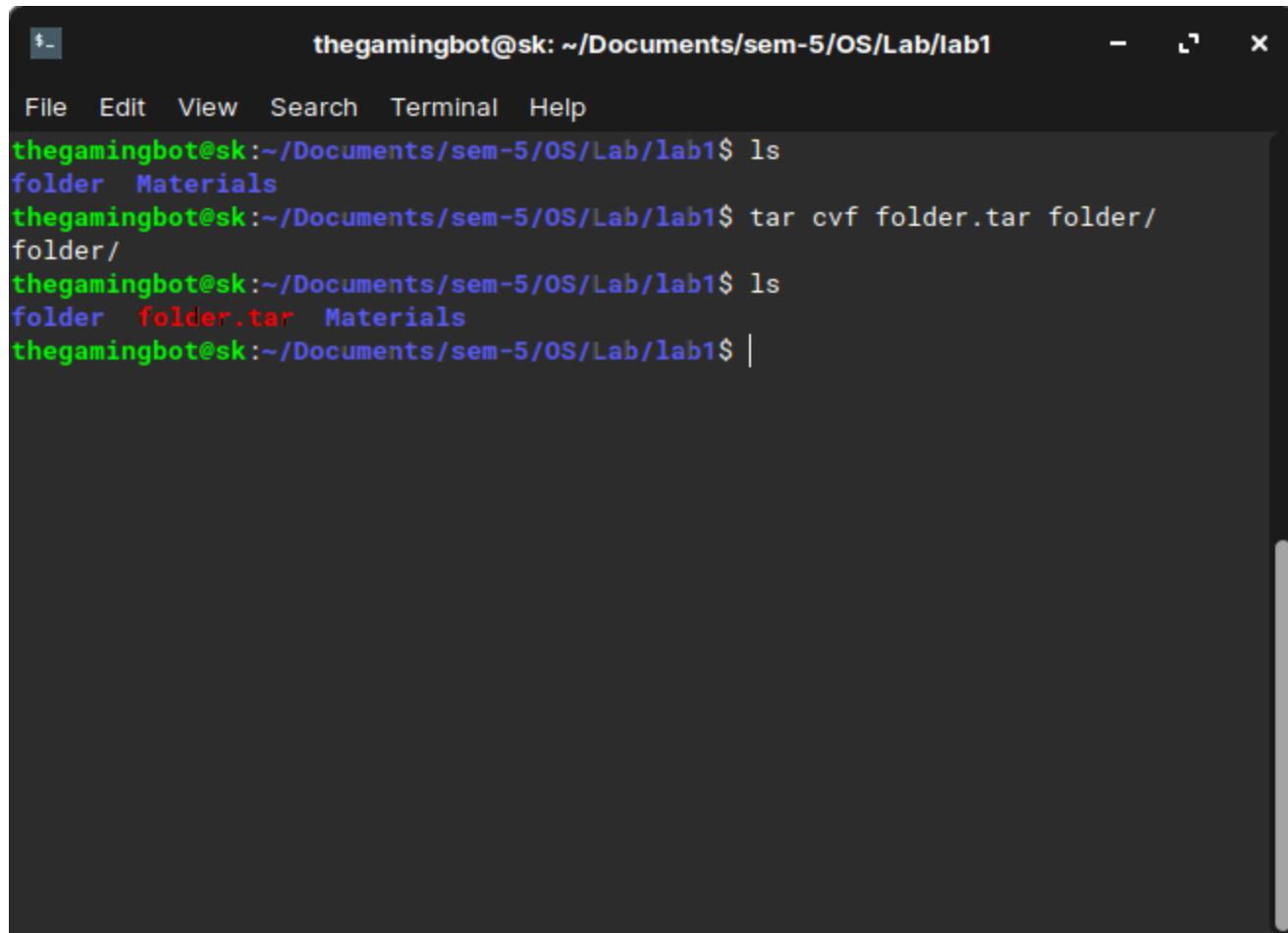
Plain Text ▾ Tab Width: 8 ▾ Ln 1, Col 1 ▾ INS

Question 1) Test drive and understand the usage of all the commands given in the 50 Most Frequently

Used UNIX / Linux Commands and linuxcommands.pdf

tar command: Create/modify/extract a tar archive.

tar cvf: create a tar archive



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the host, the current directory (~/Documents/sem-5/OS/Lab/lab1), and standard window control icons. Below this, a menu bar is visible with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the following sequence of commands and their outputs:

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder Materials
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ tar cvf folder.tar folder/
folder/
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder folder.tar Materials
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ |
```

The terminal prompt at the bottom right indicates that the user has typed a command but has not yet pressed Enter to execute it.

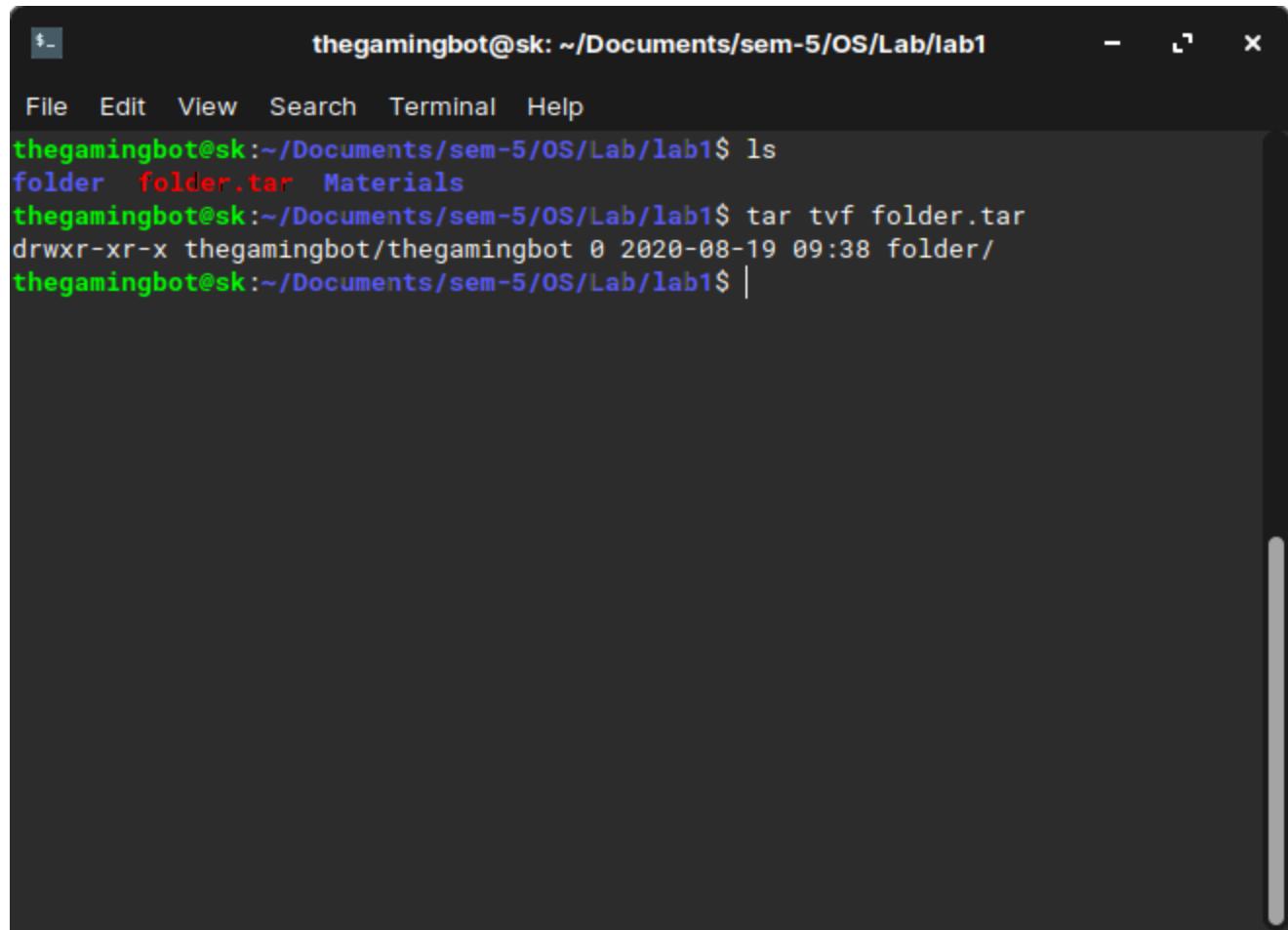
tar xvf: extract a tar archive

The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, host, and current directory: `thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1`. Below this is a standard menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the following command sequence:

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder.tar Materials
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ tar xvf folder.tar
folder/
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder folder.tar Materials
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$
```

The terminal window has a standard window title bar with minimize, maximize, and close buttons. A vertical scroll bar is visible on the right side of the terminal window.

tar tvf: view the contents of a tar archive



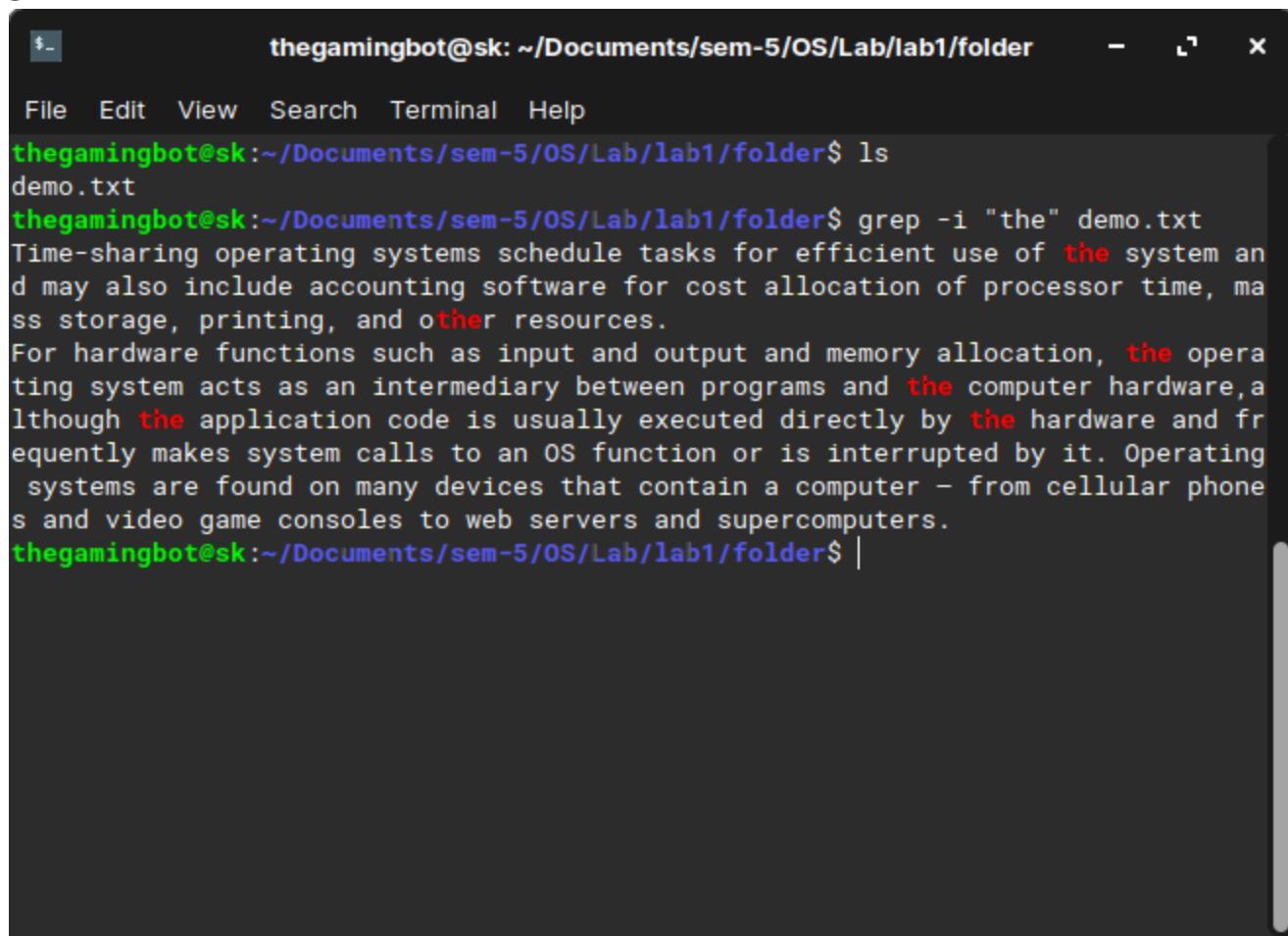
The screenshot shows a terminal window with the following content:

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder  folder.tar  Materials
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ tar tvf folder.tar
drwxr-xr-x theagingbot/theagingbot 0 2020-08-19 09:38 folder/
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ |
```

The terminal window has a dark background and light-colored text. The title bar says "theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1". The menu bar includes "File", "Edit", "View", "Search", "Terminal", and "Help". The command "ls" is run first, showing three files: "folder", "folder.tar", and "Materials". Then, the command "tar tvf folder.tar" is run, which outputs the permissions and timestamp for the "folder" directory. A vertical scroll bar is visible on the right side of the terminal window.

grep command: Search for a string in a file

grep -i: Search a given string in a given file



The screenshot shows a terminal window with the following content:

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
demo.txt
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ grep -i "the" demo.txt
Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources.
For hardware functions such as input and output and memory allocation, the operating system acts as an intermediary between programs and the computer hardware, although the application code is usually executed directly by the hardware and frequently makes system calls to an OS function or is interrupted by it. Operating systems are found on many devices that contain a computer – from cellular phones and video game consoles to web servers and supercomputers.
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

The terminal window has a dark background and light-colored text. The title bar shows the current directory as `~/Documents/sem-5/OS/Lab/lab1/folder`. The menu bar includes File, Edit, View, Search, Terminal, and Help. The command `grep -i "the" demo.txt` is run, and the output shows the contents of the `demo.txt` file with all occurrences of the word "the" highlighted in red.

grep -A: print the search string in a given file along with 'n lines' that comes after it.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
demo.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ grep -A 3 -i "operating system" demo.txt
An operating system (OS) is system software that manages computer hardware, software resources, and provides common services for computer programs.

Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources.

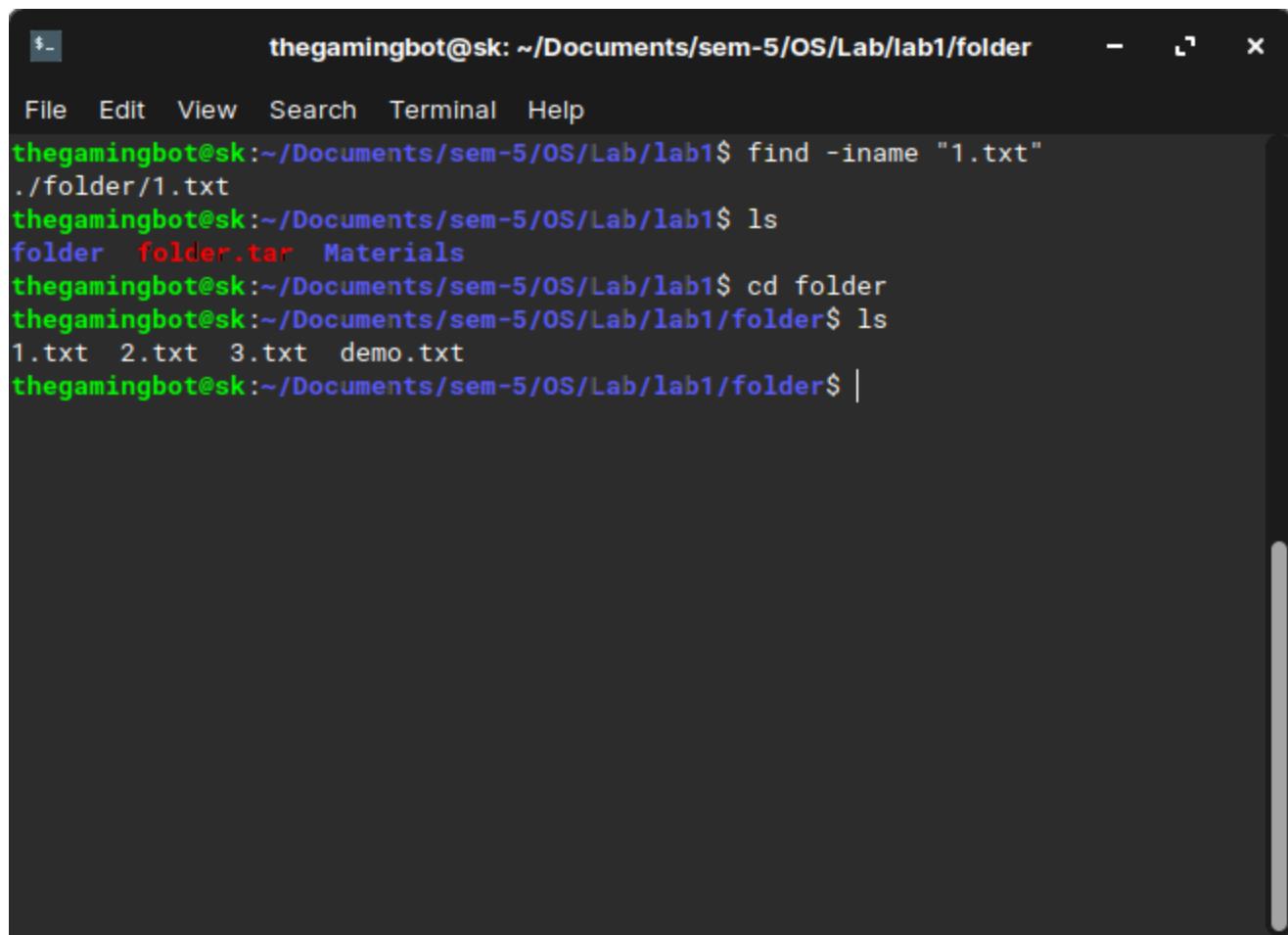
For hardware functions such as input and output and memory allocation, the operating system acts as an intermediary between programs and the computer hardware, although the application code is usually executed directly by the hardware and frequently makes system calls to an OS function or is interrupted by it. Operating systems are found on many devices that contain a computer – from cellular phones and video game consoles to web servers and supercomputers.
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

grep -r: search for a given string recursively.

```
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt 2.txt 3.txt demo.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ grep -r "operating system" *
1.txt:The dominant desktop operating system is Microsoft Windows with a market share of around 82.74%. macOS by Apple Inc. is in second place (13.23%), and the varieties of Linux are collectively in third place (1.57%). In the mobile sector (including smartphones and tablets), Android's share is up to 70% in the year 2017. According to third quarter 2016 data, Android's share on smartphones is dominant with 87.5 percent with also a growth rate of 10.3 percent per year, followed by Apple's iOS with 1.21 percent with per year decrease in market share of 5.2 percent, while other operating systems amount to just 0.3 percent. Linux distributions are dominant in the server and supercomputing sectors. Other specialized classes of operating systems, such as embedded and real-time systems, exist for many applications.
2.txt:A single-tasking system can only run one program at a time, while a multi-tasking operating system allows more than one program to be running in concurrency. This is achieved by time-sharing, where the available processor time is divided between multiple processes. These processes are each interrupted repeatedly in time slices by a task-scheduling subsystem of the operating system. Multi-tasking may be characterized in preemptive and co-operative types. In preemptive multitasking, the operating system slices the CPU time and dedicates a slot to each of the programs. Unix-like operating systems, such as Solaris and Linux-as well as non-Unix-like, such as AmigaOS-support preemptive multitasking. Cooperative multitasking is achieved by relying on each process to provide time to the other processes in a defined manner. 16-bit versions of Microsoft Windows used cooperative multi-tasking; 32-bit versions of both Windows NT and Win9x used preemptive multi-tasking.
3.txt:Single-user operating systems have no facilities to distinguish users, but may allow multiple programs to run in tandem.[6] A multi-user operating system extends the basic concept of multi-tasking with facilities that identify processes and resources, such as disk space, belonging to multiple users, and the system permits multiple users to interact with the system at the same time. Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources to multiple users.
demo.txt:An operating system (OS) is system software that manages computer hardware, software resources, and provides common services for computer programs.
demo.txt:Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources.
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

find command: Find files.

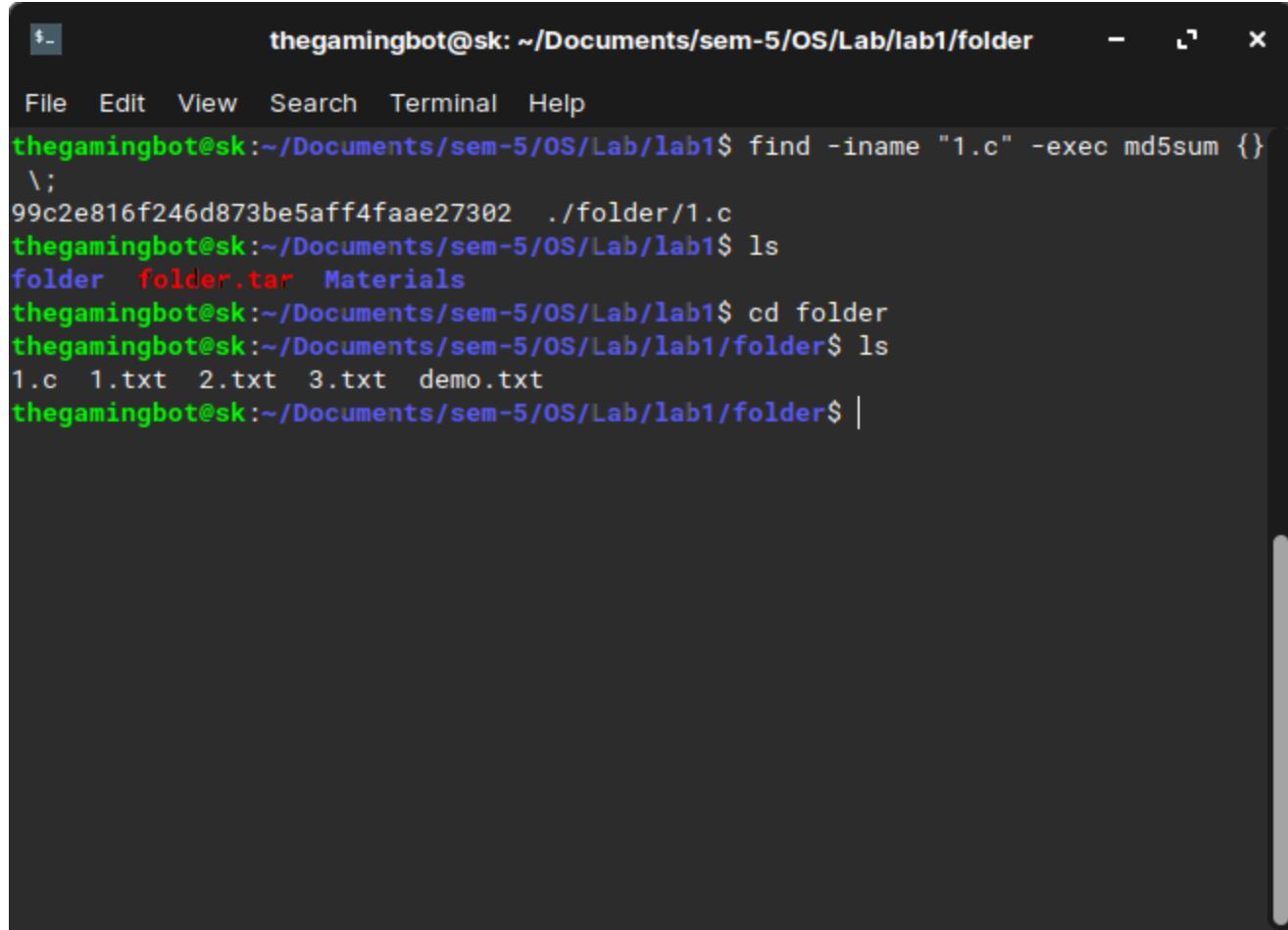
find -iname: It returns the position of the file from the current working directory.



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the host, the current directory (~/Documents/sem-5/OS/Lab/lab1/folder), and standard window control buttons (minimize, maximize, close). Below this is a menu bar with options: File, Edit, View, Search, Terminal, Help. The main area of the terminal shows the following command-line session:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1$ find -iname "1.txt"
./folder/1.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder folder.tar Materials
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ cd folder
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt 2.txt 3.txt demo.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

find -exec: find a file using its name and run a command on it.



The screenshot shows a terminal window with the following session:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ find -iname "1.c" -exec md5sum {} \;
99c2e816f246d873be5aff4faae27302 ./folder/1.c
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder folder.tar Materials
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ cd folder
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c 1.txt 2.txt 3.txt demo.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

find -empty: Lists all empty files in a given directory

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ find ~ -empty
/home/theagingbot/.cache/shotwell/thumbs/thumb360
/home/theagingbot/.cache/shotwell/thumbs/thumb128
/home/theagingbot/.cache/darktable
/home/theagingbot/.cache/ibus-table
/home/theagingbot/.cache/yelp/WebkitCache/Version 16/Blobs
/home/theagingbot/.cache/gnome-calculator
/home/theagingbot/.cache/mozilla/firefox/y9cuuh754.default-release/cache2/doomed
/home/theagingbot/.cache/mozilla/firefox/y9cuuh754.default-release/thumbnails/d2c992d16567b881ea3b2e708066658f.png
/home/theagingbot/.cache/mozilla/firefox/ph6u1vw5.default/thumbnails/8988ef7f8e3905c05f281b2914703a4.png
/home/theagingbot/.cache/mozilla/firefox/ph6u1vw5.default/thumbnails/b106c54fa2f11d85ca595479d4431ec9.png
/home/theagingbot/.cache/gnome-control-center/backgrounds
/home/theagingbot/.cache/gnome-control-center/wacom
/home/theagingbot/.cache/obexd
/home/theagingbot/.cache/folks/avatars
/home/theagingbot/.cache/remmina
/home/theagingbot/.cache/evolution/mail/trash
/home/theagingbot/.cache/evolution/calendar/trash
/home/theagingbot/.cache/evolution/memos/trash
/home/theagingbot/.cache/evolution/tasks/trash
/home/theagingbot/.cache/evolution/addressbook/trash
/home/theagingbot/.cache/evolution/sources/trash
/home/theagingbot/.cache/matplotlib/tex.cache
/home/theagingbot/.gconf
/home/theagingbot/.local/share/gstreamer-1.0/presets
/home/theagingbot/.local/share/nautilus/scripts
/home/theagingbot/.local/share/Trash/expunged
/home/theagingbot/.local/share/zeitgeist/fts.index/flintlock
/home/theagingbot/.local/share/sounds
/home/theagingbot/.local/share/ibus-table
/home/theagingbot/.local/share/webkitgtk/deviceidhashsalts/1
/home/theagingbot/.local/share/webkitgtk/databases/indexedb/v1
/home/theagingbot/.local/share/webkitgtk/localstorage
/home/theagingbot/.local/share/gtk-doc/html
/home/theagingbot/.local/share/flatpak/repo/extensions
/home/theagingbot/.local/share/flatpak/repo/state
/home/theagingbot/.local/share/flatpak/repo/objects
/home/theagingbot/.local/share/flatpak/repo/tmp/cache
```

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ find ~ -empty
/home/theagingbot/.local/share/flatpak/repo/refs/mirrors
/home/theagingbot/.local/share/flatpak/repo/refs/remotes
/home/theagingbot/.local/share/flatpak/repo/refs/heads
/home/theagingbot/.local/share/flatpak/.changed
/home/theagingbot/.local/share/folks/relationships.ini
/home/theagingbot/.local/share/remmina
/home/theagingbot/.local/share/gnome-settings-daemon/input-sources-converted
/home/theagingbot/.local/share/evolution/mail/trash
/home/theagingbot/.local/share/evolution/calendar/trash
/home/theagingbot/.local/share/evolution/memos/trash
/home/theagingbot/.local/share/evolution/tasks/trash
/home/theagingbot/.local/share/evolution/addressbook/system/photos
/home/theagingbot/.local/share/evolution/addressbook/trash
/home/theagingbot/.local/share/stalefiles/kanagram
/home/theagingbot/.local/share/gnome-shell/gnome-overrides-migrated
/home/theagingbot/.local/share/gnome-builder
/home/theagingbot/.local/nano
/home/theagingbot/.local/share/krita/gradients
/home/theagingbot/.local/share/krita/paintoppresets
/home/theagingbot/.local/share/krita/patterns
/home/theagingbot/.local/share/krita/input
/home/theagingbot/.local/share/krita/color-schemes
/home/theagingbot/.local/share/krita/symbols
/home/theagingbot/.local/share/krita/palettes
/home/theagingbot/.local/share/krita/preset_icons/tool_icons
/home/theagingbot/.local/share/krita/preset_icons/emblem_icons
/home/theagingbot/.local/share/krita/bundles
/home/theagingbot/.local/share/krita/asl
/home/theagingbot/.local/share/krita/taskset
/home/theagingbot/.local/share/krita/workspaces
/home/theagingbot/.local/share/krita/pykrita
/home/theagingbot/.local/share/krita/brushes
/home/theagingbot/Music
/home/theagingbot/.sudo_as_admin_successful
/home/theagingbot/.mozilla/extensions
/home/theagingbot/.mozilla/firefox/Crash Reports/events
/home/theagingbot/.mozilla/firefox/y9cuuh754.default-release/gmp-widevinecdm
/home/theagingbot/.mozilla/firefox/y9cuuh754.default-release/SecurityPreloadState.txt
/home/theagingbot/.mozilla/firefox/y9cuuh754.default_release/cookies/events
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://timesofindia.indiatimes.com/idb/301792106ttes.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://www.marketwatch.com/idb/301792106ttes.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://grasshopper.com/idb/766948556cbtd..files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://docs.google.com/idb/4041069256GsoDoegvlierD.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://google.dev/idb/1120474735dbedv-sxietden-i.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://drive.google.com/idb/4041069256GsoDoegvlierD.files/journals
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://mail.google.com/cache/context_open.marker
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://mail.google.com/cache/morgue/239
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://mail.google.com/cache/morgue/953658429glmaaviyile-ks-w.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://www.google.com/idb/548985059dbd.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/moz-extension@@@0d934e62-4fd3-49ba-856a-8fd8a5c3a17b^userContextId=4294967295/idb/3647222921wleabcEoxlt-eengsairo.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/permanent/chrome/idb/2918063365piupsah.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/permanent/chrome/idb/1657114595AmcateirvtiSty.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/permanent/chrome/idb/2823318777ntouromlalnodyn--naod.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/permanent/chrome/idb/3870112724rsegmnoittet-es.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/permanent/chrome/idb/3561288849sdhlie.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/permanent/chrome/idb/1451318868ntouromlalnodyn--epcr.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/temporary
/home/thebgamingbot/.mozilla/firefox/Pending Pings
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/SecurityPreloadState.txt
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/crashes/events
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/.parentlock
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/AlternateServices.txt
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/TRRBBlacklist.txt
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/minidumps
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/default/moz-extension@@@ea34411-2dfb-43bb-9492-53add27628b^userContextId=4294967295/idb/3647222921wleabcEoxlt-eengsairo.files
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/default/moz-extension@@@7fc3816-89e2-4b6c-9e14-635081ce2d90^userContextId=4294967295/idb/3647222921wleabcEoxlt-eengsairo.files/journals
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/default/https://drive.google.com/idb/4041069256GsoDoegvlierD.files
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/default/https://mail.google.com/idb/953658429glmaaviyile-ks-w.files
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/default/moz-extension@@@f29f45e-9f56-48b4-92fb-4751db5f9715^userContextId=4294967295/idb/3647222921wleabcEoxlt-eengsairo.files
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/permanent/chrome/idb/2918063365piupsah.files
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/permanent/chrome/idb/1657114595AmcateirvtiSty.files
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/permanent/chrome/idb/3870112724rsegmnoittet-es.files
/home/thebgamingbot/.mozilla/firefox/ph6u1vw5.default/storage/permanent/chrome/idb/3561288849sdhlie.files
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://www.computerworld.com/idb/972884483SHUSBUSPC_RSIRBE.files
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/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://source.android.com/idb/1120474735dbedv-sxietden-i.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://twitter.com/idb/3619119340leogcaarlf.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://twitter.com/idb/1367196241hboerwinzo.files
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/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/moz-extension@@@d1be4cae-9b04-4e93-9dd9-fff37e4e6cad^userContextId=4294967295/idb/3647222921wleabcEoxlt-eengsairo.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://myflixer.to/idb/9937825020BNDE_KSDISG_NLA.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://www.amazon.in/idb/277234971ceshac-ac.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://web.whatsapp.com/cache/context_open.marker
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/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://web.whatsapp.com/cache/morgue/218
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://web.whatsapp.com/idb/1119037936ptbc_edte.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://web.whatsapp.com/idb/3166453069wcaw.sqlite-wal
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/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://web.whatsapp.com/idb/3608811301_B_Dwdaewxce_d_nein_s.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://www.youtube.com/idb/3211250388sbwdpsunohintoatcif.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://thegeo.in/idb/9937825020BNDE_KSDISG_NLA.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://versus.com/idb/3782417788wconryksb-odxn-uboarc.files
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/moz-extension@@@ab41513b-9fde-4ab4-b2b9-f553cf32266c^userContextId=4294967295/idb/3647222921wleabcEoxlt-eengsairo.files/journals
/home/thebgamingbot/.mozilla/firefox/y9cuuh754.default-release/storage/default/https://developer.android.com/idb/1120474735dbedv-sxietden-i.files
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
/home/thegamingbot/.config/libreoffice/4/user/psprint
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/swriter/statusbar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/swriter/images/Bitmaps
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/swriter/toolbar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/swriter/menubar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/swriter/popupmenu
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/swriter/statusbar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/sdraw/images/Bitmaps
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/sdraw/toolbar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/sdraw/menubar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/sdraw/popupmenu
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/simpress/statusbar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/simpress/images/Bitmaps
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/simpress/toolbar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/simpress/menubar
/home/thegamingbot/.config/libreoffice/4/user/config/soffice.cfg/modules/simpress/popupmenu
/home/thegamingbot/.config/Code/User/snippets
/home/thegamingbot/.config/Code/Session Storage/LOCK
/home/thegamingbot/.config/Code/Dictionaries
/home/thegamingbot/.config/Code/blob_storage/a64d320f-fb75-4969-818d-aceaf3a2728f
/home/thegamingbot/.config/Code/logs/20200815T140619/output_1_20200815T140623/tasks.log
/home/thegamingbot/.config/Code/logs/20200815T140619/output_1_20200815T140623/extensions.log
/home/thegamingbot/.config/Code/logs/20200815T140619/output_1_20200815T144518/tasks.log
/home/thegamingbot/.config/Code/logs/20200815T140619/output_1_20200815T144518/extensions.log
/home/thegamingbot/.config/Code/logs/20200815T140619/exthost1/output_logging_20200815T144521/3-GitHub Authentication.log
/home/thegamingbot/.config/Code/logs/20200815T140619/exthost1/output_logging_20200815T144521/1-Microsoft Authentication.log
/home/thegamingbot/.config/Code/logs/20200815T140619/exthost1/output_logging_20200815T140625/3-GitHub Authentication.log
/home/thegamingbot/.config/Code/logs/20200815T140619/exthost1/output_logging_20200815T140625/1-Microsoft Authentication.log
/home/thegamingbot/.config/Code/logs/20200815T140619/exthost1/output_logging_20200815T144529/4-remote-attach.log
/home/thegamingbot/.config/Code/logs/20200818T153759/output_1_20200818T153801/tasks.log
/home/thegamingbot/.config/Code/logs/20200818T153759/output_1_20200818T153801/extensions.log
/home/thegamingbot/.config/Code/logs/20200818T153759/exthost1/output_logging_20200818T153804/3-remote-attach.log
/home/thegamingbot/.config/Code/logs/20200818T153759/exthost1/output_logging_20200818T153803/1-Microsoft Authentication.log
/home/thegamingbot/.config/Code/logs/20200818T153759/exthost1/output_logging_20200818T153803/2-GitHub Authentication.log
/home/thegamingbot/.config/Code/logs/20200818T155133/output_1_20200818T155133/tasks.log
/home/thegamingbot/.config/Code/logs/20200818T155133/output_1_20200818T155133/extensions.log
/home/thegamingbot/.config/Code/logs/20200818T155133/output_1_20200818T155136/tasks.log
/home/thegamingbot/.config/Code/logs/20200818T155133/output_1_20200818T155136/extensions.log
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
/home/thegamingbot/.mozilla/firefox/ph6u1vw5.default/storage/permanent/chrome/idb/1451318868ntouromlalnodry--epcr.files
/home/thegamingbot/.mozilla/firefox/ph6u1vw5.default/storage/temporary
/home/thegamingbot/.mozilla/systemextensionsdev
/home/thegamingbot/android-studio/license/dev01.license.txt
/home/thegamingbot/android-studio/plugins/android/lib/templates/gradle-projects/common/consumer-rules.pro.ftl
/home/thegamingbot/android-studio/bin/lldb/lib/python2.7/pydoc_data/_init_.py
/home/thegamingbot/android-studio/bin/lldb/lib/python2.7/email/mime/_init_.py
/home/thegamingbot/.gnupg/private-keys-v1.d
/home/thegamingbot/.java/.userPrefs/.user.lock.thegamingbot
/home/thegamingbot/.java/.userPrefs/.userRootModfile.thegamingbot
/home/thegamingbot/.config/goa-1.0
/home/thegamingbot/.config/eog
/home/thegamingbot/.config/enchant/en.dic
/home/thegamingbot/.config/enchant/en.exc
/home/thegamingbot/.config/enchant/en_IN.dic
/home/thegamingbot/.config/enchant/en_IN.exc
/home/thegamingbot/.config/update-notifier
/home/thegamingbot/.config/yelp
/home/thegamingbot/.config/libreoffice/4/user/autocorr
/home/thegamingbot/.config/libreoffice/4/user/extensions/bundled/registry/com.sun.star.comp.deployment.sfwk.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/bundled/registry/com.sun.star.comp.deployment.executable.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/tmp/extensions
/home/thegamingbot/.config/libreoffice/4/user/extensions/tmp/registry/com.sun.star.comp.deployment.bundle.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/tmp/registry/com.sun.star.comp.deployment.sfwk.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/tmp/registry/com.sun.star.comp.deployment.component.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/tmp/registry/com.sun.star.comp.deployment.executable.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/tmp/registry/com.sun.star.comp.deployment.script.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/shared/registry/com.sun.star.comp.deployment.bundle.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/shared/registry/com.sun.star.comp.deployment.sfwk.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/shared/registry/com.sun.star.comp.deployment.component.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/shared/registry/com.sun.star.comp.deployment.executable.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/extensions/shared/registry/com.sun.star.comp.deployment.script.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/uno_packages/cache/registry/com.sun.star.comp.deployment.bundle.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/uno_packages/cache/registry/com.sun.star.comp.deployment.sfwk.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/uno_packages/cache/registry/com.sun.star.comp.deployment.component.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/uno_packages/cache/registry/com.sun.star.comp.deployment.executable.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/uno_packages/cache/registry/com.sun.star.comp.deployment.script.PackageRegistryBackend
/home/thegamingbot/.config/libreoffice/4/user/uno_packages/cache/uno_packages
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
/home/thebgamingbot/.config/Code/logs/20200818T155133/exthost1/output_logging_20200818T155154/3-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200818T155133/exthost1/output_logging_20200818T155154/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200818T155133/exthost1/output_logging_20200818T155222/4-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200818T155133/exthost1/output_logging_20200818T155137/3-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200818T155133/exthost1/output_logging_20200818T155137/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200818T155133/exthost1/output_logging_20200818T155137/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/renderer3.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_3_20200817T124910/tasks.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_3_20200817T124910/extensions.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_1_20200817T124145/tasks.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_1_20200817T124145/extensions.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_3_20200817T124902/tasks.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_3_20200817T124902/extensions.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_1_20200817T124805/tasks.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_1_20200817T124805/extensions.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost3/output_logging_20200817T124911/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost3/output_logging_20200817T124911/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost3/output_logging_20200817T124903/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost3/output_logging_20200817T124903/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost3/output_logging_20200817T124916/4-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_1_20200817T124829/tasks.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/output_1_20200817T124829/extensions.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124149/4-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124148/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124148/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124830/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124830/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124807/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124807/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124807/4-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200817T124140/exthost1/output_logging_20200817T124838/4-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200818T083249/output_1_20200818T083301/tasks.log
/home/thebgamingbot/.config/Code/logs/20200818T083249/output_1_20200818T083301/extensions.log
/home/thebgamingbot/.config/Code/logs/20200818T083249/exthost1/output_logging_20200818T083309/3-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200818T083249/exthost1/output_logging_20200818T083307/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200818T083249/exthost1/output_logging_20200818T083306/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200815T134620/renderer1.log
/home/thebgamingbot/.config/Code/logs/20200815T134620/output_1_20200815T134627/tasks.log
/home/thebgamingbot/.config/Code/logs/20200815T134620/output_1_20200815T134627/extensions.log
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
/home/thebgamingbot/.config/Code/logs/20200815T134620/output_1_20200815T134627/extensions.log
/home/thebgamingbot/.config/Code/logs/20200815T134620/exthost1/output_logging_20200815T135006/4-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200815T134620/exthost1/output_logging_20200815T134630/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200815T134620/exthost1/output_logging_20200815T134629/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200819T093232/output_1_20200819T093240/tasks.log
/home/thebgamingbot/.config/Code/logs/20200819T093232/output_1_20200819T093240/extensions.log
/home/thebgamingbot/.config/Code/logs/20200819T093232/renderer1.log
/home/thebgamingbot/.config/Code/logs/20200819T093232/exthost1/output_logging_20200819T093245/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200819T093232/exthost1/output_logging_20200819T093245/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200819T093232/exthost1/output_logging_20200819T093247/3-remote-attach.log
/home/thebgamingbot/.config/Code/logs/20200818T215217/output_1_20200818T215223/tasks.log
/home/thebgamingbot/.config/Code/logs/20200818T215217/output_1_20200818T215223/extensions.log
/home/thebgamingbot/.config/Code/logs/20200818T215217/exthost1/output_logging_20200818T215226/1-Microsoft Authentication.log
/home/thebgamingbot/.config/Code/logs/20200818T215217/exthost1/output_logging_20200818T215226/2-GitHub Authentication.log
/home/thebgamingbot/.config/Code/logs/20200818T215217/exthost1/output_logging_20200818T215227/3-remote-attach.log
/home/thebgamingbot/.config/Cookies-journal
/home/thebgamingbot/.config/gnome-session/saved-session
/home/thebgamingbot/.config/matplotlib
/home/thebgamingbot/.config/gnome-builder/snippets
/home/thebgamingbot/Projects/gnome-games/.git/objects/info
/home/thebgamingbot/Projects/gnome-games/flatapk/shared-modules
/home/thebgamingbot/Projects/gnome-maps/.git/objects/info
/home/thebgamingbot/Projects/gnome-maps/.git/refs/tags
/home/thebgamingbot/Projects/gnome-maps/.git/refs/heads
/home/thebgamingbot/snap/discord/112/.local/share/icons
/home/thebgamingbot/snap/discord/112/.local/share/glib-2.0/schemas
/home/thebgamingbot/snap/discord/112/.config/discord/Local Storage/leveldb/LOCK
/home/thebgamingbot/snap/discord/112/.config/discord/VideoDecodeStats/LOCK
/home/thebgamingbot/snap/discord/112/.config/discord/0.0.11/modules/pending/discord_krisp-0.zip
/home/thebgamingbot/snap/discord/112/.config/discord/shared_proto_db/LOCK
/home/thebgamingbot/snap/discord/112/.config/discord/shared_proto_db/metadata/LOCK
/home/thebgamingbot/snap/discord/112/.config/discord/shared_proto_db/LOG
/home/thebgamingbot/snap/discord/112/.config/discord/shared_proto_db/LOG.old
/home/thebgamingbot/snap/discord/112/.config/discord/Session Storage/LOCK
/home/thebgamingbot/snap/discord/112/.config/discord/blob_storage/0f45c358-4bc8-46f2-a17c-2f003dce6a3
/home/thebgamingbot/snap/discord/112/.config/discord/Cookies-journal
/home/thebgamingbot/snap/flutter/common/flutter/dev/missing_dependency_tests/.dartignore
/home/thebgamingbot/snap/flutter/common/flutter/dev/docs/.dartignore
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
/home/thegamingbot/snap/flutter/common/flutter/dev/docs/.dartignore
/home/thegamingbot/snap/flutter/common/flutter/dev/integration_tests/non_nullable/null_safety
/home/thegamingbot/snap/flutter/common/flutter/dev/integration_tests/flutter_gallery/android/fastlane/metadata/android/en-US/video.txt
/home/thegamingbot/snap/flutter/common/flutter/packages/flutter_tools/test/data/asset_test/font/.dartignore
/home/thegamingbot/snap/flutter/common/flutter/packages/flutter_tools/templates/plugin/ios.templ/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/packages/flutter_tools/templates/app/windows.templ/runner/resources/app.icon.ico.img.templ
/home/thegamingbot/snap/flutter/common/flutter/.git/objects/info
/home/thegamingbot/snap/flutter/common/flutter/.git/refs/tags
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/_temp
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/build_runner_core-5.2.0/test/fixtures/no_packages_file/no_pubspec
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/archive-2.0.13/test/tests/res/emptyfile.txt
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/path_provider-1.6.11/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/package_info-0.4.1/macos/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/package_info-0.4.1/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/e2e-0.6.0/e2e_macos/macos/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/e2e-0.6.0/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/battery-1.0.1/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/device_info-0.4.2+4/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/process-3.0.13/test/data/replay/002.dance.101.stdout
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/url_launcher-5.5.0/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/shared_preferences-0.5.7+3/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/video_player-0.10.6/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/camera-0.5.8+2/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/.pub-cache/hosted/pub.dartlang.org/connectivity-0.4.9/ios/Assets/.gitkeep
/home/thegamingbot/snap/flutter/common/flutter/bin/cache/artifacts/openssl
/home/thegamingbot/snap/flutter/common/flutter/bin/cache/artifacts/libmobilizedevice
/home/thegamingbot/snap/flutter/common/flutter/bin/cache/artifacts/libplist
/home/thegamingbot/snap/flutter/common/flutter/bin/cache/artifacts/usbmuxd
/home/thegamingbot/snap/flutter/common/flutter/bin/cache/artifacts/ios-deploy
/home/thegamingbot/snap/flutter/common/flutter/bin/cache/lockfile
/home/thegamingbot/snap/flutter/common/flutter/.dartignore
/home/thegamingbot/snap/flutter/common/flutter/bin/cache/downloads
/home/thegamingbot/snap/flutter/common/flutter/bin/cache/pkg/sky_engine/lib/_empty.dart
/home/thegamingbot/snap/22
/home/thegamingbot/snap/code/40
/home/thegamingbot/Public
/home/thegamingbot/Templates/TXT.txt
/home/thegamingbot/Desktop
/home/thegamingbot/Android/Sdk/platform-tools/systrace/catapult/third_party/pyserial/serial/urlhandler/_init_.py
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
/home/thegamingbot/Android/Sdk/platform-tools/systrace/catapult/third_party/pyserial/serial/urlhandler/_init_.py
/home/thegamingbot/Android/Sdk/platform-tools/systrace/catapult/third_party/pyserial/serial/tools/_init_.py
/home/thegamingbot/Android/Sdk/platform-tools/systrace/catapult/common/py_utils/py_utils/refactor_util/_init_.py
/home/thegamingbot/Android/Sdk/platform-tools/systrace/catapult/devil/devil/utils/_init_.py
/home/thegamingbot/Android/Sdk/tools/lib/monitor-x86/p2/org.eclipse.equinix.p2.engine/profileRegistry/DefaultProfile.profile/.lock
/home/thegamingbot/Android/Sdk/tools/lib/monitor-x86_64/p2/org.eclipse.equinix.p2.engine/profileRegistry/DefaultProfile.profile/.lock
/home/thegamingbot/Android/Sdk/.temp
/home/thegamingbot/Documents/sem-5/.git/objects/pack
/home/thegamingbot/Documents/sem-5/.git/objects/info
/home/thegamingbot/Documents/sem-5/.git/refs/tags
/home/thegamingbot/Documents/sem-5/.git/branches
/home/thegamingbot/Videos
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/out/datascience-ui/renderers/datascience-ui/data-explorer/emptyRowsView.css
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/out/datascience-ui/renderers/datascience-ui/react-common/svgViewer.css
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/future/backports/email/mime/_init_.py
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/future/backports/test/nullcert.pem
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/future/backports/http/_init_.py
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/future/backports/urllib/_init_.py
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/future/tests/_init_.py
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/future/moves/xmlrpc/_init_.py
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2/email/mime/_init_.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2/distutils/_init_.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/xml/_etree/_init_.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/bdist_dumb.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/install_scripts.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/build_clib.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/build.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/install_headers.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/sdist.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/check.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/install_data.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/install_lib.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/build_scripts.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/register.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/_init_.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/bdist_rpm.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/bdist.pyi
/home/thegamingbot/.vscode/extensions/ms-python.python-2020.8.101144/pythonFiles/lib/python/jedi/third_party/typeshed/stdlib/2and3/distutils/command/bdist_wininst.pyi
```


!..ssh command: Login and manage remote hosts and clients.

sed command: When you copy a DOS file to Unix, you could find \r\n at the end of each line.

sed 's/.\$/\n': Converts DOS file to UNIX.

