

MODULE 2

1) Use the appropriate command to list all files larger than 1 MB in the current directory and save the output to a file.

```
admin1@admin1-VirtualBox:~$ find . -type f -size +1M > large_file.txt
admin1@admin1-VirtualBox:~$ cat large_file.txt
./.cache/tracker3/files/http%3A%2F%2Ftracker.api.gnome.org%2Fontology%2Fv3%2Ftracker%23Pictures.db
./.cache/tracker3/files/http%3A%2F%2Ftracker.api.gnome.org%2Fontology%2Fv3%2Ftracker%23Audio.db
./.cache/tracker3/files/http%3A%2F%2Ftracker.api.gnome.org%2Fontology%2Fv3%2Ftracker%23Software.db
./.cache/tracker3/files/http%3A%2F%2Ftracker.api.gnome.org%2Fontology%2Fv3%2Ftracker%23Video.db
./.cache/tracker3/files/http%3A%2F%2Ftracker.api.gnome.org%2Fontology%2Fv3%2Ftracker%23FileSystem.db
./.cache/tracker3/files/http%3A%2F%2Ftracker.api.gnome.org%2Fontology%2Fv3%2Ftracker%23Documents.db
./.cache/tracker3/files/meta.db
./.cache/mesa_shader_cache/index
./snap/firefox/common/.mozilla/firefox/suzs2xvi.default/gmp-gmpopenh264/1.8.1.2/libgmpopenh264.so
./snap/firefox/common/.mozilla/firefox/suzs2xvi.default/places.sqlite
./snap/firefox/common/.mozilla/firefox/suzs2xvi.default/favicons.sqlite
./snap/firefox/common/.mozilla/firefox/suzs2xvi.default/storage/permanent/chrome/idb/3870112724rsegmnoittet-es.sqlite
./snap/firefox/common/.cache/mesa_shader_cache/index
./snap/firefox/common/.cache/mozilla/firefox/suzs2xvi.default/startupCache/scriptCache.bin
./snap/firefox/common/.cache/mozilla/firefox/suzs2xvi.default/startupCache/scriptCache-current.bin
./snap/firefox/common/.cache/mozilla/firefox/suzs2xvi.default/startupCache/scriptCache-child-current.bin
./snap/firefox/common/.cache/mozilla/firefox/suzs2xvi.default/startupCache/startupCache.8.little
./snap/firefox/common/.cache/mozilla/firefox/suzs2xvi.default/startupCache/scriptCache-child.bin
./snap/firefox/common/.cache/mozilla/firefox/suzs2xvi.default/safebrowsing/google4/goog-phish-proto.vlpset
./snap/firefox/common/.cache/mozilla/firefox/suzs2xvi.default/safebrowsing/google-trackwhite-digest256.vlpset
admin1@admin1-VirtualBox:~$
```

2) Replace all occurrences of "localhost" with "127.0.0.1" in a configuration file named config.txt, and save the updated file as updated_config.txt.

```
admin1@admin1-VirtualBox: ~
GNU nano 6.2 config.txt *
localhost localhost
localhost
localhost

admin1@admin1-VirtualBox:~$ nano config.txt
admin1@admin1-VirtualBox:~$ sed 's/localhost/127.0.0.1/g' config.txt >updated_config.txt
admin1@admin1-VirtualBox:~$ cat updated_config.txt
127.0.0.1 127.0.0.1
127.0.0.1
127.0.0.1
```

3) Use the appropriate command to search for lines containing the word "ERROR" in a log file but exclude lines containing "DEBUG". Save the results to a file named filtered_log.txt.

log:

DEBUG: Starting the application initialization.

ERROR: Unable to connect to the database.

INFO: User 'admin' logged in successfully.

DEBUG: Fetching configuration settings from the server.

ERROR: DEBUG - Configuration settings could not be applied.

INFO: Scheduled job 'backup' completed successfully.

ERROR: DEBUG - Unexpected server response received.

A screenshot of a Linux terminal window titled "admin1@admin1-VirtualBox: ~". The terminal shows the output of a command sequence. At the top, it says "GNU nano 6.2" and "log.txt *". Below this, there's a list of log entries: "DEBUG:0", "ERROR:1", "INFO:2", "DEBUG:0", "ERROR:1", "INFO:2", "DEBUG:0", "ERROR:1", "INFO:2", "DEBUG:0", "ERROR:1", "INFO:2", "DEBUG:0", "ERROR:1", "INFO:2", "DEBUG:0", "ERROR:1", "INFO:2", "DEBUG:0", "ERROR:1", "INFO:2". Then, the user runs "nano log.txt". After that, they run "grep \"ERROR\" log.txt | grep -v \"DEFAULT\" >search.txt". Finally, they run "cat search.txt", which outputs seven lines of "ERROR:1".

```
admin1@admin1-VirtualBox: ~
GNU nano 6.2                                log.txt *
DEBUG:0
ERROR:1
INFO:2
DEBUG:0
ERROR:1
INFO:2
DEBUG:0
ERROR:1
INFO:2
DEBUG:0
ERROR:1
INFO:2
DEBUG:0
ERROR:1
INFO:2
DEBUG:0
ERROR:1
INFO:2
DEBUG:0
ERROR:1
INFO:2

admin1@admin1-VirtualBox:~$ nano log.txt
admin1@admin1-VirtualBox:~$ grep "ERROR" log.txt | grep -v "DEFAULT" >search.txt
admin1@admin1-VirtualBox:~$ cat search.txt
ERROR:1
ERROR:1
ERROR:1
ERROR:1
ERROR:1
ERROR:1
ERROR:1
```

4) Write a code to identify the process with the highest memory usage and then terminate it.

```
admin1@admin1-VirtualBox:~$ ps aux --sort=-%mem | head -n 5
```

USER	PID	PCPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
admin1	1413	13.9	4.5	4511492	350956	?	Ssl	11:33	2:52	/usr/bin/gnome-shell
admin1	1969	0.0	1.0	528816	81128	?	Ssl	11:34	0:00	/usr/libexec/gsd-xsettings
admin1	1965	0.5	0.8	285696	66240	?	S	11:34	0:06	/usr/bin/Xwayland -o -rootless -noresol -accessx -core -auth /run
/user/1000/.mutter-Xwaylandauth.WBS4J3	-listen 4						-listen 5	-displayfd 6	-initfd 7	
admin1	1697	0.0	0.8	814736	64260	?	Sl	11:34	0:00	/usr/libexec/evolution-data-server/evolution-alarm-notify

```
admin1@admin1-VirtualBox:~$ sleep 50&
[1] 5392
admin1@admin1-VirtualBox:~$ ps aux | grep sleep
admin1      5392  0.0  0.0   8368  1920 pts/0    S   11:57   0:00 sleep 50
admin1      5394  0.0  0.0   9076  2560 pts/0    S+  11:57   0:00 grep --color=auto sleep
admin1@admin1-VirtualBox:~$ kill 5392
[1]+  Terminated                  sleep 50
```

5) Use the networking tool command and print all the gateway available in asorted manner

```
admin1@admin1-VirtualBox:~$ ip route
default via 10.0.2.2 dev enp0s3 proto dhcp metric 100
10.0.2.0/24 dev enp0s3 proto kernel scope link src 10.0.2.15 metric 100
169.254.0.0/16 dev enp0s3 scope link metric 1000
admin1@admin1-VirtualBox:~$ ip route | grep default | sort
default via 10.0.2.2 dev enp0s3 proto dhcp metric 100
admin1@admin1-VirtualBox:~$ ip route | grep default | awk '{print $3}' |sort
10.0.2.2
```