The screenshot shows a terminal window with the following session:

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c 1.txt 2.txt 3.txt demo.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sed 's/.$/\n' demo.txt
An operating system (OS) is system software that manages computer hardware, software resources, and provides common services for computer programs

Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources

For hardware functions such as input and output and memory allocation, the operating system acts as an intermediary between programs and the computer hardware, although the application code is usually executed directly by the hardware and frequently makes system calls to an OS function or is interrupted by it. Operating systems are found on many devices that contain a computer – from cellular phones and video game consoles to web servers and supercomputers.
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$
```

sed -n: Prints the file in reverse order.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sed -n '1!G;h;$p' demo.txt

For hardware functions such as input and output and memory allocation, the operating system acts as an intermediary between programs and the computer hardware, although the application code is usually executed directly by the hardware and frequently makes system calls to an OS function or is interrupted by it. Operating systems are found on many devices that contain a computer – from cellular phones and video game consoles to web servers and supercomputers.

Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources.

An operating system (OS) is system software that manages computer hardware, software resources, and provides common services for computer programs.
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

sed -N;: Adds line numbers to all non-empty lines

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sed '/./=' demo.txt | sed
'N; s/\n/ /'
1 An operating system (OS) is system software that manages computer hardware, so
ftware resources, and provides common services for computer programs.
3
Time-sharing operating systems schedule tasks for efficient use of the system an
d may also include accounting software for cost allocation of processor time, ma
ss storage, printing, and other resources.
5 For hardware functions such as input and output and memory allocation, the ope
rating system acts as an intermediary between programs and the computer hardware
, although the application code is usually executed directly by the hardware and
frequently makes system calls to an OS function or is interrupted by it. Operati
ng systems are found on many devices that contain a computer – from cellular pho
nes and video game consoles to web servers and supercomputers.
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

awk command: Queries given text in given files

awk: remove duplicates in the given files.

The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the current directory (~Documents/sem-5/OS/Lab/lab1/folder), and standard window control icons (minimize, maximize, close). Below this is a menu bar with options: File, Edit, View, Search, Terminal, Help. The main area of the terminal shows the following command and its output:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ awk '!($0 in array) { array[$0]; print }' 4.txt
Search Results
Web results

The quick brown fox jumps over the lazy dog
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

The command used is `awk '!($0 in array) { array[$0]; print }' 4.txt`. This awk script reads the contents of the file "4.txt" and prints only the unique lines, as indicated by the output "The quick brown fox jumps over the lazy dog".

awk -F: Compare two columns and print if they are the same

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ awk -F ':' '$3==$4' /etc/passwd
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
the gamingbot:x:1000:1000:Sai Kaushik S,,,,:/home/the gamingbot:/bin/bash
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

awk '{print}': Print specific columns from a file

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - ? x
File Edit View Search Terminal Help
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ awk '{print $2,$5}' /etc/
passwd

List
Bug-Reporting
Network
Resolver,,,:/run/systemd/resolve:/usr/sbin/nologin
```

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - ? x
File Edit View Search Terminal Help
Resolver,,,:/run/systemd/resolve:/usr/sbin/nologin

autoip
daemon,,,:/var/lib/usbmux:/usr/sbin/nologin

for
Oops
Dispatcher,,,:/var/run/speech-dispatcher:/bin/false
OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin

daemon,,,:/var/run/pulse:/usr/sbin/nologin

mDNS
colour
system

system-wide
Display
Kaushik
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

vim command: Opens a file in the vim editor.

vim +n: Goto nth line in a given file.

```
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ vim +5 demo.txt
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

vim -R: Open file in read mode.

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ vim -R /etc/passwd
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
vsvdvpot:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd/netif:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd/resolve:/usr/sbin/nologin
-- INSERT --
```

diff command: Prints the difference between two files.

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c 1.txt 2.txt 3.txt 4.txt a.txt b.txt demo.txt
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ diff a.txt b.txt
0a1
> Tamil Nadu
2,3c3
< Uttar Pradesh
< Kolkata
---
> Andhra Pradesh
5c5
< Jammu and Kashmir
---
> Uttar pradesh
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

sort command: Sorts the lines in a file

sort: Sorts in ascending order

The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the path: `thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder`. Below the path, there is a menu bar with options: File, Edit, View, Search, Terminal, Help. The main area of the terminal shows the command `sort a.txt` being run. The output of the command is a list of Indian states: Bihar, Gujarat, Jammu and Kashmir, Kolkata, and Uttar Pradesh. The terminal window has a standard window title bar at the top right with minimize, maximize, and close buttons.

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ sort a.txt
Bihar
Gujarat
Jammu and Kashmir
Kolkata
Uttar Pradesh
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

sort -r: Sorts in descending order

The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the host, the current directory (~/Documents/sem-5/OS/Lab/lab1/folder), and standard window control icons (minimize, maximize, close). Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the command `sort -r a.txt` being run, followed by a list of Indian states sorted in descending order: Uttar Pradesh, Kolkata, Jammu and Kashmir, Gujarat, and Bihar. The prompt at the end indicates the command has completed.

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sort -r a.txt
Uttar Pradesh
Kolkata
Jammu and Kashmir
Gujarat
Bihar
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

sort -t 'kn': Sort the lines according to the kth column.

```
theчamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theчamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sort -t: -k 3n /etc/passwd
| more
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
mail:x:8:8:mail:/var/mail:/usr/sbin/nologin
news:x:9:9:news:/var/spool/news:/usr/sbin/nologin
uucp:x:10:10:uucp:/var/spool/uucp:/usr/sbin/nologin
proxy:x:13:13:proxy:/bin:/usr/sbin/nologin
www-data:x:33:33:www-data:/var/www:/usr/sbin/nologin
backup:x:34:34:backup:/var/backups:/usr/sbin/nologin
list:x:38:38:Mailing List Manager:/var/list:/usr/sbin/nologin
irc:x:39:39:ircd:/var/run/ircd:/usr/sbin/nologin
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/usr/sbin/nologin
systemd-network:x:100:102:systemd Network Management,,,:/run/systemd/netif:/usr/sbin/nologin
systemd-resolve:x:101:103:systemd Resolver,,,:/run/systemd/resolve:/usr/sbin/nologin
```

the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x

File Edit View Search Terminal Help

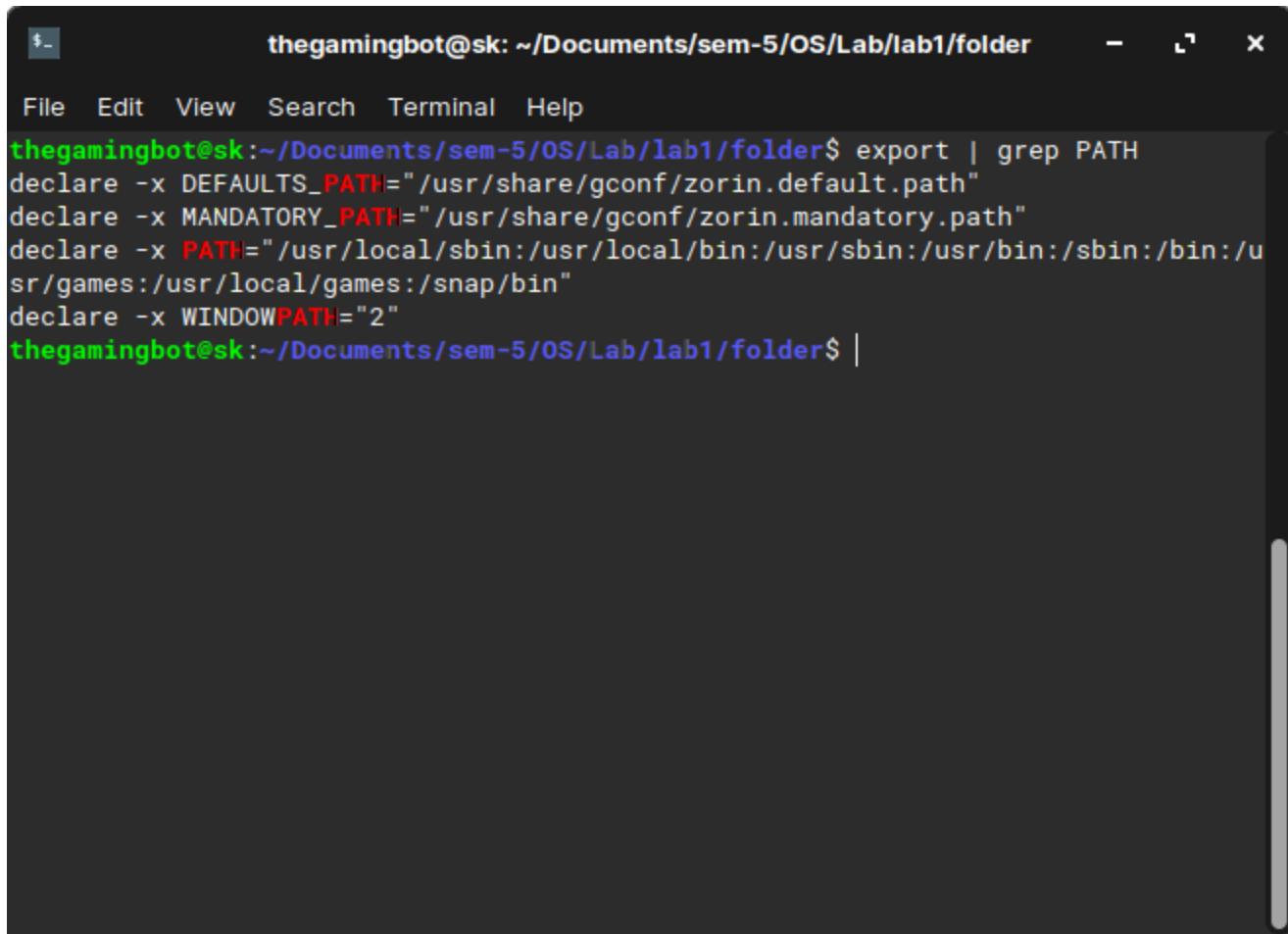
```
syslog:x:102:106::/home/syslog:/usr/sbin/nologin
messagebus:x:103:107::/nonexistent:/usr/sbin/nologin
_apt:x:104:65534::/nonexistent:/usr/sbin/nologin
uuidd:x:105:111::/run/uuidd:/usr/sbin/nologin
avahi-autoipd:x:106:112:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/usr/sbin/
nologin
usbmux:x:107:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
dnsmasq:x:108:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
rtkit:x:109:114:RealtimeKit,,,:/proc:/usr/sbin/nologin
cups-pk-helper:x:110:116:user for cups-pk-helper service,,,:/home/cups-pk-helper
:/usr/sbin/nologin
kernoops:x:111:65534:Kernel Oops Tracking Daemon,,,:::/usr/sbin/nologin
speech-dispatcher:x:112:29:Speech Dispatcher,,,:/var/run/speech-dispatcher:/bin/
false
nm-openvpn:x:113:117:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin
/nologin
saned:x:114:119::/var/lib/saned:/usr/sbin/nologin
pulse:x:115:120:PulseAudio daemon,,,:/var/run/pulse:/usr/sbin/nologin
festival:x:116:29::/nonexistent:/usr/sbin/nologin
avahi:x:117:122:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/usr/sbin/nologin
colord:x:118:123:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/no
login
hplip:x:119:7:HPLIP system user,,,:/var/run/hplip:/bin/false
--More--
```

the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x

File Edit View Search Terminal Help

```
nologin
usbmux:x:107:46:usbmux daemon,,,:/var/lib/usbmux:/usr/sbin/nologin
dnsmasq:x:108:65534:dnsmasq,,,:/var/lib/misc:/usr/sbin/nologin
rtkit:x:109:114:RealtimeKit,,,:/proc:/usr/sbin/nologin
cups-pk-helper:x:110:116:user for cups-pk-helper service,,,:/home/cups-pk-helper
:/usr/sbin/nologin
kernoops:x:111:65534:KernelOops Tracking Daemon,,,:::/usr/sbin/nologin
speech-dispatcher:x:112:29:Speech Dispatcher,,,:/var/run/speech-dispatcher:/bin/
false
nm-openvpn:x:113:117:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin
/nologin
saned:x:114:119::/var/lib/saned:/usr/sbin/nologin
pulse:x:115:120:PulseAudio daemon,,,:/var/run/pulse:/usr/sbin/nologin
festival:x:116:29::/nonexistent:/usr/sbin/nologin
avahi:x:117:122:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/usr/sbin/nologin
colord:x:118:123:colord colour management daemon,,,:/var/lib/colord:/usr/sbin/no
login
hplip:x:119:7:HPLIP system user,,,:/var/run/hplip:/bin/false
geoclue:x:120:124::/var/lib/geoclue:/usr/sbin/nologin
_flatpak:x:121:125:Flatpak system-wide installation helper,,,:/nonexistent:/usr/
sbin/nologin
gdm:x:122:126:Gnome Display Manager:/var/lib/gdm3:/bin/false
the gaming bot:x:1000:1000:Sai Kaushik S,,,:/home/the gaming bot:/bin/bash
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
```

export command: View environmental variables

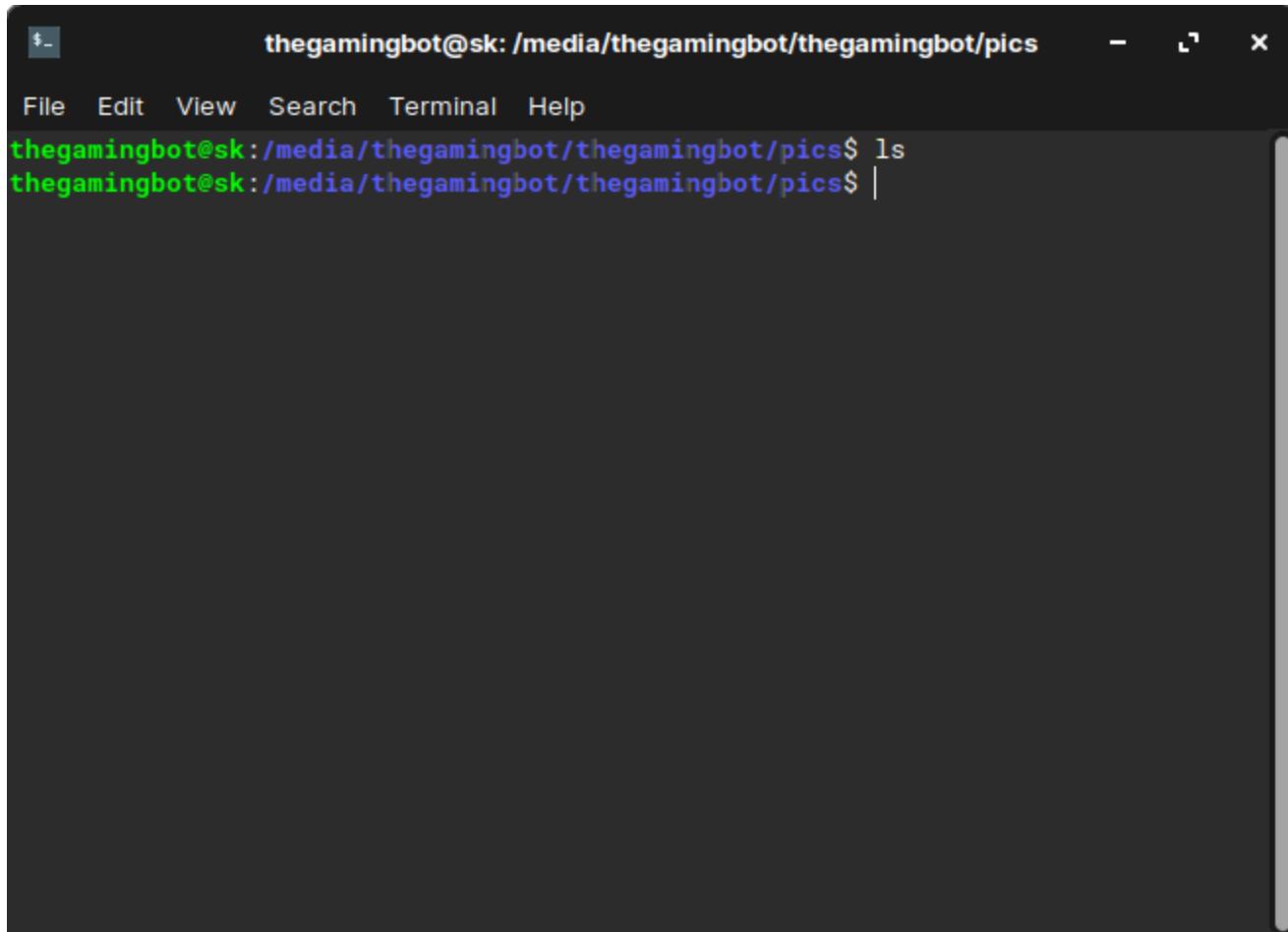


The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, host, and current directory: `thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$`. Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal contains the command `export | grep PATH` followed by its output. The output lists several environment variables starting with `declare -x`, including `DEFAULTS_PATH`, `MANDATORY_PATH`, `PATH`, and `WINDOWPATH`. The terminal ends with a prompt: `thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |`.

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ export | grep PATH
declare -x DEFAULTS_PATH="/usr/share/gconf/zorin.default.path"
declare -x MANDATORY_PATH="/usr/share/gconf/zorin.mandatory.path"
declare -x PATH="/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/usr/games:/usr/local/games:/snap/bin"
declare -x WINDOWPATH="2"
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

xargs command: Used to build and execute commands from standard input.

xargs with cp: Copies the given files to external drives.



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, host, and current directory: "thegamingbot@sk: /media/thegamingbot/thegamingbot/pics". Below the title bar is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows a command being entered: "thegamingbot@sk:/media/thegamingbot/thegamingbot/pics\$ ls". The command is partially completed, with a vertical pipe character ("|") at the end, indicating that the output of the "ls" command will be processed by the subsequent command in the pipeline.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - ⌂ ×
```

File Edit View Search Terminal Help

```
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls *.png | xargs -n1 -i cp  
{} /media/theagingbot/theagingbot/pics  
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

```
theagingbot@sk: /media/theagingbot/theagingbot/pics - ⌂ ×
```

File Edit View Search Terminal Help

```
theagingbot@sk:/media/theagingbot/theagingbot/pics$ ls  
theagingbot@sk:/media/theagingbot/theagingbot/pics$ ls  
mkdir.png 'rm -r.png' 'tar cvf.png' 'tar tvf.png' 'tar xvf.png'  
theagingbot@sk:/media/theagingbot/theagingbot/pics$
```

xargs with wget: Downloads the urls in a given file.

```
thegambaringbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ cat url-list.txt | xargs wget -c
--2020-08-19 12:24:14-- http://xn--c-5gn/
Resolving xn--c-5gn (xn--c-5gn)... failed: Name or service not known.
wget: unable to resolve host address 'xn--c-5gn'
--2020-08-19 12:24:14-- https://code.visualstudio.com/docs/?dv=win64
Resolving code.visualstudio.com (code.visualstudio.com)... 13.69.68.34
Connecting to code.visualstudio.com (code.visualstudio.com)|13.69.68.34|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 53236 (52K) [text/html]
Saving to: 'index.html?dv=win64'

index.html?dv=win64 100%[=====] 51.99K 166KB/s in 0.3s

2020-08-19 12:24:16 (166 KB/s) - 'index.html?dv=win64' saved [53236/53236]

--2020-08-19 12:24:16-- https://code.visualstudio.com/docs/?dv=win32
Reusing existing connection to code.visualstudio.com:443.
HTTP request sent, awaiting response... 200 OK
Length: 53236 (52K) [text/html]
Saving to: 'index.html?dv=win32'

index.html?dv=win32 100%[=====] 51.99K --.-KB/s in 0.007s

2020-08-19 12:24:16 (7.75 MB/s) - 'index.html?dv=win32' saved [53236/53236]

FINISHED --2020-08-19 12:24:16--
Total wall clock time: 1.5s
Downloaded: 2 files, 104K in 0.3s (325 KB/s)
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

ls command: Lists the files and directories in the given directory

```
thegambaringbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      'rm -r.png'      url-list.txt
1.txt    a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt    b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt    demo.txt   mkdir.png        'tar xvf.png'
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

ls -lh: Displays file size in readable formats.

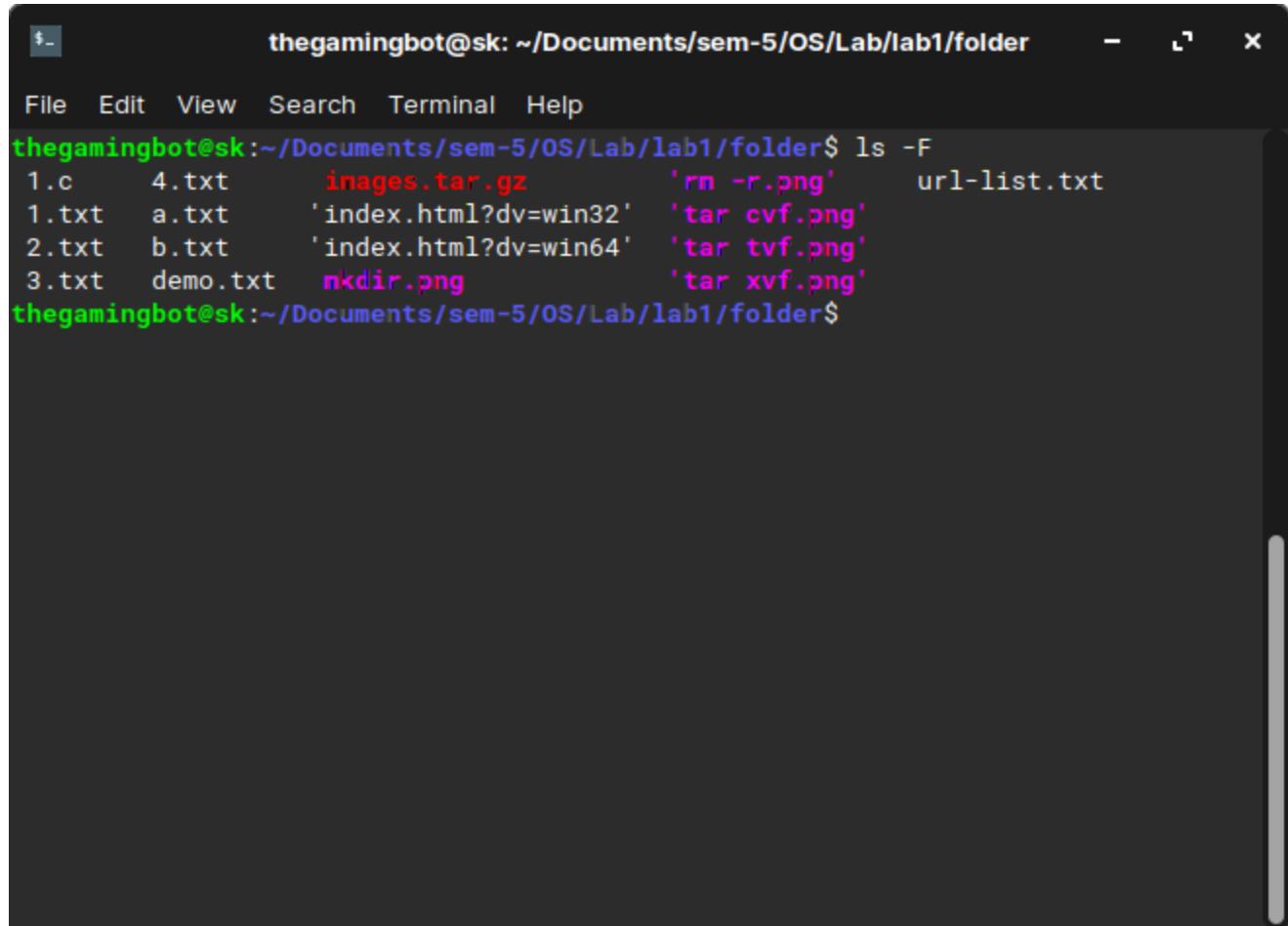
```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls -lh
total 9.3M
-rw-r--r-- 1 theagingbot theagingbot 71 Aug 19 10:17 1.c
-rw-r--r-- 1 theagingbot theagingbot 816 Aug 19 10:00 1.txt
-rw-r--r-- 1 theagingbot theagingbot 977 Aug 19 10:00 2.txt
-rw-r--r-- 1 theagingbot theagingbot 607 Aug 19 10:01 3.txt
-rw-r--r-- 1 theagingbot theagingbot 232 Aug 19 10:43 4.txt
-rw-r--r-- 1 theagingbot theagingbot 54 Aug 19 11:34 a.txt
-rw-r--r-- 1 theagingbot theagingbot 54 Aug 19 11:34 b.txt
-rw-r--r-- 1 theagingbot theagingbot 817 Aug 19 09:55 demo.txt
-rw-r--r-- 1 theagingbot theagingbot 9.0M Aug 19 12:00 images.tar.gz
-rw-r--r-- 1 theagingbot theagingbot 52K Aug 19 12:24 'index.html?dv=win32'
-rw-r--r-- 1 theagingbot theagingbot 52K Aug 19 12:24 'index.html?dv=win64'
-rw-rw-r-- 1 theagingbot theagingbot 40K Aug 19 09:39 mkdir.png
-rw-rw-r-- 1 theagingbot theagingbot 43K Aug 19 09:45 'rm -r.png'
-rw-rw-r-- 1 theagingbot theagingbot 44K Aug 19 09:42 'tar cvf.png'
-rw-rw-r-- 1 theagingbot theagingbot 39K Aug 19 09:50 'tar tvf.png'
-rw-rw-r-- 1 theagingbot theagingbot 45K Aug 19 09:45 'tar xvf.png'
-rw-r--r-- 1 theagingbot theagingbot 90 Aug 19 12:23 url-list.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

ls -ltr: Sorts the files in the last modified order.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls -ltr
total 9520
-rw-rw-r-- 1 theagingbot theagingbot 40828 Aug 19 09:39 mkdir.png
-rw-rw-r-- 1 theagingbot theagingbot 44459 Aug 19 09:42 'tar cvf.png'
-rw-rw-r-- 1 theagingbot theagingbot 43202 Aug 19 09:45 'rm -r.png'
-rw-rw-r-- 1 theagingbot theagingbot 45072 Aug 19 09:45 'tar xvf.png'
-rw-rw-r-- 1 theagingbot theagingbot 39162 Aug 19 09:50 'tar tvf.png'
-rw-r--r-- 1 theagingbot theagingbot 817 Aug 19 09:55 demo.txt
-rw-r--r-- 1 theagingbot theagingbot 816 Aug 19 10:00 1.txt
-rw-r--r-- 1 theagingbot theagingbot 977 Aug 19 10:00 2.txt
-rw-r--r-- 1 theagingbot theagingbot 607 Aug 19 10:01 3.txt
-rw-r--r-- 1 theagingbot theagingbot 71 Aug 19 10:17 1.c
-rw-r--r-- 1 theagingbot theagingbot 232 Aug 19 10:43 4.txt
-rw-r--r-- 1 theagingbot theagingbot 54 Aug 19 11:34 a.txt
-rw-r--r-- 1 theagingbot theagingbot 54 Aug 19 11:34 b.txt
-rw-r--r-- 1 theagingbot theagingbot 9380457 Aug 19 12:00 images.tar.gz
-rw-r--r-- 1 theagingbot theagingbot 90 Aug 19 12:23 url-list.txt
-rw-r--r-- 1 theagingbot theagingbot 53236 Aug 19 12:24 'index.html?dv=win64'
'
-rw-r--r-- 1 theagingbot theagingbot 53236 Aug 19 12:24 'index.html?dv=win32
'

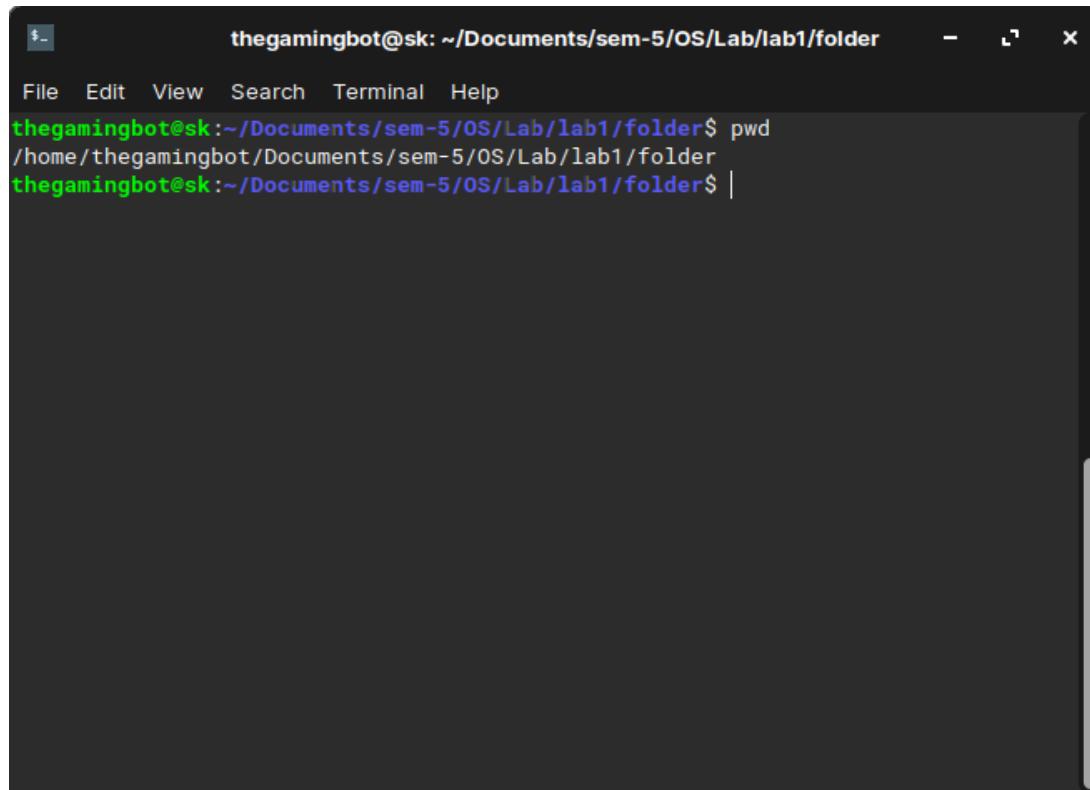
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$
```

ls -F: Visual classification of the files and directories.



```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls -F
1.c      4.txt      images.tar.gz      'rm -r.png'      url-list.txt
1.txt    a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt    b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt    demo.txt   mkdir.png          'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$
```

pwd command: Prints the path of the current working directory



```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ pwd
/home/theagingbot/Documents/sem-5/OS/Lab/lab1/folder
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

cd command: Opens the given directory

The screenshot shows a terminal window with a dark background and light-colored text. The title bar reads "thegamingbot@sk: ~/edX/GD50". The menu bar includes "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal session starts with "thegamingbot@sk:~\$ ls" which lists several directories: AC.jpg, Desktop, edX, Pictures, Qt, Templates, Android, Documents, Music, Projects, snap, Videos, android-studio, Downloads, myapp, Public, and temp. Then, "thegamingbot@sk:~\$ cd edX" is run, changing the current directory. Finally, "thegamingbot@sk:~/edX\$ ls" is run again, showing the contents of the "edX" directory: assignment, lecture, src, and website.

```
thegamingbot@sk:~$ ls
AC.jpg      Desktop   edX    Pictures  Qt    Templates
Android     Documents  Music  Projects  snap  Videos
android-studio Downloads myapp Public   temp
thegamingbot@sk:~$ cd edX
thegamingbot@sk:~/edX$ ls
assignment  lecture  src  website
thegamingbot@sk:~/edX/GD50$ |
```

cd -: Switches to the last open directory

The screenshot shows a terminal window with a dark background and light-colored text. The title bar reads "thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab0". The menu bar includes "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal session starts with "thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder\$ cd -" followed by "/home/thegamingbot/Documents/sem-5/OS/Lab/lab0". This command switches the user back to the previous directory, "lab0".

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ cd -
/home/thegamingbot/Documents/sem-5/OS/Lab/lab0
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab0$ |
```

cdspell : corrects spelling error while running cd

The screenshot shows a terminal window titled "thegamingbot@sk: ~/Android". The window has a dark theme with light-colored text. At the top, there's a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". Below the menu, the terminal prompt is "thegamingbot@sk:~\$". The user runs the command "ls" which lists several directories: "AC.jpg", "Desktop", "edX", "Pictures", "Qt", "temp", "Android", "Documents", "Music", "Projects", "QTProjects", "Templates", "android-studio", "Downloads", "myapp", "Public", "snap", and "Videos". Then, the user runs "shopt -s cdspell". After that, they attempt to change directory to "Documents" using "cd Documentts", which is corrected by cdspell to "Documents". Finally, they run "cd Androod", which is corrected to "Android". The prompt at the end is "thegamingbot@sk:~/Android\$ |".

```
thegamingbot@sk:~$ ls
AC.jpg          Desktop    edX      Pictures  Qt        temp
Android         Documents   Music    Projects  QTProjects Templates
android-studio Downloads  myapp   Public    snap      Videos
thegamingbot@sk:~$ shopt -s cdspell
thegamingbot@sk:~$ cd Documentts
Documents
thegamingbot@sk:~/Documents$ cd
thegamingbot@sk:~/Documents$ cd Androod
Android
thegamingbot@sk:~/Android$ |
```

gzip command: Used to create .gz compressed files.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt      demo.txt          'index.html?dv=win64'  'tar cvf.png'
3.txt      folder            mkdir.png           'tar tvf.png'
4.txt      images.tar.gz     nagios-3.2.1.tar.gz  'tar xvf.png'
a.txt      images.zip       'rm -r.png'        url-list.txt
b.txt      'index.html?dv=win32' taglist.zip
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ gzip 1.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt.gz    demo.txt          'index.html?dv=win64'  'tar cvf.png'
3.txt      folder            mkdir.png           'tar tvf.png'
4.txt      images.tar.gz     nagios-3.2.1.tar.gz  'tar xvf.png'
a.txt      images.zip       'rm -r.png'        url-list.txt
b.txt      'index.html?dv=win32' taglist.zip
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

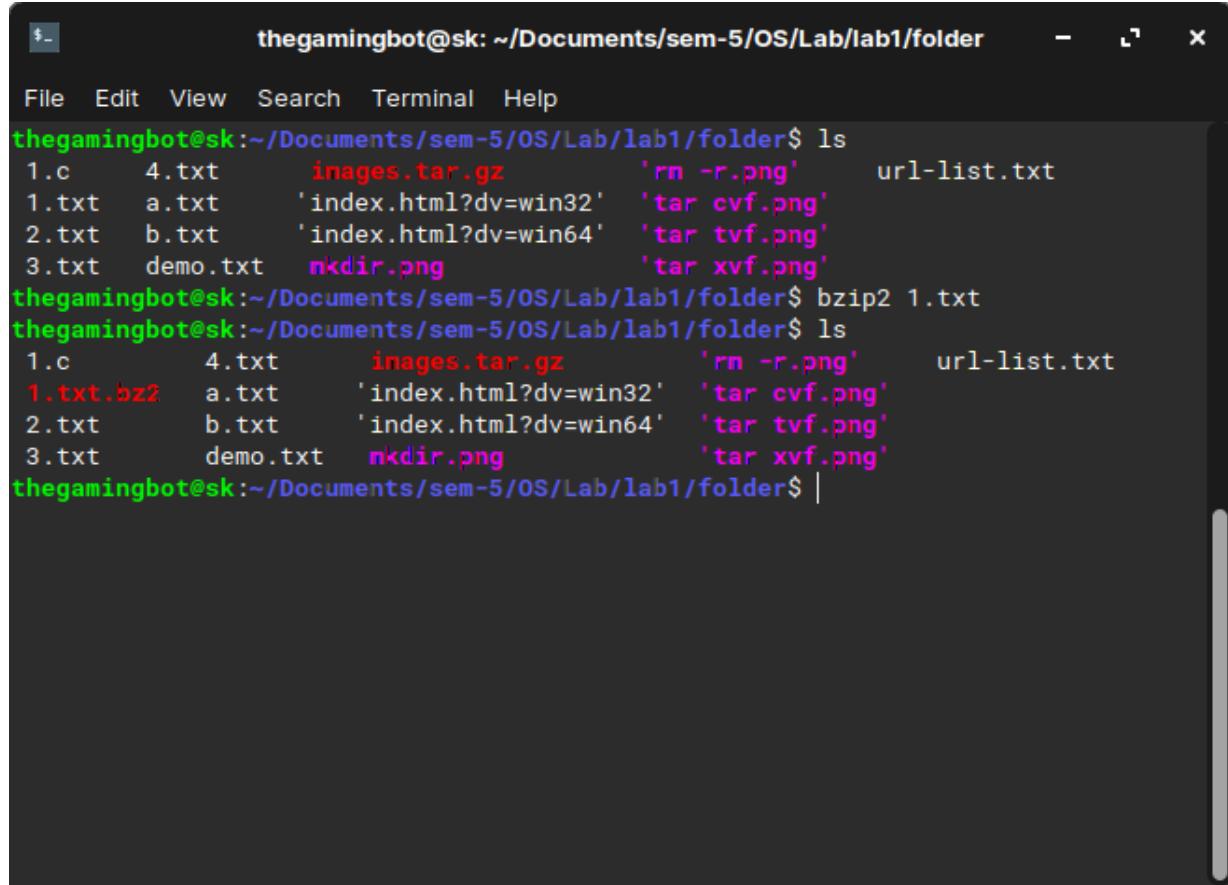
gzip -d: Uncompress a .gz file.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz     'rm -r.png'        url-list.txt
1.txt.gz  a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt      b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt      demo.txt  mkdir.png         'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ gzip -d 1.txt.gz
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz     'rm -r.png'        url-list.txt
1.txt    a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt    b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt    demo.txt  mkdir.png         'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

gzip -l: Shows the compression ratio of a .gz file.

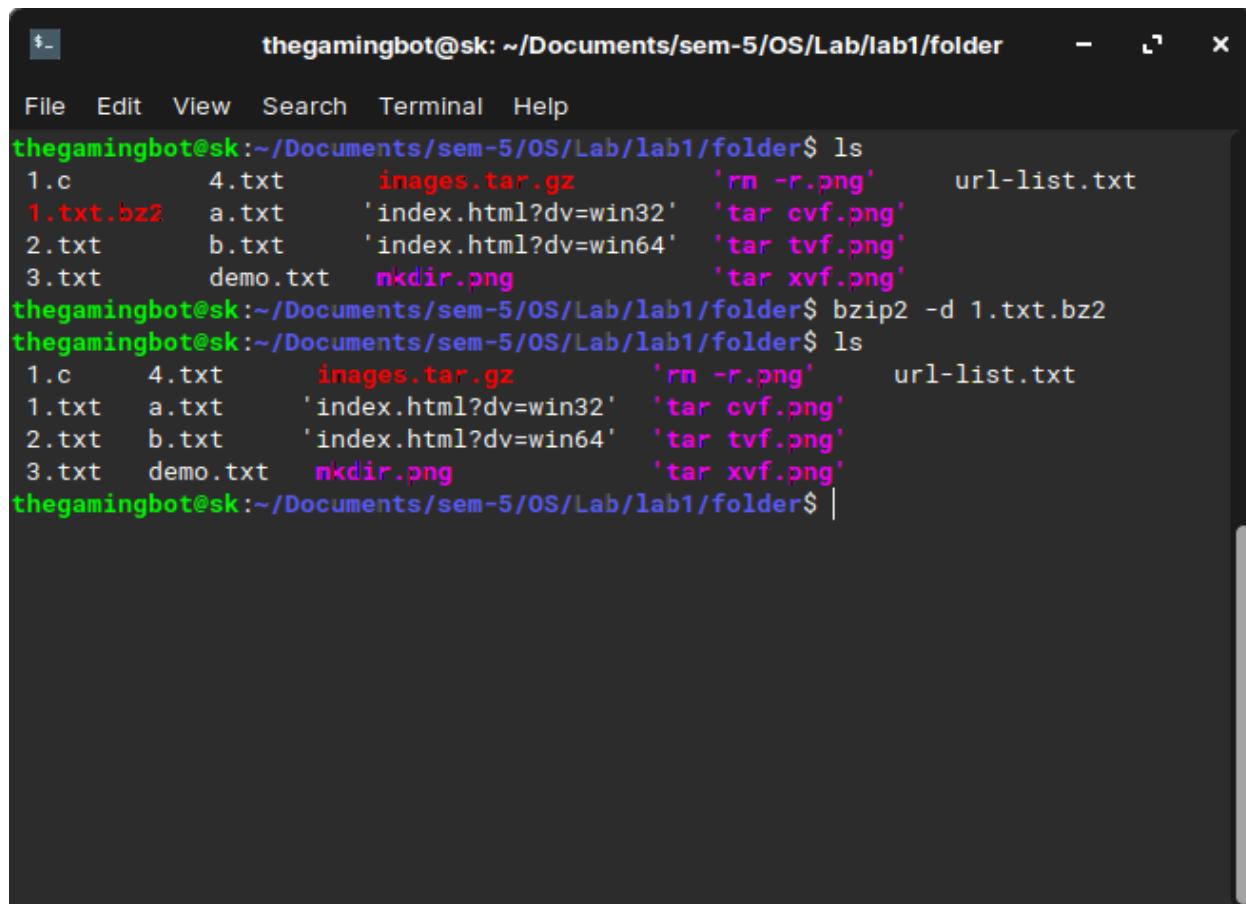
```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      'rm -r.png'      url-list.txt
1.txt    a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt    b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt    demo.txt   mkdir.png          'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ gzip -l *.gz
      compressed      uncompressed      ratio      uncompressed_name
      9380457        9943040     5.7%  images.tar
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

bzip2 command: Used to a .bz2 compressed file.



```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      'rm -r.png'      url-list.txt
1.txt    a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt    b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt    demo.txt   mkdir.png          'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ bzip2 1.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      'rm -r.png'      url-list.txt
1.txt.bz2  a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt    b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt    demo.txt   mkdir.png          'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

bzip2 -d: Decompress a .bz2 file.



```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      'rm -r.png'      url-list.txt
1.txt.bz2  a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt    b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt    demo.txt   mkdir.png          'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ bzip2 -d 1.txt.bz2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      'rm -r.png'      url-list.txt
1.txt    a.txt      'index.html?dv=win32'  'tar cvf.png'
2.txt    b.txt      'index.html?dv=win64'  'tar tvf.png'
3.txt    demo.txt   mkdir.png          'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

unzip command: Extract a .zip file

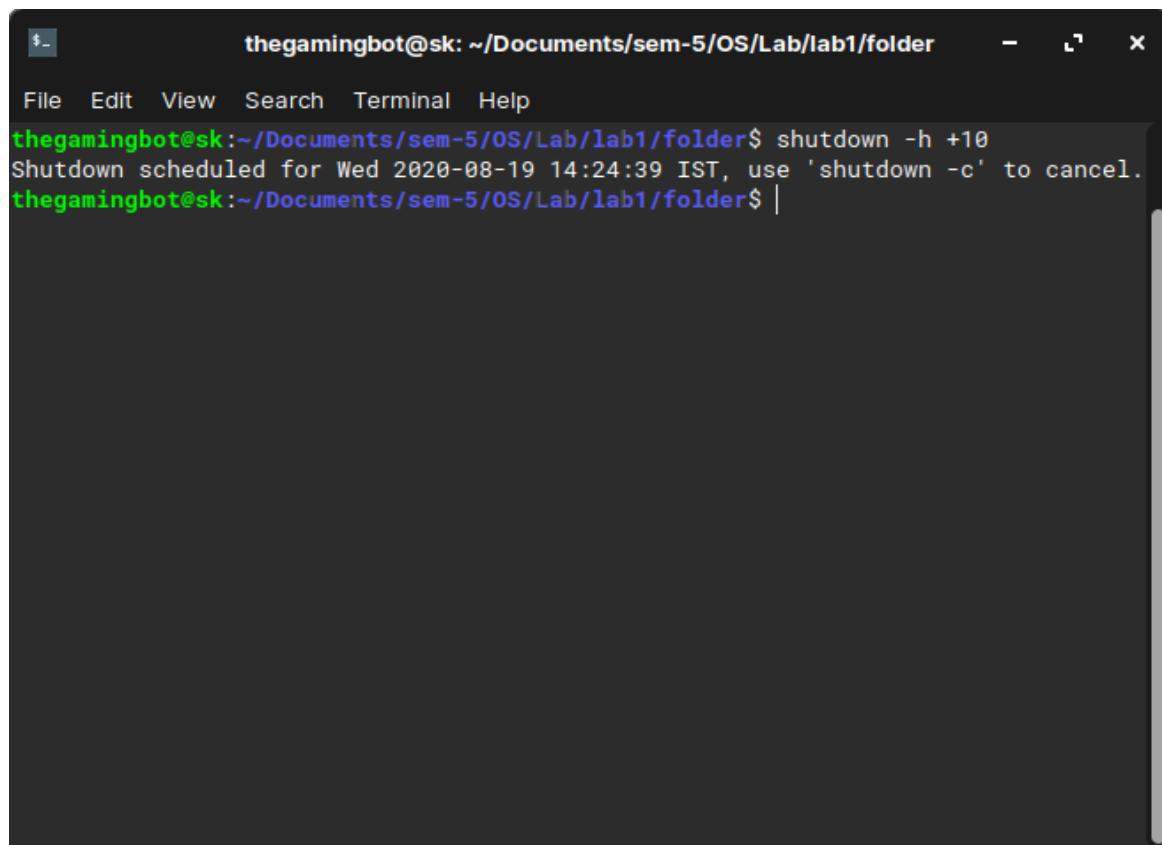
```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      3.txt      b.txt      images.zip      url-list.txt
1.txt    4.txt      demo.txt   'index.html?dv=win32'
2.txt    a.txt      images.tar.gz 'index.html?dv=win64'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ unzip images.zip
Archive: images.zip
  inflating: mkdir.png
  inflating: rm -r.png
  inflating: tar cvf.png
  inflating: tar tvf.png
  inflating: tar xvf.png
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      mkdir.png      'tar xvf.png'
1.txt    a.txt      images.zip       'rm -r.png'    url-list.txt
2.txt    b.txt      'index.html?dv=win32' 'tar cvf.png'
3.txt    demo.txt   'index.html?dv=win64'  'tar tvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

unzip -l: List the contents of a .zip file without extracting it

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      mkdir.png      'tar xvf.png'
1.txt    a.txt      images.zip       'rm -r.png'    url-list.txt
2.txt    b.txt      'index.html?dv=win32' 'tar cvf.png'
3.txt    demo.txt   'index.html?dv=win64'  'tar tvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ unzip -l images.zip
Archive: images.zip
      Length      Date      Time      Name
-----  -----
    40828  2020-08-19 09:39  mkdir.png
    43202  2020-08-19 09:45  rm -r.png
    44459  2020-08-19 09:42  tar cvf.png
    39162  2020-08-19 09:50  tar tvf.png
    45072  2020-08-19 09:45  tar xvf.png
-----
      212723           5 files
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

shutdown command: Shutdown/ reboots the desktop

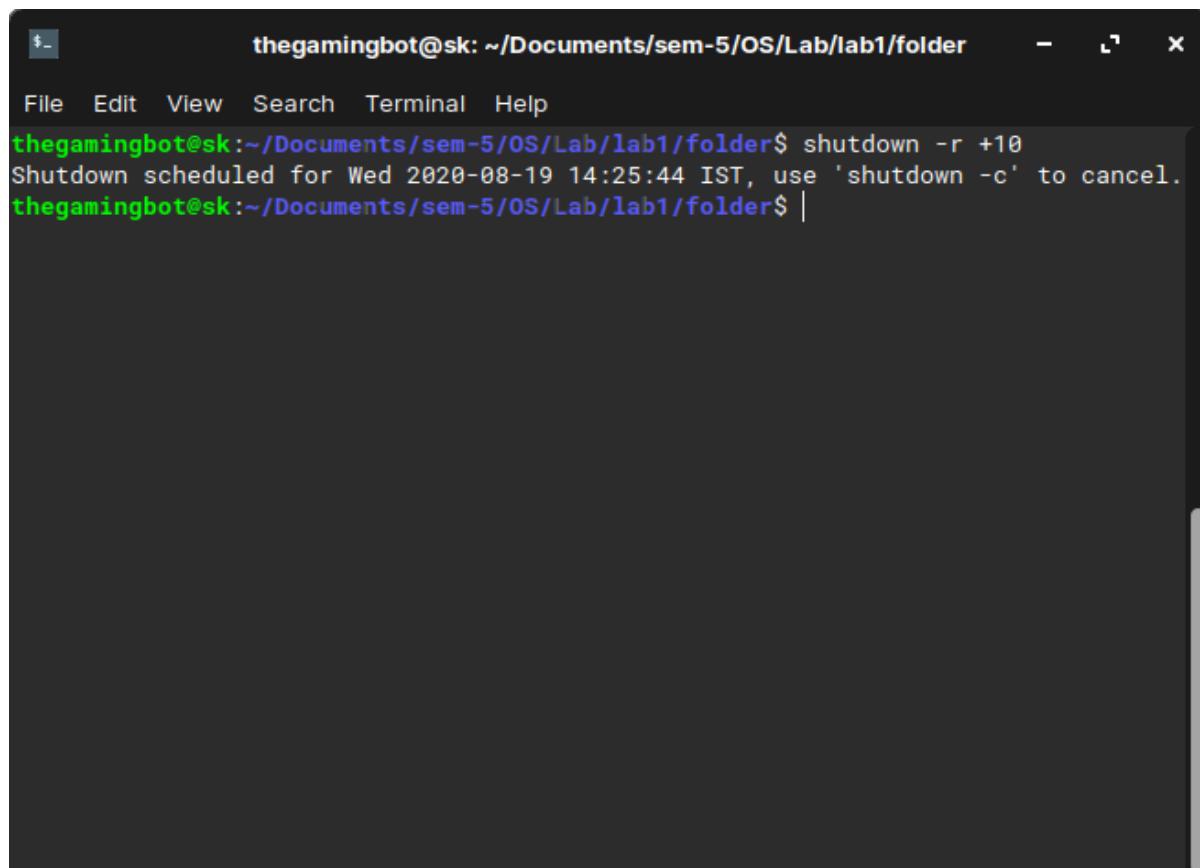
shutdown -h: Shutdown the desktop



A screenshot of a terminal window titled "thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder". The window has standard OS X-style controls at the top right. The menu bar includes "File", "Edit", "View", "Search", "Terminal", and "Help". The main pane shows the command "shutdown -h +10" being run, followed by a confirmation message: "Shutdown scheduled for Wed 2020-08-19 14:24:39 IST, use 'shutdown -c' to cancel." A vertical scroll bar is visible on the right side of the terminal window.

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ shutdown -h +10
Shutdown scheduled for Wed 2020-08-19 14:24:39 IST, use 'shutdown -c' to cancel.
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

shutdown -r: Restarts the desktop



A screenshot of a terminal window titled "thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder". The window has standard OS X-style controls at the top right. The menu bar includes "File", "Edit", "View", "Search", "Terminal", and "Help". The main pane shows the command "shutdown -r +10" being run, followed by a confirmation message: "Shutdown scheduled for Wed 2020-08-19 14:25:44 IST, use 'shutdown -c' to cancel." A vertical scroll bar is visible on the right side of the terminal window.

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ shutdown -r +10
Shutdown scheduled for Wed 2020-08-19 14:25:44 IST, use 'shutdown -c' to cancel.
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

shutdown -Fr: Force file check on boot.

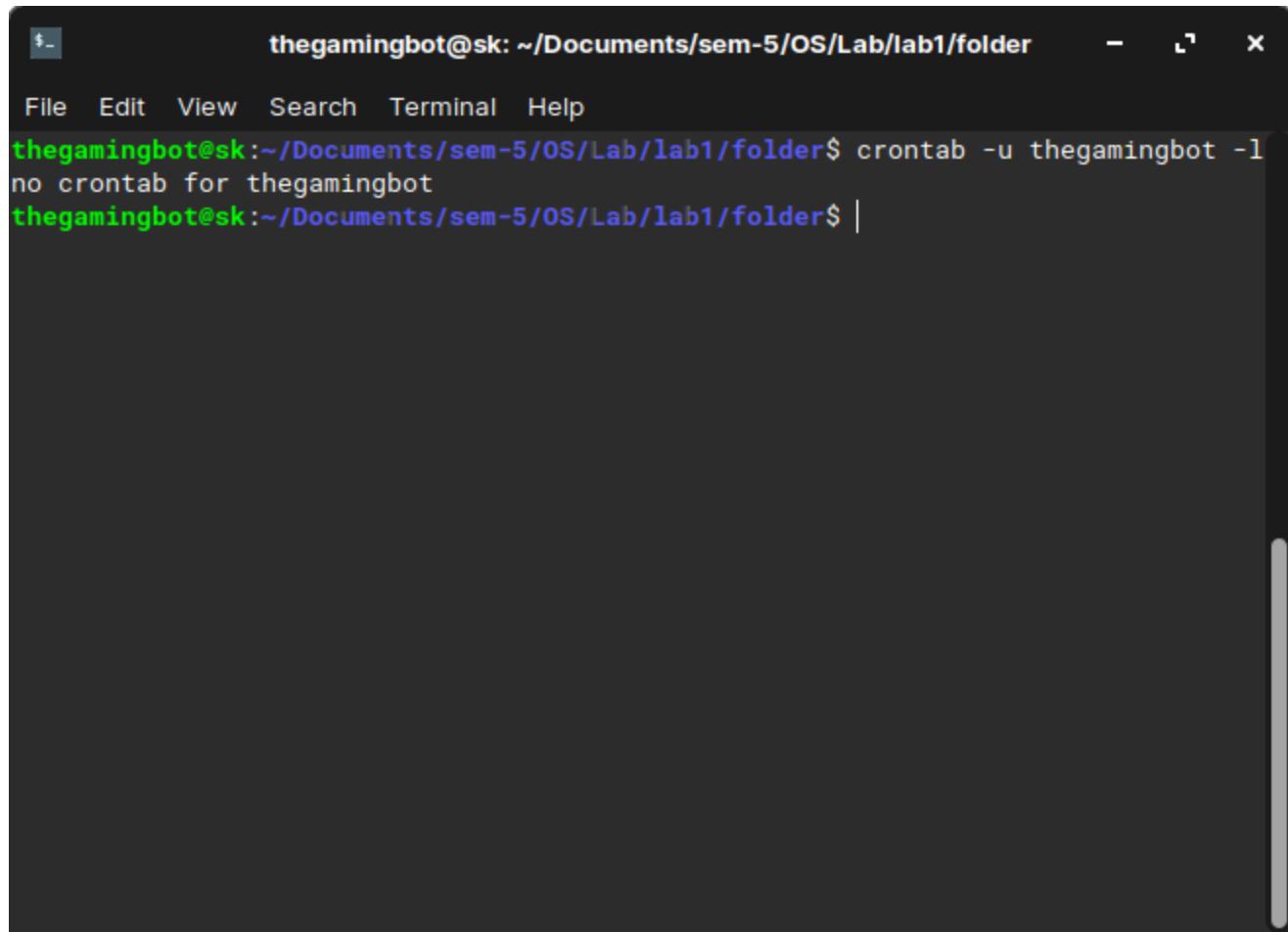
The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, host, and current directory: `thegamingbot@sk: ~/Android`. Below this is a standard menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows a command being entered and its execution. The command is `shutdown -Fr +10`, which schedules a shutdown for 10 minutes from the current time. The terminal output indicates that the shutdown is scheduled for Wednesday, August 26, 2020, at 11:21:19 IST. It also provides instructions on how to cancel the shutdown if needed. The command prompt ends with a vertical bar |, indicating where further input can be provided.

```
thegamingbot@sk:~/Android$ shutdown -Fr +10
Shutdown scheduled for Wed 2020-08-26 11:21:19 IST, use 'shutdown -c' to cancel.
thegamingbot@sk:~/Android$ |
```

!..ftp command: Connect to an account in the FTP server

crontab command: Used to view or edit the table of commands to be run by cron.

crontab -u: View crontab entry for a specific user



```
theчagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theчagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ crontab -u theчagingbot -l
no crontab for theчagingbot
theчagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

crontab -e: Schedule a crontab entry

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - _ x
File Edit View Search Terminal Help
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ crontab -e
crontab: installing new crontab
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - _ x
File Edit View Search Terminal Help
GNU nano 2.9.3          /tmp/crontab.UboDGS/crontab

# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
*/10 * * * * /home/ramesh/check-disk-space|
```

[Wrote 23 lines]

^G Get Help **^O** Write Out **^W** Where Is **^K** Cut Text **^J** Justify **^C** Cur Pos
^X Exit **^R** Read File **^V** Replace **^U** Uncut Text **^T** To Spell **^L** Go To Line

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ crontab -u theagingbot -l
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow command
*/10 * * * * /home/theagingbot/check-disk-space
```

service command: Service command is used to run the system V init scripts.

```
theagingbot@sk:~$ service --status-all
[ + ] acpid
[ - ] alsa-utils
[ - ] anacron
[ + ] apparmor
[ + ] avahi-daemon
[ + ] binfmt-support
[ + ] bluetooth
[ - ] console-setup.sh
[ + ] cron
[ + ] cups
[ + ] cups-browsed
[ + ] dbus
[ - ] dns-clean
[ + ] gdm3
[ + ] grub-common
[ - ] hwclock.sh
[ + ] irqbalance
[ + ] kerneloops
[ - ] keyboard-setup.sh
[ + ] kmod
[ + ] network-manager
[ + ] networking
[ + ] openvpn
[ - ] plymouth
[ - ] plymouth-log
[ - ] pppd-dns
[ + ] procps
[ - ] rsync
[ + ] rsyslog
[ - ] saned
[ + ] speech-dispatcher
[ - ] spice-vdagent
[ + ] udev
[ + ] ufw
[ - ] uuid
[ - ] x11-common
theagingbot@sk:~$ |
```

ps command: Used to display information about the processes that are running in the system.

ps -ef: View current running process.

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ps -ef | more
UID      PID  PPID  C STIME TTY      TIME CMD
root      1    0  0 13:42 ?    00:00:04 /sbin/init splash
root      2    0  0 13:42 ?    00:00:00 [kthreadd]
root      3    2  0 13:42 ?    00:00:00 [rcu_gp]
root      4    2  0 13:42 ?    00:00:00 [rcu_par_gp]
root      6    2  0 13:42 ?    00:00:00 [kworker/0:0H-kb]
root      7    2  0 13:42 ?    00:00:00 [kworker/0:1-eve]
root      9    2  0 13:42 ?    00:00:00 [mm_percpu_wq]
root     10   2  0 13:42 ?    00:00:00 [ksoftirqd/0]
root     11   2  0 13:42 ?    00:00:01 [rcu_sched]
root     12   2  0 13:42 ?    00:00:00 [migration/0]
root     13   2  0 13:42 ?    00:00:00 [idle_inject/0]
root     14   2  0 13:42 ?    00:00:00 [cpuhp/0]
root     15   2  0 13:42 ?    00:00:00 [cpuhp/1]
root     16   2  0 13:42 ?    00:00:00 [idle_inject/1]
root     17   2  0 13:42 ?    00:00:00 [migration/1]
root     18   2  0 13:42 ?    00:00:00 [ksoftirqd/1]
root     20   2  0 13:42 ?    00:00:00 [kworker/1:0H-ev]
root     21   2  0 13:42 ?    00:00:00 [cpuhp/2]
root     22   2  0 13:42 ?    00:00:00 [idle_inject/2]
root     23   2  0 13:42 ?    00:00:00 [migration/2]
root     24   2  0 13:42 ?    00:00:00 [ksoftirqd/2]
root     25   2  0 13:42 ?    00:00:00 [kworker/2:0-eve]
root     26   2  0 13:42 ?    00:00:00 [kworker/2:0H-kb]
root     27   2  0 13:42 ?    00:00:00 [cpuhp/3]
root     28   2  0 13:42 ?    00:00:00 [idle_inject/3]
root     29   2  0 13:42 ?    00:00:00 [migration/3]
root     30   2  0 13:42 ?    00:00:00 [ksoftirqd/3]
root     32   2  0 13:42 ?    00:00:00 [kworker/3:0H-ev]
root     33   2  0 13:42 ?    00:00:00 [kdevtmpfs]
root     34   2  0 13:42 ?    00:00:00 [netns]
root     35   2  0 13:42 ?    00:00:00 [rcu_tasks_kthre]
root     36   2  0 13:42 ?    00:00:00 [kaudit]
root     37   2  0 13:42 ?    00:00:00 [khungtaskd]
root     38   2  0 13:42 ?    00:00:00 [oom_reaper]
root     39   2  0 13:42 ?    00:00:00 [writeback]
root     40   2  0 13:42 ?    00:00:00 [kcompactd0]
```

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ps -ef | more
File Edit View Search Terminal Help
UID      PID  PPID  C STIME TTY      TIME CMD
root      41   2  0 13:42 ?    00:00:00 [ksmd]
root      42   2  0 13:42 ?    00:00:00 [khugepaged]
root      44   2  0 13:42 ?    00:00:02 [kworker/u8:1-19]
root     135   2  0 13:42 ?    00:00:00 [kintegrityd]
root     136   2  0 13:42 ?    00:00:00 [kblockd]
root     137   2  0 13:42 ?    00:00:00 [blkcg_punt_bio]
root     139   2  0 13:42 ?    00:00:00 [tpm_dev_wq]
root     140   2  0 13:42 ?    00:00:00 [ata_sff]
root     141   2  0 13:42 ?    00:00:00 [md]
root     142   2  0 13:42 ?    00:00:00 [edac-poller]
root     143   2  0 13:42 ?    00:00:00 [devfreq_wq]
root     144   2  0 13:42 ?    00:00:00 [watchdogd]
root     148   2  0 13:42 ?    00:00:00 [kswapd0]
root     149   2  0 13:42 ?    00:00:00 [ecryptfs-kthrea]
root     152   2  0 13:42 ?    00:00:00 [kthrotld]
root     153   2  0 13:42 ?    00:00:00 [irq/122-aerdrv]
root     154   2  0 13:42 ?    00:00:00 [irq/123-aerdrv]
root     155   2  0 13:42 ?    00:00:00 [acpi_thermal_pm]
root     156   2  0 13:42 ?    00:00:00 [vfio-irqfd-clea]
root     159   2  0 13:42 ?    00:00:00 [ipv6_addrconf]
root     170   2  0 13:42 ?    00:00:00 [kstrp]
root     191   2  0 13:42 ?    00:00:00 [charger_manager]
root     240   2  0 13:42 ?    00:00:01 [kworker/1:2-cgr]
root     241   2  0 13:42 ?    00:00:00 [scsi_eh_0]
root     242   2  0 13:42 ?    00:00:00 [scsi_tmf_0]
root     243   2  0 13:42 ?    00:00:00 [scsi_eh_1]
root     244   2  0 13:42 ?    00:00:00 [scsi_tmf_1]
root     245   2  0 13:42 ?    00:00:00 [scsi_eh_2]
root     246   2  0 13:42 ?    00:00:00 [scsi_tmf_2]
root     251   2  0 13:42 ?    00:00:00 [kworker/1:H]
root     255   2  0 13:42 ?    00:00:00 [kworker/0:1H-ev]
root     256   2  0 13:42 ?    00:00:00 [kworker/3:3-eve]
root     258   2  0 13:42 ?    00:00:00 [uas]
root     259   2  0 13:42 ?    00:00:00 [scsi_eh_3]
root     260   2  0 13:42 ?    00:00:00 [scsi_tmf_3]
root     316   2  0 13:42 ?    00:00:00 [kworker/3:1H-ev]
root     345   2  0 13:42 ?    00:00:00 [kworker/2:1H-kb]
root     347   2  0 13:42 ?    00:00:00 [jbd2/sdb1-8]
root     348   2  0 13:42 ?    00:00:00 [ext4-rsv-conver]
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
root      348  2  0 13:42 ?    00:00:00 [ext4-rsv-conver]
root      393  1  0 13:42 ?    00:00:00 /lib/systemd/systemd-journald
root      411  1  0 13:42 ?    00:00:01 /lib/systemd/systemd-udevd
root      425  2  0 13:42 ?    00:00:00 [loop0]
root      426  2  0 13:42 ?    00:00:00 [loop1]
root      427  2  0 13:42 ?    00:00:00 [loop2]
root      440  2  0 13:42 ?    00:00:00 [loop3]
root      446  2  0 13:42 ?    00:00:00 [loop4]
root      449  2  0 13:42 ?    00:00:00 [loop5]
root      451  2  0 13:42 ?    00:00:00 [loop6]
root      455  2  0 13:42 ?    00:00:00 [loop7]
root      461  2  0 13:42 ?    00:00:09 [irq/108-ELAN070]
root      463  2  0 13:42 ?    00:00:00 [irq/128-me1_me]
root      487  2  0 13:42 ?    00:00:00 [kworker/u9:1-hc]
root      488  2  0 13:42 ?    00:00:00 [kworker/u9:2-hc]
root      493  2  0 13:42 ?    00:00:00 [cryptd]
root      532  2  0 13:42 ?    00:00:00 [cfg80211]
root      585  2  0 13:42 ?    00:00:06 [irq/130-rtwpcie]
systemd+  903  1  0 13:42 ?    00:00:00 /lib/systemd/systemd-resolved
systemd+  904  1  0 13:42 ?    00:00:00 /lib/systemd/systemd-timesyncd
avahi     908  1  0 13:42 ?    00:00:00 avahi-daemon: running [sk.local]
syslog   910  1  0 13:42 ?    00:00:00 /usr/sbin/syslogd -n
root     913  1  0 13:42 ?    00:00:00 /usr/lib/bluetooth/bluetoothd
root     914  1  0 13:42 ?    00:00:00 /usr/sbin/thermald --no-daemon -
ibus+    -dbus-enable
root     916  1  0 13:42 ?    00:00:00 /usr/sbin/cron -f
root     917  1  0 13:42 ?    00:00:00 /usr/sbin/acpid
root     918  1  0 13:42 ?    00:00:00 /usr/sbin/cupsd -l
message+ 919  1  0 13:42 ?    00:00:01 /usr/bin/dbus-daemon --system --
address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
avahi    935  988 0 13:42 ?    00:00:00 avahi-daemon: chroot helper
root     937  1  0 13:42 ?    00:00:00 /usr/lib/accounts-service/account
s-daemon
root     940  1  0 13:42 ?    00:00:00 /usr/lib/udisks2/udisksd
root     942  1  0 13:42 ?    00:00:01 /usr/sbin/NetworkManager --no-da
emon
root     946  1  0 13:42 ?    00:00:00 /usr/bin/python3 /usr/bin/networ
kd-dispatcher --run-startup-triggers
root     949  1  0 13:42 ?    00:00:00 /lib/systemd/systemd-journald
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
root      948  1  0 13:42 ?    00:00:00 /lib/systemd/systemd-logind
root      952  1  0 13:42 ?    00:00:00 /sbin/wpa_supplicant -u -s -0 /r
un-wpa_supplicant
root     953  1  0 13:42 ?    00:00:00 /usr/sbin/irqbalance --foregroun
d
root     954  1  0 13:42 ?    00:00:00 /usr/sbin/ModemManager --filter-
policy=strict
root     955  1  0 13:42 ?    00:00:02 /usr/lib/snapd/snapd
root     974  1  0 13:42 ?    00:00:00 /usr/sbin/cups-browsed
root     975  1  0 13:42 ?    00:00:00 /usr/lib/policykit-1/polkitd --n
o-debug
root     1018  1  0 13:42 ?    00:00:00 /usr/sbin/gdm3
root     1035  1018 0 13:42 ?    00:00:00 gdm-session-worker [pam/gdm-auto
login]
thegami+ 1040  1  0 13:42 ?    00:00:00 /lib/systemd/systemd --user
thegami+ 1041  1040 0 13:42 ?    00:00:00 (sd-pam)
thegami+ 1068  1  0 13:42 ?    00:00:00 /usr/bin/gnome-keyring-daemon --
daemonize --login
thegami+ 1072  1035 0 13:42 tty2    00:00:00 /usr/lib/gdm3/gdm-x-session --ru
n-script env GNOME_SHELL_SESSION_MODE=zorin gnome-session --session=zorin
thegami+ 1077  1072 3 13:42 tty2    00:01:35 /usr/lib/xorg/Xorg vt2 -displayf
d 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verb
ose 3
root     1101  942 0 13:42 ?    00:00:00 /sbin/dhclient -d -q -sf /usr/li
b/NetworkManager/nm-dhcp-helper -pf /run/dhclient-wlp2s0.pid -lf /var/lib/Networ
kManager/dhclient-5a6e60f6-890e-42fc-a44c-83d7d306863f-wlp2s0.lease -cf /var/lib
/NetworkManager/dhclient-wlp2s0.conf wlp2s0
thegami+ 1207  1040 0 13:42 ?    00:00:00 /usr/bin/dbus-daemon --session -
--address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
thegami+ 1211  1072 0 13:42 tty2    00:00:00 /usr/lib/gnome-session/gnome-ses
sion-binary --session=zorin
thegami+ 1221  1040 0 13:42 ?    00:00:00 /usr/lib/gvfs/gvfsd
thegami+ 1226  1040 0 13:42 ?    00:00:00 /usr/lib/gvfs/gvfsd-fuse /run/us
er/1000/gvfs -f -o big_writes
root     1299  1  0 13:42 ?    00:00:00 /usr/bin/veyon-service
kernoops 1303  1  0 13:42 ?    00:00:00 /usr/sbin/kerneloops --test
kernoops 1309  1  0 13:42 ?    00:00:00 /usr/sbin/kerneloops
thegami+ 1318  1211 0 13:42 tty2    00:00:00 [xbrlapi] <defunct>
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegami+ 1338 1211 0 13:42 ? 00:00:00 /usr/bin/ssh-agent /usr/bin/im-launch env GNOME_SHELL_SESSION_MODE=zorin gnome-session --session=zorin
thegami+ 1344 1040 0 13:42 ? 00:00:00 /usr/lib/at-spi2-core/at-spi-bus-launcher
thegami+ 1349 1344 0 13:42 ? 00:00:00 /usr/bin/dbus-daemon --config-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address 3
thegami+ 1351 1040 0 13:42 ? 00:00:00 /usr/lib/at-spi2-core/at-spi2-registry --use-gnome-session
root 1361 1299 0 13:42 ? 00:00:07 /usr/bin/veyon-server
thegami+ 1366 1361 0 13:42 ? 00:00:00 /usr/bin/veyon-worker {8e997d84-ebb9-430f-8f72-d45d9821963d}
thegami+ 1379 1211 3 13:42 tty2 00:01:32 /usr/bin/gnome-shell
thegami+ 1396 1 0 13:42 ? 00:00:00 /usr/bin/pulseaudio --start --load-module=syslog
rtkit 1397 1 0 13:42 ? 00:00:00 /usr/lib/rtkit/rtkit-daemon
root 1409 2 0 13:42 ? 00:00:00 [krfcomm]
thegami+ 1413 1379 0 13:42 tty2 00:00:05 ibus-daemon --xim --panel disable
thegami+ 1418 1413 0 13:42 tty2 00:00:00 /usr/lib/ibus/ibus-dconf
thegami+ 1420 1 0 13:42 tty2 00:00:00 /usr/lib/ibus/ibus-x11 --kill-daemon
thegami+ 1422 1040 0 13:42 ? 00:00:00 /usr/lib/ibus/ibus-portal
thegami+ 1432 1040 0 13:42 ? 00:00:00 /usr/libexec/xdg-permission-store
thegami+ 1437 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-shell/gnome-shell-calendar-server
thegami+ 1443 1040 0 13:42 ? 00:00:00 /usr/lib/evolution/evolution-source-registry
root 1444 1 0 13:42 ? 00:00:00 /usr/lib/upower/upowerd
geoclue 1448 1 0 13:42 ? 00:00:00 /usr/lib/geoclue-2.0/geoclue -t5
thegami+ 1468 1040 0 13:42 ? 00:00:00 /usr/lib/dconf/dconf-service
thegami+ 1471 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-udisks2-volume-monitor
thegami+ 1475 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-goa-volume-monitor
thegami+ 1479 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-online-accounts/goa-daemon
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegami+ 1486 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-online-accounts/goa-identity-service
thegami+ 1488 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-ghphoto2-volume-monitor
thegami+ 1495 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-afc-volume-monitor
thegami+ 1501 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-mtp-volume-monitor
root 1505 1 0 13:42 ? 00:00:17 /usr/lib/packagekit/packagekitd
thegami+ 1508 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-power
thegami+ 1509 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-print-notifications
thegami+ 1510 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-rfkill
thegami+ 1511 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-screensaver-proxy
thegami+ 1514 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-sharing
thegami+ 1520 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-smartcard
thegami+ 1521 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-sound
thegami+ 1526 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-xsettings
thegami+ 1530 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-wacom
thegami+ 1543 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-audio-settings
thegami+ 1544 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-clipboard
thegami+ 1548 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-datetime
thegami+ 1553 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-housekeeping
thegami+ 1554 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-color
thegami+ 1558 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-media-keys
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegami+ 1560 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/g
sd-mouse
thegami+ 1562 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/g
sd-keyboard
thegami+ 1593 1 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon/g
sd-printer
colord 1612 1 0 13:42 ? 00:00:00 /usr/lib/colord/colord
thegami+ 1630 1211 0 13:43 tty2 00:00:01 nautilus-desktop
thegami+ 1631 1211 0 13:43 tty2 00:00:00 /usr/lib/evolution/evolution-ala
rm-notify
thegami+ 1632 1211 0 13:43 tty2 00:00:00 /usr/lib/gnome-disk-utility/gsd-
disk-utility-notify
thegami+ 1647 1221 0 13:43 ? 00:00:00 /usr/lib/gvfs/gvfsd-trash --spaw
ner :1.3 /org/gtk/gvfs/exec_spaw/0
thegami+ 1654 1040 0 13:43 ? 00:00:00 /usr/lib/evolution/evolution-cal
endar-factory
thegami+ 1672 1654 0 13:43 ? 00:00:00 /usr/lib/evolution/evolution-cal
endar-factory-subprocess --factory all --bus-name org.gnome.evolution.dataserver
.Subprocess.Backend.Calendarx1654x2 --own-path /org/gnome/evolution/dataserver/S
ubprocess/Backend/Calendar/1654/2
thegami+ 1681 1040 0 13:43 ? 00:00:00 /usr/lib/evolution/evolution-add
ressbook-factory
thegami+ 1700 1681 0 13:43 ? 00:00:00 /usr/lib/evolution/evolution-add
ressbook-factory-subprocess --factory all --bus-name org.gnome.evolution.dataser
ver.Subprocess.Backend.AddressBookx1681x2 --own-path /org/gnome/evolution/datas
erver/Subprocess/Backend/AddressBook/1681/2
thegami+ 1728 1413 0 13:43 tty2 00:00:01 /usr/lib/ibus/ibus-engine-simple
thegami+ 1736 1040 0 13:43 ? 00:00:02 gjs /usr/share/gnome-shell/exten
sions/zorin-connect@zorinos.com/service/daemon.js
thegami+ 1778 1221 0 13:43 ? 00:00:00 /usr/lib/gvfs/gvfsd-burn --spaw
ner :1.3 /org/gtk/gvfs/exec_spaw/1
thegami+ 1785 1040 0 13:43 ? 00:00:00 /usr/lib/gvfs/gvfsd-metadata
root 1792 1 0 13:43 ? 00:00:00 /sbin/mount.ntfs /dev/sdb3 /medi
a/thebgamingbot/thebgamingbot -o rw,nodev,nosuid,uid=1000,gid=1000,uheiper=udisks2
thegami+ 1806 1068 0 13:43 ? 00:00:00 /usr/bin/ssh-agent -D a /run/us
er/1000/keyring/.ssh
thegami+ 1826 1211 0 13:43 tty2 00:00:04 /usr/bin/gnome-software --gappli
cation-service
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegami+ 1828 1211 0 13:43 tty2 00:00:00 update-notifier
root 1852 1 0 13:44 ? 00:00:00 /usr/lib/fwupd/fwupd
root 1861 1 0 13:44 ? 00:00:00 /usr/lib/x86_64-linux-gnu/boltd
thegami+ 1969 1211 0 13:45 tty2 00:00:00 /usr/lib/deja-dup/deja-dup-monit
or
root 2057 2 0 14:02 ? 00:00:01 [kworker/u8:2-19]
root 2064 2 0 14:11 ? 00:00:01 [kworker/:0-eve]
thegami+ 2142 1 6 14:12 tty2 00:01:02 /usr/lib/firefox/firefox -new-wi
ndow
thegami+ 2189 1040 1 14:12 ? 00:00:20 /usr/bin/nautilus --gapplication
-service
thegami+ 2226 1040 0 14:12 ? 00:00:06 /usr/lib/gnome-terminal/gnome-te
rminal-server
thegami+ 2233 2142 1 14:12 tty2 00:00:12 /usr/lib/firefox/firefox -conten
tproc -childID 1 -isForBrowser -prefsLen 1 -prefMapSize 226345 -parentBuildID 20
2007020193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2267 2226 0 14:12 pts/0 00:00:00 bash
thegami+ 2282 2142 3 14:12:00 00:00:35 /usr/lib/firefox/firefox -conten
tproc -childID 2 -isForBrowser -prefsLen 105 -prefMapSize 226345 -parentBuildID
20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2312 2142 3 14:12 tty2 00:00:33 /usr/lib/firefox/firefox -conten
tproc -childID 3 -isForBrowser -prefsLen 241 -prefMapSize 226345 -parentBuildID
20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2319 2142 1 14:12 tty2 00:00:14 /usr/lib/firefox/firefox -conten
tproc -childID 4 -isForBrowser -prefsLen 241 -prefMapSize 226345 -parentBuildID
20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2357 2142 0 14:12 tty2 00:00:01 /usr/lib/firefox/firefox -conten
tproc -childID 5 -isForBrowser -prefsLen 335 -prefMapSize 226345 -parentBuildID
20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2413 2142 1 14:12 tty2 00:00:13 /usr/lib/firefox/firefox -conten
tproc -childID 6 -isForBrowser -prefsLen 6380 -prefMapSize 226345 -parentBuildID
20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2485 2142 0 14:12 tty2 00:00:00 /usr/lib/firefox/firefox -conten
tproc -childID 7 -isForBrowser -prefsLen 7216 -prefMapSize 226345 -parentBuildID
20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2512 2142 0 14:12 tty2 00:00:00 /usr/bin/python3 /usr/bin/chrome
-gnome-shell /usr/lib/mozilla/native-messaging-hosts/org.gnome.chrome_gnome_shel
l.json chrome-gnome-shell@gnome.org
root 2645 2 0 14:12 ? 00:00:00 [kworker/2:1-eve]
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
tproc -childID 6 -isForBrowser -prefflen 6380 -prefMapSize 226345 -parentBuildID
20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2485 2142 0 14:12 tty2 00:00:00 /usr/lib/firefox/firefox -content
tproc -childID 7 -isForBrowser -prefflen 7216 -prefMapSize 226345 -parentBuildID
20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thegami+ 2512 2142 0 14:12 tty2 00:00:00 /usr/bin/python3 /usr/bin/chrome
-gnome-shell /usr/lib/mozilla/native-messaging-hosts/org.gnome.chrome_gnome_shel
l.json chrome-gnome-shell@gnome.org
root 2645 2 0 14:12 ? 00:00:00 [kworker/2:1-eve]
thegami+ 2803 1040 4 14:14 ? 00:00:45 evince /home/thebgamingbot/Docume
nts/sem-5/OS/Lab/lab1/Materials/50_Most_Frequently_Used_UNIX_Linux_Commands_Wi
th_Examples.pdf
thegami+ 2809 1040 0 14:14 ? 00:00:00 /usr/lib/evince/evinced
root 2851 2 0 14:15 ? 00:00:00 [kworker/3:2-eve]
thegami+ 2860 1040 0 14:15 ? 00:00:00 /usr/bin/zeitgeist-daemon
thegami+ 2868 1040 0 14:15 ? 00:00:00 /usr/lib/zeitgeist/zeitgeist/zei
tgeist-fs
thegami+ 2972 1221 0 14:18 ? 00:00:00 /usr/lib/gvfs/gvfsd-network --sp
awner :1.3 /org/gtk/gvfs/exec_spaw/3
thegami+ 3003 1221 0 14:18 ? 00:00:00 /usr/lib/gvfs/gvfsd-dnssd --spaw
ner :1.3 /org/gtk/gvfs/exec_spaw/9
thegami+ 3022 2267 0 14:19 pts/0 00:00:00 ftp IP/8.8.8.8
thegami+ 3026 2267 0 14:20 pts/0 00:00:00 ftp IP/https://www.google.co.in
root 3033 2 0 14:20 ? 00:00:00 [kworker/0:2-eve]
root 3156 2 0 14:23 ? 00:00:00 [kworker/u8:3-ev]
root 3157 2 0 14:23 ? 00:00:00 [kworker/u8:4-19]
root 3222 2 0 14:25 ? 00:00:00 [kworker/3:0-eve]
root 3223 2 0 14:25 ? 00:00:00 [kworker/3:1]
root 3258 2 0 14:26 ? 00:00:00 [kworker/0:0-eve]
root 3272 2 0 14:26 ? 00:00:00 [kworker/1:1-eve]
root 3273 2 0 14:26 ? 00:00:00 [kworker/1:3]
root 3362 2 0 14:29 ? 00:00:00 [kworker/2:2-eve]
root 3363 2 0 14:29 ? 00:00:00 [kworker/2:3-eve]
root 3364 2 0 14:29 ? 00:00:00 [kworker/2:4-cgr]
root 3365 2 0 14:29 ? 00:00:00 [kworker/2:5]
thegami+ 3367 2267 0 14:29 pts/0 00:00:00 ps -ef
thegami+ 3368 2267 0 14:29 pts/0 00:00:00 more
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$
```

ps -efH: View current running process in a tree structure.

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ps -efH | more
File Edit View Search Terminal Help
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ps -efH | more
UID PID PPID C STIME TTY TIME CMD
root 2 0 13:42 ? 00:00:00 [kthreadd]
root 3 2 0 13:42 ? 00:00:00 [rcu_gp]
root 4 2 0 13:42 ? 00:00:00 [rcu_par_gp]
root 6 2 0 13:42 ? 00:00:00 [kworker/0:0H-kb]
root 7 2 0 13:42 ? 00:00:00 [kworker/0:1-eve]
root 9 2 0 13:42 ? 00:00:00 [mm_percpu_wq]
root 10 2 0 13:42 ? 00:00:00 [ksoftirqd/0]
root 11 2 0 13:42 ? 00:00:01 [rcu_sched]
root 12 2 0 13:42 ? 00:00:00 [migration/0]
root 13 2 0 13:42 ? 00:00:00 [idle_inject/0]
root 14 2 0 13:42 ? 00:00:00 [cpuhp/0]
root 15 2 0 13:42 ? 00:00:00 [cpuhp/1]
root 16 2 0 13:42 ? 00:00:00 [idle_inject/1]
root 17 2 0 13:42 ? 00:00:00 [migration/1]
root 18 2 0 13:42 ? 00:00:00 [ksoftirqd/1]
root 20 2 0 13:42 ? 00:00:00 [kworker/1:0H-kb]
root 21 2 0 13:42 ? 00:00:00 [cpuhp/2]
root 22 2 0 13:42 ? 00:00:00 [idle_inject/2]
root 23 2 0 13:42 ? 00:00:00 [migration/2]
root 24 2 0 13:42 ? 00:00:00 [ksoftirqd/2]
root 25 2 0 13:42 ? 00:00:00 [kworker/2:0-eve]
root 26 2 0 13:42 ? 00:00:00 [kworker/2:0H-kb]
root 27 2 0 13:42 ? 00:00:00 [cpuhp/3]
root 28 2 0 13:42 ? 00:00:00 [idle_inject/3]
root 29 2 0 13:42 ? 00:00:00 [migration/3]
root 30 2 0 13:42 ? 00:00:00 [ksoftirqd/3]
root 32 2 0 13:42 ? 00:00:00 [kworker/3:0H-ev]
root 33 2 0 13:42 ? 00:00:00 [kdevtmpfs]
root 34 2 0 13:42 ? 00:00:00 [netns]
root 35 2 0 13:42 ? 00:00:00 [rcu_tasks_kthre]
root 36 2 0 13:42 ? 00:00:00 [kauditfd]
root 37 2 0 13:42 ? 00:00:00 [khungtaskd]
root 38 2 0 13:42 ? 00:00:00 [oom_reaper]
root 39 2 0 13:42 ? 00:00:00 [writeback]
root 40 2 0 13:42 ? 00:00:00 [kcompactd0]
root 41 2 0 13:42 ? 00:00:00 [ksmd]
root 42 2 0 13:42 ? 00:00:00 [kthreecess]
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
root 42 2 0 13:42 ? 00:00:00 [khugepaged]
root 44 2 0 13:42 ? 00:00:03 [kworker/u8:1-i9]
root 135 2 0 13:42 ? 00:00:00 [kintegrityd]
root 136 2 0 13:42 ? 00:00:00 [kblockd]
root 137 2 0 13:42 ? 00:00:00 [blkcg_punt_bio]
root 139 2 0 13:42 ? 00:00:00 [tpm_dev_wq]
root 140 2 0 13:42 ? 00:00:00 [ata_sff]
root 141 2 0 13:42 ? 00:00:00 [md]
root 142 2 0 13:42 ? 00:00:00 [edac-poller]
root 143 2 0 13:42 ? 00:00:00 [devfreq_wq]
root 144 2 0 13:42 ? 00:00:00 [watchdogd]
root 148 2 0 13:42 ? 00:00:00 [kswapd0]
root 149 2 0 13:42 ? 00:00:00 [ecryptfs-kthrea]
root 152 2 0 13:42 ? 00:00:00 [kthrotld]
root 153 2 0 13:42 ? 00:00:00 [irq/122-aerdrv]
root 154 2 0 13:42 ? 00:00:00 [irq/123-aerdrv]
root 155 2 0 13:42 ? 00:00:00 [acpi_thermal_pm]
root 156 2 0 13:42 ? 00:00:00 [vfio-irqfd-clea]
root 159 2 0 13:42 ? 00:00:00 [ipv6_addrconf]
root 170 2 0 13:42 ? 00:00:00 [kstrt]
root 191 2 0 13:42 ? 00:00:00 [charger_manager]
root 240 2 0 13:42 ? 00:00:01 [kworker/1:2-rcu]
root 241 2 0 13:42 ? 00:00:00 [scsi_eh_0]
root 242 2 0 13:42 ? 00:00:00 [scsi_tmf_0]
root 243 2 0 13:42 ? 00:00:00 [scsi_eh_1]
root 244 2 0 13:42 ? 00:00:00 [scsi_tmf_1]
root 245 2 0 13:42 ? 00:00:00 [scsi_eh_2]
root 246 2 0 13:42 ? 00:00:00 [scsi_tmf_2]
root 251 2 0 13:42 ? 00:00:00 [kworker/1:1H]
root 255 2 0 13:42 ? 00:00:00 [kworker/0:1H-ev]
root 256 2 0 13:42 ? 00:00:00 [kworker/3:3-eve]
root 258 2 0 13:42 ? 00:00:00 [uas]
root 259 2 0 13:42 ? 00:00:00 [scsi_eh_3]
root 260 2 0 13:42 ? 00:00:00 [scsi_tmf_3]
root 316 2 0 13:42 ? 00:00:00 [kworker/3:1H-ev]
root 345 2 0 13:42 ? 00:00:00 [kworker/2:1H-ev]
root 347 2 0 13:42 ? 00:00:00 [jbd2/sdb1-8]
root 348 2 0 13:42 ? 00:00:00 [ext4-rsv-conver]
root 425 2 0 13:42 ? 00:00:00 [loop0]
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
root 425 2 0 13:42 ? 00:00:00 [loop0]
root 426 2 0 13:42 ? 00:00:00 [loop1]
root 427 2 0 13:42 ? 00:00:00 [loop2]
root 440 2 0 13:42 ? 00:00:00 [loop3]
root 446 2 0 13:42 ? 00:00:00 [loop4]
root 449 2 0 13:42 ? 00:00:00 [loop5]
root 451 2 0 13:42 ? 00:00:00 [loop6]
root 455 2 0 13:42 ? 00:00:00 [loop7]
root 461 2 0 13:42 ? 00:00:11 [irq/108-ELAN070]
root 463 2 0 13:42 ? 00:00:00 [irq/128-me1_me]
root 487 2 0 13:42 ? 00:00:00 [kworker/u9:1-hc]
root 488 2 0 13:42 ? 00:00:00 [kworker/u9:2-hc]
root 493 2 0 13:42 ? 00:00:00 [cryptd]
root 532 2 0 13:42 ? 00:00:00 [cfg80211]
root 585 2 0 13:42 ? 00:00:06 [irq/130-rtwpc1]
root 1409 2 0 13:42 ? 00:00:00 [krfcomm]
root 2645 2 0 14:12 ? 00:00:00 [kworker/2:1-eve]
root 2851 2 0 14:15 ? 00:00:00 [kworker/3:2-eve]
root 3033 2 0 14:20 ? 00:00:00 [kworker/u0:2-eve]
root 3156 2 0 14:23 ? 00:00:00 [kworker/u8:3-i9]
root 3157 2 0 14:23 ? 00:00:01 [kworker/u8:4+ev]
root 3258 2 0 14:26 ? 00:00:00 [kworker/u0:mm...]
root 3272 2 0 14:26 ? 00:00:01 [kworker/1:1-rcu]
root 3362 2 0 14:29 ? 00:00:00 [kworker/2:2-eve]
root 3363 2 0 14:29 ? 00:00:00 [kworker/2:3-eve]
root 3364 2 0 14:29 ? 00:00:00 [kworker/2:4-cgr]
root 3365 2 0 14:29 ? 00:00:00 [kworker/2:5-eve]
root 3386 2 0 14:30 ? 00:00:00 [kworker/3:0-mm...]
root 3393 2 0 14:30 ? 00:00:00 [kworker/u3:eve]
root 3402 2 0 14:31 ? 00:00:00 [kworker/3:1-eve]
root 3433 2 0 14:31 ? 00:00:00 [kworker/1:0-eve]
root 3451 2 0 14:32 ? 00:00:00 [kworker/u8:0-i9]
root 1 0 0 13:42 ? 00:00:04 /sbin/init splash
root 393 1 0 13:42 ? 00:00:00 /lib/systemd/systemd-journald
root 411 1 0 13:42 ? 00:00:01 /lib/systemd/systemd-udevd
systemd+ 903 1 0 13:42 ? 00:00:00 /lib/systemd/systemd-resolved
systemd+ 904 1 0 13:42 ? 00:00:00 /lib/systemd/systemd-timesyncd
avahi 908 1 0 13:42 ? 00:00:00 avahi-daemon: running [sk.loca
..
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
1]
avahi      935  908  0 13:42 ?    00:00:00   avahi-daemon: chroot helper
syslog     910  1  0 13:42 ?    00:00:00   /usr/sbin/rsyslogd -n
root       913  1  0 13:42 ?    00:00:00   /usr/lib/bluetooth/bluetoothd
root       914  1  0 13:42 ?    00:00:00   /usr/sbin/thermald --no-daemon
--dbus-enable
root       916  1  0 13:42 ?    00:00:00   /usr/sbin/cron -f
root       917  1  0 13:42 ?    00:00:00   /usr/sbin/acpid
root       918  1  0 13:42 ?    00:00:00   /usr/sbin/cupsd -l
message+  919  1  0 13:42 ?    00:00:01   /usr/bin/dbus-daemon --system
--address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
root       937  1  0 13:42 ?    00:00:00   /usr/lib/accountservice/accou
nts-daemon
root       940  1  0 13:42 ?    00:00:00   /usr/lib/udisks2/udisksd
root       942  1  0 13:42 ?    00:00:01   /usr/sbin/NetworkManager --no-
daemon
root       1101  942  0 13:42 ?    00:00:00   /sbin/dhcclient -d -q -sf /us
r/lib/NetworkManager/nm-dhcp-helper -pf /run/dhcclient-wlp2s0.pid -lf /var/lib/Ne
tworkManager/dhcclient-5a6e60f6-890e-42fc-a44c-83d7d306863f-wlp2s0.lease -cf /var
/lib/NetworkManager/dhcclient-wlp2s0.conf wlp2s0
root       946  1  0 13:42 ?    00:00:00   /usr/bin/python3 /usr/bin/netw
orkd-dispatcher --run-startup-triggers
root       948  1  0 13:42 ?    00:00:00   /lib/systemd/systemd-logind
root       952  1  0 13:42 ?    00:00:00   /sbin/wpa_supplicant -u -s -0
/run/wpa_supplicant
root       953  1  0 13:42 ?    00:00:00   /usr/sbin/irqbalance --foregro
und
root       954  1  0 13:42 ?    00:00:00   /usr/sbin/ModemManager --filte
r-policy=strict
root       955  1  0 13:42 ?    00:00:02   /usr/lib/snapd/snapd
root       974  1  0 13:42 ?    00:00:00   /usr/sbin/cups-browsed
root       975  1  0 13:42 ?    00:00:00   /usr/lib/polkit-1/polkitd -
-no-debug
root       1018  1  0 13:42 ?    00:00:00   /usr/sbin/gdm3
root       1035  1018  0 13:42 ?    00:00:00   gdm-session-worker [pam/gdm-
autologin]
thebgami+ 1072 1035  0 13:42 ttv2    00:00:00   /usr/lib/gdm3/gdm-x-sessio
n --run-script env GNOME_SESSION_MODE=zorin gnome-session --session=zorin
thebgami+ 1077 1072  3 13:42 ttv2    00:02:02   /usr/lib/zorin/Zorin_vt2 -
```

```
thebgami+ 1077 1072  3 13:42 ttv2    00:02:02   /usr/lib/xorg/Xorg vt2 -
displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keep
ty -verbose 3
thebgami+ 1211 1072  0 13:42 ttv2    00:00:00   /usr/lib/gnome-session/g
nome-session-binary --session=zorin
thebgami+ 1318 1211  0 13:42 ttv2    00:00:00   [xbrlapi] <defunct>
thebgami+ 1338 1211  0 13:42 ?    00:00:00   /usr/bin/ssh-agent /us
r/bin/im-launch env GNOME_SESSION_MODE=zorin gnome-session --session=zorin
thebgami+ 1379 1211  3 13:42 ttv2    00:01:53   /usr/bin/gnome-shell
thebgami+ 1413 1379  0 13:42 ttv2    00:00:07   ibus-daemon --xim --
panel disable
thebgami+ 1418 1413  0 13:42 ttv2    00:00:00   /usr/lib/ibus/ibus
-dconf
thebgami+ 1728 1413  0 13:43 ttv2    00:00:02   /usr/lib/ibus/ibus
-engine-simple
thebgami+ 1508 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-power
thebgami+ 1509 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-print-notifications
thebgami+ 1510 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-fkill
thebgami+ 1511 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-screensaver-proxy
thebgami+ 1514 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-sharing
thebgami+ 1520 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-smartcard
thebgami+ 1521 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-sound
thebgami+ 1526 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-xsettings
thebgami+ 1530 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-wacom
thebgami+ 1543 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-a11y-settings
thebgami+ 1544 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-clipboard
thebgami+ 1548 1211  0 13:42 ttv2    00:00:00   /usr/lib/gnome-setting
s-daemon/gsd-datetime
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
s-daemon/gsd-datetime
thegami+ 1553 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-setting
s-daemon/gsd-housekeeping
thegami+ 1554 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-setting
s-daemon/gsd-color
thegami+ 1558 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-setting
s-daemon/gsd-media-keys
thegami+ 1560 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-setting
s-daemon/gsd-mouse
thegami+ 1562 1211 0 13:42 tty2 00:00:00 /usr/lib/gnome-setting
s-daemon/gsd-keyboard
thegami+ 1630 1211 0 13:43 tty2 00:00:01 nautilus-desktop
thegami+ 1631 1211 0 13:43 tty2 00:00:00 /usr/lib/evolution/evo
lution-alarm-notify
thegami+ 1632 1211 0 13:43 tty2 00:00:00 /usr/lib/gnome-disk-ut
ility/gsd-disk-utility-notify
thegami+ 1826 1211 0 13:43 tty2 00:00:04 /usr/bin/gnome-software
--application-service
thegami+ 1828 1211 0 13:43 tty2 00:00:00 update-notifier
thegami+ 1969 1211 0 13:45 tty2 00:00:00 /usr/lib/deja-dup/deja
-dup-monitor
thegami+ 1840 1 0 13:42 ? 00:00:00 /lib/systemd/systemd --user
(thegami+ 1841 1040 0 13:42 ? 00:00:00 (sd-pam)
thegami+ 1207 1040 0 13:42 ? 00:00:00 /usr/bin/dbus-daemon --sessi
on --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
thegami+ 1221 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfsd
thegami+ 1647 1221 0 13:43 ? 00:00:00 /usr/lib/gvfs/gvfsd-trash
--spawner :1.3 /org/gtk/gvfs/exec_spaw/
thegami+ 1778 1221 0 13:43 ? 00:00:00 /usr/lib/gvfs/gvfsd-burn -
-spawner :1.3 /org/gtk/gvfs/exec_spaw/
thegami+ 2972 1221 0 14:18 ? 00:00:00 /usr/lib/gvfs/gvfsd-networ
k --spawner :1.3 /org/gtk/gvfs/exec_spaw/
thegami+ 3003 1221 0 14:18 ? 00:00:00 /usr/lib/gvfs/gvfsd-dnssd
--spawner :1.3 /org/gtk/gvfs/exec_spaw/
thegami+ 1226 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfsd-fuse /ru
n/user/1000/gvfs -f -o big_writes
thegami+ 1344 1040 0 13:42 ? 00:00:00 /usr/lib/at-spi2-core/at-spi
-bus-launcher
thegami+ 1349 1344 0 13:42 ? 00:00:00 /usr/bin/dbus-daemon --con
fig-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address
3
thegami+ 1351 1040 0 13:42 ? 00:00:00 /usr/lib/at-spi2-core/at-spi
2-registryrd --use-gnome-session
thegami+ 1422 1040 0 13:42 ? 00:00:00 /usr/lib/ibus/ibus-portal
thegami+ 1432 1040 0 13:42 ? 00:00:00 /usr/libexec/xdg-permission-
store
thegami+ 1437 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-shell/gnome-s
hell-calendar-server
thegami+ 1443 1040 0 13:42 ? 00:00:00 /usr/lib/evolution/evolution
-source-registry
thegami+ 1468 1040 0 13:42 ? 00:00:00 /usr/lib/dconf/dconf-service
thegami+ 1471 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-udisks2-v
olume-monitor
thegami+ 1475 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-goa-volum
e-monitor
thegami+ 1479 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-online-accoun
ts/goa-daemon
thegami+ 1486 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-online-accoun
ts/goa-identity-service
thegami+ 1488 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-gphoto2-v
olume-monitor
thegami+ 1495 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-afc-volum
e-monitor
thegami+ 1501 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-mtp-volum
e-monitor
thegami+ 1654 1040 0 13:43 ? 00:00:00 /usr/lib/evolution/evolution
-calendar-factory
thegami+ 1672 1654 0 13:43 ? 00:00:00 /usr/lib/evolution/evoluti
on-calendar-factory-subprocess --factory all --bus-name org.gnome.evolution.data
server.Subprocess.Backend.Calendarx1654x2 --own-path /org/gnome/evolution/database
rver/Subprocess/Backend/Calendar/1654/2
thegami+ 1681 1040 0 13:43 ? 00:00:00 /usr/lib/evolution/evolution
-addressbook-factory
thegami+ 1700 1681 0 13:43 ? 00:00:00 /usr/lib/evolution/evoluti
on-addressbook-factory-subprocess --factory all --bus-name org.gnome.evolution.d
atabase.Subprocess.Backend.AddressBookx1681x2 --own-path /org/gnome/evolution/
addressbook/Subprocess/Backend/AddressBook/1681/2
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegami+ 1349 1344 0 13:42 ? 00:00:00 /usr/bin/dbus-daemon --con
fig-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address
3
thegami+ 1351 1040 0 13:42 ? 00:00:00 /usr/lib/at-spi2-core/at-spi
2-registryrd --use-gnome-session
thegami+ 1422 1040 0 13:42 ? 00:00:00 /usr/lib/ibus/ibus-portal
thegami+ 1432 1040 0 13:42 ? 00:00:00 /usr/libexec/xdg-permission-
store
thegami+ 1437 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-shell/gnome-s
hell-calendar-server
thegami+ 1443 1040 0 13:42 ? 00:00:00 /usr/lib/evolution/evolution
-source-registry
thegami+ 1468 1040 0 13:42 ? 00:00:00 /usr/lib/dconf/dconf-service
thegami+ 1471 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-udisks2-v
olume-monitor
thegami+ 1475 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-goa-volum
e-monitor
thegami+ 1479 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-online-accoun
ts/goa-daemon
thegami+ 1486 1040 0 13:42 ? 00:00:00 /usr/lib/gnome-online-accoun
ts/goa-identity-service
thegami+ 1488 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-gphoto2-v
olume-monitor
thegami+ 1495 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-afc-volum
e-monitor
thegami+ 1501 1040 0 13:42 ? 00:00:00 /usr/lib/gvfs/gvfs-mtp-volum
e-monitor
thegami+ 1654 1040 0 13:43 ? 00:00:00 /usr/lib/evolution/evolution
-calendar-factory
thegami+ 1672 1654 0 13:43 ? 00:00:00 /usr/lib/evolution/evoluti
on-calendar-factory-subprocess --factory all --bus-name org.gnome.evolution.data
server.Subprocess.Backend.Calendarx1654x2 --own-path /org/gnome/evolution/database
rver/Subprocess/Backend/Calendar/1654/2
thegami+ 1681 1040 0 13:43 ? 00:00:00 /usr/lib/evolution/evolution
-addressbook-factory
thegami+ 1700 1681 0 13:43 ? 00:00:00 /usr/lib/evolution/evoluti
on-addressbook-factory-subprocess --factory all --bus-name org.gnome.evolution.d
atabase.Subprocess.Backend.AddressBookx1681x2 --own-path /org/gnome/evolution/
addressbook/Subprocess/Backend/AddressBook/1681/2
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
databaser/Subprocess/Backend/AddressBook/1681/2
thebgami+ 1736 1040 0 13:43 ? 00:00:02 gjs /usr/share/gnome-shell/extensions/zorin-connect@zorin.com/service/daemon.js
thebgami+ 1785 1040 0 13:43 ? 00:00:00 /usr/lib/gvfs/gvfsd-metadata
thebgami+ 2189 1040 2 14:12 ? 00:00:32 /usr/bin/nautilus --applica
tion-service
thebgami+ 2226 1040 0 14:12 ? 00:00:12 /usr/lib/gnome-terminal/gnom
e-terminal-server
thebgami+ 2267 2226 0 14:12 pts/0 00:00:00 bash
thebgami+ 3022 2267 0 14:19 pts/0 00:00:00 ftp IP/8.8.8.8
thebgami+ 3026 2267 0 14:20 pts/0 00:00:00 ftp IP/https://www.googl
e.co.in
thebgami+ 3476 2267 0 14:34 pts/0 00:00:00 ps -efH
thebgami+ 3477 2267 0 14:34 pts/0 00:00:00 more
thebgami+ 2803 1040 3 14:14 ? 00:00:47 evince /home/thebgamingbot/Do
cuments/sem-5/OS/Lab/lab1/Materials/50_Most_Frequently_Used_UNIX _ Linux Command
s_With Examples.pdf
thebgami+ 2809 1040 0 14:14 ? 00:00:00 /usr/lib/evince/evinced
thebgami+ 2860 1040 0 14:15 ? 00:00:00 /usr/bin/zeitgeist-daemon
thebgami+ 2868 1040 0 14:15 ? 00:00:00 /usr/lib/zeitgeist/zeitgeist
/zeitgeist-fts
thebgami+ 1068 1 0 13:42 ? 00:00:00 /usr/bin/gnome-keyring-daemon
--daemonize --login
thebgami+ 1806 1068 0 13:43 ? 00:00:00 /usr/bin/ssh-agent -D -a /ru
n/user/1000/keyring/.ssh
root 1299 1 0 13:42 ? 00:00:00 /usr/bin/veyon-service
root 1361 1299 0 13:42 ? 00:00:07 /usr/bin/veyon-server
thebgami+ 1366 1361 0 13:42 ? 00:00:00 /usr/bin/veyon-worker {8e9
97d84-ebb9-430f-8f72-d45d9821963d}
kernoops 1303 1 0 13:42 ? 00:00:00 /usr/sbin/kerneloops --test
kernoops 1309 1 0 13:42 ? 00:00:00 /usr/sbin/kerneloops
thebgami+ 1396 1 0 13:42 ? 00:00:00 /usr/bin/pulseaudio --start --
log-target=syslog
rtkit 1397 1 0 13:42 ? 00:00:00 /usr/lib/rtkit/rtkit-daemon
thebgami+ 1420 1 0 13:42 tty2 00:00:00 /usr/lib/ibus/ibus-x11 --kill-
daemon
root 1444 1 0 13:42 ? 00:00:00 /usr/lib/upower/upowerd
geoclue 1448 1 0 13:42 ? 00:00:00 /usr/lib/geoclue-2.0/geoclue -
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
root 1505 1 0 13:42 ? 00:00:17 /usr/lib/packagekit/packagekit
d
thebgami+ 1593 1 0 13:42 tty2 00:00:00 /usr/lib/gnome-settings-daemon
/gsd-printer
colord 1612 1 0 13:42 ? 00:00:00 /usr/lib/colord/colord
root 1792 1 0 13:43 ? 00:00:00 /sbin/mount.ntfs /dev/sdb3 /me
dia/thebgamingbot/thebgamingbot -o rw,nodev,nosuid,uid=1000,gid=1000,uhelper=udisk
s2
root 1852 1 0 13:44 ? 00:00:00 /usr/lib/fwupd/fwupd
root 1861 1 0 13:44 ? 00:00:00 /usr/lib/x86_64-linux-gnu/bolt
d
thebgami+ 2142 1 5 14:12 tty2 00:01:05 /usr/lib/firefox/firefox -new-
window
thebgami+ 2233 2142 1 14:12 tty2 00:00:13 /usr/lib/firefox/firefox -co
ntentproc -childID 1 -isForBrowser -prefsLen 1 -prefMapSize 226345 -parentBuildI
D 20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thebgami+ 2282 2142 2 14:12 tty2 00:00:36 /usr/lib/firefox/firefox -co
ntentproc -childID 2 -isForBrowser -prefsLen 105 -prefMapSize 226345 -parentBuildI
D 20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thebgami+ 2312 2142 2 14:12 tty2 00:00:35 /usr/lib/firefox/firefox -co
ntentproc -childID 3 -isForBrowser -prefsLen 241 -prefMapSize 226345 -parentBuildI
D 20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thebgami+ 2319 2142 1 14:12 tty2 00:00:15 /usr/lib/firefox/firefox -co
ntentproc -childID 4 -isForBrowser -prefsLen 241 -prefMapSize 226345 -parentBuildI
D 20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thebgami+ 2357 2142 0 14:12 tty2 00:00:01 /usr/lib/firefox/firefox -co
ntentproc -childID 5 -isForBrowser -prefsLen 335 -prefMapSize 226345 -parentBuildI
D 20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thebgami+ 2413 2142 1 14:12 tty2 00:00:13 /usr/lib/firefox/firefox -co
ntentproc -childID 6 -isForBrowser -prefsLen 6380 -prefMapSize 226345 -parentBuildI
D 20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thebgami+ 2485 2142 0 14:12 tty2 00:00:00 /usr/lib/firefox/firefox -co
ntentproc -childID 7 -isForBrowser -prefsLen 7216 -prefMapSize 226345 -parentBuildI
D 20200720193547 -appdir /usr/lib/firefox/browser 2142 true tab
thebgami+ 2512 2142 0 14:12 tty2 00:00:00 /usr/bin/python3 /usr/bin/ch
rome-gnome-shell /usr/lib/mozilla/native-messaging-hosts/org.gnome.chrome_gnome_
shell.json chrome-gnome-shell@gnome.org
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$
```

free command: Used to display free, used swap memory of the system

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ free
      total        used         free        shared   buff/cache   available
Mem:    8019056     2066220     4510372     317896     1442464     5370616
Swap:  3998716          0    3998716
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$
```

free -g: Display the used, free, swap memory in GigaBytes

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ free -g
      total        used         free        shared   buff/cache   available
Mem:       7          1          4          0          1          5
Swap:      3          0          3
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

free -t: View the total available memory.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ free -t
total        used        free      shared  buff/cache   available
Mem:    8019056     2076212     4498108      318792     1444736     5359604
Swap:  3998716          0     3998716
Total: 12017772     2076212     8496824
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

top command: Used to display the top process running

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
top - 14:42:40 up 1:00, 1 user, load average: 1.85, 1.21, 0.85
Tasks: 228 total, 1 running, 171 sleeping, 2 stopped, 1 zombie
%Cpu(s): 11.9 us, 4.8 sy, 0.0 ni, 78.0 id, 4.3 wa, 0.0 hi, 1.0 si, 0.0 st
KiB Mem: 8019056 total, 4373380 free, 2184992 used, 1460684 buff/cache
KiB Swap: 3998716 total, 3998716 free, 0 used. 5239728 avail Mem

PID USER      PR  NI    VIRT    RES    SHR S %CPU %MEM      TIME+ COMMAND
1379 thegami+  20   0 3999588 291876 155548 S 22.8 3.6  2:51.62 gnome-shell
1077 thegami+  20   0 1073304  96400  72348 S 19.5 1.2  3:12.49 Xorg
2189 thegami+  20   0 1165264  94916  46752 S 10.9 1.2  1:04.22 nautilus
2312 thegami+  20   0 3136412 407964 115276 S 3.0 5.1  0:39.89 Web Content
2226 thegami+  20   0 783356  40492  28652 S 2.0 0.5  0:18.78 gnome-terminal-
2142 thegami+  20   0 3516312 360628 167948 S 1.7 4.5  1:17.87 MainThread
1558 thegami+  20   0 1349664 247000 18940 S 1.0 0.3  0:01.18 gsd-media-keys
3272 root      20   0     0     0     0 I 1.0 0.0  0:04.23 kworker/1:1-eve
3587 root      20   0     0     0     0 D 1.0 0.0  0:01.17 kworker/u8:1+ev
461 root      -51   0     0     0     0 S 0.7 0.0  0:15.16 irq/108-ELAN070
1396 thegami+  9 -11 2131388 18812 13660 S 0.7 0.2  0:01.27 pulseaudio
1397 rtkit     21   1 183464 2908 2644 S 0.7 0.0  0:00.09 rtkit-daemon
1413 thegami+  20   0 367180 8112 6348 S 0.7 0.1  0:09.75 ibus-daemon
2233 thegami+  20   0 2852932 270488 128888 S 0.7 3.4  0:19.27 Web Content
2282 thegami+  20   0 2968984 242308 112092 S 0.7 3.0  0:38.98 Web Content
3689 thegami+  20   0 56552 4056 3392 R 0.7 8.1  0:00.23 top
1 root      20   0 225388 9072 6620 S 0.3 0.1  0:05.47 systemd
1351 thegami+  20   0 220776 6932 6220 S 0.3 0.1  0:01.34 at-spi2-registr
1361 root      20   0 416676 33388 25552 S 0.3 0.4  0:09.01 veyon-server
1366 thegami+  20   0 779172 47804 39840 S 0.3 0.6  0:01.24 veyon-worker
1530 thegami+  20   0 434048 20960 16060 S 0.3 0.3  0:00.28 gsd-wacom
1728 thegami+  20   0 210148 6532 5916 S 0.3 0.1  0:03.01 ibus-engine-sim
1736 thegami+  20   0 2369992 63360 35968 S 0.3 0.8  0:03.71 gjs
1828 thegami+  20   0 658400 31256 25288 S 0.3 0.4  0:00.33 update-notifier
2319 thegami+  20   0 2734700 210268 113600 S 0.3 2.6  0:17.40 Web Content
2413 thegami+  20   0 2933880 257212 94148 S 0.3 3.2  0:14.23 WebExtensions
2803 thegami+  20   0 1114900 213076 44620 S 0.3 2.7  0:56.76 evince
3157 root      20   0     0     0 I 0.3 0.0  0:02.17 kworker/u8:4-19
2 root      20   0     0     0 S 0.0 0.0  0:00.00 kthreadd
3 root      0 -20     0     0 I 0.0 0.0  0:00.00 rcu_gp
4 root      0 -20     0     0 I 0.0 0.0  0:00.00 rcu_par_gp
```

top -u: View the processes of a certain user.

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
top - 14:45:17 up 1:03, 1 user, load average: 0.69, 1.09, 0.88
Tasks: 230 total, 1 running, 168 sleeping, 2 stopped, 1 zombie
%Cpu(s): 1.2 us, 0.7 sy, 0.0 ni, 98.0 id, 0.0 wa, 0.0 hi, 0.2 si, 0.0 st
KiB Mem : 8019856 total, 4579824 free, 2017972 used, 1421260 buff/cache
KiB Swap: 3998716 total, 3998716 free, 0 used. 5445920 avail Mem

PID USER      PR  NI    VIRT   RES   SHR S %CPU %MEM TIME+ COMMAND
1077 thegami+ 20  0 1021868 84620 60316 S 1.7  1.1  3:33.84 Xorg
1379 thegami+ 20  0 3992488 286020 148704 S 1.3  3.6  3:08.78 gnome-shell
2142 thegami+ 20  0 3519384 367752 168840 S 1.0  4.6  1:21.74 MainThread
2226 thegami+ 20  0 783356 40564 28616 S 1.0  0.5  0:19.65 gnome-term+
2233 thegami+ 20  0 2852932 269596 128800 S 0.7  3.4  0:21.82 Web Content
2312 thegami+ 20  0 3134364 407220 115276 S 0.7  5.1  0:41.30 Web Content
3791 thegami+ 20  0 56552   3976  3324 R 0.7  0.0  0:00.07 top
1413 thegami+ 20  0 367180 8112  6348 S 0.3  0.1  0:10.38 ibus-daemon
2319 thegami+ 20  0 2734700 210252 113600 S 0.3  2.6  0:17.96 Web Content
1040 thegami+ 20  0 77064  8388  6756 S 0.0  0.1  0:00.31 systemd
1041 thegami+ 20  0 113988 2652   80 S 0.0  0.0  0:00.00 (sd-pam)
1068 thegami+ 20  0 441108 7780  6716 S 0.0  0.1  0:00.14 gnome-keyr+
1072 thegami+ 20  0 217396 5912  5288 S 0.0  0.1  0:00.00 gdm-x-sess+
1207 thegami+ 20  0 51160  5476  3696 S 0.0  0.1  0:01.09 dbus-daemon
1211 thegami+ 20  0 572996 14428 11736 S 0.0  0.2  0:00.40 gnome-sess+
1221 thegami+ 20  0 371080 7180  6156 S 0.0  0.1  0:00.11 gvfsd
1226 thegami+ 20  0 416100 5292  4756 S 0.0  0.1  0:00.02 gvfsd-fuse
```

df command: Used to display the disk usage

df -k: Display the disk usage in bytes.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ df -k
Filesystem      1K-blocks    Used Available Use% Mounted on
udev            3973796      0   3973796   0% /dev
tmpfs           801908     1748   800160   1% /run
/dev/sdb1       721434616 27003380 657714692  4% /
tmpfs           4009528    51736   3957792   2% /dev/shm
tmpfs           5120        0     5120   0% /run/lock
tmpfs           4009528      0   4009528   0% /sys/fs/cgroup
/dev/loop0       148480    148480      0 100% /snap/code/40
/dev/loop1       63616     63616      0 100% /snap/gtk-common-themes/1506
/dev/loop2       165376    165376      0 100% /snap/gnome-3-28-1804/128
/dev/loop4       58752     58752      0 100% /snap/discord/112
/dev/loop5       201728    201728      0 100% /snap/flutter/22
/dev/loop3       98944     98944      0 100% /snap/core/9804
/dev/loop6       30720     30720      0 100% /snap/snapd/8790
/dev/loop7       56704     56704      0 100% /snap/core18/1885
/dev/sda1        98304    32965    65339   34% /boot/efi
tmpfs           801904      52   801852   1% /run/user/1000
/dev/sdb3       727132156 119800  727012356  1% /media/theagingbot/theagingbo
t
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$
```

df -h: Display the disk usage in human readable format.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            3.8G   0    3.8G   0% /dev
tmpfs           784M  1.8M  782M   1% /run
/dev/sdb1       689G  26G  628G   4% /
tmpfs           3.9G  51M  3.8G   2% /dev/shm
tmpfs           5.0M   0    5.0M   0% /run/lock
tmpfs           3.9G   0    3.9G   0% /sys/fs/cgroup
/dev/loop0       145M  145M   0 100% /snap/code/40
/dev/loop1       63M   63M   0 100% /snap/gtk-common-themes/1506
/dev/loop2       162M  162M   0 100% /snap/gnome-3-28-1804/128
/dev/loop4       58M   58M   0 100% /snap/discord/112
/dev/loop5       197M  197M   0 100% /snap/flutter/22
/dev/loop3       97M   97M   0 100% /snap/core/9804
/dev/loop6       30M   30M   0 100% /snap/snapd/8790
/dev/loop7       56M   56M   0 100% /snap/core18/1885
/dev/sda1        96M   33M   64M   34% /boot/efi
tmpfs           784M  52K   784M   1% /run/user/1000
/dev/sdb3       694G  117M  694G   1% /media/theagingbot/theagingbot
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$
```

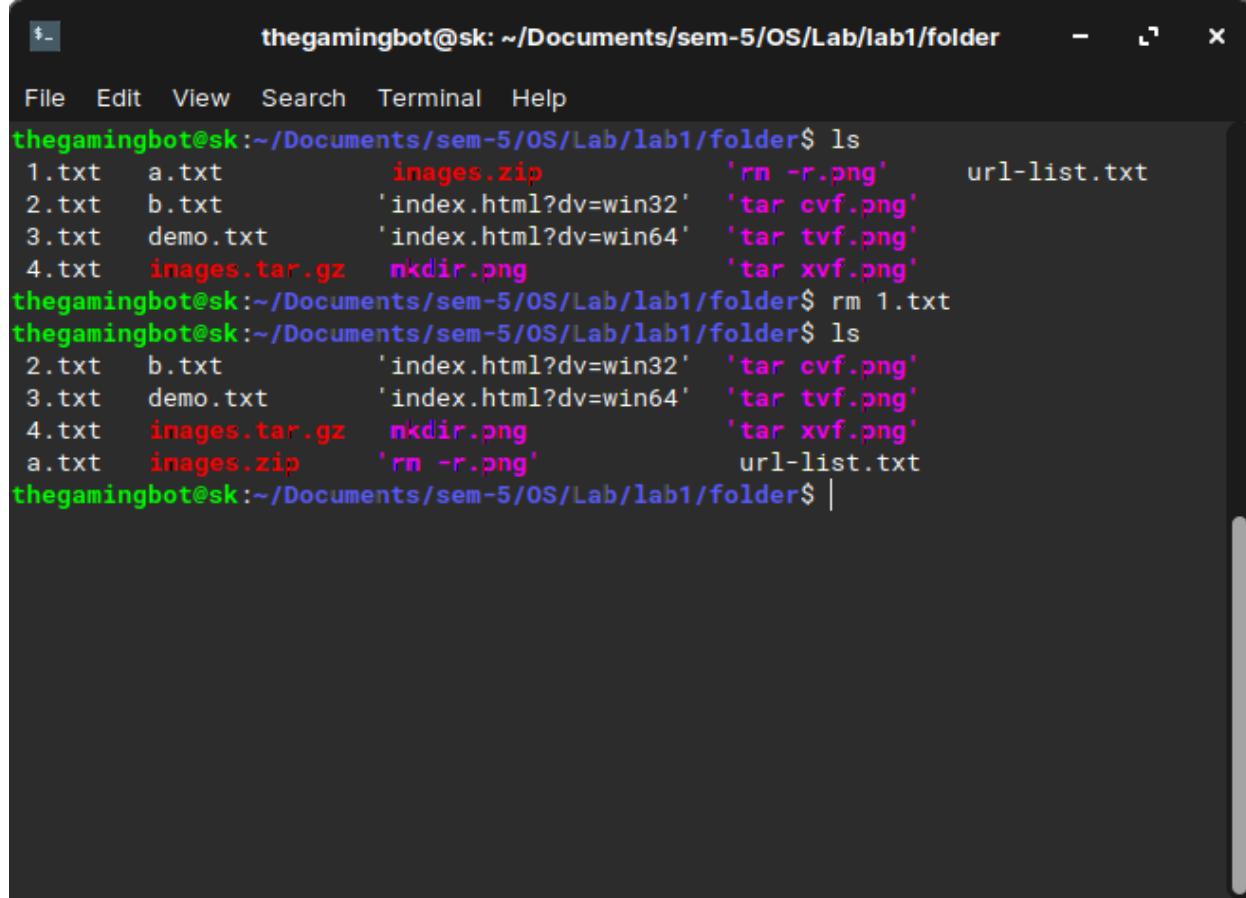
df -T: Display the type of the disks.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ df -T
Filesystem      Type 1K-blocks   Used Available Use% Mounted on
udev           devtmpfs  3973796      0  3973796  0% /dev
tmpfs          tmpfs    801908   1748  800160  1% /run
/dev/sdb1       ext4  721434616 27003724 657714348  4% /
tmpfs          tmpfs   4009528   51736 3957792  2% /dev/shm
tmpfs          tmpfs     5120      0   5120  0% /run/lock
tmpfs          tmpfs   4009528      0  4009528  0% /sys/fs/cgroup
/dev/loop0      squashfs 148480  148480      0 100% /snap/code/40
/dev/loop1      squashfs  63616   63616      0 100% /snap/gtk-common-theme
s/1506
/dev/loop2      squashfs 165376  165376      0 100% /snap/gnome-3-28-1804/
128
/dev/loop4      squashfs  58752   58752      0 100% /snap/discord/112
/dev/loop5      squashfs 201728  201728      0 100% /snap/flutter/22
/dev/loop3      squashfs  98944  98944      0 100% /snap/core/9804
/dev/loop6      squashfs  30720  30720      0 100% /snap/snapd/8790
/dev/loop7      squashfs  56704  56704      0 100% /snap/core18/1885
/dev/sda1       vfat    98304  32965  65339  34% /boot/efi
tmpfs          tmpfs    801904     56  801848  1% /run/user/1000
/dev/sdb3       fuseblk 727132156 119800 727012356  1% /media/theagingbot/th
eagingbot
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$
```

kill command: Used to terminate a process

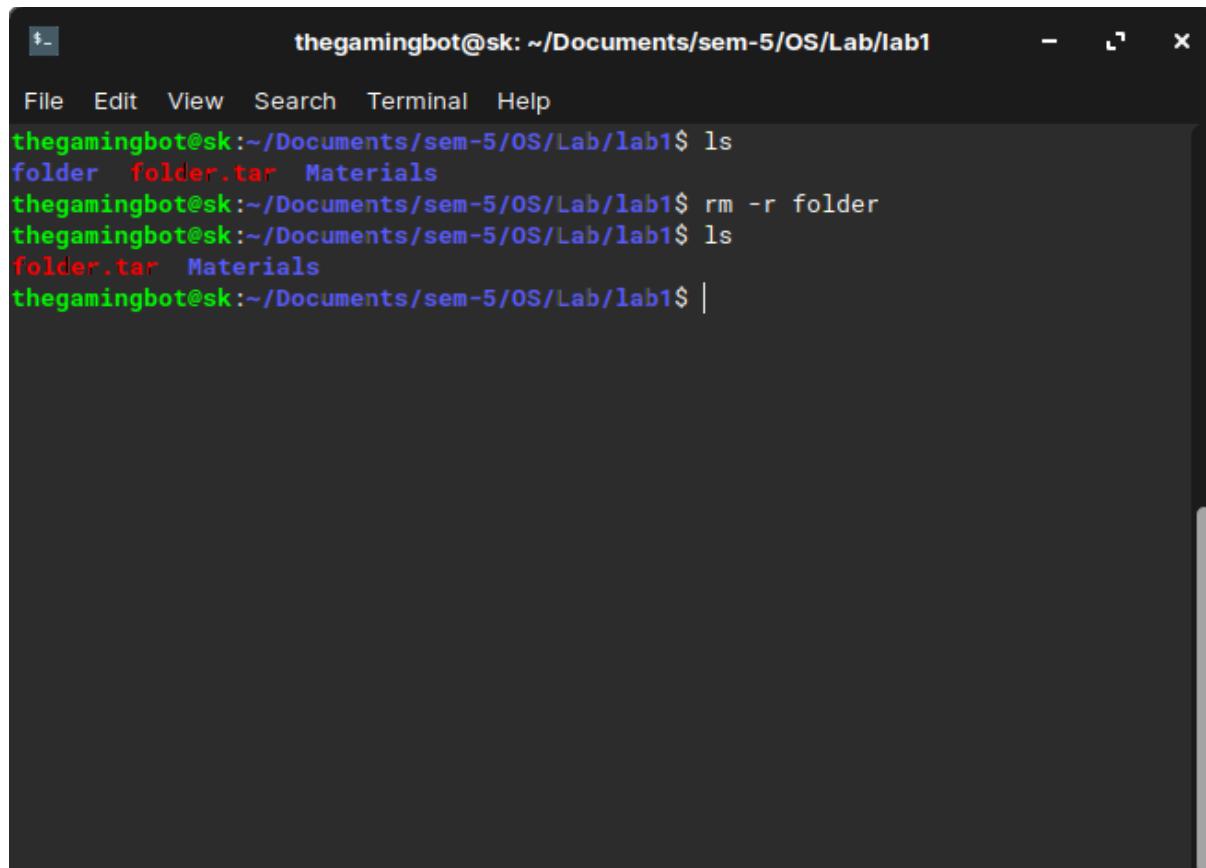
```
theagingbot@sk: ~
File Edit View Search Terminal Help
theagingbot@sk:~$ ps -ef | grep firefox
theagingbot 23839  1 61 14:52 tty2    00:00:17 /usr/lib/firefox/firefox -new-window
theagingbot 23902 23839 26 14:52 tty2    00:00:06 /usr/lib/firefox/firefox -contentproc -childID 1 -isForBrowser -prefsLen 1 -prefMapSize 227192 -parentBuildID 2020072019
3547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 23951 23839 26 14:52 tty2    00:00:06 /usr/lib/firefox/firefox -contentproc -childID 2 -isForBrowser -prefsLen 309 -prefMapSize 227192 -parentBuildID 2020072019
193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 23967 23839 28 14:52 tty2    00:00:07 /usr/lib/firefox/firefox -contentproc -childID 3 -isForBrowser -prefsLen 309 -prefMapSize 227192 -parentBuildID 2020072019
193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 23984 23839 41 14:52 tty2    00:00:10 /usr/lib/firefox/firefox -contentproc -childID 4 -isForBrowser -prefsLen 309 -prefMapSize 227192 -parentBuildID 2020072019
193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 24008 23839 17 14:52 tty2    00:00:04 /usr/lib/firefox/firefox -contentproc -childID 5 -isForBrowser -prefsLen 309 -prefMapSize 227192 -parentBuildID 2020072019
193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 24017 23839 30 14:52 tty2    00:00:07 /usr/lib/firefox/firefox -contentproc -childID 6 -isForBrowser -prefsLen 309 -prefMapSize 227192 -parentBuildID 2020072019
193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 24075 23839 4 14:52 tty2    00:00:01 /usr/lib/firefox/firefox -contentproc -childID 7 -isForBrowser -prefsLen 6448 -prefMapSize 227192 -parentBuildID 2020072019
0193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 24146 23839 2 14:52 tty2    00:00:00 /usr/lib/firefox/firefox -contentproc -childID 8 -isForBrowser -prefsLen 7213 -prefMapSize 227192 -parentBuildID 2020072019
0193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 24153 23839 2 14:52 tty2    00:00:00 /usr/lib/firefox/firefox -contentproc -childID 9 -isForBrowser -prefsLen 7213 -prefMapSize 227192 -parentBuildID 2020072019
0193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 24198 23839 1 14:52 tty2    00:00:00 /usr/lib/firefox/firefox -contentproc -childID 10 -isForBrowser -prefsLen 7213 -prefMapSize 227192 -parentBuildID 2020072019
0193547 -appdir /usr/lib/firefox/browser 23839 true tab
theagingbot 24393 21176 0 14:53 pts/1    00:00:00 grep --color=auto firefox
theagingbot@sk:~$ kill -2 23839
theagingbot@sk:~$ ps -ef | grep firefox
theagingbot 24422 21176 0 14:53 pts/1    00:00:00 grep --color=auto firefox
theagingbot@sk:~$ |
```

rm command: Used to remove files and directories



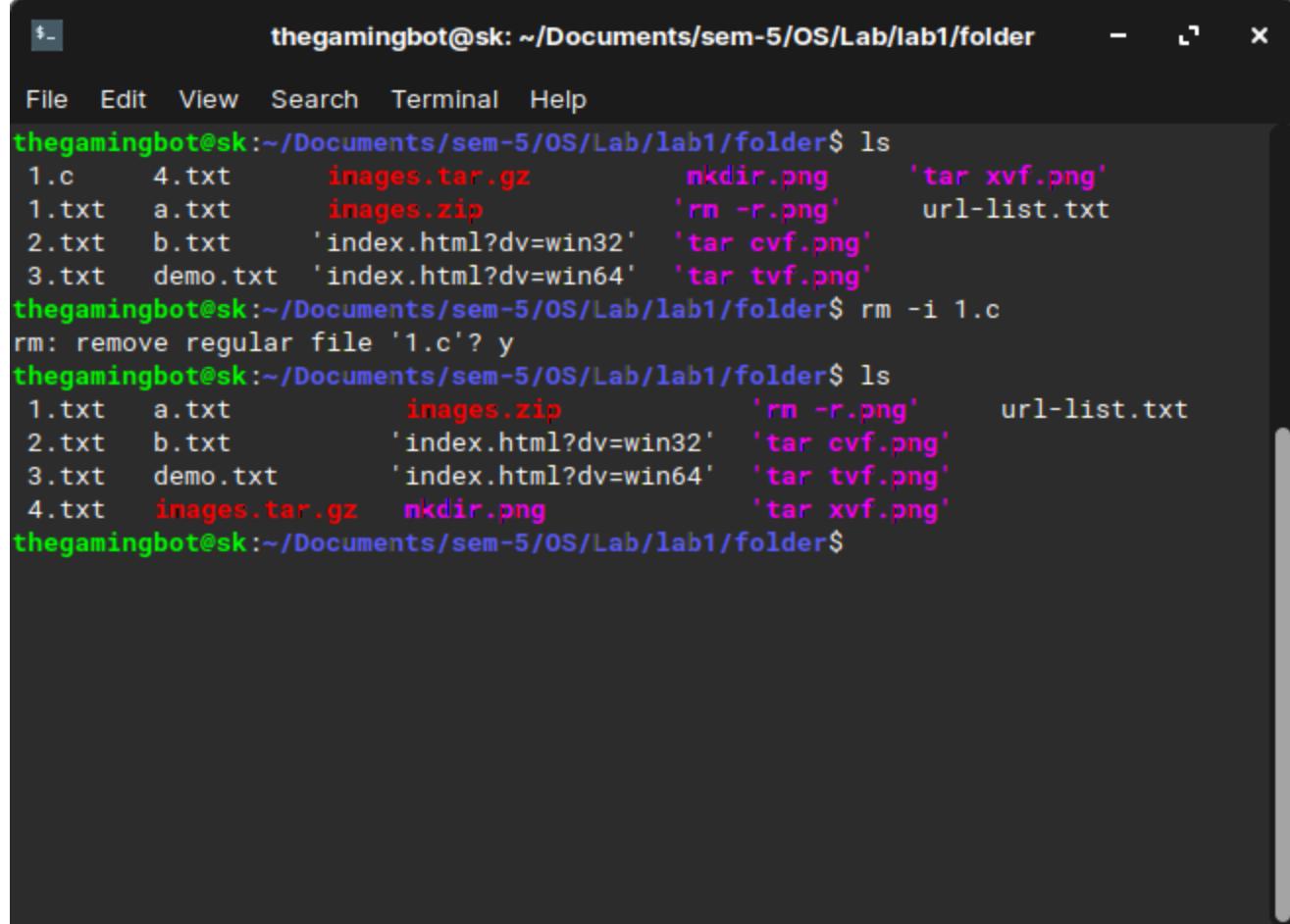
```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt  a.txt      images.zip          'rm -r.png'    url-list.txt
2.txt  b.txt      'index.html?dv=win32' 'tar cvf.png'
3.txt  demo.txt   'index.html?dv=win64' 'tar tvf.png'
4.txt  images.tar.gz  mkdir.png        'tar xvf.png'
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ rm 1.txt
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
2.txt  b.txt      'index.html?dv=win32' 'tar cvf.png'
3.txt  demo.txt   'index.html?dv=win64' 'tar tvf.png'
4.txt  images.tar.gz  mkdir.png        'tar xvf.png'
a.txt  images.zip  'rm -r.png'        url-list.txt
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

rm -r: Recursively remove file/directories



```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1$ ls
folder folder.tar Materials
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ rm -r folder
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder.tar Materials
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ |
```

rm -i: Ask for confirmation before deletion.



The screenshot shows a terminal window with the following session:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.c      4.txt      images.tar.gz      mkdir.png      'tar xvf.png'
1.txt    a.txt      images.zip       'rm -r.png'    url-list.txt
2.txt    b.txt      'index.html?dv=win32' 'tar cvf.png'
3.txt    demo.txt   'index.html?dv=win64' 'tar tvf.png'
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ rm -i 1.c
rm: remove regular file '1.c'? y
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt    a.txt      images.zip       'rm -r.png'    url-list.txt
2.txt    b.txt      'index.html?dv=win32' 'tar cvf.png'
3.txt    demo.txt   'index.html?dv=win64' 'tar tvf.png'
4.txt    images.tar.gz  mkdir.png      'tar xvf.png'
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$
```

cp command: Used to copy files/directories from a source to the destination.

```
$ - thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
2.txt      b.txt      'index.html?dv=win32'  'tar cvf.png'
3.txt      demo.txt   'index.html?dv=win64'   'tar tvf.png'
4.txt      images.tar.gz  mkdir.png          'tar xvf.png'
a.txt      images.zip   'rm -r.png'        url-list.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ cp 2.txt a.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ vim a.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

cp -i: If the destination file exists, ask for confirmation before overwriting it.

```
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - _ x
File Edit View Search Terminal Help
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
2.txt    b.txt        'index.html?dv=win32'  'tar cvf.png'
3.txt    demo.txt     'index.html?dv=win64'   'tar tvf.png'
4.txt    images.tar.gz mkdir.png           'tar xvf.png'
a.txt    images.zip   'rm -r.png'          url-list.txt
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ cp -i 2.txt a.txt
cp: overwrite 'a.txt'? y
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ vim a.txt
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
A single-tasking system can only run one program at a time, while a multi-tasking operating system allows more than one program to be running in concurrency. This is achieved by time-sharing, where the available processor time is divided between multiple processes. These processes are each interrupted repeatedly in time slices by a task-scheduling subsystem of the operating system. Multi-tasking may be characterized in preemptive and co-operative types. In preemptive multitasking, the operating system slices the CPU time and dedicates a slot to each of the programs. Unix-like operating systems, such as Solaris and Linux-as well as non-Unix-like, such as AmigaOS-support preemptive multitasking. Cooperative multitasking is achieved by relying on each process to provide time to the other processes in a defined manner. 16-bit versions of Microsoft Windows used cooperative multi-tasking; 32-bit versions of both Windows NT and Win9x used preemptive multi-tasking.

~
```

cp -r: Copy files recursively from source to destination.

The screenshot shows a terminal window with the following session:

```
thebgamingbot@sk: ~/folder
File Edit View Search Terminal Help
thebgamingbot@sk:~$ ls
AC.jpg Desktop edX myapp Public snap Videos
Android Documents folder Pictures Qt temp
android-studio Downloads Music Projects QTProjects Templates
thebgamingbot@sk:~$ cp -r edX folder
thebgamingbot@sk:~$ cd folder
thebgamingbot@sk:~/folder$ ls
edX
thebgamingbot@sk:~/folder$ |
```

The terminal window has a dark background and light-colored text. The title bar says "thebgamingbot@sk: ~/folder". The menu bar includes "File", "Edit", "View", "Search", "Terminal", and "Help". The command history shows the user navigating to the current directory (~), listing files, copying the "edX" folder with the "-r" option, changing to the "folder" directory, and finally listing the contents of the "folder" directory, which now contains the "edX" folder.

mv command: Used to move files/directories from source to destination.

```
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help

the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls
2.txt      b.txt          'index.html?dv=win32'  'tar cvf.png'
3.txt      demo.txt       'index.html?dv=win64'   'tar tvf.png'
4.txt      images.tar.gz  mkdir.png            'tar xvf.png'
a.txt      images.zip     'rm -r.png'        url-list.txt
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ mv 2.txt a.txt
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls
3.txt      b.txt          images.zip          mkdir.png    'tar tvf.png'
4.txt      demo.txt       'index.html?dv=win32'  'rm -r.png'  'tar xvf.png'
a.txt      images.tar.gz  'index.html?dv=win64'  'tar cvf.png' url-list.txt
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ vim a.txt
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

mv -i: Ask for confirmation if the destination file exists.

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
2.txt    b.txt      'index.html?dv=win32'  'tar cvf.png'
3.txt    demo.txt   'index.html?dv=win64'   'tar tvf.png'
4.txt    images.tar.gz  mkdir.png          'tar xvf.png'
a.txt    images.zip   'rm -r.png'        url-list.txt
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ mv -i 2.txt a.txt
mv: overwrite 'a.txt'? y
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
3.txt    b.txt      images.zip          mkdir.png      'tar tvf.png'
4.txt    demo.txt   'index.html?dv=win32'  'rm -r.png'   'tar xvf.png'
a.txt    images.tar.gz  'index.html?dv=win64'  'tar cvf.png'  url-list.txt
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ vim a.txt
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

```
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
A single-tasking system can only run one program at a time, while a multi-tasking operating system allows more than one program to be running in concurrency. This is achieved by time-sharing, where the available processor time is divided between multiple processes. These processes are each interrupted repeatedly in time slices by a task-scheduling subsystem of the operating system. Multi-tasking may be characterized in preemptive and co-operative types. In preemptive multitasking, the operating system slices the CPU time and dedicates a slot to each of the programs. Unix-like operating systems, such as Solaris and Linux-as well as non-Unix-like, such as AmigaOS-support preemptive multitasking. Cooperative multitasking is achieved by relying on each process to provide time to the other processes in a defined manner. 16-bit versions of Microsoft Windows used cooperative multi-tasking; 32-bit versions of both Windows NT and Win9x used preemptive multi-tasking.
~
```

mv -f: Overwrite without prompting.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt    a.txt          images.zip          'rm -r.png'      url-list.txt
2.txt    b.txt          'index.html?dv=win32'  'tar cvf.png'
3.txt    demo.txt       'index.html?dv=win64'   'tar tvf.png'
4.txt    images.tar.gz  mkdir.png           'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ mv -f 2.txt a.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt    b.txt          'index.html?dv=win32'  'tar cvf.png'
3.txt    demo.txt       'index.html?dv=win64'   'tar tvf.png'
4.txt    images.tar.gz  mkdir.png           'tar xvf.png'
a.txt    images.zip     'rm -r.png'          url-list.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ vim a.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

```
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
A single-tasking system can only run one program at a time, while a multi-tasking operating system allows more than one program to be running in concurrency. This is achieved by time-sharing, where the available processor time is divided between multiple processes. These processes are each interrupted repeatedly in time slices by a task-scheduling subsystem of the operating system. Multi-tasking may be characterized in preemptive and co-operative types. In preemptive multitasking, the operating system slices the CPU time and dedicates a slot to each of the programs. Unix-like operating systems, such as Solaris and Linux-as well as non-Unix-like, such as AmigaOS-support preemptive multitasking. Cooperative multitasking is achieved by relying on each process to provide time to the other processes in a defined manner. 16-bit versions of Microsoft Windows used cooperative multitasking; 32-bit versions of both Windows NT and Win9x used preemptive multi-tasking.
~
```

mv -v: View the process of file transition during mv.

```
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
2.txt b.txt 'index.html?dv=win32' 'tar cvf.png'
3.txt demo.txt 'index.html?dv=win64' 'tar tvf.png'
4.txt images.tar.gz mkdir.png 'tar xvf.png'
a.txt images.zip 'rm -r.png' url-list.txt
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ mv -v 2.txt 1.txt
renamed '2.txt' -> '1.txt'
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt b.txt 'index.html?dv=win32' 'tar cvf.png'
3.txt demo.txt 'index.html?dv=win64' 'tar tvf.png'
4.txt images.tar.gz mkdir.png 'tar xvf.png'
a.txt images.zip 'rm -r.png' url-list.txt
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ vim 1.txt
the gaming bot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$
```

```
the gaming bot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
A single-tasking system can only run one program at a time, while a multi-tasking operating system allows more than one program to be running in concurrency. This is achieved by time-sharing, where the available processor time is divided between multiple processes. These processes are each interrupted repeatedly in time slices by a task-scheduling subsystem of the operating system. Multi-tasking may be characterized in preemptive and co-operative types. In preemptive multitasking, the operating system slices the CPU time and dedicates a slot to each of the programs. Unix-like operating systems, such as Solaris and Linux-as well as non-Unix-like, such as AmigaOS-support preemptive multitasking. Cooperative multitasking is achieved by relying on each process to provide time to the other processes in a defined manner. 16-bit versions of Microsoft Windows used cooperative multi-tasking; 32-bit versions of both Windows NT and Win9x used preemptive multi-tasking.

~
```

cat command: Used to display more than one file.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt      b.txt          'index.html?dv=win32'  'tar cvf.png'
3.txt      demo.txt       'index.html?dv=win64'   'tar tvf.png'
4.txt      images.tar.gz  mkdir.png            'tar xvf.png'
a.txt      images.zip     'rm -r.png'          url-list.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ cat a.txt b.txt
A single-tasking system can only run one program at a time, while a multi-tasking operating system allows more than one program to be running in concurrency. This is achieved by time-sharing, where the available processor time is divided between multiple processes. These processes are each interrupted repeatedly in time slices by a task-scheduling subsystem of the operating system. Multi-tasking may be characterized in preemptive and co-operative types. In preemptive multitasking, the operating system slices the CPU time and dedicates a slot to each of the programs. Unix-like operating systems, such as Solaris and Linux-as well as non-Unix-like, such as AmigaOS-support preemptive multitasking. Cooperative multi-tasking is achieved by relying on each process to provide time to the other processes in a defined manner. 16-bit versions of Microsoft Windows used cooperative multi-tasking; 32-bit versions of both Windows NT and Win9x used preemptive multi-tasking.
Tamil Nadu
Gujarat
Andhra Pradesh
Bihar
Uttar pradesh
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

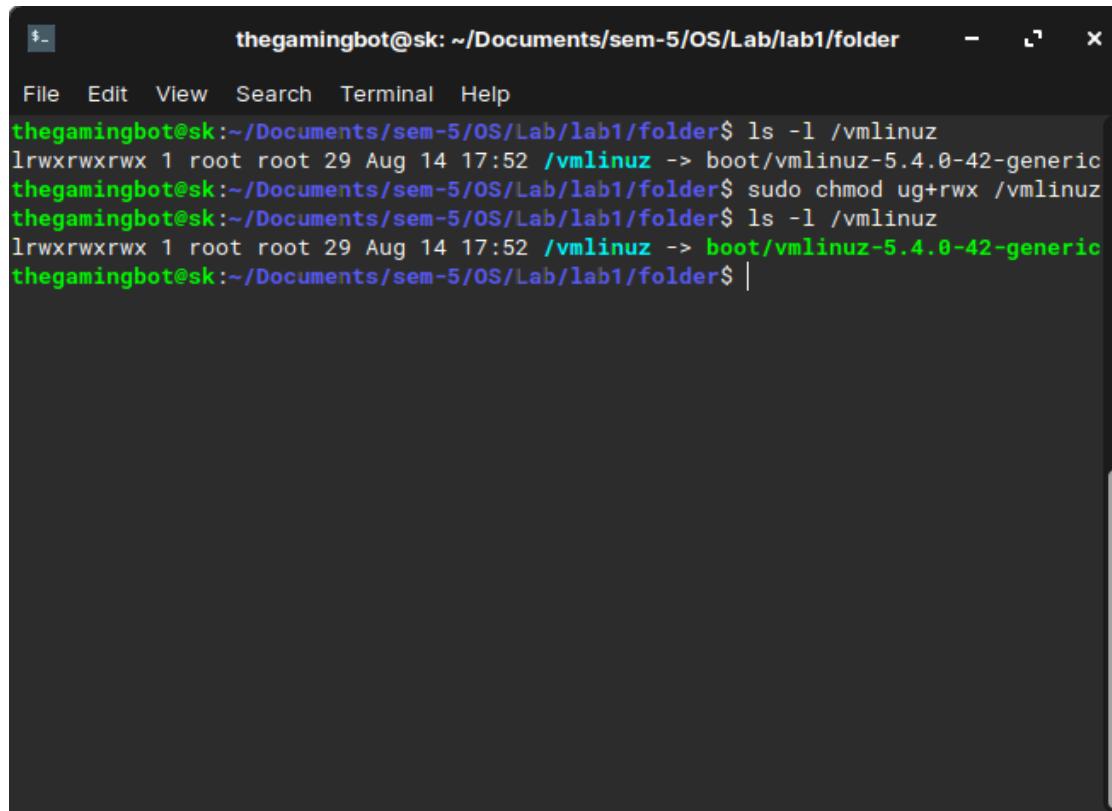
cat -n: Display more than one file, with line numbers

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ cat -n /etc/logrotate.conf
 1 # see "man logrotate" for details
 2 # rotate log files weekly
 3 weekly
 4
 5 # use the syslog group by default, since this is the owning group
 6 # of /var/log/syslog.
 7 su root syslog
 8
 9 # keep 4 weeks worth of backlogs
10 rotate 4
11
12 # create new (empty) log files after rotating old ones
13 create
14
15 # uncomment this if you want your log files compressed
16 #compress
17
18 # packages drop log rotation information into this directory
19 include /etc/logrotate.d
20
21 # no packages own wtmp, or btmp -- we'll rotate them here
22 /var/log/wtmp {
23     missingok
24     monthly
25     create 0664 root utmp
26     rotate 1
27 }
28
29 /var/log/btmp {
30     missingok
31     monthly
32     create 0660 root utmp
33     rotate 1
34 }
35
36 # system-specific logs may be configured here
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

!..mount command: Mount a directory as a disk

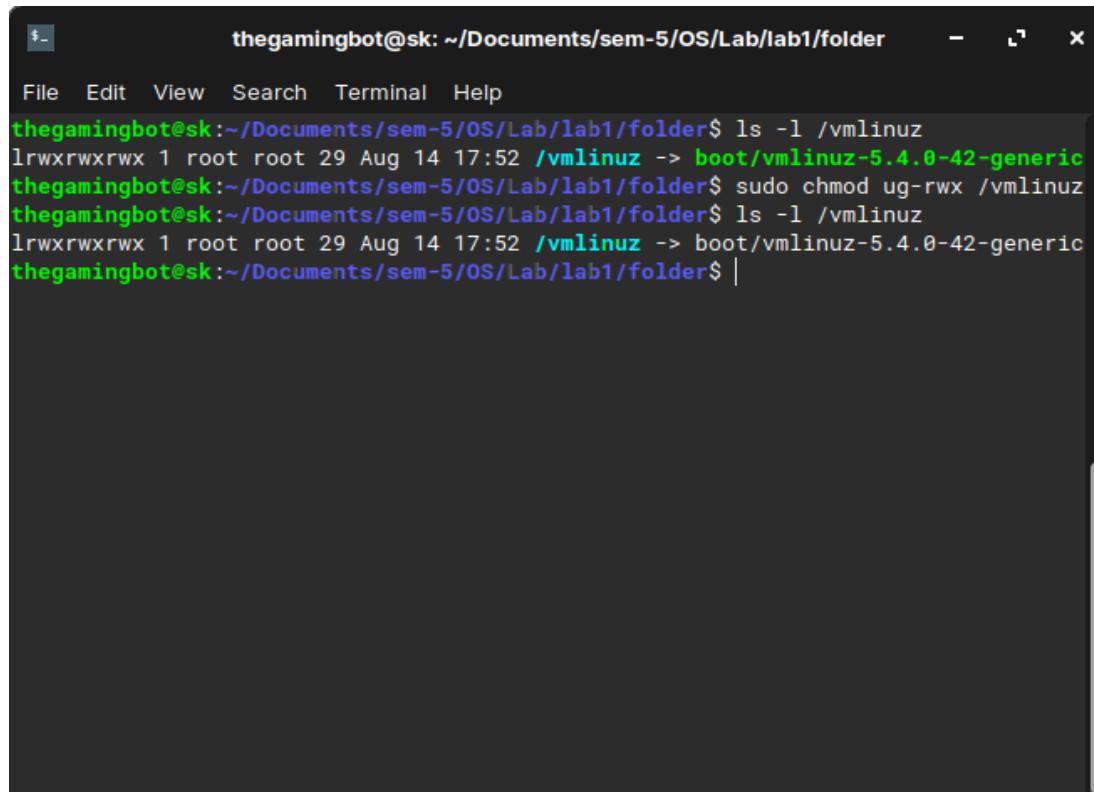
chmod command: Used to change the modify the permissions of a file

chmod +: Add permissions to user/ group/ other.



```
thegeamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls -l /vmlinuz
lrwxrwxrwx 1 root root 29 Aug 14 17:52 /vmlinuz -> boot/vmlinuz-5.4.0-42-generic
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sudo chmod ug+rwx /vmlinuz
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls -l /vmlinuz
lrwxrwxrwx 1 root root 29 Aug 14 17:52 /vmlinuz -> boot/vmlinuz-5.4.0-42-generic
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

chmod -: Remove permissions to user/ group/ other.



```
thegeamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls -l /vmlinuz
lrwxrwxrwx 1 root root 29 Aug 14 17:52 /vmlinuz -> boot/vmlinuz-5.4.0-42-generic
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sudo chmod ug-rwx /vmlinuz
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls -l /vmlinuz
lrwxrwxrwx 1 root root 29 Aug 14 17:52 /vmlinuz -> boot/vmlinuz-5.4.0-42-generic
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

!..chown command: Used to change owner / group of a file

chown -R: Recursively change ownership.

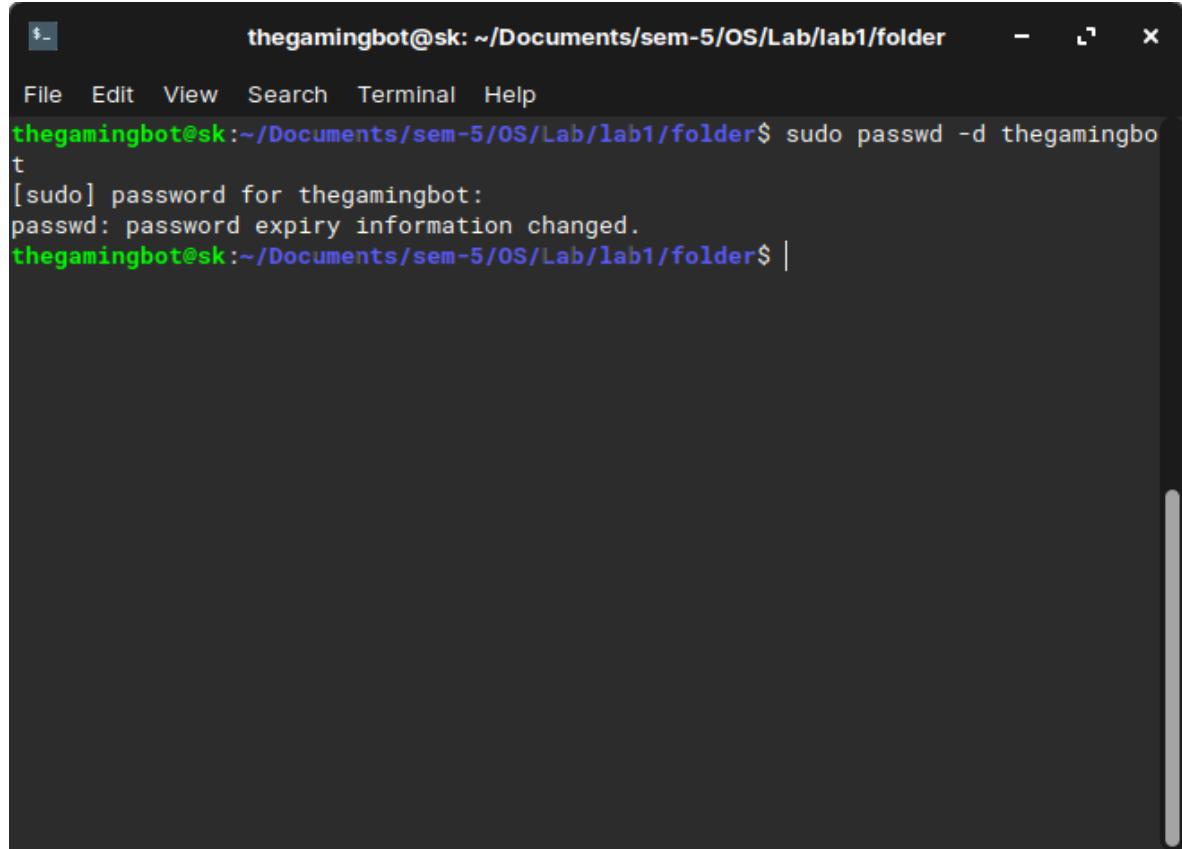
passwd command: Used to change the password of the current user.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - c x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ passwd
Changing password for theagingbot.
(current) UNIX password:
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

passwd [username]: Change the password of a certain user.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - c x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ passwd theagingbot
Changing password for theagingbot.
(current) UNIX password:
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

passwd -d: Used to remove the password of a certain user.



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name 'thegamingbot' followed by the host name 'sk' and the current directory '/Documents/sem-5/OS/Lab/lab1/folder'. Below this is a standard menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the command 'sudo passwd -d thegamingbot' being entered. After the command is run, the terminal prompts for a password with '[sudo] password for thegamingbot:'. The user enters their password. A confirmation message 'passwd: password expiry information changed.' is displayed. Finally, the prompt '\$ |' is shown, indicating the command has completed.

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sudo passwd -d thegamingbot
[sudo] password for thegamingbot:
passwd: password expiry information changed.
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

mkdir command: Used to create new directories

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls ~
AC.jpg android-studio Documents edX Pictures Public Templates
Android Desktop Downloads Music Projects snap Videos
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ mkdir ~/temp
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls ~
AC.jpg android-studio Documents edX Pictures Public temp Videos
Android Desktop Downloads Music Projects snap Templates
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

mkdir -p: Create nested directories.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder/fold... - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt b.txt 'index.html?dv=win32' 'tar cvf.png'
3.txt demo.txt 'index.html?dv=win64' 'tar tvf.png'
4.txt images.tar.gz mkdir.png 'tar xvf.png'
a.txt images.zip 'rm -r.png' url-list.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ mkdir -p folder/folder/folder
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt b.txt images.zip 'rm -r.png' url-list.txt
3.txt demo.txt 'index.html?dv=win32' 'tar cvf.png'
4.txt folder 'index.html?dv=win64' 'tar tvf.png'
a.txt images.tar.gz mkdir.png 'tar xvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ cd folder
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder$ ls
folder
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ cd folder
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder/folder$ ls
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder/folder$ |
```

ifconfig command: Used to view or configure a network interface

ifconfig -a: View all interfaces with status.

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ ifconfig -a
enp1s0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
      ether 84:a9:3e:4b:8b:87 txqueuelen 1000 (Ethernet)
      RX packets 0 bytes 0 (0.0 B)
      RX errors 0 dropped 0 overruns 0 frame 0
      TX packets 0 bytes 0 (0.0 B)
      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 147044 bytes 14628248 (14.6 MB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 147044 bytes 14628248 (14.6 MB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlp2s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
      inet 192.168.1.4 netmask 255.255.255.0 broadcast 192.168.1.255
      inet6 fe80::1352:fd51:366:31f2 prefixlen 64 scopeid 0x20<link>
        ether d0:c5:d3:74:fd:51 txqueuelen 1000 (Ethernet)
        RX packets 12190946 bytes 13139030099 (13.1 GB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 4367338 bytes 507249605 (507.2 MB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ |
```

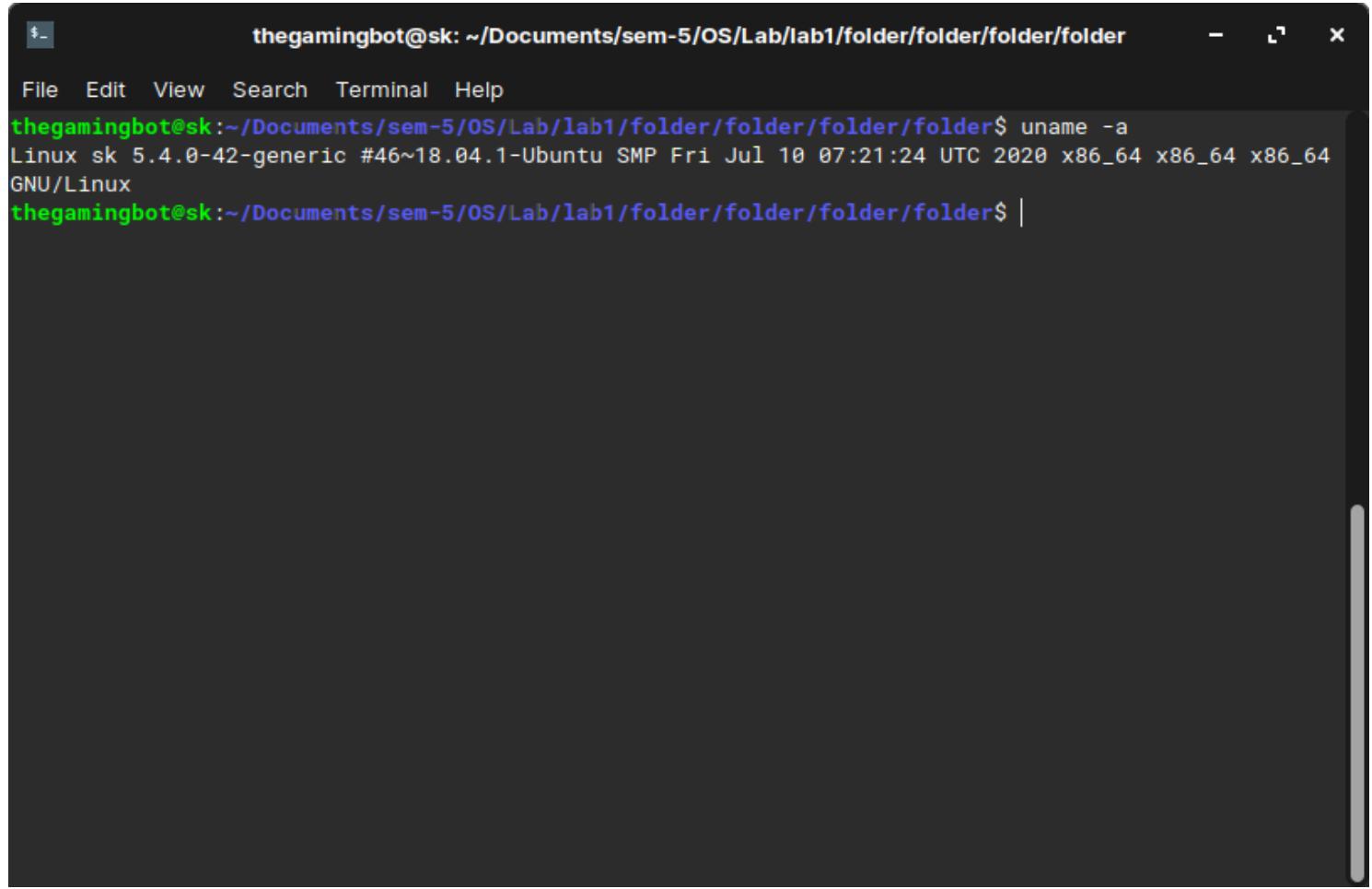
ifconfig [interface] up: Start a network interface

```
thegambaringbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder
File Edit View Search Terminal Help
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ ifconfig lo up
SIOCSIFFLAGS: Operation not permitted
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ ifconfig wlp2s0 up
SIOCSIFFLAGS: Operation not permitted
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ ifconfig enp1s0 up
SIOCSIFFLAGS: Operation not permitted
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ |
```

ifconfig down: Stop a network interface.

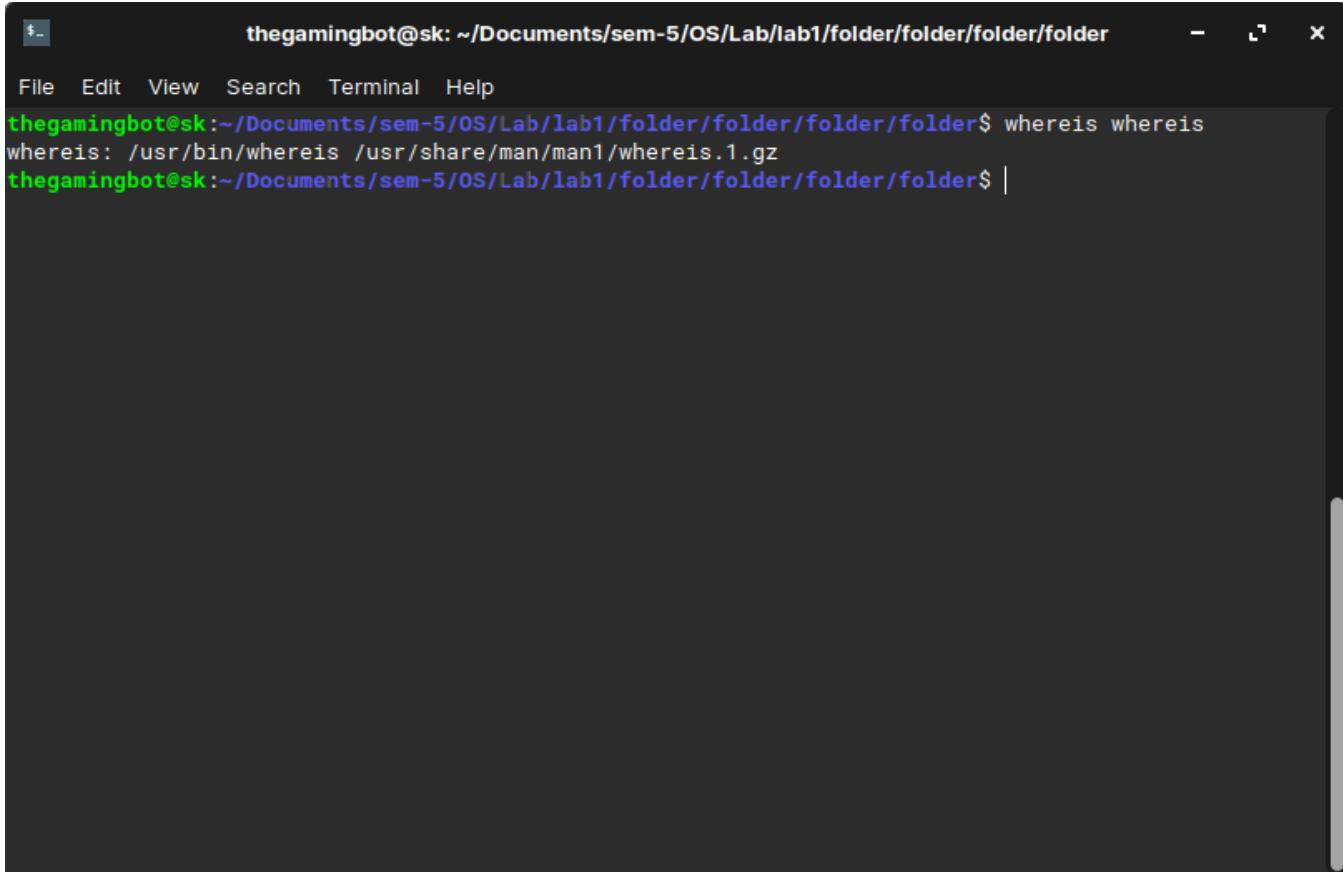
```
thegambaringbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder
File Edit View Search Terminal Help
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ ifconfig lo down
SIOCSIFFLAGS: Operation not permitted
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ ifconfig wlp2s0 down
SIOCSIFFLAGS: Operation not permitted
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ ifconfig enp1s0 down
SIOCSIFFLAGS: Operation not permitted
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ |
```

uname command: Used to display kernel number, host name, kernel release number, processor type



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the host name, and the current working directory: `thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder/folder$`. Below this, a menu bar is visible with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the command `uname -a` being run, followed by its output: `Linux sk 5.4.0-42-generic #46~18.04.1-Ubuntu SMP Fri Jul 10 07:21:24 UTC 2020 x86_64 x86_64 x86_64 GNU/Linux`. The terminal prompt `thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder/folder$ |` is at the bottom right.

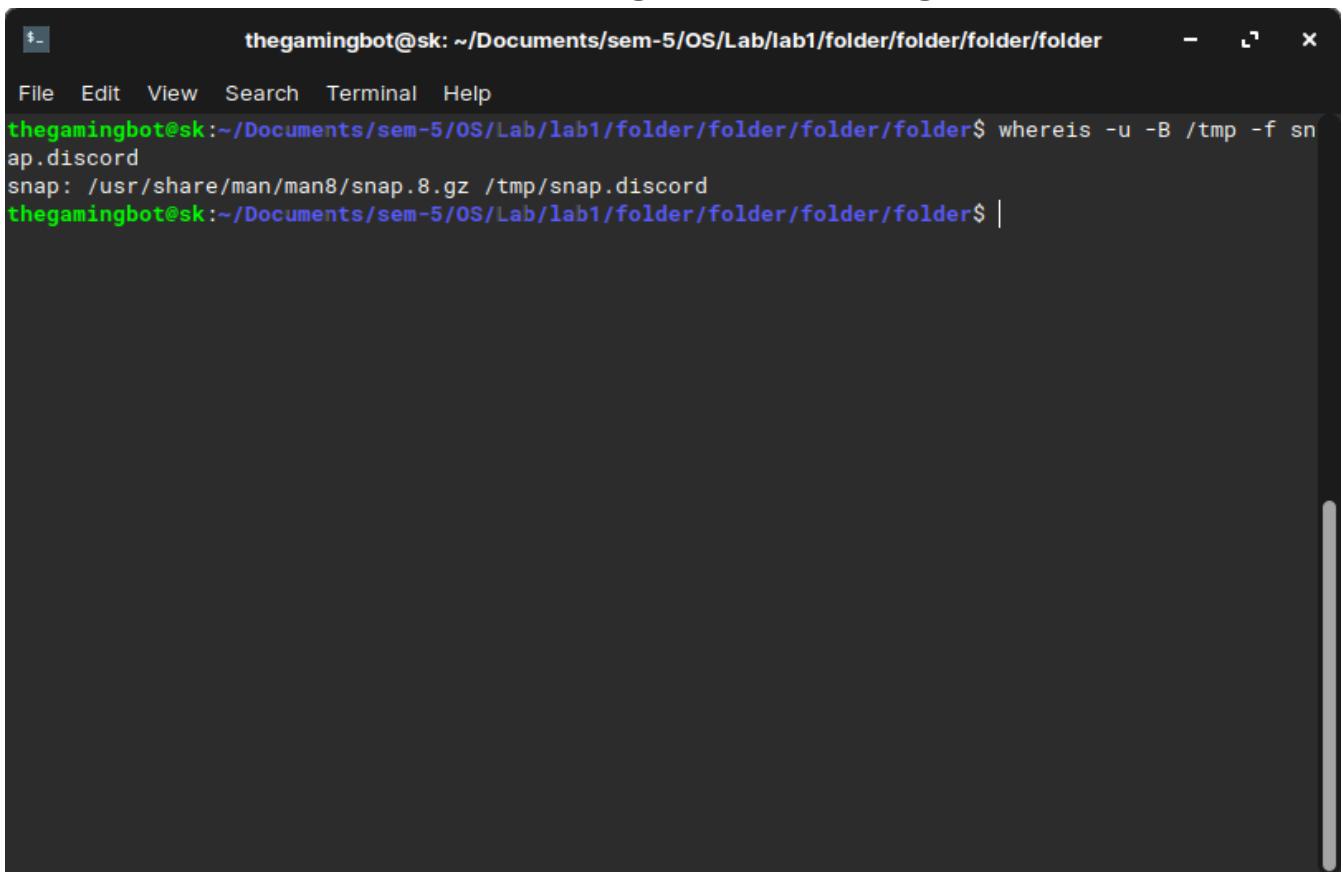
whereis command: Used to display the location of any command



```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ whereis whereis
whereis: /usr/bin/whereis /usr/share/man/man1/whereis.1.gz
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ |
```

A screenshot of a terminal window with a dark background. The title bar shows the path: 'thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder\$'. The menu bar includes 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The command 'whereis whereis' is entered, followed by a pipe character '|'. The output shows the command's own location: '/usr/bin/whereis' and its man page 'man1/whereis.1.gz'. A vertical scroll bar is visible on the right side of the terminal window.

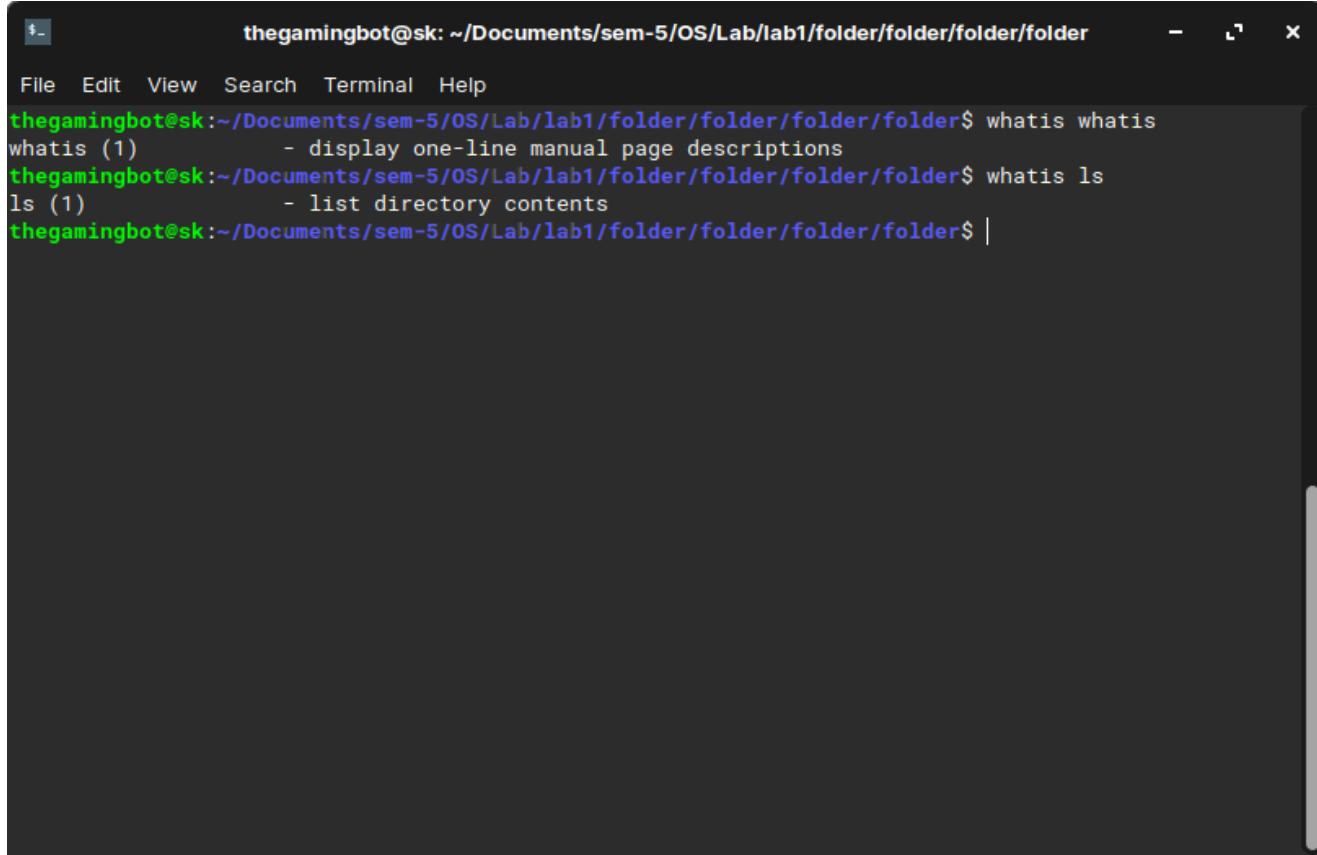
whereis -B: When you want to search an executable from a path other than the whereis default path, you can use -B option and give the path as argument to it.



```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ whereis -u -B /tmp -f snap.discord
snap: /usr/share/man/man8/snap.8.gz /tmp/snap.discord
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ |
```

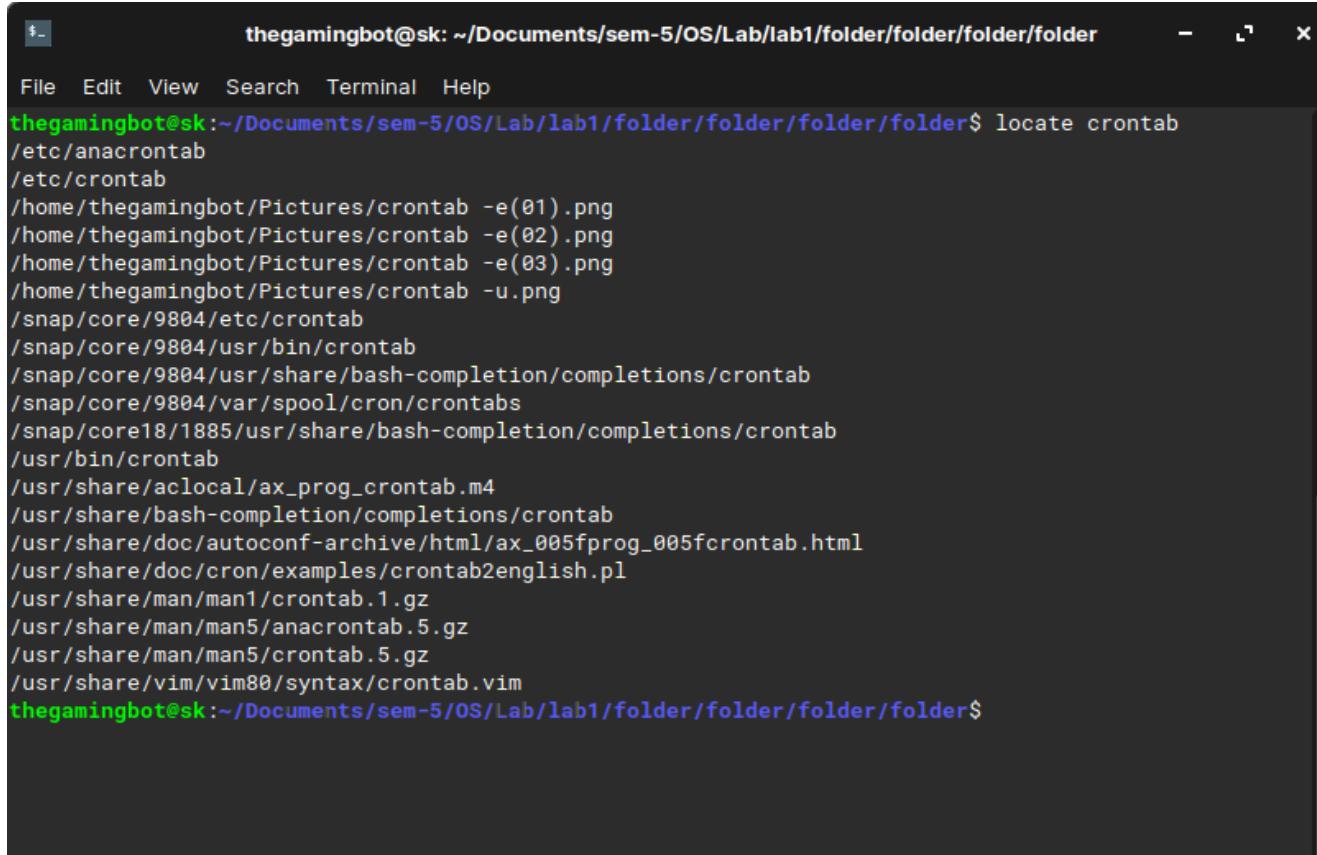
A screenshot of a terminal window with a dark background. The title bar shows the path: 'thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder\$'. The menu bar includes 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'. The command 'whereis -u -B /tmp -f snap.discord' is entered, followed by a pipe character '|'. The output shows the snap executable's location: '/tmp/snap.discord'. A vertical scroll bar is visible on the right side of the terminal window.

whatis command: Used to display a single line description of a command



```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ whatis whatis
whatis (1)           - display one-line manual page descriptions
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ whatis ls
ls (1)              - list directory contents
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ |
```

locate command: Used to search the location of specific files



```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$ locate crontab
/etc/anacrontab
/etc/crontab
/home/thebgamingbot/Pictures/crontab -e(01).png
/home/thebgamingbot/Pictures/crontab -e(02).png
/home/thebgamingbot/Pictures/crontab -e(03).png
/home/thebgamingbot/Pictures/crontab -u.png
/snap/core/9804/etc/crontab
/snap/core/9804/usr/bin/crontab
/snap/core/9804/usr/share/bash-completion/completions/crontab
/snap/core/9804/var/spool/cron/crontabs
/snap/core18/1885/usr/share/bash-completion/completions/crontab
/usr/bin/crontab
/usr/share/aclocal/ax_prog_crontab.m4
/usr/share/bash-completion/completions/crontab
/usr/share/doc/autoconf-archive/html/ax_005fprog_005fcrontab.html
/usr/share/doc/cron/examples/crontab2english.pl
/usr/share/man/man1/crontab.1.gz
/usr/share/man/man5/anacrontab.5.gz
/usr/share/man/man5/crontab.5.gz
/usr/share/vim/vim80/syntax/crontab.vim
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder$
```

man command: Used to view the details of a command

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder
File Edit View Search Terminal Help
CRONTAB(1)                               General Commands Manual                               CRONTAB(1)
NAME
    crontab - maintain crontab files for individual users (Vixie Cron)

SYNOPSIS
    crontab [ -u user ] file
    crontab [ -u user ] [ -i ] { -e | -l | -r }

DESCRIPTION
    crontab is the program used to install, deinstall or list the tables used to drive the cron(8) daemon in Vixie Cron. Each user can have their own crontab, and though these are files in /var/spool/cron/crontabs, they are not intended to be edited directly.

    If the /etc/cron.allow file exists, then you must be listed (one user per line) therein in order to be allowed to use this command. If the /etc/cron.deny file does not exist but the /etc/cron.allow file does exist, then you must not be listed in the /etc/cron.deny file in order to use this command.

    If neither of these files exists, then depending on site-dependent configuration parameters, only the super user will be allowed to use this command, or all users will be able to use this command.

    If both files exist then /etc/cron.allow takes precedence. Which means that /etc/cron.deny is not considered and your user must be listed in /etc/cron.allow in order to be able to use the crontab.

    Regardless of the existence of any of these files, the root administrative user is always allowed to setup a crontab. For standard Debian systems, all users may use this command.

    If the -u option is given, it specifies the name of the user whose crontab is to be used (when listing) or modified (when editing). If this option is not given, crontab examines "your" crontab, i.e., the crontab of the person executing the command. Note that su(8) can confuse crontab and that if you are running inside of su(8) you should always use the -u option for safety's sake.

    The first form of this command is used to install a new crontab from some named file or standard input if the pseudo-filename '-' is given.

    The -l option causes the current crontab to be displayed on standard output. See the note under DEBIAN SPECIFIC below.

    The -r option causes the current crontab to be removed.

    The -e option is used to edit the current crontab using the editor specified by the VISUAL or EDITOR environment variables. After you exit from the editor, the modified crontab will be installed automatically. If neither of the environment variables is defined, then the default editor /usr/bin/editor is used.

Manual page crontab(1) line 1/77 54% (press h for help or q to quit)
```

man [section_number]: Some man pages can be located in multiple sections. Specify the one the user wishes.

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder/folder/folder
File Edit View Search Terminal Help
PRINTF(3)                               Linux Programmer's Manual                               PRINTF(3)
NAME
    printf, fprintf, dprintf, sprintf, snprintf, vprintf, vfprintf, vdprintf, vsprintf, vsnprintf - formatted output conversion

SYNOPSIS
    #include <stdio.h>

    int printf(const char *format, ...);
    int fprintf(FILE *stream, const char *format, ...);
    int dprintf(int fd, const char *format, ...);
    int sprintf(char *str, const char *format, ...);
    int snprintf(char *str, size_t size, const char *format, ...);

    #include <stdarg.h>

    int vprintf(const char *format, va_list ap);
    int vfprintf(FILE *stream, const char *format, va_list ap);
    int vdprintf(int fd, const char *format, va_list ap);
    int vsprintf(char *str, const char *format, va_list ap);
    int vsnprintf(char *str, size_t size, const char *format, va_list ap);

Feature Test Macro Requirements for glibc (see feature_test_macros(7)):

    snprintf(), vsnprintf():
        _XOPEN_SOURCE >= 500 || _ISOC99_SOURCE ||
        /* Glibc versions <= 2.19: */ _BSD_SOURCE

    dprintf(), vdprintf():
        Since glibc 2.10:
            _POSIX_C_SOURCE >= 200809L
        Before glibc 2.10:
            _GNU_SOURCE

DESCRIPTION
    The functions in the printf() family produce output according to a format as described below. The functions printf() and vprintf() write output to stdout, the standard output stream; fprintf() and vfprintf() write output to the given output stream; sprintf(), snprintf(), vsprintf() and vsnprintf() write to the
Manual page printf(3) line 1 (press h for help or q to quit)
```

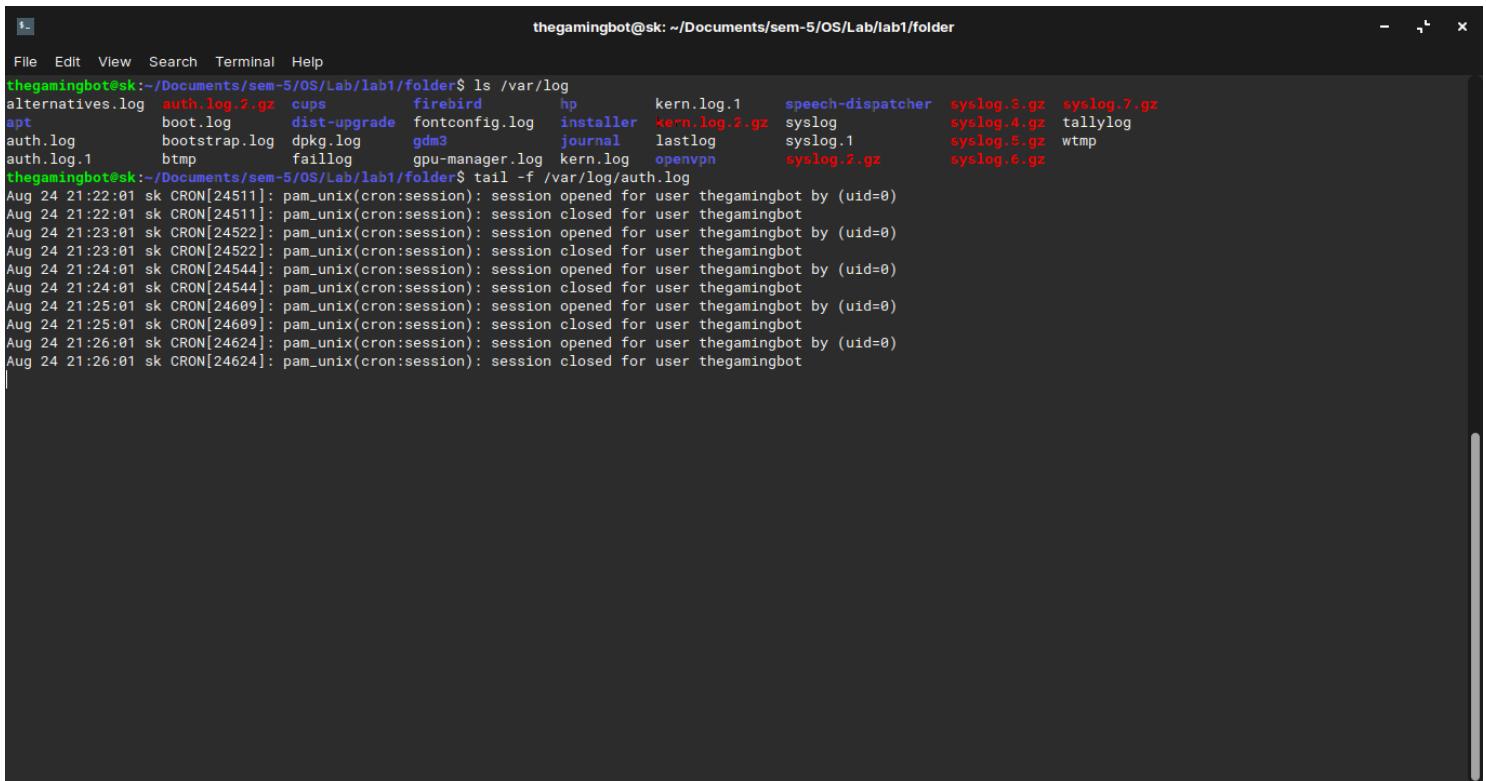
tail command: Print the ending 10 lines of a file

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt    a.txt      folder      'index.html?dv=win32'  'rm -r.png'    'tar xvf.png'
3.txt    b.txt      images.tar.gz 'index.html?dv=win64'  'tar cvf.png'   url-list.txt
4.txt    demo.txt   images.zip   mkdir.png          'tar tvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ tail b.txt
Tamil Nadu
Gujarat
Andhra Pradesh
Bihar
Uttar pradesh
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

tail -n [N]: Print the last n number of lines.

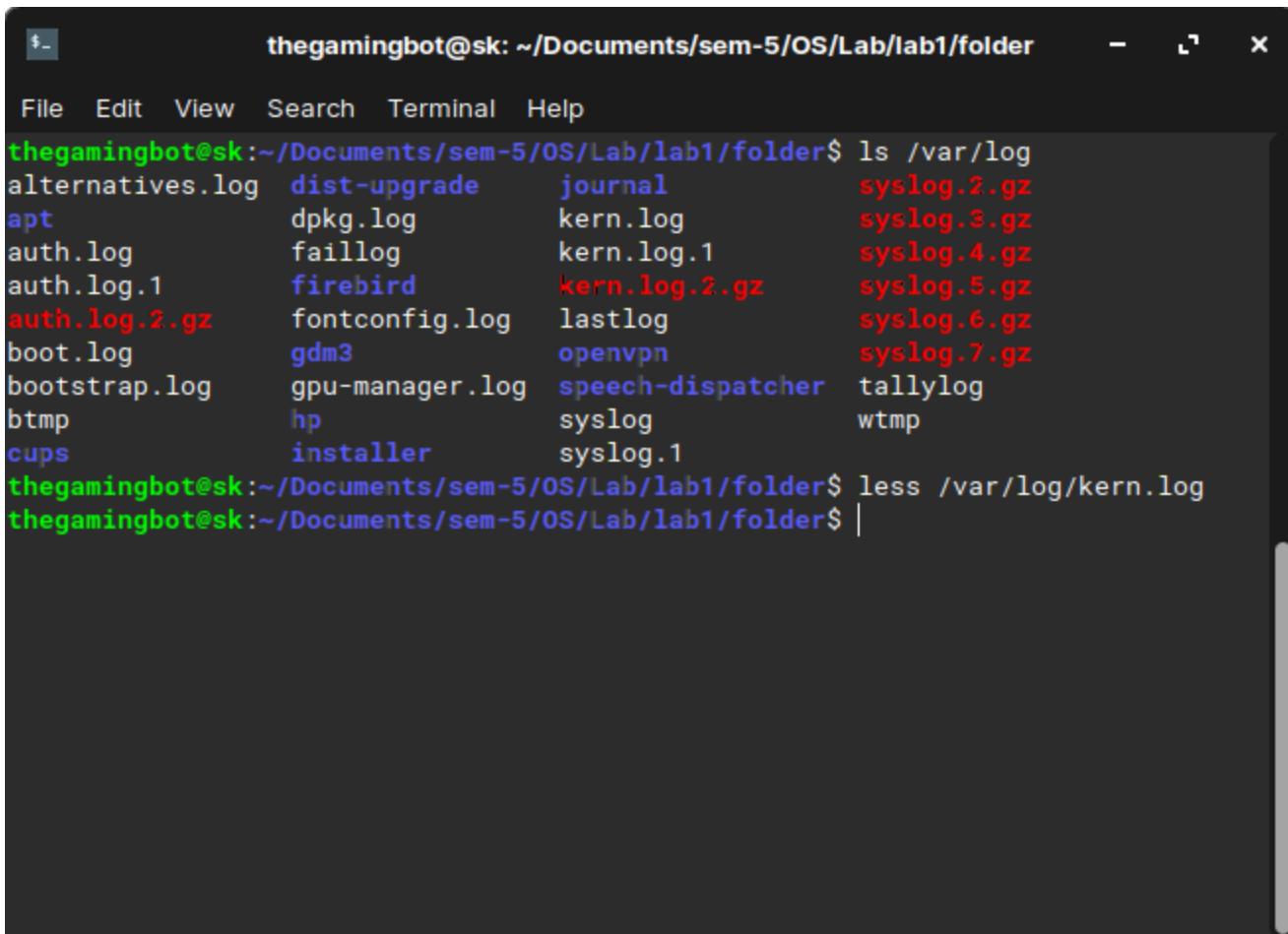
```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt    a.txt      folder      'index.html?dv=win32'  'rm -r.png'    'tar xvf.png'
3.txt    b.txt      images.tar.gz 'index.html?dv=win64'  'tar cvf.png'   url-list.txt
4.txt    demo.txt   images.zip   mkdir.png          'tar tvf.png'
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ tail -n 2 b.txt
Bihar
Uttar pradesh
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

tail -f: View the contents of a file in real time.



```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ tail -f /var/log/auth.log
Aug 24 21:22:01 sk CRON[24511]: pam_unix(cron:session): session opened for user thegamingbot by (uid=0)
Aug 24 21:22:01 sk CRON[24511]: pam_unix(cron:session): session closed for user thegamingbot
Aug 24 21:23:01 sk CRON[24522]: pam_unix(cron:session): session opened for user thegamingbot by (uid=0)
Aug 24 21:23:01 sk CRON[24522]: pam_unix(cron:session): session closed for user thegamingbot
Aug 24 21:24:01 sk CRON[24544]: pam_unix(cron:session): session opened for user thegamingbot by (uid=0)
Aug 24 21:24:01 sk CRON[24544]: pam_unix(cron:session): session closed for user thegamingbot
Aug 24 21:25:01 sk CRON[24609]: pam_unix(cron:session): session opened for user thegamingbot by (uid=0)
Aug 24 21:25:01 sk CRON[24609]: pam_unix(cron:session): session closed for user thegamingbot
Aug 24 21:26:01 sk CRON[24624]: pam_unix(cron:session): session opened for user thegamingbot by (uid=0)
Aug 24 21:26:01 sk CRON[24624]: pam_unix(cron:session): session closed for user thegamingbot
```

less command: Used to view large files in small parts



```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls /var/log
alternatives.log  dist-upgrade    journal          syslog.2.gz
apt              dpkg.log        kern.log         syslog.3.gz
auth.log         faillog        kern.log.1       syslog.4.gz
auth.log.1       firebird       kern.log.2.gz   syslog.5.gz
auth.log.2.gz    fontconfig.log lastlog         syslog.6.gz
boot.log         gdm3           openvpn        syslog.7.gz
bootstrap.log   gpu-manager.log speech-dispatcher tallylog
btmp             hp              syslog
cups             installer      syslog.1
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ less /var/log/kern.log
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x

File Edit View Search Terminal Help

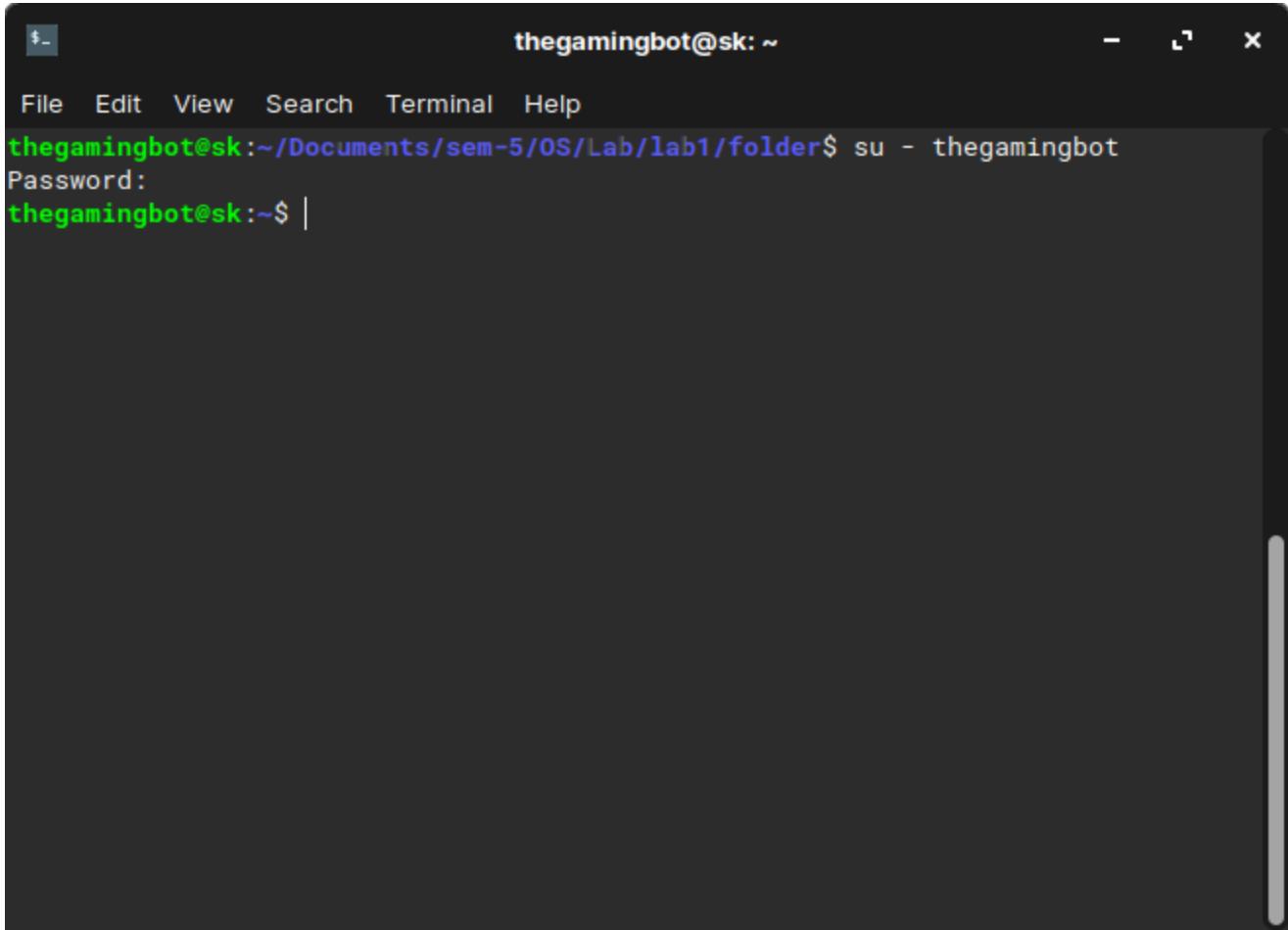
```
Aug 23 11:46:18 sk kernel: [ 421.999946] sysrq: HELP : loglevel(0-9) reboot(b)  
crash(c) terminate-all-tasks(e) memory-full-oom-kill(f) kill-all-tasks(i) thaw-f  
ilesystems(j) sak(k) show-backtrace-all-active-cpus(l) show-memory-usage(m) nice  
-all-RT-tasks(n) poweroff(o) show-registers(p) show-all-timers(q) unwind(r) sync(s)  
show-task-states(t) unmount(u) force-fb(v) show-blocked-tasks(w) dump-ftrace-  
buffer(z)  
Aug 23 11:46:30 sk kernel: [ 433.888606] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 11:46:46 sk kernel: [ 449.853507] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 11:46:54 sk kernel: [ 457.851553] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 11:47:10 sk kernel: [ 473.846983] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 11:47:50 sk kernel: [ 513.866042] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 11:49:00 sk kernel: [ 583.897016] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 11:49:02 sk kernel: [ 585.882514] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 11:49:04 sk kernel: [ 588.096372] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 11:49:18 sk kernel: [ 601.924644] rtw_pci 0000:02:00.0: failed to send h  
/var/log/kern.log
```

the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder - x

File Edit View Search Terminal Help

```
2c command  
Aug 23 12:02:33 sk kernel: [ 1396.901297] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 12:02:43 sk kernel: [ 1406.916870] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 12:02:59 sk kernel: [ 1422.916336] rtw_pci 0000:02:00.0: failed to send h  
2c command  
Aug 23 12:03:05 sk kernel: [ 1429.715639] kauditd_printk_skb: 74 callbacks suppr  
essed  
Aug 23 12:03:05 sk kernel: [ 1429.715641] audit: type=1400 audit(1598164385.942:  
86): apparmor="DENIED" operation="capable" profile="/snap/snapd/8790/usr/lib/sna  
pd/snap-confine" pid=3971 comm="snap-confine" capability=4 capname="fsetid"  
Aug 23 12:03:12 sk kernel: [ 1435.826112] audit: type=1400 audit(1598164392.054:  
87): apparmor="DENIED" operation="ptrace" profile="snap.discord.discord" pid=397  
1 comm="Discord" requested_mask="read" denied_mask="read" peer="unconfined"  
Aug 23 12:03:13 sk kernel: [ 1436.901844] audit: type=1107 audit(1598164393.130:  
88): pid=995 uid=103 auid=4294967295 ses=4294967295 msg='apparmor="DENIED" opera  
tion="dbus_method_call" bus="system" path="/" interface="org.freedesktop.DBus.O  
bjectManager" member="GetManagedObjects" mask="send" name="org.bluez" pid=4070 l  
abel="snap.discord.discord" peer_pid=1005 peer_label="unconfined"  
Aug 23 12:03:13 sk kernel: [ 1436.901844] exe="/usr/bin/dbus-daemon" sauid=103  
hostname=? addr=? terminal=?  
Aug 23 12:03:14 sk kernel: [ 1437.825717] audit: type=1107 audit(1598164394.054:  
:|
```

su command: Switch to a different account.



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it says "thegamingbot@sk: ~". Below that is a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The main area of the terminal shows the command "thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder\$ su - thegamingbot" followed by a password prompt "Password:". The command "thegamingbot@sk:~\$ |" is also visible at the bottom.

!..mysql command: Used to connect to a mysql database locally, or a remote server.

ifconfig -a: View all interfaces with status.

!..yum command: Used to view or configure a network interface

ifconfig -a: View all interfaces with status.

!..rpm command: Used to view or configure a network interface

ifconfig -a: View all interfaces with status.

ping command: Used to ping a remote host

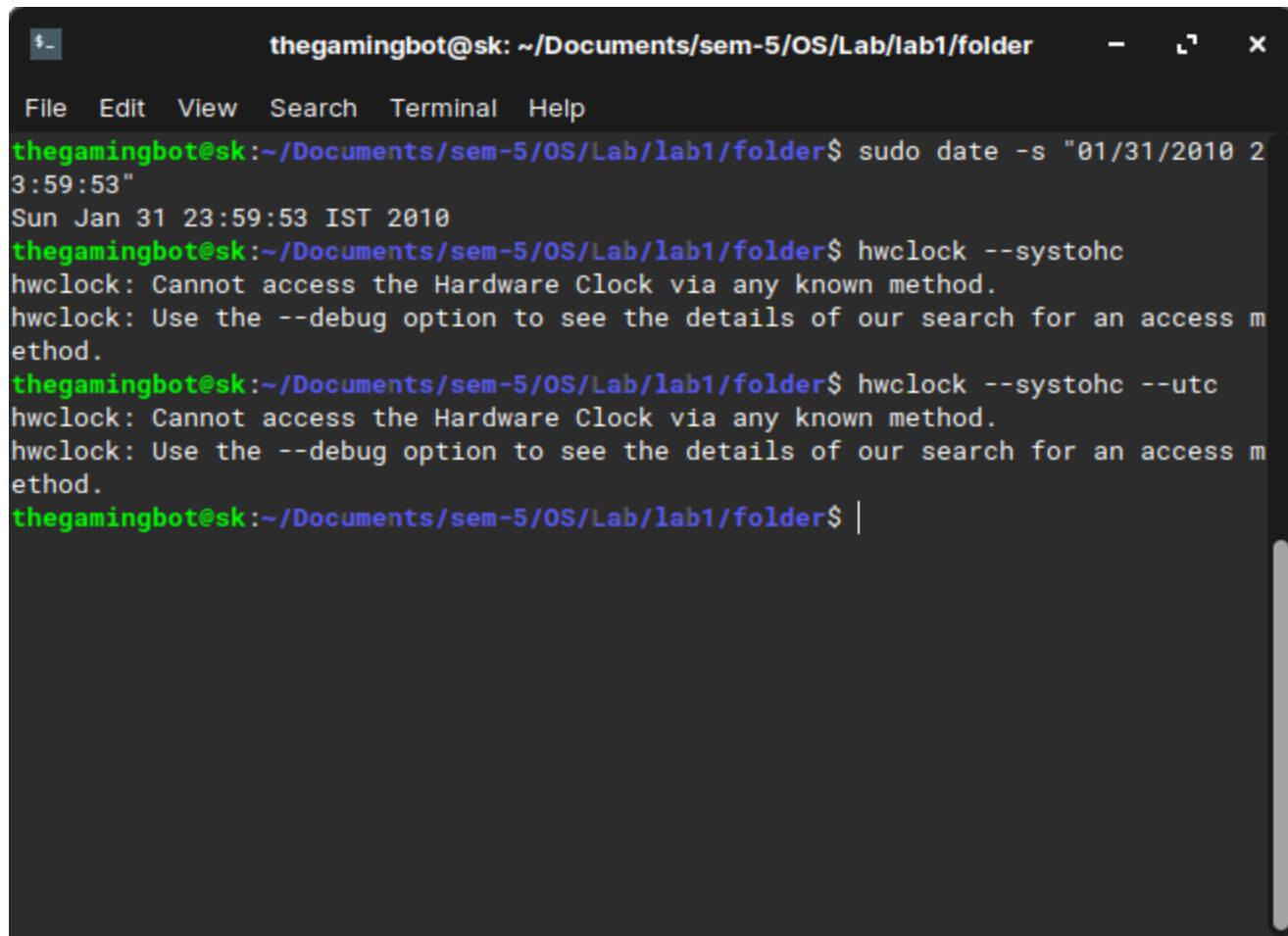
```
File Edit View Search Terminal Help
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ping 8.8.4.4
PING 8.8.4.4 (8.8.4.4) 56(84) bytes of data.
64 bytes from 8.8.4.4: icmp_seq=1 ttl=116 time=112 ms
64 bytes from 8.8.4.4: icmp_seq=2 ttl=116 time=21.1 ms
64 bytes from 8.8.4.4: icmp_seq=3 ttl=116 time=11.0 ms
64 bytes from 8.8.4.4: icmp_seq=4 ttl=116 time=78.2 ms
64 bytes from 8.8.4.4: icmp_seq=5 ttl=116 time=13.3 ms
64 bytes from 8.8.4.4: icmp_seq=6 ttl=116 time=130 ms
64 bytes from 8.8.4.4: icmp_seq=7 ttl=116 time=50.7 ms
64 bytes from 8.8.4.4: icmp_seq=8 ttl=116 time=16.5 ms
64 bytes from 8.8.4.4: icmp_seq=9 ttl=116 time=10.6 ms
64 bytes from 8.8.4.4: icmp_seq=10 ttl=116 time=10.7 ms
64 bytes from 8.8.4.4: icmp_seq=11 ttl=116 time=10.6 ms
64 bytes from 8.8.4.4: icmp_seq=12 ttl=116 time=48.4 ms
64 bytes from 8.8.4.4: icmp_seq=13 ttl=116 time=19.1 ms
```

ping -c [number]: Used to ping 'number' of times.

```
File Edit View Search Terminal Help
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ping -c 25 fast.com
PING fast.com (104.71.125.172) 56(84) bytes of data.
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=1 ttl=56 time=198 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=2 ttl=56 time=118 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=3 ttl=56 time=30.8 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=4 ttl=56 time=149 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=5 ttl=56 time=30.9 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=6 ttl=56 time=97.1 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=7 ttl=56 time=31.6 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=8 ttl=56 time=144 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=9 ttl=56 time=262 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=10 ttl=56 time=87.0 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=11 ttl=56 time=108 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=12 ttl=56 time=124 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=13 ttl=56 time=147 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=14 ttl=56 time=66.5 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=15 ttl=56 time=88.5 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=16 ttl=56 time=30.4 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=17 ttl=56 time=133 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=18 ttl=56 time=161 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=19 ttl=56 time=90.4 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=20 ttl=56 time=104 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=21 ttl=56 time=30.3 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=22 ttl=56 time=155 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=23 ttl=56 time=170 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=24 ttl=56 time=204 ms
64 bytes from a104-71-125-172.deploy.static.akamaitechnologies.com (104.71.125.172): icmp_seq=25 ttl=56 time=118 ms

--- fast.com ping statistics ---
25 packets transmitted, 25 received, 0% packet loss, time 24038ms
rtt min/avg/max/mdev = 30.357/115.174/262.926/59.214 ms
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

date command: Used to view or configure the date of the hardware



The screenshot shows a terminal window with the following content:

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ sudo date -s "01/31/2010 23:59:53"
Sun Jan 31 23:59:53 IST 2010
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ hwclock --systohc
hwclock: Cannot access the Hardware Clock via any known method.
hwclock: Use the --debug option to see the details of our search for an access method.
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ hwclock --systohc --utc
hwclock: Cannot access the Hardware Clock via any known method.
hwclock: Use the --debug option to see the details of our search for an access method.
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

wget command: Used to download software, music, etc..

```
File Edit View Search Terminal Help
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt 4.txt b.txt folder images.zip 'index.html?dv=win64' 'rm -r.png' 'tar tvf.png' url-list.txt
3.txt a.txt demo.txt images.tar.gz 'index.html?dv=win32' mkdir.png 'tar cvf.png' 'tar xvf.png'
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ wget http://prdownloads.sourceforge.net/sourceforge/nagios/nagios-3.2.1.tar.gz
--2020-08-24 21:45:26-- http://prdownloads.sourceforge.net/sourceforge/nagios/nagios-3.2.1.tar.gz
Resolving prdownloads.sourceforge.net (prdownloads.sourceforge.net)... 216.105.38.13
Connecting to prdownloads.sourceforge.net (prdownloads.sourceforge.net)|216.105.38.13|:80... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: http://downloads.sourceforge.net/project/nagios/nagios-3.x/nagios-3.2.1/nagios-3.2.1.tar.gz [following]
--2020-08-24 21:45:27-- https://excellmedia.dl.sourceforge.net/project/nagios/nagios-3.x/nagios-3.2.1/nagios-3.2.1.tar.gz
Resolving excellmedia.dl.sourceforge.net (excellmedia.dl.sourceforge.net)... 202.153.32.19
Connecting to excellmedia.dl.sourceforge.net (excellmedia.dl.sourceforge.net)|202.153.32.19|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3215350 (3.1M) [application/x-gzip]
Saving to: 'nagios-3.2.1.tar.gz'

nagios-3.2.1.tar.gz          100%[=====] 3.07M 674KB/s in 4.7s

2020-08-24 21:45:32 (674 KB/s) - 'nagios-3.2.1.tar.gz' saved [3215350/3215350]

thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt 4.txt b.txt folder images.zip 'index.html?dv=win64' nagios-3.2.1.tar.gz 'tar cvf.png' 'tar xvf.png'
3.txt a.txt demo.txt images.tar.gz 'index.html?dv=win32' mkdir.png 'rm -r.png' 'tar tvf.png' url-list.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$
```

wget -O: Download and rename the file

```
File Edit View Search Terminal Help
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt 4.txt b.txt folder images.zip 'index.html?dv=win64' nagios-3.2.1.tar.gz 'tar cvf.png' 'tar xvf.png'
3.txt a.txt demo.txt images.tar.gz 'index.html?dv=win32' mkdir.png 'rm -r.png' 'tar tvf.png' url-list.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ wget -O taglist.zip http://www.vim.org/scripts/download_script.php?src_id=7701
--2020-08-24 21:46:06-- http://www.vim.org/scripts/download_script.php?src_id=7701
Resolving www.vim.org (www.vim.org)... 202.221.179.29
Connecting to www.vim.org (www.vim.org)|202.221.179.29|:80... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://www.vim.org/scripts/download_script.php?src_id=7701 [following]
--2020-08-24 21:46:06-- https://www.vim.org/scripts/download_script.php?src_id=7701
Connecting to www.vim.org (www.vim.org)|202.221.179.29|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [application/octetstream]
Saving to: 'taglist.zip'

taglist.zip          [ => ] 49.07K 159KB/s in 0.3s

2020-08-24 21:46:08 (159 KB/s) - 'taglist.zip' saved [50243]

thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ ls
1.txt 4.txt b.txt folder images.zip 'index.html?dv=win64' nagios-3.2.1.tar.gz taglist.zip 'tar tvf.png' url-list.txt
3.txt a.txt demo.txt images.tar.gz 'index.html?dv=win32' mkdir.png 'rm -r.png' 'tar cvf.png' 'tar xvf.png'
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/folder$ |
```

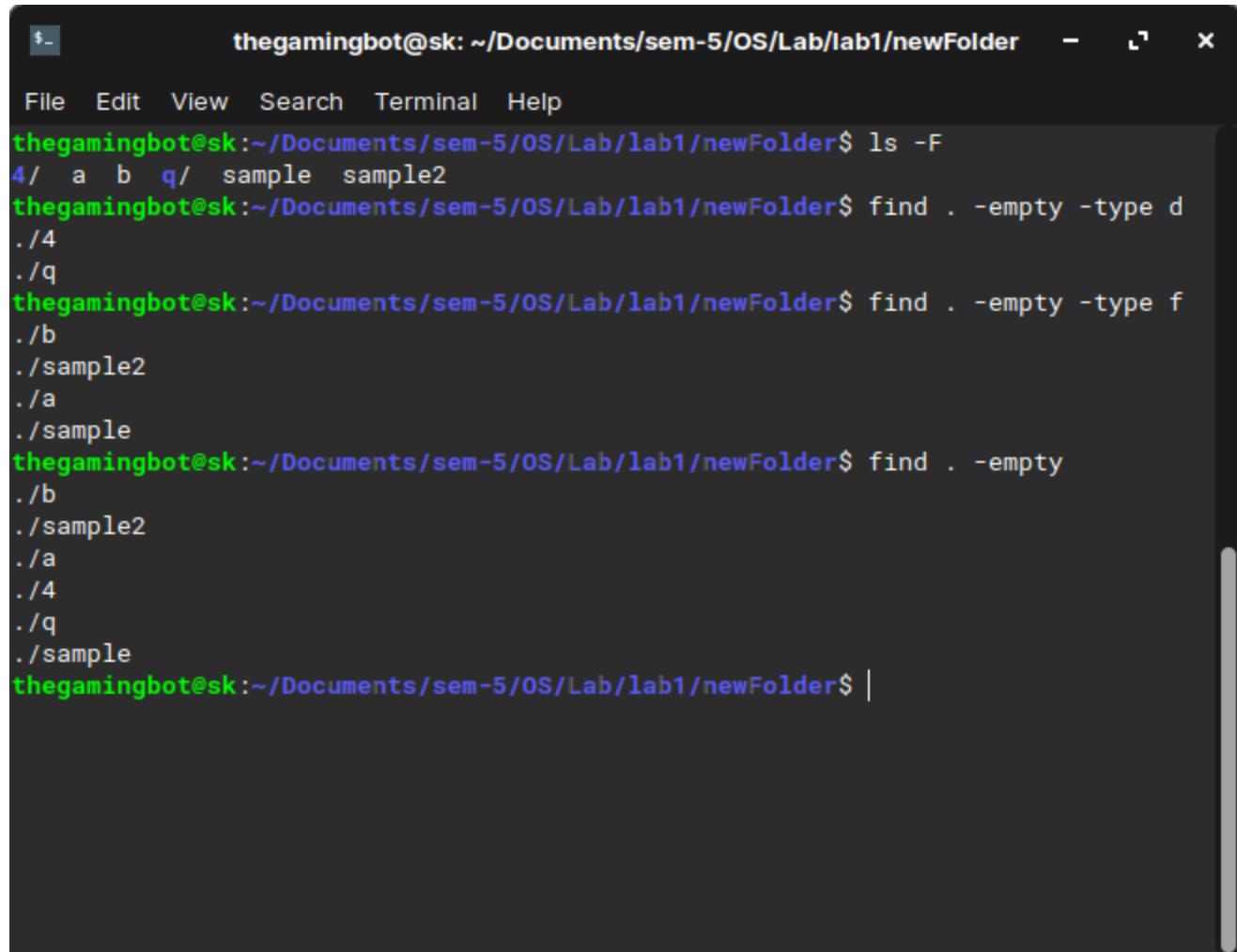
Question 2) Create a directory and create a file inside that directory.

The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the terminal type, and the current working directory: thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder. Below this is a menu bar with options: File, Edit, View, Search, Terminal, Help. The main area of the terminal shows the following command history:

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder folder.tar Materials
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ mkdir newFolder
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ ls
folder folder.tar Materials newFolder
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ cd newFolder
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ gedit sample &
[1] 29057
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
sample
[1]+ Done                  gedit sample
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ touch sample2
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
sample sample2
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

mkdir newFolder	/* creating a new folder */
cd newFolder	/* Navigate through directories */
gedit sample	/* GUI based (opens using the text editor) have to hit save manually */
touch sample2	/* Creates a new doc called sample2 */

Question 3) List the files and directories that are empty in a working directory.



```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - ⌂ x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls -F
4/ a b q/ sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ find . -empty -type d
./4
./q
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ find . -empty -type f
./b
./sample2
./a
./sample
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ find . -empty
./b
./sample2
./a
./4
./q
./sample
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

find . -empty -type d /* finds empty directories in the current location */
find . -empty -type f /* finds empty files in the current location */
find . -empty /* finds empty files and directory in the current location */

Question 4) Show commands to delete empty and non-empty directory.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls -F
4/ a b q/ sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ find . -empty -type d -delete
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ mkdir q
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls -F
a b q/ sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ rmdir q
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ mkdir folder
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cd folder
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder/folder$ touch sample
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder/folder$ touch sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder/folder$ mkdir a
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder/folder$ ls
a sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder/folder$ cd ..
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ rm -r folder
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

find . -empty -type d -delete

/* finds and deletes empty directories in the current location */

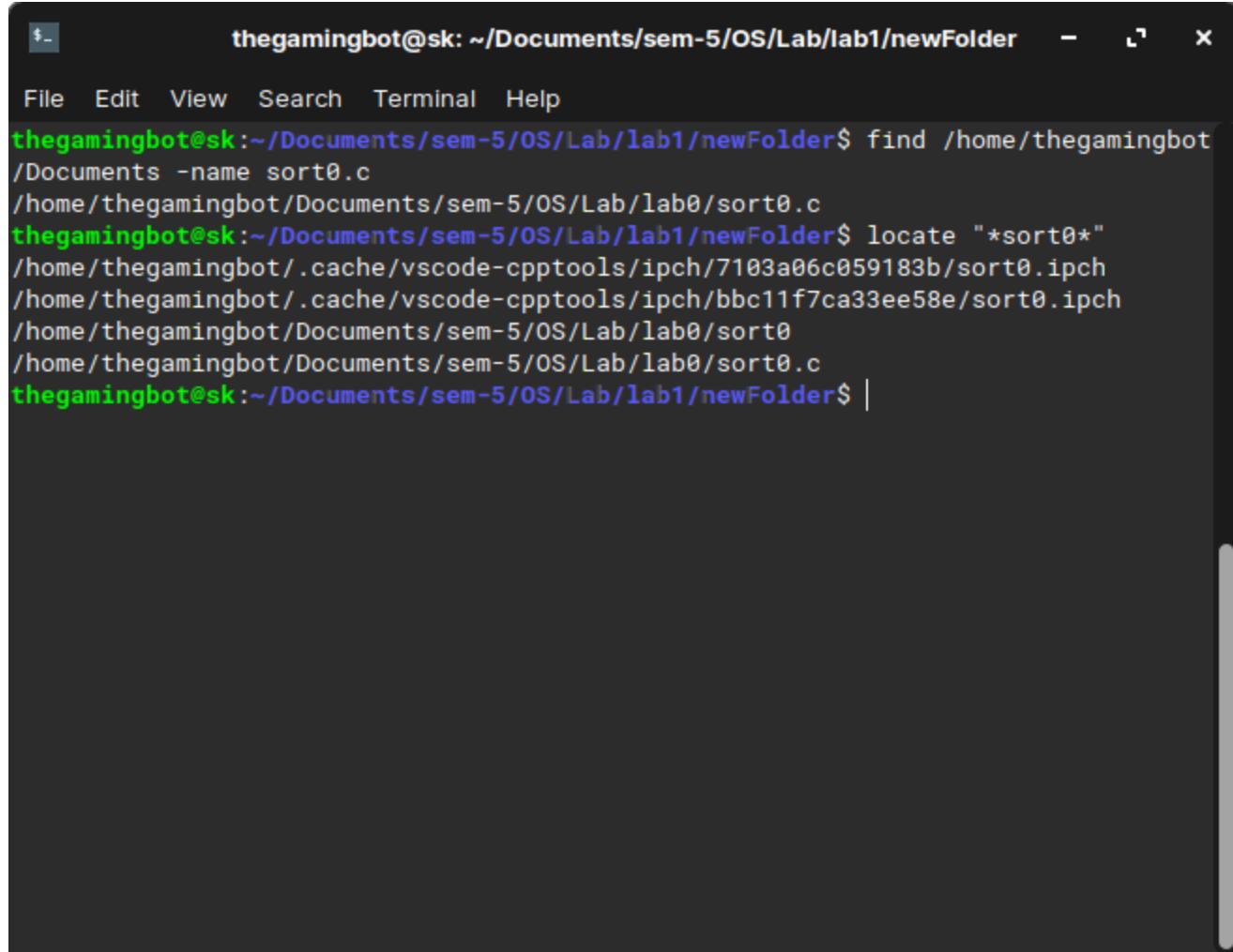
rmdir dir1

/* deletes dir if its empty */

rm -r dir2

/* deletes dir and the contents inside r is for recursion */

Question 5) Find the location of the input files using locate and find command.



```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - ⌂ x
File Edit View Search Terminal Help
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ find /home/thebgamingbot
/Documents -name sort0.c
/home/thebgamingbot/Documents/sem-5/OS/Lab/lab0/sort0.c
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ locate "*sort0*"
/home/thebgamingbot/.cache/vscode-cpptools/ipch/7103a06c059183b/sort0.ipch
/home/thebgamingbot/.cache/vscode-cpptools/ipch/bbc11f7ca33ee58e/sort0.ipch
/home/thebgamingbot/Documents/sem-5/OS/Lab/lab0/sort0
/home/thebgamingbot/Documents/sem-5/OS/Lab/lab0/sort0.c
thebgamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

find / inpFile	/* Lists all the files with name inpFile */
sudo updatedb	/* Updaters the database to use locate */
locate “*inpFile*”	/* Searches for all files with the name inpFile */

Question 6) View the user permissions and ownership of the files in the current directory and change the ownership of some selected files to another user.

The screenshot shows a terminal window with the following session:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls -l
total 0
-rw-r--r-- 1 thegamingbot thegamingbot 0 Aug 26 17:11 a
-rw-r--r-- 1 thegamingbot thegamingbot 0 Aug 26 17:11 b
-rw-rw-r-- 1 thegamingbot thegamingbot 0 Aug 26 17:09 sample
-rw-r--r-- 1 thegamingbot thegamingbot 0 Aug 26 17:10 sample2
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ chmod 665 a
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ chown thegamingbot a
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls -l
total 0
-rw-rw-r-x 1 thegamingbot thegamingbot 0 Aug 26 17:11 a
-rw-r--r-- 1 thegamingbot thegamingbot 0 Aug 26 17:11 b
-rw-rw-r-- 1 thegamingbot thegamingbot 0 Aug 26 17:09 sample
-rw-r--r-- 1 thegamingbot thegamingbot 0 Aug 26 17:10 sample2
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

ls -l
chmod 665 fileName
chown newOwner fileName

/* Lists all files with permissions and user name.
/* Changes the permission of a file owner & group
can read and write, others can read and execute */
/* Changes the ownership to newOwner */

Question 7) List all the files in the current directory and subdirectories.

The screenshot shows a terminal window with the following content:

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls -LR
.:
a b folder sample sample2

./folder:
befag.c folder vknefkn.c

./folder/folder:
1.c dajvnds.c
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

ls /* Lists all directories and files in current directory */
ls -LR /* Lists all directories and files in subdirectories as well */

Question 8) Concatenate the two input files: “sample1.txt” and “sample2.txt” and save it to a new file named “Input”.

The screenshot shows a terminal window with the following command history:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder sample1.txt sample2.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample1.txt sample2.txt > input.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder input.txt sample1.txt sample2.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat input.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Karnataka
Kerala
Chhattisgarh
Uttar Pradesh
Goa
Gujarat
Haryana
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

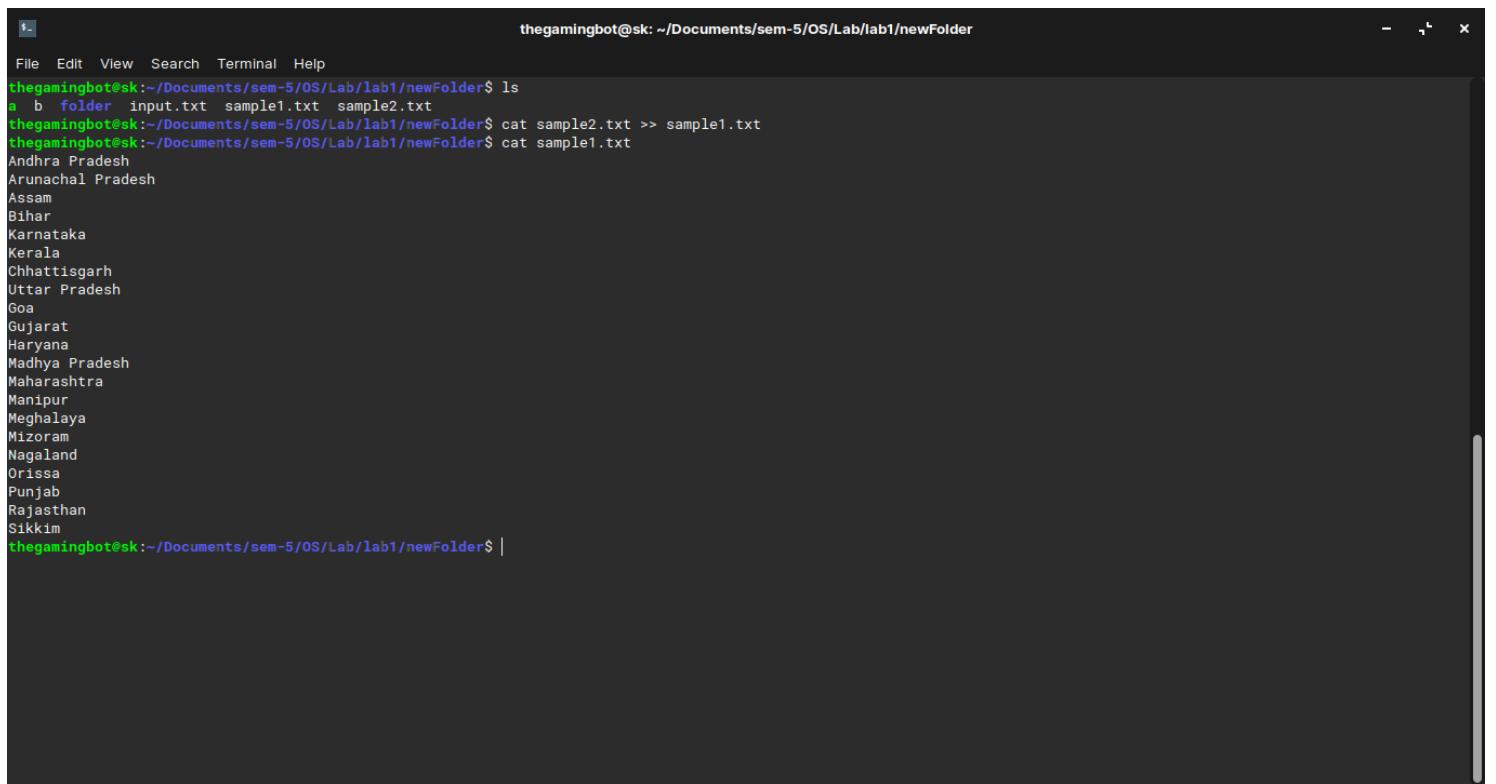
`cat sample1.txt sample2.txt > input`
/* concatenates contents of sample2.txt to sample1.txt and saves it in ‘input’*/

Question 9) Copy the contents of file 'sample2.txt' to 'sample.txt'

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cp sample sample2
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample sample2
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Karnataka
Kerala
Chhattisgarh
Uttar Pradesh
Goa
Gujarat
Haryana
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Karnataka
Kerala
Chhattisgarh
Uttar Pradesh
Goa
Gujarat
Haryana
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

cp sample2.txt sample.txt /* Copies text from sample2.txt to sample.txt */

Question 10) Append the file contents of input file ‘sample2.txt’ to the end of the first input file ‘sample1.txt’.

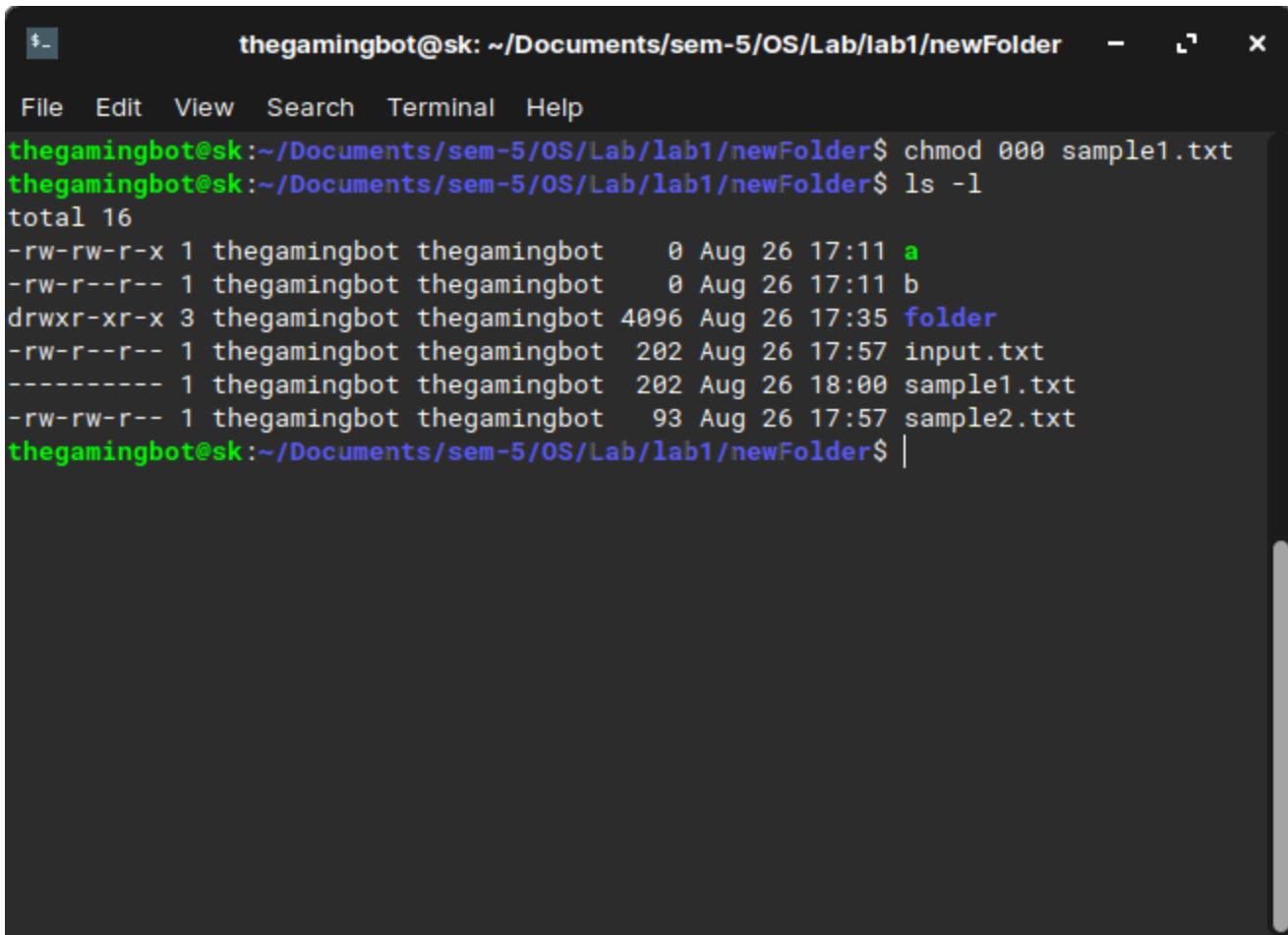


The screenshot shows a terminal window with a dark background and light-colored text. At the top, it says "thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder". The terminal window has a title bar with standard window controls (minimize, maximize, close). Below the title bar, there is a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The main area of the terminal contains the following text:

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder input.txt sample1.txt sample2.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample2.txt >> sample1.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample1.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Karnataka
Kerala
Chhattisgarh
Uttar Pradesh
Goa
Gujarat
Haryana
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

cat sample2.txt >> sample1.txt
/* Concatenates contents of sample2.txt to sample1.txt */

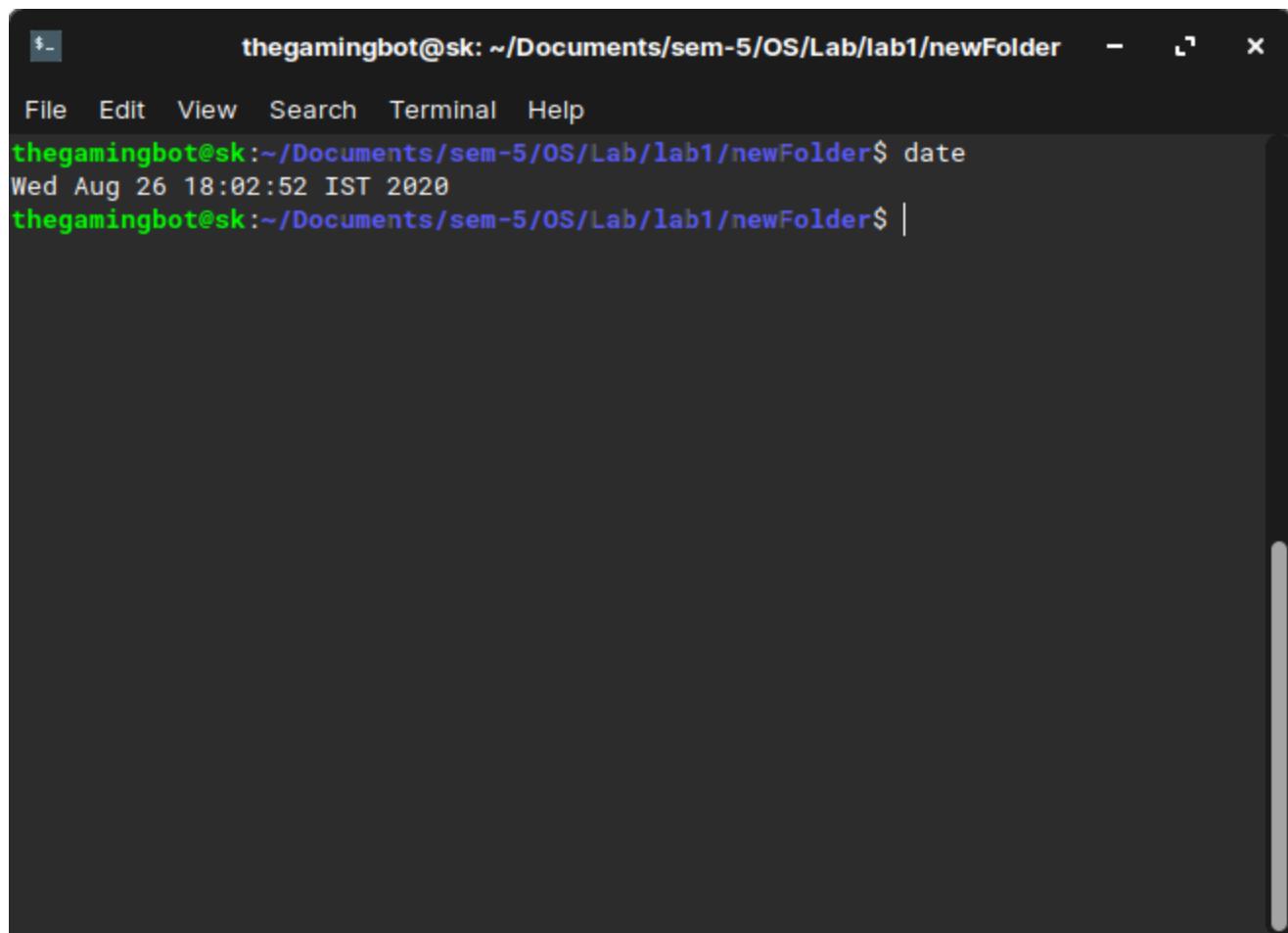
Question 11) Remove the permission for the users to read, write and execute the file ‘sample.txt’.



```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - ⌛ x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ chmod 000 sample1.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls -l
total 16
-rw-rw-r-x 1 theagingbot theagingbot    0 Aug 26 17:11 a
-rw-r--r-- 1 theagingbot theagingbot    0 Aug 26 17:11 b
drwxr-xr-x 3 theagingbot theagingbot 4096 Aug 26 17:35 folder
-rw-r--r-- 1 theagingbot theagingbot  202 Aug 26 17:57 input.txt
----- 1 theagingbot theagingbot  202 Aug 26 18:00 sample1.txt
-rw-rw-r-- 1 theagingbot theagingbot   93 Aug 26 17:57 sample2.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

chmod 000 sample1.txt /* Removes the permission for everyone */

Question 12) Display the current date with the day of week, month, time and the year.



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the current directory (~Documents/sem-5/OS/Lab/lab1/newFolder), and standard window control icons (minimize, maximize, close). Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the command `date` being run, followed by its output: "Wed Aug 26 18:02:52 IST 2020". The prompt then changes to `thelegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |`, indicating the user is ready for the next command.

```
thelegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
thelegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ date
Wed Aug 26 18:02:52 IST 2020
thelegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

date /* Shows the current day, date, month, time and time zone */

Question 13) Show the calendar of previous, current and next month.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cal -3
          2020
      July         August        September
Su Mo Tu We Th Fr Sa   Su Mo Tu We Th Fr Sa   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
  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
19 20 21 22 23 24 25 26 27 28 29 30 31           27 28 29 30
26 27 28 29 30 31           30 31
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

cal -3 /* Displays the calendar of previous, current and next month. */

Question 14) Sort the contents of the file ‘sample1.txt’ in alphabetical order.

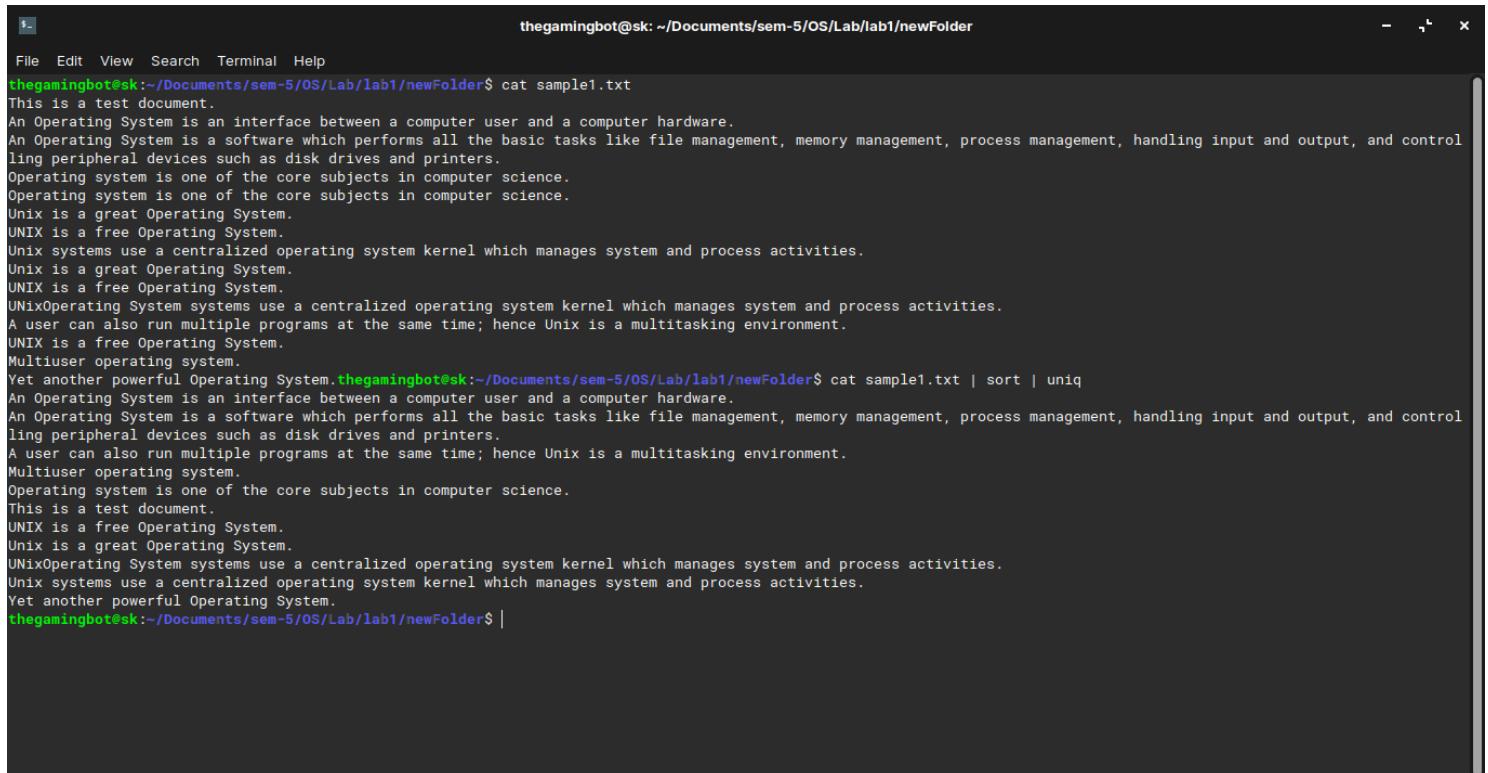


The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the current directory (~Documents/sem-5/OS/Lab/lab1/newFolder), and standard window control icons (minimize, maximize, close). Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the command `sort sample3.txt` being run, followed by the sorted list of state names. The sorted list includes: Madhya Pradesh, Madhya Pradesh, Maharashtra, Maharashtra, Manipur, Manipur, Meghalaya, Meghalaya, Mizoram, Mizoram, Nagaland, Nagaland, Orissa, Orissa, Punjab, Punjab, Rajasthan, Rajasthan, and Sikkim. The command prompt at the bottom is `theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |`.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ sort sample3.txt
Madhya Pradesh
Madhya Pradesh
Maharashtra
Maharashtra
Manipur
Manipur
Meghalaya
Meghalaya
Mizoram
Mizoram
Nagaland
Nagaland
Orissa
Orissa
Punjab
Punjab
Rajasthan
Rajasthan
Sikkim
Sikkim
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

sort sample1.txt /* Each line is sorted based on alphabetic order */

Question 15) Erase duplicate records in the file ‘sample1.txt’ and display only the unique records



```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample1.txt
This is a test document.
An Operating System is an interface between a computer user and a computer hardware.
An Operating System is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
Operating system is one of the core subjects in computer science.
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Unix is a great Operating System.
UNIX is a free Operating System.
Unix systems use a centralized operating system kernel which manages system and process activities.
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UNIX is a free Operating System.
UNIXOperating System systems use a centralized operating system kernel which manages system and process activities.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
UNIX is a free Operating System.
Multiuser operating system.
Yet another powerful Operating System.thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample1.txt | sort | uniq
An Operating System is an interface between a computer user and a computer hardware.
An Operating System is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
Multiuser operating system.
Operating system is one of the core subjects in computer science.
This is a test document.
UNIX is a free Operating System.
Unix is a great Operating System.
UNIXOperating System systems use a centralized operating system kernel which manages system and process activities.
Unix systems use a centralized operating system kernel which manages system and process activities.
Yet another powerful Operating System.
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

`cat sample1.txt | sort |uniq` /* Prints the unique lines in sample1.txt*/

Question 16) Add line numbers to the file ‘sample2.txt’

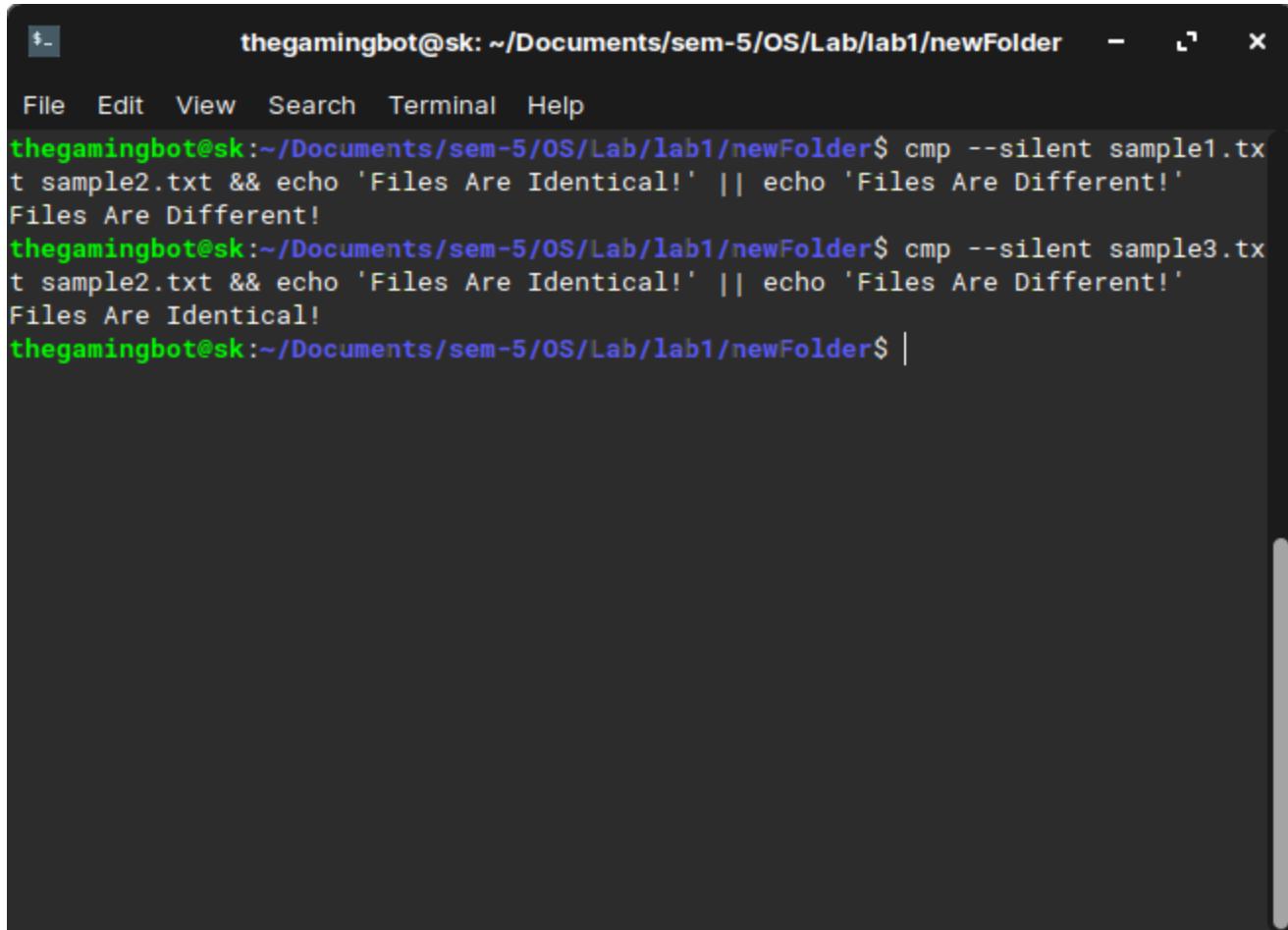
```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - ⌂ x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ nl -s "." sample2.txt
1.Madhyā Pradesha
2.Maharashtra
3.Manipur
4.Meghalaya
5.Mizoram
6.Nagaland
7.Orissa
8.Punjab
9.Rajasthan
10.Sikkim
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

nl -s "." sample2.txt /* adds a number to each line (Ex: 1. Line1) */

Question 17) Find out whether the two pairs of input files are identical or not.

Compare sample1.txt and sample2.txt

Compare sample2.txt and sample.txt



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the current directory (~/Documents/sem-5/OS/Lab/lab1/newFolder), and standard window control buttons (minimize, maximize, close). Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows command-line interactions:

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ cmp --silent sample1.txt sample2.txt && echo 'Files Are Identical!' || echo 'Files Are Different!'
Files Are Different!
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ cmp --silent sample3.txt sample2.txt && echo 'Files Are Identical!' || echo 'Files Are Different!'
Files Are Identical!
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

cmp --silent file1 file2 && echo 'Files Are Identical!' || echo 'Files Are Different!'

/* Echoes 'Files Are Identical' if cmp is true and 'Files Are Different' if cmp is false*/

Question 18) Show how the input file “sample1.txt” differs line by line from “sample2.txt” in context and unified mode.

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - ⌂ ×
File Edit View Search Terminal Help
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ diff sample1.txt sample2.txt -c
*** sample1.txt 2020-08-26 18:13:05.753806796 +0530
--- sample2.txt 2020-08-26 17:57:18.710791640 +0530
*****
*** 1,11 ****
! Andhra Pradesh
! Arunachal Pradesh
! Assam
! Bihar
! Karnataka
! Kerala
! Chhattisgarh
! Uttar Pradesh
! Goa
! Gujarat
! Haryana
--- 1,10 ----
! Madhya Pradesh
! Maharashtra
! Manipur
! Meghalaya
! Mizoram
! Nagaland
! Orissa
! Punjab
! Rajasthan
! Sikkim
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

diff sample1.txt sample2.txt -c /* context mode */

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - □ ×  
File Edit View Search Terminal Help  
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ diff sample1.txt sample2.txt -u  
--- sample1.txt 2020-08-26 18:13:05.753806796 +0530  
+++ sample2.txt 2020-08-26 17:57:18.710791640 +0530  
@@ -1,11 +1,10 @@  
-Andhra Pradesh  
-Arunachal Pradesh  
-Assam  
-Bihar  
-Karnataka  
-Kerala  
-Chhattisgarh  
-Uttar Pradesh  
-Goa  
-Gujarat  
-Haryana  
+Madhya Pradesh  
+Maharashtra  
+Manipur  
+Meghalaya  
+Mizoram  
+Nagaland  
+Orissa  
+Punjab  
+Rajasthan  
+Sikkim  
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

diff sample1.txt sample2.txt -u /* unified mode */

Question 19) Solve the arithmetic expression: $((8+12)*(5-3))/2$ using linux commands.

The screenshot shows a terminal window with the following session:

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ var1=$((8+12))
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ var2=$((5-3))
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ans=$((var1*var2/2))
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ echo $ans
20
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

```
var1=$((8+12))          // creating a new variable
var2=$((5-3))            // creating a second variable
ans=$((var1*var2/2))     // Answer
```

Question 20) Cut and display the first 10 characters of every line of the file “Input.txt”.



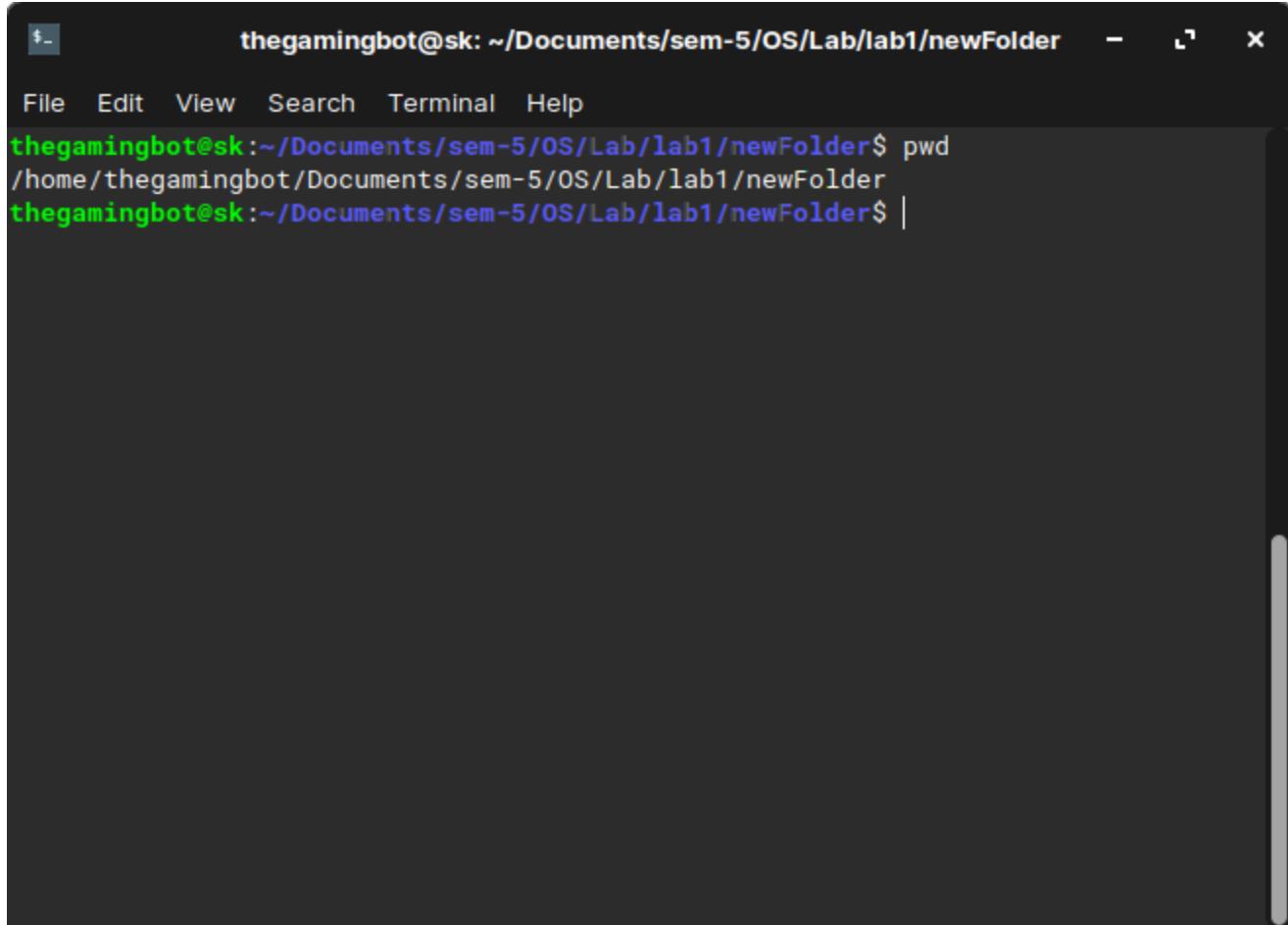
The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the current directory (~Documents/sem-5/OS/Lab/lab1/newFolder), and several window control icons. Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the command `cut -b 1-10 sample1.txt` being run, followed by the output which lists the first 10 characters of each line from the file. The output includes: Andhra Pra, Arunachal, Assam, Bihar, Karnataka, Kerala, Chhattisga, Uttar Prad, Goa, Gujarat, and Haryana. The command prompt `thelegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$` appears at the bottom of the terminal window.

```
thelegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ cut -b 1-10 sample1.txt
Andhra Pra
Arunachal
Assam
Bihar
Karnataka
Kerala
Chhattisga
Uttar Prad
Goa
Gujarat
Haryana
thelegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$
```

`cut -b 1-10 inpFile`

/ Cuts the 1st 10 bytes of each line in inpFile. Each char is 1 byte. */*

Question 21) Print the name of the current working directory.



A screenshot of a terminal window titled "the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder". The window has standard OS X-style controls at the top right. The menu bar includes "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal itself shows the command "pwd" being run, followed by its output "/home/the gamingbot/Documents/sem-5/OS/Lab/lab1/newFolder". The prompt "the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder\$ |" is visible at the bottom, indicating the user is ready for the next command.

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ pwd
/home/the gamingbot/Documents/sem-5/OS/Lab/lab1/newFolder
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

pwd // prints present working directory

Question 22) Process Status

a. List all the running processes with their corresponding PIDs.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ ps -ef
UID  PID  PPID  C STIME TTY      TIME CMD
root   1    0 Aug25 ?        00:03:05 /sbin/init splash
root   2    0 Aug25 ?        00:00:00 [kthreadd]
root   3    2 Aug25 ?        00:00:00 [rcu_gp]
root   4    2 Aug25 ?        00:00:00 [rcu_par_gp]
root   6    2 Aug25 ?        00:00:00 [kworker/0:0H-kb]
root   9    2 Aug25 ?        00:00:00 [mm_percpu_wq]
root  10   2 Aug25 ?        00:00:03 [ksoftirqd/0]
root  11   2 Aug25 ?        00:02:15 [rcu_sched]
root  12   2 Aug25 ?        00:00:11 [migration/0]
root  13   2 Aug25 ?        00:00:00 [idle_inject/0]
root  14   2 Aug25 ?        00:00:00 [cpuhp/0]
root  15   2 Aug25 ?        00:00:00 [cpuhp/1]
root  16   2 Aug25 ?        00:00:00 [idle_inject/1]
root  17   2 Aug25 ?        00:00:00 [migration/1]
root  18   2 Aug25 ?        00:00:04 [ksoftirqd/1]
root  20   2 Aug25 ?        00:00:00 [kworker/1:0H-kb]
root  21   2 Aug25 ?        00:00:00 [cpuhp/2]
root  22   2 Aug25 ?        00:00:00 [idle_inject/2]
root  23   2 Aug25 ?        00:00:02 [migration/2]
root  24   2 Aug25 ?        00:00:04 [ksoftirqd/2]
root  26   2 Aug25 ?        00:00:07 [kworker/2:0H-ev]
root  27   2 Aug25 ?        00:00:00 [cpuhp/3]
root  28   2 Aug25 ?        00:00:00 [idle_inject/3]
root  29   2 Aug25 ?        00:00:00 [migration/3]
root  30   2 Aug25 ?        00:00:02 [ksoftirqd/3]
root  32   2 Aug25 ?        00:00:00 [kworker/3:0H-kb]
root  33   2 Aug25 ?        00:00:00 [kdevtmpfs]
root  34   2 Aug25 ?        00:00:00 [netns]
root  35   2 Aug25 ?        00:00:00 [rcu_tasks_kthre]
root  36   2 Aug25 ?        00:00:21 [kaudittd]
root  37   2 Aug25 ?        00:00:00 [khungtaskd]
root  38   2 Aug25 ?        00:00:00 [oom_reaper]
root  39   2 Aug25 ?        00:00:00 [writeback]
root  40   2 Aug25 ?        00:00:00 [kcompactd0]
root  41   2 Aug25 ?        00:00:00 [ksmd]
root  42   2 Aug25 ?        00:00:00 [khugepaged]
root 136   2 Aug25 ?        00:00:00 [kintegrityvd]

theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ ps -ef
UID  PID  PPID  C STIME TTY      TIME CMD
root   1    0 Aug25 ?        00:00:00 [khugepaged]
root  136   2 Aug25 ?        00:00:00 [kintegrityd]
root  137   2 Aug25 ?        00:00:00 [kblockd]
root  138   2 Aug25 ?        00:00:00 [blkcg_punt_bio]
root  139   2 Aug25 ?        00:00:00 [tpm_dev_wq]
root  140   2 Aug25 ?        00:00:00 [ata_sff]
root  141   2 Aug25 ?        00:00:00 [md]
root  142   2 Aug25 ?        00:00:00 [edac-poller]
root  143   2 Aug25 ?        00:00:00 [devfreq_wq]
root  144   2 Aug25 ?        00:00:00 [watchdogd]
root  148   2 Aug25 ?        00:00:30 [kswapd0]
root  149   2 Aug25 ?        00:00:00 [ecryptfs-kthrea]
root  152   2 Aug25 ?        00:00:00 [kthrotld]
root  153   2 Aug25 ?        00:00:00 [irq/122-aerdrv]
root  154   2 Aug25 ?        00:00:00 [irq/123-aerdrv]
root  155   2 Aug25 ?        00:00:00 [acpi_thermal_pm]
root  156   2 Aug25 ?        00:00:00 [vfio-irqfd-clea]
root  159   2 Aug25 ?        00:00:00 [ipve_addrconf]
root  170   2 Aug25 ?        00:00:00 [kstrp]
root  174   2 Aug25 ?        00:00:00 [kworker/u9:0-hc]
root  190   2 Aug25 ?        00:00:00 [charger_manager]
root  246   2 Aug25 ?        00:00:00 [scsi_eh_0]
root  247   2 Aug25 ?        00:00:00 [scsi_tmf_0]
root  248   2 Aug25 ?        00:00:00 [scsi_eh_1]
root  249   2 Aug25 ?        00:00:00 [scsi_tmf_1]
root  250   2 Aug25 ?        00:00:00 [scsi_eh_2]
root  251   2 Aug25 ?        00:00:00 [scsi_tmf_2]
root  256   2 Aug25 ?        00:00:09 [kworker/2:1H-ev]
root  260   2 Aug25 ?        00:00:16 [kworker/3:1H-ev]
root  277   2 Aug25 ?        00:00:21 [kworker/1:1H-ev]
root  278   2 Aug25 ?        00:00:00 [uas]
root  279   2 Aug25 ?        00:00:00 [scsi_eh_3]
root  280   2 Aug25 ?        00:00:00 [scsi_tmf_3]
root  281   2 Aug25 ?        00:00:18 [kworker/0:1H-ev]
root  328   2 08:12 ?        00:00:00 [irq/128-me1_me]
root  337   1 13 Aug25 ?        04:31:42 @sbin/plmouthd --mode=boot --attach-to-session --pid-file=/run/plmouth/pid
root  367   2 Aug25 ?        00:00:20 [jbd2/sdb1-8]
root  368   2 Aug25 ?        00:00:00 [ext4-rsv-conver]
root  410   1 0 Aug25 ?        00:04:00 /lib/systemd/systemd-journald
```

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
root 417 1055 0 08:12 ? 00:00:00 /sbin/dhclient -d -q -sf /usr/lib/NetworkManager/nm-dhcp-helper -pf /run/dhclient-wlp2s0.pid -lf /var/lib/NetworkManager
root 433 1 0 Aug25 ? 00:00:13 /lib/systemd/systemd-udevd
root 483 2 0 Aug25 ? 00:05:24 [irq/108-ELAN070]
root 485 2 0 Aug25 ? 00:00:00 [loop0]
root 515 2 0 Aug25 ? 00:00:00 [loop1]
root 519 2 0 Aug25 ? 00:00:00 [loop2]
root 524 2 0 Aug25 ? 00:00:01 [loop3]
root 526 2 0 Aug25 ? 00:00:00 [loop4]
root 527 2 0 Aug25 ? 00:00:00 [loop5]
root 528 2 0 Aug25 ? 00:00:00 [cryptd]
root 563 2 0 Aug25 ? 00:00:00 [loop6]
root 565 2 0 Aug25 ? 00:00:00 [loop7]
root 566 2 0 Aug25 ? 00:00:00 [loop8]
root 567 2 0 Aug25 ? 00:00:00 [loop9]
root 571 2 0 Aug25 ? 00:00:00 [cfg80211]
root 572 2 0 Aug25 ? 00:00:00 [loop10]
root 573 2 0 Aug25 ? 00:00:00 [loop11]
root 575 2 0 Aug25 ? 00:00:00 [loop12]
root 576 2 0 Aug25 ? 00:00:00 [loop13]
root 578 2 0 Aug25 ? 00:00:00 [loop15]
root 612 2 0 Aug25 ? 00:13:21 [irq/130-rtwpc1]
systemd+ 989 1 0 Aug25 ? 00:00:00 /lib/systemd/systemd-timesyncd
systemd+ 990 1 0 Aug25 ? 00:00:41 /lib/systemd/systemd-resolved
root 1018 1 0 Aug25 ? 00:00:06 /usr/sbin/ModemManager --filter-policy=strict
root 1019 1 0 Aug25 ? 00:00:00 /usr/sbin/cron -f
root 1020 1 0 Aug25 ? 00:00:07 /usr/sbin/irqbalance --foreground
root 1022 1 0 Aug25 ? 00:00:09 /usr/lib/udisks2/udisksd
root 1024 1 0 Aug25 ? 00:00:12 /usr/sbin/acpid
root 1025 1 0 Aug25 ? 00:00:02 /lib/systemd/systemd-logind
root 1030 1 0 Aug25 ? 00:00:15 /usr/sbin/thermald --no-daemon --dbus-enable
message+ 1032 1 0 Aug25 ? 00:00:20 /usr/bin/dbus-daemon --system --address=systemd: --nofork --nrepidfile --systemd-activation --syslog-only
root 1055 1 0 Aug25 ? 00:00:23 /usr/sbin/NetworkManager --no-daemon
root 1056 1 0 Aug25 ? 00:00:00 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
root 1058 1 0 Aug25 ? 00:00:02 /sbin/wpa_supplicant -u -s -0 /run/wpa_supplicant
root 1060 1 0 Aug25 ? 00:00:38 /usr/lib/accounts-service/accounts-daemon
root 1062 1 0 Aug25 ? 00:00:00 /usr/lib/bluetooth/bluetoothd
avahi 1064 1 0 Aug25 ? 00:00:04 avahi-daemon: running [sk.local]
syslog 1069 1 0 Aug25 ? 00:00:09 /usr/sbin/rsyslogd -n
1070 1 0 Aug25 ? 00:00:00 /usr/lib/rsyslogd-5
```

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
root 1070 1 0 Aug25 ? 00:01:40 /usr/lib/snapd/snapd
root 1073 1 0 Aug25 ? 00:00:02 /usr/lib/policykit-1/polkitd --no-debug
avahi 1077 1064 0 Aug25 ? 00:00:00 avahi-daemon: chroot helper
root 1078 1 0 Aug25 ? 00:00:00 /usr/sbin/cups-browsed
root 1120 1 0 Aug25 ? 00:00:00 /bin/plymouth --wait
root 1128 1 0 Aug25 ? 00:00:00 /usr/sbin/gdm3
root 1191 1128 0 Aug25 ? 00:00:00 gdm-session-worker [pam/gdm-autologin]
thegami+ 1214 1 0 Aug25 ? 00:00:02 /lib/systemd/systemd --user
thegami+ 1215 1214 0 Aug25 ? 00:00:00 (sd-pam)
thegami+ 1293 1 0 Aug25 ? 00:00:02 /usr/bin/gnome-keyring-daemon --daemonize --login
thegami+ 1306 1191 0 Aug25 tty2 00:00:00 /usr/lib/gdm3/gdm-x-session --run-script env GNOME_SHELL_SESSION_MODE=zorin gnome-session --session=zorin
thegami+ 1306 1306 3 Aug25 tty2 01:20:59 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeppty -verbose 3
thegami+ 1322 1214 0 Aug25 ? 00:00:27 /usr/bin/dbus-daemon --session --address=systemd: --nofork --nrepidfile --systemd-activation --syslog-only
thegami+ 1325 1306 0 Aug25 tty2 00:00:04 /usr/lib/gnome-session/gnome-session-binary --session=zorin
thegami+ 1335 1214 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfsd
thegami+ 1340 1214 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfsd-fuse /run/user/1000/gvfs -f -o big_writes
root 1365 1 0 Aug25 ? 00:00:00 /usr/bin/veyon-service
kernoops 1368 1 0 Aug25 ? 00:00:08 /usr/sbin/kerneloops --test
kernoops 1370 1 0 Aug25 ? 00:00:08 /usr/sbin/kerneloops
root 1473 1365 0 Aug25 ? 00:02:55 /usr/bin/veyon-server
thegami+ 1474 1325 0 Aug25 ? 00:00:00 /usr/bin/ssh-agent /usr/bin/im-launch env GNOME_SHELL_SESSION_MODE=zorin gnome-session --session=zorin
thegami+ 1475 1473 0 Aug25 ? 00:00:26 /usr/bin/veyon-worker (8e997d84-ebb9-430f-8f72-d45d9821963d)
thegami+ 1488 1214 0 Aug25 ? 00:00:00 /usr/lib/at-spi2-core@at-spi-bus-launcher
thegami+ 1493 1488 0 Aug25 ? 00:00:04 /usr/bin/dbus-daemon --config-file=/usr/share/defaults/at-spi2/accessibility.conf --nofork --print-address 3
thegami+ 1495 1214 0 Aug25 ? 00:00:35 /usr/lib/at-spi2-core@at-spi2-registryd --use-gnome-session
thegami+ 1542 1 2 Aug25 ? 00:49:32 /usr/bin/pulseaudio --start --log-target=syslog
rtkit 1543 1 0 Aug25 ? 00:00:01 /usr/lib/rtkit/rtkit-daemon
root 1552 2 0 Aug25 ? 00:00:00 [krfcomm]
thegami+ 1559 1 0 Aug25 tty2 00:04:05 ibus-daemon --xim --panel disable
thegami+ 1563 1559 0 Aug25 tty2 00:00:00 /usr/lib/ibus/ibus-dconf
thegami+ 1565 1 0 Aug25 tty2 00:00:01 /usr/lib/ibus/ibus-x11 --kill-daemon
thegami+ 1567 1214 0 Aug25 ? 00:00:00 /usr/lib/ibus/ibus-portal
thegami+ 1577 1214 0 Aug25 ? 00:00:00 /usr/libexec/xdg-permission-store
thegami+ 1582 1214 0 Aug25 ? 00:00:00 /usr/lib/gnome-shell/gnome-shell-calendar-server
thegami+ 1588 1214 0 Aug25 ? 00:00:00 /usr/lib/evolution/evolution-source-registry
root 1589 1 0 Aug25 ? 00:00:03 /usr/lib/upower/upowerd
geoclue 1596 1 0 Aug25 ? 00:00:00 /usr/lib/geoclue-2.0/geoclue -t 5
thegami+ 1613 1214 0 Aug25 ? 00:00:05 /usr/lib/dconf/dconf-service
thegami+ 1616 1214 0 Aug25 ? 00:00:05 /usr/lib/gvfs/gvfsd-afc@volume-monitor
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
thegami+ 1620 1214 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfs-goa-volume-monitor
thegami+ 1624 1214 0 Aug25 ? 00:00:00 /usr/lib/gnome-online-accounts/goa-daemon
thegami+ 1631 1214 0 Aug25 ? 00:00:01 /usr/lib/gnome-online-accounts/goa-identity-service
thegami+ 1633 1214 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gphoto2-volume-monitor
thegami+ 1640 1214 0 Aug25 ? 00:00:00 /usr/lib/gvfs/afc-volume-monitor
thegami+ 1645 1214 0 Aug25 ? 00:00:00 /usr/lib/gvfs/mtp-volume-monitor
root 1650 1 0 Aug25 ? 00:00:46 /usr/lib/packagekit/packagekitd
thegami+ 1653 1325 0 Aug25 tty2 00:00:04 /usr/lib/gnome-settings-daemon/gsd-power
thegami+ 1654 1325 0 Aug25 tty2 00:00:01 /usr/lib/gnome-settings-daemon/gsd-print-notifications
thegami+ 1655 1325 0 Aug25 tty2 00:00:01 /usr/lib/gnome-settings-daemon/gsd-rfkill
thegami+ 1657 1325 0 Aug25 tty2 00:00:02 /usr/lib/gnome-settings-daemon/gsd-screensaver-proxy
thegami+ 1658 1325 0 Aug25 tty2 00:00:12 /usr/lib/gnome-settings-daemon/gsd-sharing
thegami+ 1665 1325 0 Aug25 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-smartcard
thegami+ 1667 1325 0 Aug25 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-sound
thegami+ 1669 1325 0 Aug25 tty2 00:00:02 /usr/lib/gnome-settings-daemon/gsd-xsettings
thegami+ 1673 1325 0 Aug25 tty2 00:00:02 /usr/lib/gnome-settings-daemon/gsd-wacom
thegami+ 1686 1325 0 Aug25 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-a11y-settings
thegami+ 1687 1325 0 Aug25 tty2 00:00:02 /usr/lib/gnome-settings-daemon/gsd-clipboard
thegami+ 1688 1325 0 Aug25 tty2 00:00:01 /usr/lib/gnome-settings-daemon/gsd-datetime
thegami+ 1693 1325 0 Aug25 tty2 00:00:07 /usr/lib/gnome-settings-daemon/gsd-housekeeping
thegami+ 1694 1325 0 Aug25 tty2 00:00:22 /usr/lib/gnome-settings-daemon/gsd-color
thegami+ 1699 1325 0 Aug25 tty2 00:00:08 /usr/lib/gnome-settings-daemon/gsd-media-keys
thegami+ 1701 1325 0 Aug25 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-mouse
thegami+ 1702 1325 0 Aug25 tty2 00:00:02 /usr/lib/gnome-settings-daemon/gsd-keyboard
thegami+ 1726 1 0 Aug25 tty2 00:00:00 /usr/lib/gnome-settings-daemon/gsd-printer
thegami+ 1753 1325 0 Aug25 tty2 00:00:10 nautilus-desktop
thegami+ 1758 1325 0 Aug25 tty2 00:00:01 /usr/lib/evolution/evolution-alarm-notify
thegami+ 1760 1325 0 Aug25 tty2 00:00:00 /usr/lib/gnome-disk-utility/gsd-disk-utility-notify
color 1775 1 0 Aug25 ? 00:00:00 /usr/lib/colord/colord
thegami+ 1785 1214 0 Aug25 ? 00:00:00 /usr/lib/evolution/evolution-calendar-factory
thegami+ 1788 1335 0 Aug25 ? 00:00:03 /usr/lib/gvfsd-trash --spawner :1.3 /org/gtk/gvfs/exec_spaw/0
thegami+ 1815 1785 0 Aug25 ? 00:00:00 /usr/lib/evolution/evolution-calendar-factory-subprocess --factory all --bus-name org.gnome.evolution.dataserver.Subproc
thegami+ 1832 1214 0 Aug25 ? 00:00:00 /usr/lib/evolution/evolution-addressbook-factory
thegami+ 1844 1832 0 Aug25 ? 00:00:00 /usr/lib/evolution/evolution-addressbook-factory-subprocess --factory all --bus-name org.gnome.evolution.dataserver.Subp
thegami+ 1874 1559 0 Aug25 tty2 00:01:08 /usr/lib/ibus/ibus-engine-simple
thegami+ 1881 1214 0 Aug25 ? 00:03:01 gjs /usr/share/gnome-shell/extensions/zorin-connect@zorinos.com/service/daemon.js
thegami+ 1902 1335 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfsd-burn --spawner :1.3 /org/gtk/gvfs/exec_spaw/1
thegami+ 1928 1214 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfsd-metadata
1929 1214 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfsd-volume-monitor
```

```
theчgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
root 1932 1 0 Aug25 ? 00:00:00 /sbin/mount.ntfs /dev/sdb3 /media/theчgamingbot/theчgamingbot -o rw,nodev,nosuid,uid=1000,gid=1000,uhelper=udisks2
thegami+ 2330 1293 0 Aug25 ? 00:00:00 /usr/bin/ssh-agent -D -a /run/user/1000/keyring.ssh
thegami+ 2588 1325 0 Aug25 tty2 00:01:16 /usr/bin/gnome-software --gapplication-service
thegami+ 2590 1325 0 Aug25 tty2 00:00:03 update-notifier
root 2666 1 0 Aug25 ? 00:00:02 /usr/lib/x86_64-linux-gnu/boltd
thegami+ 2759 1325 0 Aug25 tty2 00:00:00 /usr/lib/deja-dup/deja-dup-monitor
thegami+ 3580 1335 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfsd-network --spawner :1.3 /org/gtk/gvfs/exec_spaw/3
thegami+ 3610 1335 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfsd-dnssd --spawner :1.3 /org/gtk/gvfs/exec_spaw/7
root 3626 1 0 08:17 ? 00:00:00 /usr/sbin/cupsd -l
thegami+ 4287 1 0 Aug25 tty2 00:19:53 /snap/discord/112/usr/share/discord/Discord --no-sandbox
thegami+ 4307 1214 0 Aug25 ? 00:00:00 /usr/libexec/xdg-document-portal
root 4311 4307 0 Aug25 ? 00:00:00 fusermount -o rw,nosuid,nodev,fname=portal,auto_unmount,subtype=portal -- /run/user/1000/doc
thegami+ 4386 4287 0 Aug25 tty2 00:00:00 /snap/discord/112/usr/share/discord/Discord --type=zygote --no-sandbox
thegami+ 4408 4287 0 Aug25 tty2 00:09:26 /snap/discord/112/usr/share/discord/Discord --type=gpu-process --field-trial-handle=10203617750317623790,869060513489672
thegami+ 4416 4287 0 Aug25 tty2 00:00:44 /snap/discord/112/usr/share/discord/Discord --type=utility --field-trial-handle=10203617750317623790,869060513489672127,
thegami+ 4454 4287 3 Aug25 tty2 00:16:08 /snap/discord/112/usr/share/discord/Discord --type=renderer --no-sandbox --autoplay-policy=no-user-gesture-required --fi
thegami+ 12377 1335 0 Aug25 ? 00:00:00 /usr/lib/gvfs/gvfsd-http --spawner :1.3 /org/gtk/gvfs/exec_spaw/8
root 15387 2 0 Aug25 ? 00:00:00 [loop17]
thegami+ 16154 1325 5 Aug25 tty2 00:13:11 /usr/bin/gnome-shell
root 17437 2 0 12:09 ? 00:00:00 [loop16]
root 21081 1214 0 14:18 ? 00:00:00 dbus-launch --autolaunch=20f0945dfb084e9d81057450a9542254 --binary-syntax --close-stderr
root 21082 1214 0 14:18 ? 00:00:00 /usr/bin/dbus-daemon --syslog-only --fork --print-pid 5 --print-address 7 --session
root 21084 1214 0 14:18 ? 00:00:00 /usr/libexec/xdg-desktop-portal
root 21089 1214 0 14:18 ? 00:00:00 /usr/libexec/xdg-document-portal
root 21093 1214 0 14:18 ? 00:00:00 /usr/libexec/xdg-permission-store
root 21098 21089 0 14:18 ? 00:00:00 fusermount -o rw,nosuid,nodev,fname=portal,auto_unmount,subtype=portal -- /home/theчgamingbot/.cache/doc
root 21104 1214 0 14:18 ? 00:00:00 /usr/libexec/xdg-desktop-portal-gtk
root 21108 1214 0 14:18 ? 00:00:00 /usr/lib/gvfs/gvfsd
root 21113 1214 0 14:18 ? 00:00:00 /usr/lib/gvfs/gvfsd-fuse /home/theчgamingbot/.gvfs -f -o big_writes
root 21128 1214 0 14:18 ? 00:00:00 /usr/lib/dconf/dconf-service
thegami+ 21159 1214 0 Aug25 ? 00:00:01 /usr/bin/zeitgeist-daemon
thegami+ 21164 1214 0 14:19 ? 00:02:08 /usr/lib/gnome-terminal/gnome-terminal-server
thegami+ 21167 1214 0 Aug25 ? 00:00:01 /usr/lib/zeitgeist/zeitgeist/zeitgeist-fts
thegami+ 21176 21164 0 14:19 pts/1 00:00:04 bash
thegami+ 24442 1214 0 14:54 ? 00:01:26 /usr/bin/nautilus --gapplication-service
thegami+ 24492 1 16 14:54 tty2 00:39:04 /usr/lib/firefox/firefox -new-window
thegami+ 24594 24492 9 14:54 tty2 00:22:21 /usr/lib/firefox/firefox -contentproc -childID 2 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720
thegami+ 24599 24492 1 14:54 tty2 00:02:44 /usr/lib/firefox/firefox -contentproc -childID 3 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720
thegami+ 24684 24492 9 14:54 tty2 00:01:10 /usr/lib/firefox/firefox -contentproc -childID 4 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720
```

```
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
thebgami+ 21164 1214 0 14:19 ?          00:02:08 /usr/lib/gnome-terminal/gnome-terminal-server
thebgami+ 21167 1214 0 Aug25 ?           00:00:01 /usr/lib/zeitgeist/zeitgeist/zeitgeist-fts
thebgami+ 21176 21164 0 14:19 pts/1       00:00:04 bash
thebgami+ 24442 1214 0 14:54 ?          00:01:26 /usr/bin/nautilus --gapplication-service
thebgami+ 24492 1 16 14:54 tty2          00:39:04 /usr/lib/firefox/firefox -new-window
thebgami+ 24594 24492 9 14:54 tty2        00:22:21 /usr/lib/firefox/firefox -contentproc -childID 2 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 24599 24492 1 14:54 tty2        00:02:44 /usr/lib/firefox/firefox -contentproc -childID 3 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 24604 24492 0 14:54 tty2        00:01:19 /usr/lib/firefox/firefox -contentproc -childID 4 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 24609 24492 0 14:54 tty2        00:01:22 /usr/lib/firefox/firefox -contentproc -childID 5 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 24631 24492 0 14:54 tty2        00:00:14 /usr/lib/firefox/firefox -contentproc -childID 6 -isForBrowser -prefsLen 271 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 24696 24492 0 14:54 tty2        00:01:13 /usr/lib/firefox/firefox -contentproc -childID 7 -isForBrowser -prefsLen 6316 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 24788 24492 3 14:54 tty2        00:08:46 /usr/lib/firefox/firefox -contentproc -childID 8 -isForBrowser -prefsLen 7152 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 24840 24492 0 14:54 tty2        00:00:00 /usr/bin/python3 /usr/lib/mozilla/native-messaging-hosts/org.gnome.chrome_gnome_shell.json c
thebgami+ 25013 24492 2 14:54 tty2        00:06:13 /usr/lib/firefox/firefox -contentproc -parentBuildID 20200720193547 -prefsLen 7265 -prefMapSize 227207 -appdir /usr/lib/
thebgami+ 26589 1214 0 Aug25 ?           00:00:03 /usr/bin/snap userd
root    29465 2 0 17:29 ?              00:00:00 [kworker/2:2-eve]
root    30225 2 0 17:53 ?              00:00:00 [kworker/0:0-rcu]
root    30448 2 0 18:02 ?              00:00:03 [kworker/u8:3-ev]
root    30616 2 0 18:08 ?              00:00:00 [kworker/2:3-pm]
thebgami+ 30798 24492 0 18:12 tty2      00:00:08 /usr/lib/firefox/firefox -contentproc -childID 21 -isForBrowser -prefsLen 8752 -prefMapSize 227207 -parentBuildID 20200720
root    30968 2 0 18:17 ?              00:00:00 [kworker/3:1-eve]
root    31113 2 0 18:24 ?              00:00:00 [kworker/3:0-eve]
thebgami+ 31177 24492 1 18:25 tty2      00:00:25 /usr/lib/firefox/firefox -contentproc -childID 22 -isForBrowser -prefsLen 8751 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 31249 4287 0 18:28 tty2        00:00:00 /snap/discord/112/usr/share/discord/Discord --type=utility --field-trial-handle=10203617750317623790,869060513489672127,
root    31403 2 0 18:28 ?              00:00:06 [kworker/1:0-eve]
thebgami+ 31437 24492 2 18:28 tty2      00:00:34 /usr/lib/firefox/firefox -contentproc -childID 23 -isForBrowser -prefsLen 8752 -prefMapSize 227207 -parentBuildID 20200720
thebgami+ 31488 1214 0 Aug25 ?           00:00:18 adb -L tcp:5037 fork-server server --reply-fd 4
root    31503 2 0 18:29 ?              00:00:01 [kworker/u8:2-ev]
root    31804 2 0 18:40 ?              00:00:00 [kworker/0:1-eve]
root    31970 2 0 18:45 ?              00:00:00 [kworker/u8:1-ev]
root    32029 2 0 18:47 ?              00:00:01 [kworker/1:1-eve]
root    32115 2 0 18:51 ?              00:00:00 [kworker/u8:0-i9]
root    32148 2 0 18:52 ?              00:00:00 [kworker/0:2]
root    32150 2 0 18:52 ?              00:00:02 [kworker/1:2-eve]
root    32164 2 0 18:53 ?              00:00:00 [kworker/u8:4-i9]
thebgami+ 32275 21176 0 18:56 pts/1       00:00:00 ps -ef
root    32652 2 0 Aug25 ?              00:00:00 [kworker/u9:1-hc]
thebgamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newOlder$ |
```

```
ps // Displays the process that are running
```

b. List the processes that are not associated with the terminal.

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ ps a -N
PID TTY      STAT   TIME COMMAND
 1 ?        Ss    3:07 /sbin/init splash
 2 ?        S     0:00 [kthreadd]
 3 ?        I<    0:00 [rcu_gp]
 4 ?        I<    0:00 [rcu_par_gp]
 6 ?        I<    0:00 [kworker/0:0H-kb]
 9 ?        I<    0:00 [mm_percpu_wq]
10 ?       S     0:03 [ksoftirqd/0]
11 ?       I     2:16 [rcu_sched]
12 ?       S     0:11 [migration/0]
13 ?       S     0:00 [idle_inject/0]
14 ?       S     0:00 [cpuhp/0]
15 ?       S     0:00 [cpuhp/1]
16 ?       S     0:00 [idle_inject/1]
17 ?       S     0:00 [migration/1]
18 ?       S     0:04 [ksoftirqd/1]
20 ?       I<    0:00 [kworker/1:0H-kb]
21 ?       S     0:00 [cpuhp/2]
22 ?       S     0:00 [idle_inject/2]
23 ?       S     0:02 [migration/2]
24 ?       S     0:04 [ksoftirqd/2]
26 ?       I<    0:07 [kworker/2:0H-ev]
27 ?       S     0:00 [cpuhp/3]
28 ?       S     0:00 [idle_inject/3]
29 ?       S     0:00 [migration/3]
30 ?       S     0:02 [ksoftirqd/3]
32 ?       I<    0:00 [kworker/3:0H-kb]
33 ?       S     0:00 [kdevtmpfs]
34 ?       I<    0:00 [netns]
35 ?       S     0:00 [rcu_tasks_kthre]
36 ?       S     0:21 [kaudittd]
37 ?       S     0:00 [khungtaskd]
38 ?       S     0:00 [oom_reaper]
39 ?       I<    0:00 [writeback]
40 ?       S     0:00 [kcompactd0]
41 ?      SN     0:00 [ksmd]
42 ?      SN     0:00 [khugepaged]
```

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
170 ? I< 0:00 [kstrp]
174 ? I< 0:00 [kworker/u9:0-hc]
199 ? I< 0:00 [charger_manager]
246 ? S 0:00 [scsi_eh_0]
247 ? I< 0:00 [scsi_tmf_0]
248 ? S 0:00 [scsi_eh_1]
249 ? I< 0:00 [scsi_tmf_1]
250 ? S 0:00 [scsi_eh_2]
251 ? I< 0:00 [scsi_tmf_2]
256 ? I< 0:10 [kworker/2:1H-ev]
260 ? I< 0:16 [kworker/3:1H-ev]
277 ? I< 0:21 [kworker/1:1H-ev]
278 ? I< 0:00 [uas]
279 ? S 0:00 [scsi_eh_3]
280 ? I< 0:00 [scsi_tmf_3]
281 ? I< 0:19 [kworker/0:1H-ev]
328 ? S 0:00 [irq/128-mei_me]
337 ? S 273:38 @sbin/plymouthd --mode=boot --attach-to-session --pid-file=/run/plymouth.pid
367 ? S 0:20 [jbd2/sdb1-8]
368 ? I< 0:00 [ext4-rsv-conver]
410 ? S<s 4:02 /lib/systemd/systemd-journald
417 ? S 0:00 /sbin/dhclient -d -q -sf /usr/lib/NetworkManager/nm-dhcp-helper -pf /run/dhclient-wlp2s0.pid -lf /var/lib/NetworkManager/dhclient-5a6e60f6-89
433 ? Ss 0:13 /lib/systemd/systemd-udevd
483 ? S 5:26 [irq/108-ELAN070]
485 ? S< 0:00 [loop0]
515 ? S< 0:00 [loop1]
519 ? S< 0:00 [loop2]
524 ? S< 0:01 [loop3]
526 ? S< 0:00 [loop4]
527 ? S< 0:00 [loop5]
528 ? I< 0:00 [cryptd]
563 ? S< 0:00 [loop6]
565 ? S< 0:00 [loop7]
566 ? S< 0:00 [loop8]
567 ? S< 0:00 [loop9]
571 ? I< 0:00 [cfg80211]
572 ? S< 0:00 [loop10]
573 ? S< 0:00 [loop11]
575 ? S< 0:00 [loop12]
576 ? S< 0:00 [loop13]
578 ? S< 0:00 [loop15]
612 ? S 13:27 [irq/130-rtwpc1]
989 ? Ssl 0:00 /lib/systemd/systemd-timesyncd
990 ? Ss 0:41 /lib/systemd/systemd-resolved
1018 ? Ssl 0:06 /usr/sbin/ModemManager --filter-policy=strict
1019 ? Ss 0:00 /usr/sbin/cron -f
1020 ? Ssl 0:07 /usr/sbin/irqbalance --foreground
1022 ? Ssl 0:09 /usr/lib/udisks2/udisksd
1024 ? Ss 0:12 /usr/sbin/acpid
1025 ? Ss 0:02 /lib/systemd/systemd-logind
1030 ? Ssl 0:15 /usr/sbin/thermald --no-daemon --dbus-enable
1032 ? Ss 0:20 /usr/bin/dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
1055 ? Ssl 0:23 /usr/sbin/NetworkManager --no-daemon
1056 ? Ssl 0:00 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
1058 ? Ss 0:02 /sbin/wpa_supplicant -u -s -0 /run/wpa_supplicant
1060 ? Ssl 0:38 /usr/lib/accountsservice/accounts-daemon
1062 ? Ss 0:00 /usr/lib/bluetooth/bluetoothd
1064 ? Ss 0:04 avahi-daemon: running [sk.local]
1069 ? Ssl 0:09 /usr/sbin/rsyslogd -n
1070 ? Ssl 1:40 /usr/lib/snapd/snapd
1073 ? Ssl 0:02 /usr/lib/policykit-1/polkitd --no-debug
1077 ? S 0:00 avahi-daemon: chroot helper
1078 ? Ssl 0:00 /usr/sbin/cups-browsed
1120 ? Ss 0:00 /bin/plymouth --wait
1128 ? Ssl 0:00 /usr/sbin/gdm3
1191 ? S1 0:00 gdm-session-worker [pam/gdm-autologin]
1214 ? Ss 0:02 /lib/systemd/systemd --user
1215 ? S 0:00 (sd-pam)
1293 ? Sll 0:02 /usr/bin/gnome-keyring-daemon --daemonize --login
1322 ? Ss 0:28 /usr/bin/dbus-daemon --session --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
1335 ? Ssl 0:00 /usr/lib/gvfs/gvfsd
1340 ? S1 0:00 /usr/lib/gvfs/gvfsd-fuse /run/user/1000/gvfs -f -o big_writes
1365 ? Sls1 0:00 /usr/bin/veyon-service
1368 ? Ss 0:08 /usr/sbin/kerneloops --test
1370 ? Ss 0:08 /usr/sbin/kerneloops
1472 ? S1 0:55 /usr/bin/veyon-server
```

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
573 ? S< 0:00 [loop11]
575 ? S< 0:00 [loop12]
576 ? S< 0:00 [loop13]
578 ? S< 0:00 [loop15]
612 ? S 13:27 [irq/130-rtwpc1]
989 ? Ssl 0:00 /lib/systemd/systemd-timesyncd
990 ? Ss 0:41 /lib/systemd/systemd-resolved
1018 ? Ssl 0:06 /usr/sbin/ModemManager --filter-policy=strict
1019 ? Ss 0:00 /usr/sbin/cron -f
1020 ? Ssl 0:07 /usr/sbin/irqbalance --foreground
1022 ? Ssl 0:09 /usr/lib/udisks2/udisksd
1024 ? Ss 0:12 /usr/sbin/acpid
1025 ? Ss 0:02 /lib/systemd/systemd-logind
1030 ? Ssl 0:15 /usr/sbin/thermald --no-daemon --dbus-enable
1032 ? Ss 0:20 /usr/bin/dbus-daemon --system --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
1055 ? Ssl 0:23 /usr/sbin/NetworkManager --no-daemon
1056 ? Ssl 0:00 /usr/bin/python3 /usr/bin/networkd-dispatcher --run-startup-triggers
1058 ? Ss 0:02 /sbin/wpa_supplicant -u -s -0 /run/wpa_supplicant
1060 ? Ssl 0:38 /usr/lib/accountsservice/accounts-daemon
1062 ? Ss 0:00 /usr/lib/bluetooth/bluetoothd
1064 ? Ss 0:04 avahi-daemon: running [sk.local]
1069 ? Ssl 0:09 /usr/sbin/rsyslogd -n
1070 ? Ssl 1:40 /usr/lib/snapd/snapd
1073 ? Ssl 0:02 /usr/lib/policykit-1/polkitd --no-debug
1077 ? S 0:00 avahi-daemon: chroot helper
1078 ? Ssl 0:00 /usr/sbin/cups-browsed
1120 ? Ss 0:00 /bin/plymouth --wait
1128 ? Ssl 0:00 /usr/sbin/gdm3
1191 ? S1 0:00 gdm-session-worker [pam/gdm-autologin]
1214 ? Ss 0:02 /lib/systemd/systemd --user
1215 ? S 0:00 (sd-pam)
1293 ? Sll 0:02 /usr/bin/gnome-keyring-daemon --daemonize --login
1322 ? Ss 0:28 /usr/bin/dbus-daemon --session --address=systemd: --nofork --nopidfile --systemd-activation --syslog-only
1335 ? Ssl 0:00 /usr/lib/gvfs/gvfsd
1340 ? S1 0:00 /usr/lib/gvfs/gvfsd-fuse /run/user/1000/gvfs -f -o big_writes
1365 ? Sls1 0:00 /usr/bin/veyon-service
1368 ? Ss 0:08 /usr/sbin/kerneloops --test
1370 ? Ss 0:08 /usr/sbin/kerneloops
1472 ? S1 0:55 /usr/bin/veyon-server
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
... ? Ss 0:00 /usr/bin/ssh-agent /usr/bin/im-launch env GNOME_SESSION_MODE=zorin gnome-session --session=zorin
1474 ? Ss 0:00 /usr/bin/zorin-session
1475 ? SL1 0:27 /usr/bin/veyon-worker {8e997d84-ebb9-430f-8f72-d45d9821963d}
1488 ? Ss1 0:00 /usr/lib/at-spi2-core/at-spi-bus-launcher
1493 ? S 0:04 /usr/bin/dbus-daemon --config-file=/usr/share/default/at-spi2/accessibility.conf --nofork --print-address 3
1495 ? S1 0:36 /usr/lib/at-spi2-core/at-spi2-registeryd --use-gnome-session
1542 ? S<1 50:51 /usr/bin/pulseaudio --start --log-target=syslog
1543 ? SNS1 0:01 /usr/lib/rtkit/rtkit-daemon
1552 ? S< 0:00 [krfcomm]
1567 ? S1 0:00 /usr/lib/ibus/ibus-portal
1577 ? Ss1 0:00 /usr/libexec/xdg-permission-store
1582 ? S1 0:00 /usr/lib/gnome-shell/gnome-shell-calendar-server
1588 ? Ss1 0:00 /usr/lib/evolution/evolution-source-registry
1589 ? Ss1 0:03 /usr/lib/upower/upowerd
1596 ? Ss1 0:00 /usr/lib/geoclue-2.0/geoclue -t 5
1613 ? S1 0:05 /usr/lib/dconf/dconf-service
1616 ? Ss1 0:05 /usr/lib/gvfs/gvfs-udisks2-volume-monitor
1620 ? Ss1 0:00 /usr/lib/gvfs/gvfs-goa-volume-monitor
1624 ? S1 0:00 /usr/lib/gnome-online-accounts/goa-daemon
1631 ? S1 0:01 /usr/lib/gnome-online-accounts/goa-identity-service
1633 ? Ss1 0:00 /usr/lib/gvfs/gvfs-ghoto2-volume-monitor
1640 ? Ss1 0:00 /usr/lib/gvfs/gvfs-afc-volume-monitor
1645 ? Ss1 0:00 /usr/lib/gvfs/gvfs-mtp-volume-monitor
1650 ? Ss1 0:46 /usr/lib/packagekit/packagekitd
1775 ? Ss1 0:00 /usr/lib/color/color
1785 ? Ss1 0:00 /usr/lib/evolution/evolution-calendar-factory
1788 ? S1 0:03 /usr/lib/gvfs/gvfd-trash --spawner :1.3 /org/gtk/gvfs/exec_spaw/0
1815 ? S1 0:00 /usr/lib/evolution/evolution-calendar-factory-subprocess --factory all --bus-name org.gnome.evolution.dataserver.Subprocess.Backend.Calendarx
1832 ? Ss1 0:00 /usr/lib/evolution/evolution-addressbook-factory
1844 ? S1 0:00 /usr/lib/evolution/evolution-addressbook-factory-subprocess --factory all --bus-name org.gnome.evolution.dataserver.Subprocess.Backend.Address
1881 ? S1 3:34 gjs /usr/share/gnome-shell/extensions/zorin-connect@zorinos.com/service/daemon.js
1902 ? S1 0:00 /usr/lib/gvfs/gvfd-burn --spawner :1.3 /org/gtk/gvfs/exec_spaw/1
1928 ? Ss1 0:00 /usr/lib/gvfs/gvfd-metadata
1932 ? Ss 0:00 /sbin/mount.ntfs /dev/sdb3 /media/thegamingbot/thegamingbot -o rw,nodev,nosuid,uid=1000,gid=1000,uhelper=udisks2
2330 ? S 0:00 /usr/bin/ssh-agent -D -a /run/user/1000/keyring/.ssh
2666 ? Ss1 0:02 /usr/lib/x86_64-linux-gnu/bolt
3580 ? S1 0:00 /usr/lib/gvfs/gvfd-network --spawner :1.3 /org/gtk/gvfs/exec_spaw/3
3610 ? S1 0:00 /usr/lib/gvfs/gvfd-dnssd --spawner :1.3 /org/gtk/gvfs/exec_spaw/7
3626 ? Ss 0:00 /usr/sbin/cupsd -1
```

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
4311 ? Ss 0:00 fusermount -o rw,nouid,nodev,fsname=portal,auto_unmount,subtype=portal -- /run/user/1000/doc
12377 ? S1 0:00 /usr/lib/gvfs/gvfd-http --spawner :1.3 /org/gtk/gvfs/exec_spaw/8
15387 ? S< 0:00 [loop17]
17437 ? S< 0:00 [loop16]
21081 ? S 0:00 dbus-launch --autolaunch=20f0945dfb084e9d81057450a9542254 --binary-syntax --close-stderr
21082 ? Ss 0:00 /usr/bin/dbus-daemon --syslog-only --fork --print-pid 5 --print-address 7 --session
21084 ? S1 0:00 /usr/libexec/xdg-desktop-portal
21089 ? S1 0:00 /usr/libexec/xdg-document-portal
21093 ? S1 0:00 /usr/libexec/xdg-permission-store
21098 ? Ss 0:00 fusermount -o rw,nouid,nodev,fsname=portal,auto_unmount,subtype=portal -- /home/thegeingbot/.cache/doc
21104 ? S1 0:00 /usr/libexec/xdg-desktop-portal-gtk
21108 ? S1 0:00 /usr/lib/gvfs/gvfd
21113 ? S1 0:00 /usr/lib/gvfs/gvfd-fuse /home/thegeingbot/.gvfs -f -o big_writes
21128 ? S1 0:00 /usr/lib/dconf/dconf-service
21159 ? Ss1 0:01 /usr/bin/zeitgeist-daemon
21164 ? R$1 2:09 /usr/lib/gnome-terminal/gnome-terminal-server
21167 ? Ss1 0:01 /usr/lib/zeitgeist/zeitgeist/zeitgeist-fts
24442 ? S1 1:30 /usr/bin/nautilus --gapplication-service
26589 ? S1 0:03 /usr/bin/snap userd
30225 ? I 0:00 [worker/0:0-eve]
30448 ? I 0:04 [worker/u8:3-ev]
30616 ? I 0:00 [worker/2:3-pm]
30968 ? I 0:00 [worker/3:1-eve]
31113 ? I 0:00 [worker/3:0-eve]
31488 ? Ss1 0:18 adb -L tcp:5037 fork-server server --reply-fd 4
32115 ? I 0:01 [worker/u8:0-ev]
32148 ? I 0:00 [worker/0:2-rcu]
32150 ? I 0:02 [worker/1:2-eve]
32164 ? I 0:01 [worker/u8:4-ev]
32284 ? I 0:00 [worker/2:0-eve]
32344 ? I 0:00 [worker/u8:2-19]
32477 ? I 0:04 [worker/1:0-eve]
32496 ? I 0:00 [worker/3:2-eve]
32551 ? I 0:00 [worker/0:1]
32579 ? I 0:00 [worker/3:3]
32652 ? I< 0:00 [worker/u9:1-hc]
32710 ? I 0:00 [worker/1:1-eve]
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

ps a -N

/* Here ps a gives process associated with terminal
-N negates the output given by the option. i.e. processes not
associated with the terminal*/

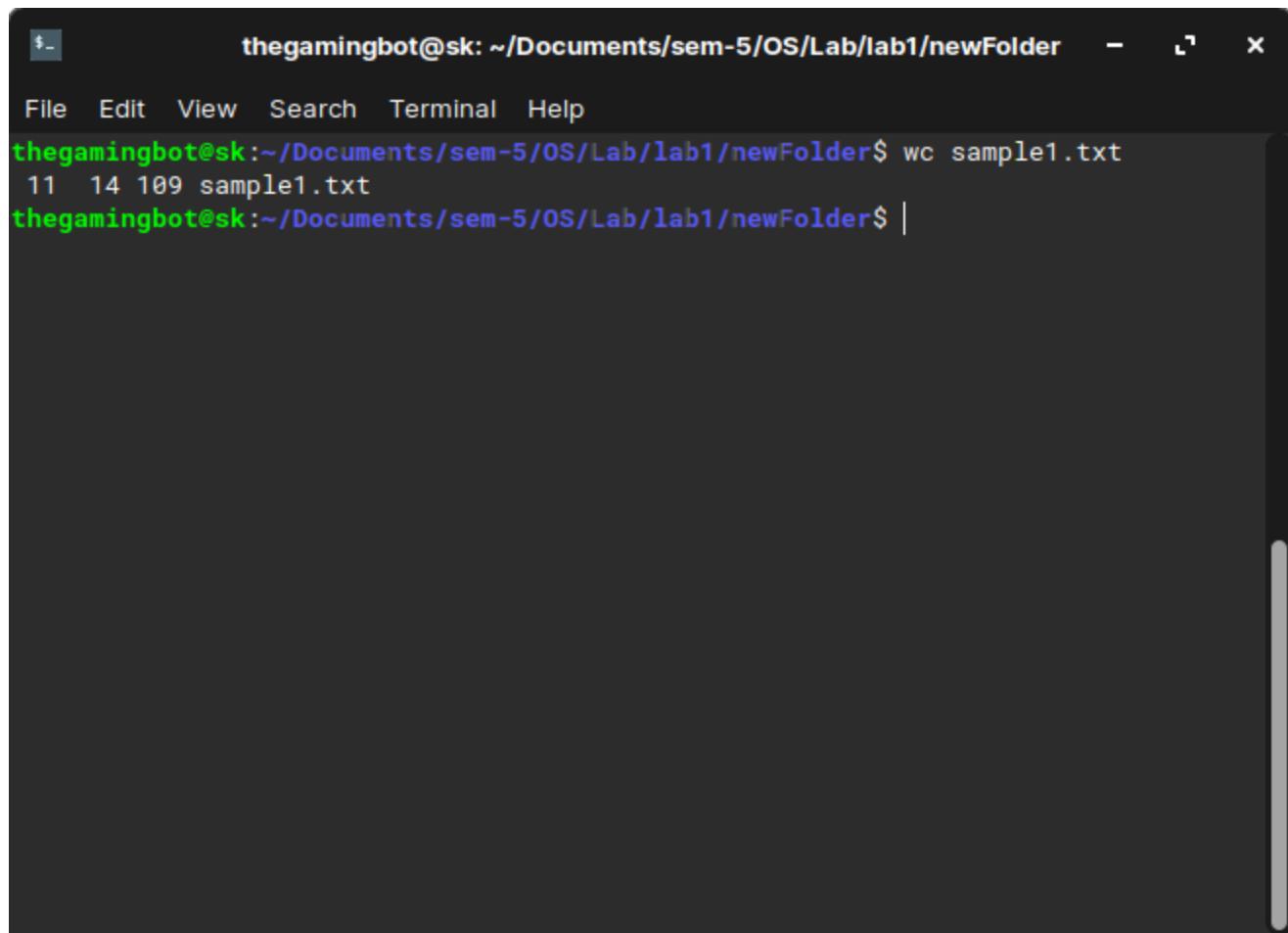
c. List the processes that are associated with the terminal.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ ps a
  PID TTY      STAT   TIME COMMAND
 416 pts/1    R+    0:00 ps a
1306 tty2    Ssl+  0:00 /usr/lib/gdm3/gdm-x-session --run-script env GNOME_SHELL_SESSION_MODE=zorin gnome-session --session=zorin
1308 tty2    S1+  82:33 /usr/lib/xorg/Xorg vt2 -displayfd 3 -auth /run/user/1000/gdm/Xauthority -background none -noreset -keeptty -verbose 3
1325 tty2    S1+  0:04 /usr/lib/gnome-session/gnome-session-binary --session=zorin
1559 tty2    R1  4:07 ibus-daemon --xim --panel disable
1563 tty2    S1  0:00 /usr/lib/ibus/ibus-dconf
1565 tty2    S1  0:01 /usr/lib/ibus/ibus-x11 --kill-daemon
1653 tty2    S1+  0:04 /usr/lib/gnome-settings-daemon/gsd-power
1654 tty2    S1+  0:01 /usr/lib/gnome-settings-daemon/gsd-print-notifications
1655 tty2    S1+  0:01 /usr/lib/gnome-settings-daemon/gsd-rfkill
1657 tty2    S1+  0:02 /usr/lib/gnome-settings-daemon/gsd-screensaver-proxy
1658 tty2    S1+  0:12 /usr/lib/gnome-settings-daemon/gsd-sharing
1665 tty2    S1+  0:00 /usr/lib/gnome-settings-daemon/gsd-smartcard
1667 tty2    S1+  0:00 /usr/lib/gnome-settings-daemon/gsd-sound
1669 tty2    S1+  0:02 /usr/lib/gnome-settings-daemon/gsd-xsettings
1673 tty2    S1+  0:02 /usr/lib/gnome-settings-daemon/gsd-wacom
1686 tty2    S1+  0:00 /usr/lib/gnome-settings-daemon/gsd-a11y-settings
1687 tty2    S1+  0:02 /usr/lib/gnome-settings-daemon/gsd-clipboard
1688 tty2    S1+  0:01 /usr/lib/gnome-settings-daemon/gsd-datetime
1693 tty2    S1+  0:07 /usr/lib/gnome-settings-daemon/gsd-housekeeping
1694 tty2    S1+  0:23 /usr/lib/gnome-settings-daemon/gsd-color
1699 tty2    S1+  0:08 /usr/lib/gnome-settings-daemon/gsd-media-keys
1701 tty2    S1+  0:00 /usr/lib/gnome-settings-daemon/gsd-mouse
1702 tty2    S1+  0:02 /usr/lib/gnome-settings-daemon/gsd-keyboard
1726 tty2    S1+  0:00 /usr/lib/gnome-settings-daemon/gsd-printer
1753 tty2    S1+  0:11 nautilus-desktop
1758 tty2    S1+  0:01 /usr/lib/evolution/evolution-alarm-notify
1760 tty2    S1+  0:00 /usr/lib/gnome-disk-utility/gsd-disk-utility-notify
1874 tty2    S1  1:08 /usr/lib/ibus/ibus-engine-simple
2588 tty2    S1L+ 1:16 /usr/bin/gnome-software --gapplication-service
2590 tty2    S1+  0:03 update-notifier
2759 tty2    S1+  0:00 /usr/lib/deja-dup/deja-dup-monitor
4287 tty2    S1+  22:17 /snap/discord/112/usr/share/discord/Discord --no-sandbox
4386 tty2    S+  0:00 /snap/discord/112/usr/share/discord/Discord --type=zygote --no-sandbox
4408 tty2    S1+  13:31 /snap/discord/112/usr/share/discord/Discord --type=gpu-process --field-trial-handle=10203617750317623790,869060513489672127,131072 --disable-feat
4416 tty2    S1+  0:45 /snap/discord/112/usr/share/discord/Discord --type=utility --field-trial-handle=10203617750317623790,869060513489672127,131072 --disable-feat
4454 tty2    R1+ 113:22 /snap/discord/112/usr/share/discord/Discord --type=renderer --no-sandbox --autoplay-policy=no-user-gesture-required --field-trial-handle=1020
4454 pts/1    Ss  0:04 bash
21176 pts/1    S+  0:04 bash
24492 tty2    S1+  39:59 /usr/lib/firefox/firefox -new-window
24594 tty2    S1+  24:14 /usr/lib/firefox/firefox -contentproc -childID 2 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr/l
24599 tty2    S1+  2:50 /usr/lib/firefox/firefox -contentproc -childID 3 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr/l
24604 tty2    S1+  1:22 /usr/lib/firefox/firefox -contentproc -childID 4 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr/l
24609 tty2    S1+  1:26 /usr/lib/firefox/firefox -contentproc -childID 5 -isForBrowser -prefsLen 177 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr/l
24631 tty2    S1+  0:15 /usr/lib/firefox/firefox -contentproc -childID 6 -isForBrowser -prefsLen 271 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr/l
24696 tty2    S1+  1:15 /usr/lib/firefox/firefox -contentproc -childID 7 -isForBrowser -prefsLen 6316 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr/
24788 tty2    S1+  9:04 /usr/lib/firefox/firefox -contentproc -childID 8 -isForBrowser -prefsLen 7152 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr/
24840 tty2    S1+  0:00 /usr/bin/python3 /usr/bin/chrome-gnome-shell /usr/lib/mozilla/native-messaging-hosts/org.gnome.chrome_gnome_shell.json chrome-gnome-shell@no
25013 tty2    S1+  6:13 /usr/lib/firefox/firefox -contentproc -parentBuildID 20200720193547 -prefsLen 7265 -prefMapSize 227207 -appdir /usr/lib/firefox/browser 24492
30798 tty2    S1+  0:10 /usr/lib/firefox/firefox -contentproc -childID 21 -isForBrowser -prefsLen 8752 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr
31177 tty2    S1+  0:28 /usr/lib/firefox/firefox -contentproc -childID 22 -isForBrowser -prefsLen 8751 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr
31249 tty2    S1+  0:01 /snap/discord/112/usr/share/discord/Discord --type=utility --field-trial-handle=10203617750317623790,869060513489672127,131072 --disable-feat
32622 tty2    S1+  0:09 /usr/lib/firefox/firefox -contentproc -childID 24 -isForBrowser -prefsLen 8751 -prefMapSize 227207 -parentBuildID 20200720193547 -appdir /usr
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$
```

ps a

/* Displays all the processes by the terminal */

Question 23) Print the number of characters, number of lines and number of words all the given input files.

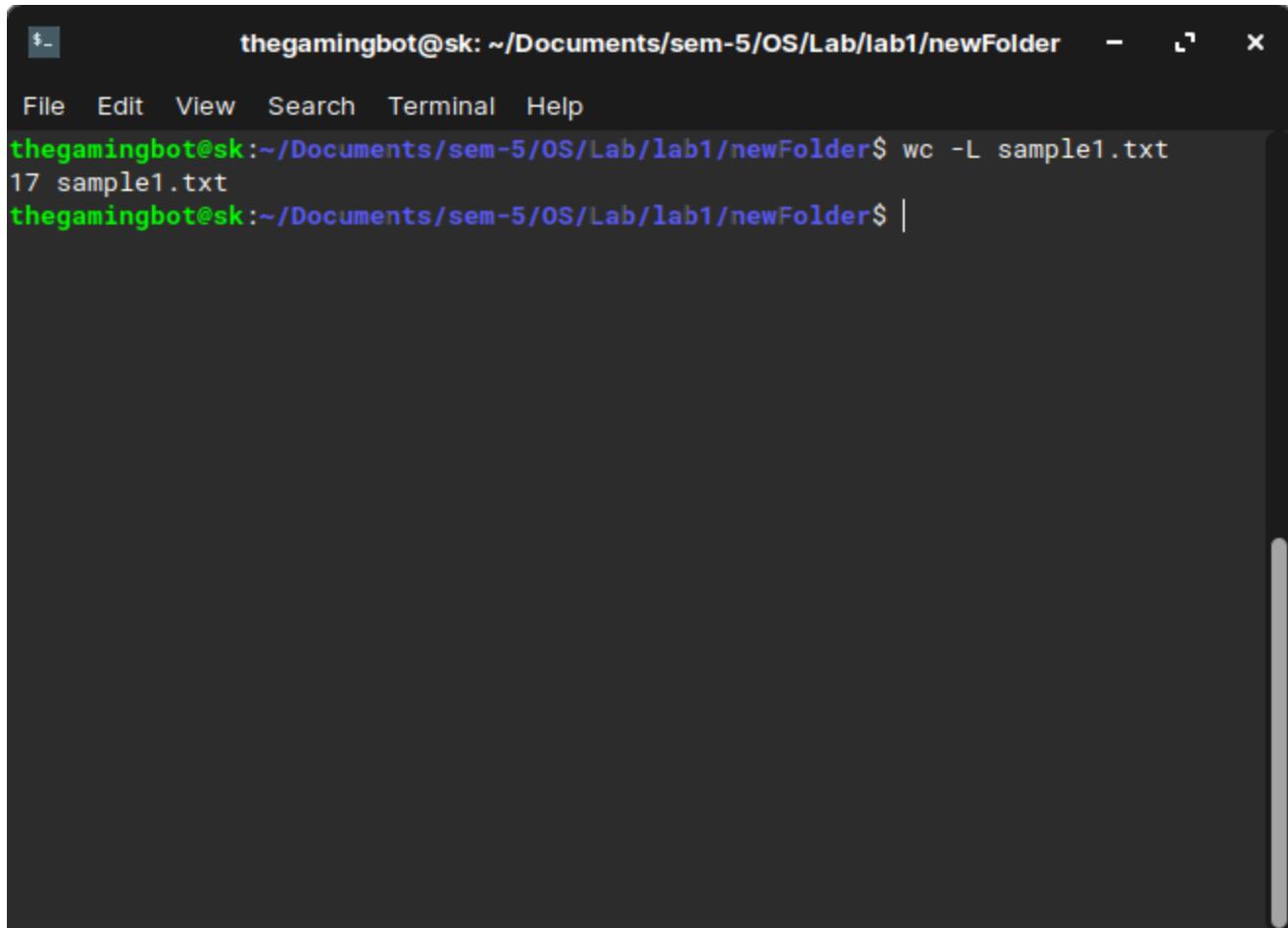


The image shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, the current directory (~Documents/sem-5/OS/Lab/lab1/newFolder), and some window control icons. Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the command 'wc sample1.txt' being run, followed by its output: '11 14 109 sample1.txt'. The prompt 'thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder\$ |' is visible at the bottom.

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ wc sample1.txt
11 14 109 sample1.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

wc sample.txt /* Gives the number of lines, words and characters that are present in the file sample.txt */

Question 24) Print the length of the longest line from all the input files.



```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - ⌂ x
File Edit View Search Terminal Help
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ wc -L sample1.txt
17 sample1.txt
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

wc -L file.txt /* Gives the longest line in the file */

Question 25) Move the contents of the input file sample.txt to a new file.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder newtext.txt sample1.txt sample2.txt sample3.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ mv -i newtext.txt new.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder new.txt sample1.txt sample2.txt sample3.txt
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat new.txt
Andhra Pradesh
Arunachal Pradesh
Assam
Bihar
Karnataka
Kerala
Chhattisgarh
Uttar Pradesh
Goa
Gujarat
Haryana
Madhya Pradesh
Maharashtra
Manipur
Meghalaya
Mizoram
Nagaland
Orissa
Punjab
Rajasthan
Sikkim
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

mv -i file1.txt file2.txt

/* Moves the contents of file1.txt to file2.txt,
if file2.txt exists, confirmation asked before overwriting
if file2.txt does not exist, a new file is created */

Question 26) Copy the contents of one directory to another directory.

```
theGamingBot:~/Documents/sem-5/OS/Lab/lab1$ mkdir qwerty
theGamingBot:~/Documents/sem-5/OS/Lab/lab1$ cp -r newFolder/* qwerty
theGamingBot:~/Documents/sem-5/OS/Lab/lab1$ ls -LR
.:
folder    folder.tar  Materials  newFolder  qwerty

./folder:
1.txt.gz   demo.txt          'index.html?dv=win64'  'tar cvf.png'
3.txt      folder            'mkdir.png'           'tar zvf.png'
4.txt      images.tar.gz     nagios-3.2.1.tar.gz  'tar xvf.png'
a.txt      images.zip        'rm -r.png'          url-list.txt
b.txt      'index.html?dv=win32' taglist.zip

./folder/folder:
folder

./folder/folder/folder:
folder

./folder/folder/folder/folder:
folder

./Materials:
'50_Most_Frequently_Used_UNIX _ Linux Commands_With Examples.pdf'
'Exercise-I LINUX COMMANDS.pdf'
LinuxCommand.pdf
linuxcommands.pdf
sample1.txt
sample2.txt
TLCL-13.07.pdf

./newFolder:
a  b  folder  newtext.txt  sample1.txt  sample2.txt  sample3.txt

./newFolder/folder:
```

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1$ |  
File Edit View Search Terminal Help  
folder  
. ./folder/folder/folder:  
folder  
. ./folder/folder/folder/folder:  
  
. /Materials:  
'50_Most_Frequently_Used_UNIX _ Linux Commands_With Examples.pdf'  
'Exercise-I LINUX COMMANDS.pdf'  
LinuxCommand.pdf  
linuxcommands.pdf  
sample1.txt  
sample2.txt  
TLCL-13.07.pdf  
  
. ./newFolder:  
a b folder newtext.txt sample1.txt sample2.txt sample3.txt  
  
. ./newFolder/folder:  
befag.c folder vknefkn.c  
  
. ./newFolder/folder/folder:  
1.c dajvnds.c  
  
. ./qwerty:  
a b folder newtext.txt sample1.txt sample2.txt sample3.txt  
  
. ./qwerty/folder:  
befag.c folder vknefkn.c  
  
. ./qwerty/folder/folder:  
1.c dajvnds.c  
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1$ |
```

```
cp -i file1.txt file2.txt
```

```
/* Copies the contents of file1.txt to file2.txt,  
if file2.txt exists, confirmation asked before overwriting  
if file2.txt does not exist, a new file is created */
```

Question 27) Reverse the lines of the two input files and concatenate the file contents using a single command.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ tac sample1.txt && tac
sample2.txt
Haryana
Gujarat
Goa
Uttar Pradesh
Chhattisgarh
Kerala
Karnataka
Bihar
Assam
Arunachal Pradesh
Andhra Pradesh
Sikkim
Rajasthan
Punjab
Orissa
Nagaland
Mizoram
Meghalaya
Manipur
Maharashtra
Madhya Pradesh
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

tac file1.txt && tac file2.txt

/* tac displays the file in reverse order
&& is used to run commands one after the other */

Question 28) Delete all the files with *.txt extension from the working directory using yes command.

The screenshot shows a terminal window with the following session:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder new.txt sample1.txt sample2.txt sample3.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ yes | rm -i *.txt
rm: remove regular file 'new.txt'? rm: remove regular file 'sample1.txt'? rm: re
move regular file 'sample2.txt'? rm: remove regular file 'sample3.txt'? thegamin
gbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

The terminal shows the user navigating to a directory, listing files, and then using the `yes | rm -i *.txt` command to delete three files: `new.txt`, `sample1.txt`, and `sample2.txt`. The `yes` command is used to automatically answer "yes" to each confirmation prompt from the `rm -i` command.

`yes | rm -i *.txt`

/* It is used to answer yes to each confirmation request of -i option of the rm command */

Question 29) Given the input file “sample1.txt”, print the number of the lines that match the pattern “system”.

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ grep 'system' sample1.txt | wc -l
5
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample1.txt
This is a test document.
An OS is an interface between a computer user and a computer hardware.
An OS is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
Operating system is one of the core subjects in computer science.
Operating system is one of the core subjects in computer science.
Unix is a great OS.
UNIX is a free OS.
Unix systems use a centralized operating system kernel which manages system and process activities.
Unix is a great OS.
UNIX is a free OS.
UNIXOS systems use a centralized operating system kernel which manages system and process activities.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
UNIX is a free OS.
Multiuser operating system.
Yet another powerful OS.theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

grep 'system' sample1.txt | wc -l

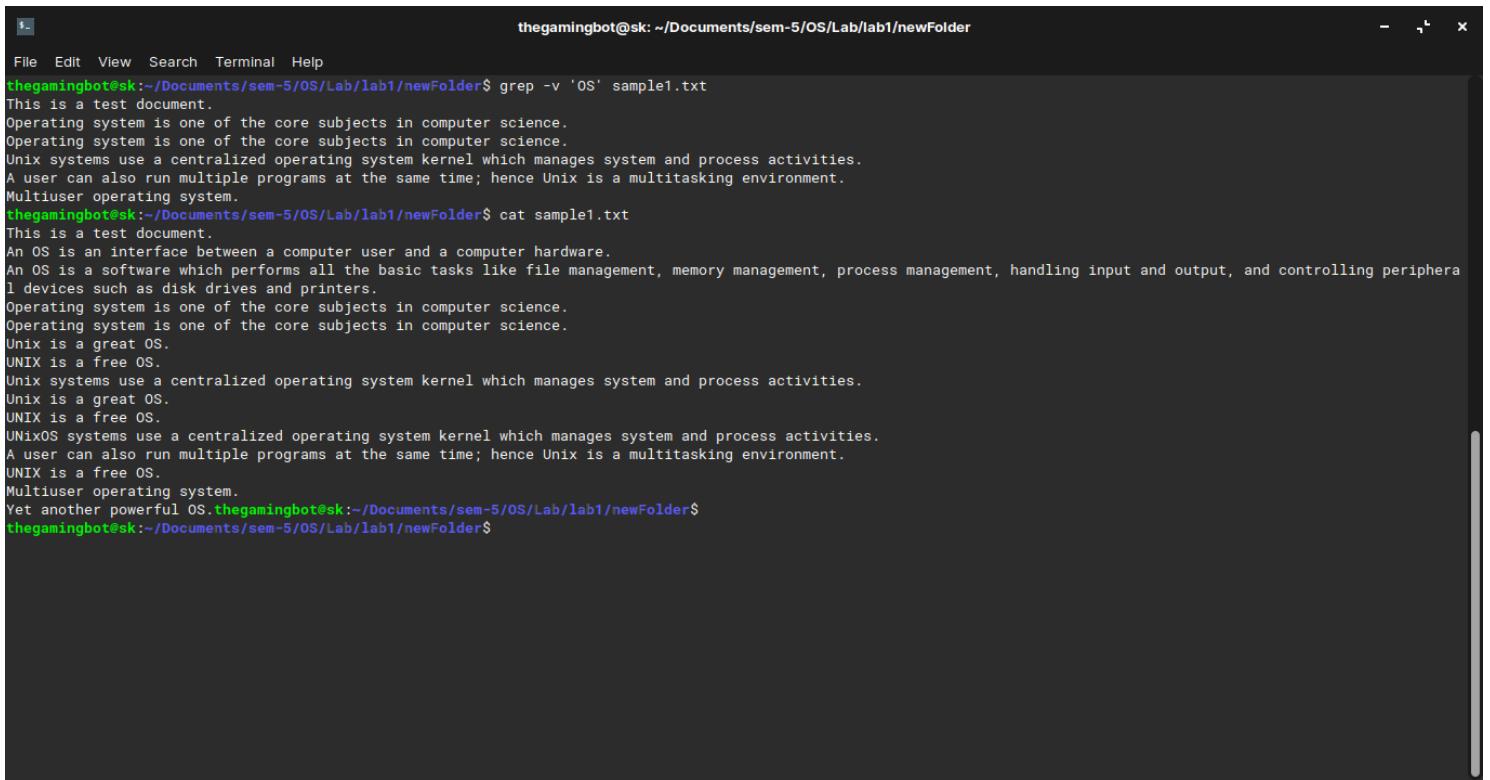
/*Searches and displays the number of matches to the given word */

Question 30) Having sample1 file as input, print the matched lines that contain the pattern “Unix” as whole words.

```
thegambaringbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ grep -w 'Unix' sample1.txt
Unix is a great OS.
Unix systems use a centralized operating system kernel which manages system and
process activities.
Unix is a great OS.
A user can also run multiple programs at the same time; hence Unix is a multita
sking environment.
thegambaringbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

grep -w 'Unix' sample1.txt /* Finding the whole word for the pattern. */

Question 31) Print the lines from “sample1.txt” that do not match the pattern “OS”.

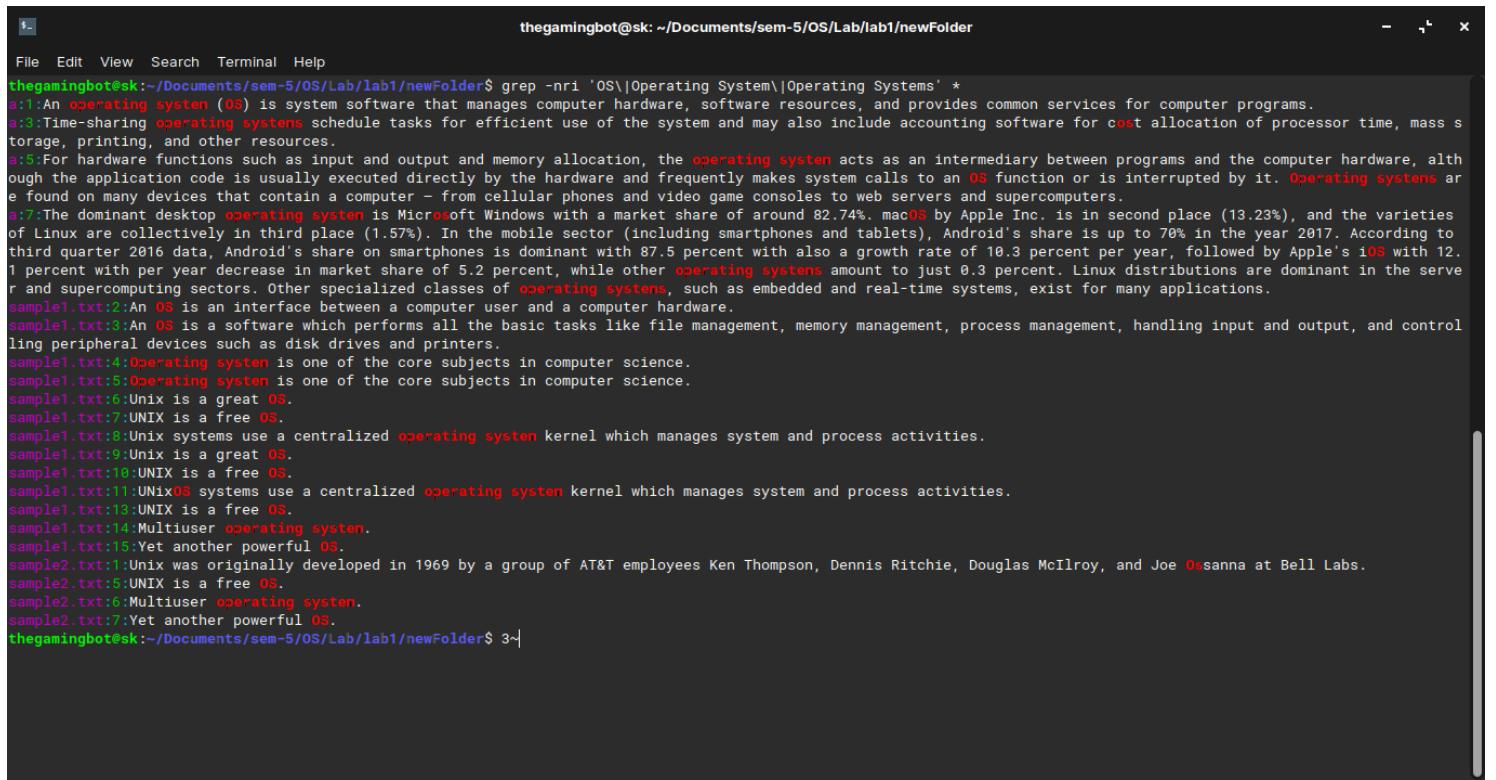


The screenshot shows a terminal window with the following content:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ grep -v 'OS' sample1.txt
This is a test document.
Operating system is one of the core subjects in computer science.
Operating system is one of the core subjects in computer science.
Unix systems use a centralized operating system kernel which manages system and process activities.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
Multiuser operating system.
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample1.txt
This is a test document.
An OS is an interface between a computer user and a computer hardware.
An OS is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
Operating system is one of the core subjects in computer science.
Operating system is one of the core subjects in computer science.
Unix is a great OS.
UNIX is a free OS.
Unix systems use a centralized operating system kernel which manages system and process activities.
Unix is a great OS.
UNIX is a free OS.
UnixOS systems use a centralized operating system kernel which manages system and process activities.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
UNIX is a free OS.
Multiuser operating system.
Yet another powerful OS.thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$
```

grep -v 'OS' sample1.txt /* Find the lines with inverse of the pattern */

Question 32) Fetch the files that contain the word “OS”, “Operating System”, “Operating Systems” with its respective line number. (Ignore the case).



The screenshot shows a terminal window titled "thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder". The terminal displays the output of a grep command: "grep -nri 'OS\|Operating System\|Operating Systems' *". The output lists numerous lines from various files (sample1.txt, sample2.txt, etc.) containing the specified patterns, along with their line numbers. The grep command is case-insensitive, as indicated by the "-i" option.

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ grep -nri 'OS\|Operating System\|Operating Systems' *
a:1:An operating system (OS) is system software that manages computer hardware, software resources, and provides common services for computer programs.
a:3:Time-sharing operating systems schedule tasks for efficient use of the system and may also include accounting software for cost allocation of processor time, mass storage, printing, and other resources.
a:5:For hardware functions such as input and output and memory allocation, the operating system acts as an intermediary between programs and the computer hardware, although the application code is usually executed directly by the hardware and frequently makes system calls to an OS function or is interrupted by it. Operating systems are found on many devices that contain a computer - from cellular phones and video game consoles to web servers and supercomputers.
a:7:The dominant desktop operating system is Microsoft Windows with a market share of around 82.74%. macOS by Apple Inc. is in second place (13.23%), and the varieties of Linux are collectively in third place (1.57%). In the mobile sector (including smartphones and tablets), Android's share is up to 70% in the year 2017. According to third quarter 2016 data, Android's share on smartphones is dominant with 87.5 percent with also a growth rate of 10.3 percent per year, followed by Apple's iOS with 12.1 percent with per year decrease in market share of 5.2 percent, while other operating systems amount to just 0.3 percent. Linux distributions are dominant in the server and supercomputing sectors. Other specialized classes of operating systems, such as embedded and real-time systems, exist for many applications.
sample1.txt:2:An OS is an interface between a computer user and a computer hardware.
sample1.txt:3:An OS is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
sample1.txt:4:Operating system is one of the core subjects in computer science.
sample1.txt:5:Operating system is one of the core subjects in computer science.
sample1.txt:6:Unix is a great OS.
sample1.txt:7:UNIX is a free OS.
sample1.txt:8:Unix systems use a centralized operating system kernel which manages system and process activities.
sample1.txt:9:Unix is a great OS.
sample1.txt:10:UNIX is a free OS.
sample1.txt:11:UnixOS systems use a centralized operating system kernel which manages system and process activities.
sample1.txt:12:UNIX is a free OS.
sample1.txt:14:Multiuser operating system.
sample1.txt:15:Yet another powerful OS.
sample2.txt:1:Unix was originally developed in 1969 by a group of AT&T employees Ken Thompson, Dennis Ritchie, Douglas McIlroy, and Joe Osanna at Bell Labs.
sample2.txt:5:UNIX is a free OS.
sample2.txt:6:Multiuser operating system.
sample2.txt:7:Yet another powerful OS.
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ 3~
```

```
grep -nri 'OS\|Operating System\|Operating Systems' *
/* Find the pattern in all files and display it along with the line number. */
```

Question 33) Having “sample1.txt” and “core” as the input and pattern respectively, along with the matched line print three lines before and after the pattern match.

```
theagingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - x
File Edit View Search Terminal Help
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ grep -a3 "core" sample1.txt
This is a test document.
An OS is an interface between a computer user and a computer hardware.
An OS is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
Operating system is one of the core subjects in computer science.
Operating system is one of the core subjects in computer science.
Unix is a great OS.
UNIX is a free OS.
Unix systems use a centralized operating system kernel which manages system and process activities.
theagingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

grep -a3 "core" sample1.txt

/* Displays the lines with core in sample1.txt and prints 3 lines before and after the search word. */

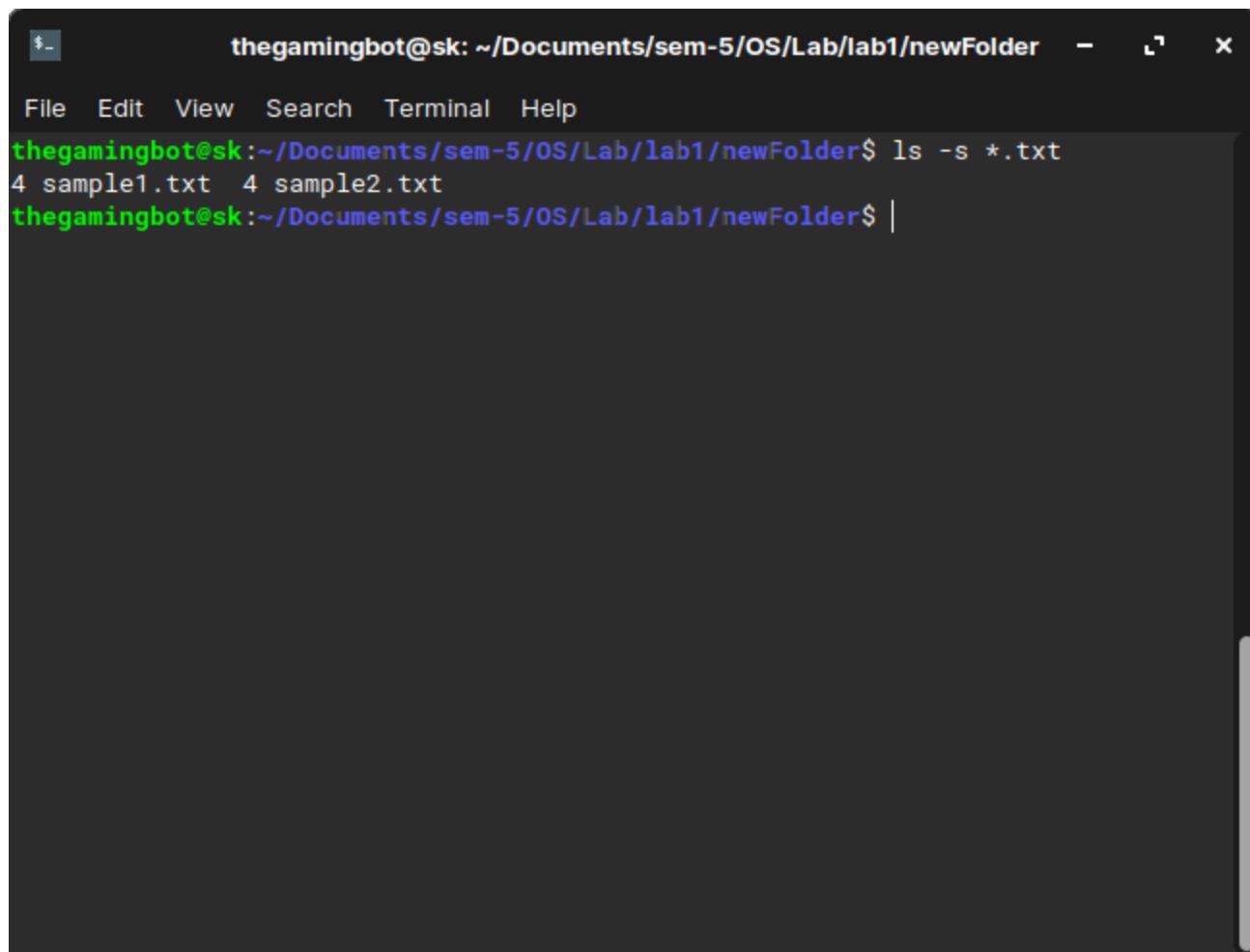
Question 34) Find and replace the string “OS” with “Operating System”.

The screenshot shows a terminal window with the following session:

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample1.txt
This is a test document.
An OS is an interface between a computer user and a computer hardware.
An OS is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
Operating system is one of the core subjects in computer science.
Operating system is one of the core subjects in computer science.
Unix is a great OS.
UNIX is a free OS.
Unix systems use a centralized operating system kernel which manages system and process activities.
Unix is a great OS.
UNIX is a free OS.
UNIXOS systems use a centralized operating system kernel which manages system and process activities.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
UNIX is a free OS.
Multiuser operating system.
Yet another powerful OS.
```

```
sed -i 's/OS/Operating System/g' sample1.txt
/* Changes all the occurrences of OS to Operating System */
```

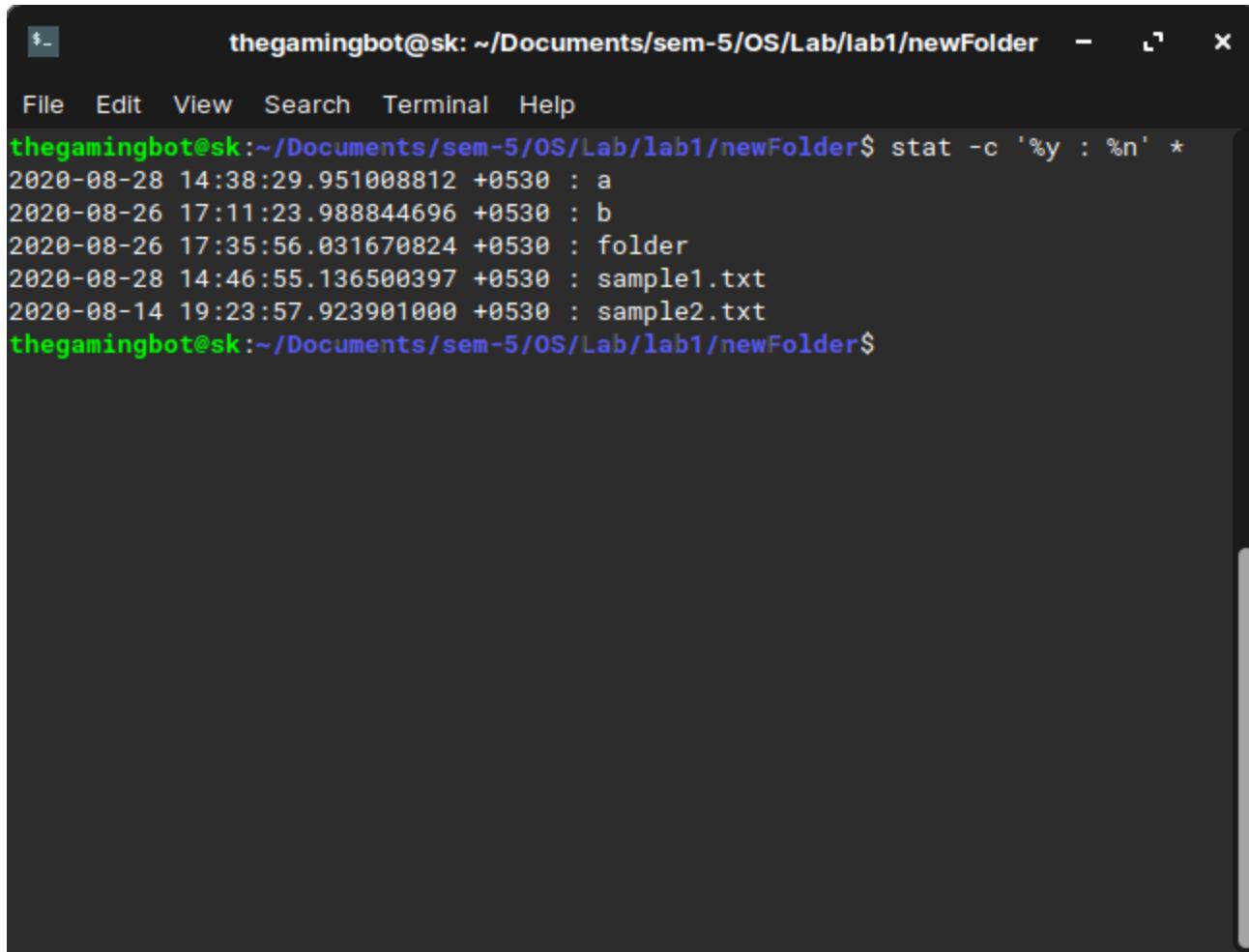
Question 35) List only the text files in the current working directory with its corresponding disk space occupied.



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the user's name, host, and current directory: `thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder`. Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the command `ls -s *.txt` being run, followed by its output: `4 sample1.txt 4 sample2.txt`. The prompt `thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |` is visible at the bottom.

`ls -s *.txt` /* Lists the size of all the txt files in pwd */

Question 36) Show the last modification time of all the input text files.



The screenshot shows a terminal window with a dark background. At the top, it displays the user's name, the current directory (~Documents/sem-5/OS/Lab/lab1/newFolder), and standard window control icons (minimize, maximize, close). Below this is a menu bar with options: File, Edit, View, Search, Terminal, and Help. The main area of the terminal shows the output of the 'stat' command. The command is: 'stat -c '%y : %n' *'. The output lists several entries: '2020-08-28 14:38:29.951008812 +0530 : a', '2020-08-26 17:11:23.988844696 +0530 : b', '2020-08-26 17:35:56.031670824 +0530 : folder', '2020-08-28 14:46:55.136500397 +0530 : sample1.txt', and '2020-08-14 19:23:57.923901000 +0530 : sample2.txt'. The prompt 'thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder\$' appears at the bottom of the terminal window.

```
thegeamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder - ⌂ ×
File Edit View Search Terminal Help
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ stat -c '%y : %n' *
2020-08-28 14:38:29.951008812 +0530 : a
2020-08-26 17:11:23.988844696 +0530 : b
2020-08-26 17:35:56.031670824 +0530 : folder
2020-08-28 14:46:55.136500397 +0530 : sample1.txt
2020-08-14 19:23:57.923901000 +0530 : sample2.txt
thegeamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$
```

```
stat -c '%oy : %on' *
/* Shows the Last modified date and time of n files, if * displays all files in pwd */
```

Question 37) Delete the line that has the word “Powerful” from the text file “sample2.txt”.

The screenshot shows a terminal window with the following session:

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample2.txt
Unix was originally developed in 1969 by a group of AT&T employees Ken Thompson, Dennis Ritchie, Douglas McIlroy, and Joe Ossanna at Bell Labs.
There are various Unix variants available in the market. Solaris Unix, AIX, HP Unix and BSD are a few examples. Linux is also a flavor of Unix which is freely available
.
Several people can use a Unix computer at the same time; hence Unix is called a multiuser system.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
UNIX is a free OS.
Multiuser operating system.
Yet another powerful OS.

thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ sed -i '/powerful\b/d' sample2.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ cat sample2.txt
Unix was originally developed in 1969 by a group of AT&T employees Ken Thompson, Dennis Ritchie, Douglas McIlroy, and Joe Ossanna at Bell Labs.
There are various Unix variants available in the market. Solaris Unix, AIX, HP Unix and BSD are a few examples. Linux is also a flavor of Unix which is freely available
.
Several people can use a Unix computer at the same time; hence Unix is called a multiuser system.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
UNIX is a free OS.
Multiuser operating system.

thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

```
sed -i '/Powerful\b/d' sample2.txt
/* Delete any line containing the word Powerful in sample2.txt */
```

Question 38) Print the roll numbers that end with even numbers in the format (COE18B002) up to COE18B050.

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
GNU nano 2.9.3
loop.sh

for i in {2..50..2}
do
    if [ $i -lt 10 ]
    then
        echo -n "COE18B00$i ";
    else
        echo -n "COE18I0$i ";
    fi
    echo;
done
```

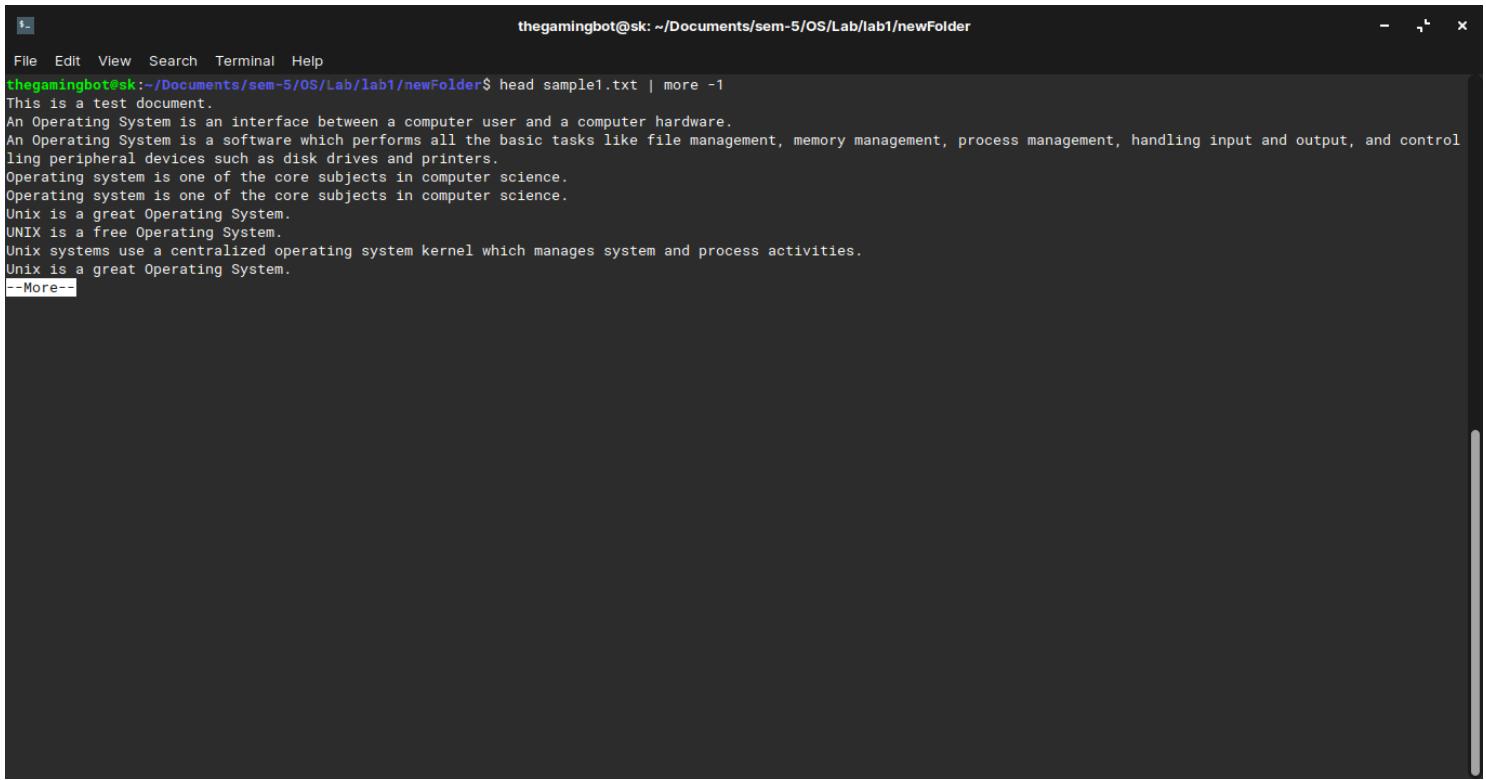
[Read 10 lines]

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos M-U Undo
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Linter ^_ Go To Line M-E Redo
M-A Mark Text M-] To Bracket M-▲ Previous M-W WhereIs Next M-▼ Next

```
the gamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ nano loop.sh
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ bash loop.sh
COE18B002
COE18B004
COE18B006
COE18B008
COE18I010
COE18I012
COE18I014
COE18I016
COE18I018
COE18I020
COE18I022
COE18I024
COE18I026
COE18I028
COE18I030
COE18I032
COE18I034
COE18I036
COE18I038
COE18I040
COE18I042
COE18I044
COE18I046
COE18I048
COE18I050
the gamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

```
for i in {2..50..2}      // i moves from 2 to 50 in the steps of 2
$i lt 10                // checks if i is less than 10
```

Question 39) Use filter commands like head, tail, more to view the file contents page by page.



The screenshot shows a terminal window with a dark background and light-colored text. At the top, it displays the path 'thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder'. Below this, the command 'head sample1.txt | more -1' is run. The output consists of several lines of text about operating systems, followed by a prompt '--More--' and a vertical scroll bar on the right side of the window.

```
thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ head sample1.txt | more -1
This is a test document.
An Operating System is an interface between a computer user and a computer hardware.
An Operating System is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
Operating system is one of the core subjects in computer science.
Operating system is one of the core subjects in computer science.
Unix is a great Operating System.
UNIX is a free Operating System.
Unix systems use a centralized operating system kernel which manages system and process activities.
Unix is a great Operating System.
--More--
```

head sample1.txt | more -1

/* Head is used to print the from the starting of the file.

More -{n} prints n lines at a time*/

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ head sample1.txt | more -1
This is a test document.
An Operating System is an interface between a computer user and a computer hardware.
An Operating System is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.
Operating system is one of the core subjects in computer science.
Operating system is one of the core subjects in computer science.
Unix is a great Operating System.
Unix is a free Operating System.
Unix systems use a centralized operating system kernel which manages system and process activities.
Unix is a great Operating System.
UNIX is a free Operating System.
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ tail -5 sample1.txt
Unix Operating System systems use a centralized operating system kernel which manages system and process activities.
A user can also run multiple programs at the same time; hence Unix is a multitasking environment.
UNIX is a free Operating System.
Multiuser operating system.
Yet another powerful Operating System.theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$
```

tail -{n} sample1.txt
/* Prints the last n lines of sample1.txt */

Question 40) Compress the current working directory contents to a tar file and extract those files from the compressed tar file.

The screenshot shows a terminal window with the following session:

```
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder sample1.txt sample2.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ tar -czf temp.tar.gz *
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
temp.tar.gz
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ rm -r a b folder sample1.txt sample2.txt
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
temp.tar.gz
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ tar -xzf temp.tar.gz
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder sample1.txt sample2.txt temp.tar.gz
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ mkdir temp
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ tar -xzf temp.tar.gz --directory temp/
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls -LR
.:
a b folder sample1.txt sample2.txt temp temp.tar.gz

./folder:
befag.c folder vknefkn.c

./folder/folder:
1.c dajvnds.c

./temp:
a b folder sample1.txt sample2.txt

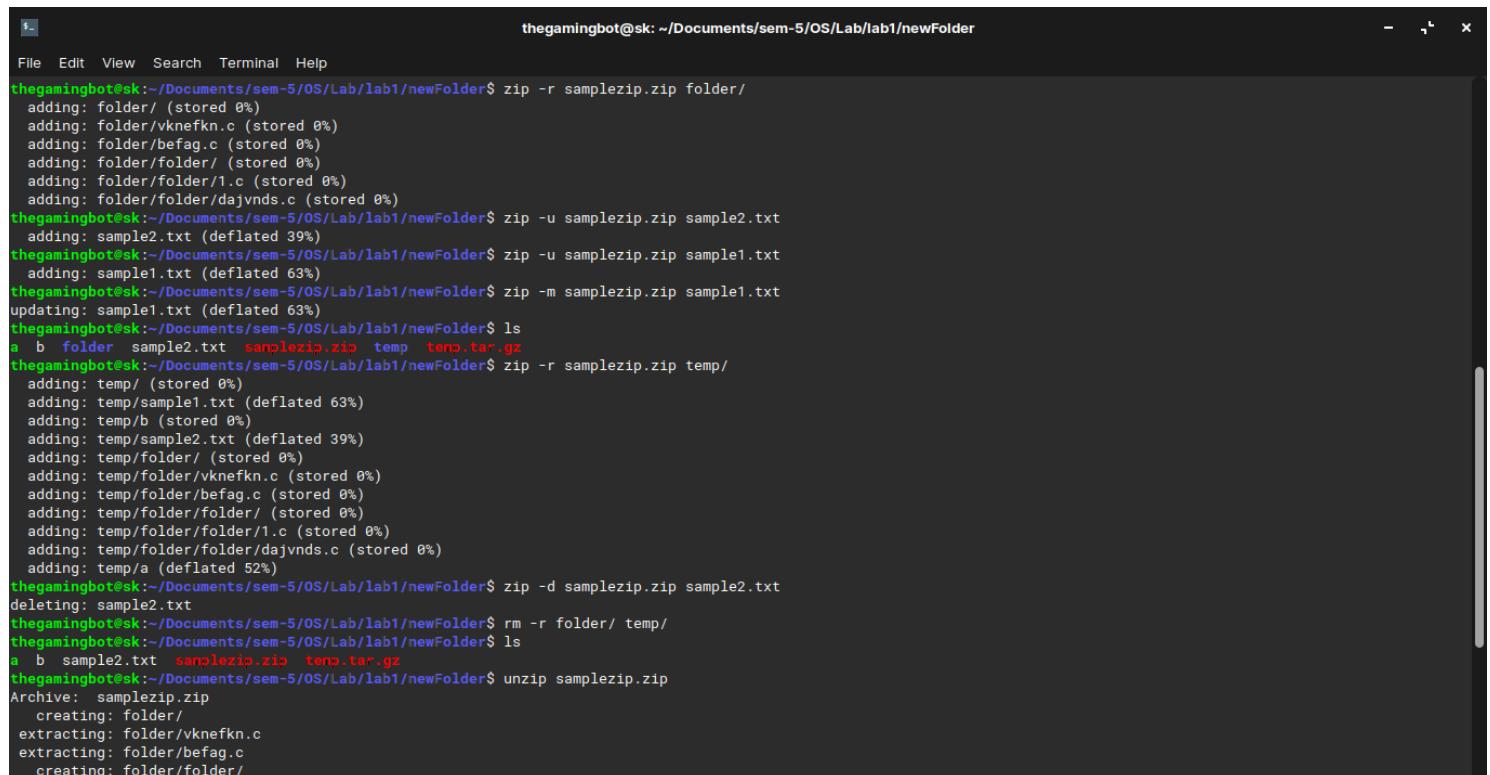
./temp/folder:
befag.c folder vknefkn.c

./temp/folder/folder:
1.c dajvnds.c
thegamingbot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$
```

```
tar -czf temp.tar.gz      /* compressing the contents from current directory */
tar -xzf temp.tar.gz      /* Extracting the contents to the current directory */
tar -xzf temp.tar.gz -C dir_name/
/* Extracting the contents to dir_name */
```

Question 41) Compress the files using zip command.

- a. Zip the input file “sample1.txt” as samplezip.zip and remove the file from the current directory after zipping.
- b. Add “sample2.txt” and update the zip archive.
- c. Zip a directory with all its contents.
- d. Remove a file from the zip archive
- e. Unzip the contents from samplezip.zip



A terminal window titled "thegamingbot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder". The window displays a series of commands related to the zip command:

- zip -r samplezip.zip folder/
- adding: folder/ (stored 0%)
adding: folder/vknefkn.c (stored 0%)
adding: folder/befag.c (stored 0%)
adding: folder/folder/ (stored 0%)
adding: folder/folder/l.c (stored 0%)
adding: folder/folder/dajvnds.c (stored 0%)
- zip -u samplezip.zip sample2.txt
adding: sample2.txt (deflated 3%)
- zip -u samplezip.zip sample1.txt
adding: sample1.txt (deflated 63%)
- zip -m samplezip.zip sample1.txt
updating: sample1.txt (deflated 63%)
- ls
- a b folder sample2.txt samplezip.zip temp temp.tar.gz
- zip -r samplezip.zip temp/
adding: temp/ (stored 0%)
adding: temp/sample1.txt (deflated 63%)
adding: temp/b (stored 0%)
adding: temp/sample2.txt (deflated 39%)
adding: temp/folder/ (stored 0%)
adding: temp/folder/vknefkn.c (stored 0%)
adding: temp/folder/befag.c (stored 0%)
adding: temp/folder/folder/ (stored 0%)
adding: temp/folder/folder/l.c (stored 0%)
adding: temp/folder/folder/dajvnds.c (stored 0%)
adding: temp/a (deflated 52%)
- zip -d samplezip.zip sample2.txt
deleting: sample2.txt
- rm -r folder/ temp/
- ls
- a b sample2.txt samplezip.zip temp.tar.gz
- unzip samplezip.zip

```
theGamingBot@sk: ~/Documents/sem-5/OS/Lab/lab1/newFolder
File Edit View Search Terminal Help
adding: temp/sample1.txt (deflated 63%)
adding: temp/b (stored 0%)
adding: temp/sample2.txt (deflated 39%)
adding: temp/folder/ (stored 0%)
adding: temp/folder/vknefkn.c (stored 0%)
adding: temp/folder/befag.c (stored 0%)
adding: temp/folder/folder/ (stored 0%)
adding: temp/folder/folder/1.c (stored 0%)
adding: temp/folder/folder/dajvnds.c (stored 0%)
adding: temp/a (deflated 52%)
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ zip -d samplezip.zip sample2.txt
deleting: sample2.txt
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ rm -r folder/ temp/
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b sample2.txt samplezip.zip temp.tar.gz
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ unzip samplezip.zip
Archive: samplezip.zip
  creating: folder/
extracting: folder/vknefkn.c
extracting: folder/befag.c
  creating: folder/folder/
extracting: folder/folder/1.c
extracting: folder/folder/dajvnds.c
  inflating: sample1.txt
  creating: temp/
  inflating: temp/sample1.txt
extracting: temp/b
  inflating: temp/sample2.txt
  creating: temp/folder/
extracting: temp/folder/vknefkn.c
extracting: temp/folder/befag.c
  creating: temp/folder/folder/
extracting: temp/folder/folder/1.c
extracting: temp/folder/folder/dajvnds.c
  inflating: temp/a
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ ls
a b folder sample1.txt sample2.txt samplezip.zip temp temp.tar.gz
theGamingBot@sk:~/Documents/sem-5/OS/Lab/lab1/newFolder$ |
```

- a) `zip -m samplezip.zip sample1.txt` /* zips and removes the sample1.txt file */
- b) `zip -u samplezip.zip sample2.txt` /* adds sample2.txt into the zip file */
- c) `zip -r samplezip.zip dir_name` /* adds the directory to the zip file */
- d) `zip -d samplezip.zip sample2.txt` /* removes sample2.txt from the zip file */
- e) `unzip samplezip.zip` /* unzips a .zip file */