



**Module Code & Module Title**

**Level 5 – Network Operating System**

**Assessment Type**

**Logbook 6**

**Semester**

**2024 Spring**

**Student Name: Yogesh Dhakal**

**London Met ID: 23057067**

**College ID: NP04CP4S240032**

**Assignment Submission Date: 14<sup>th</sup> December 2024**

**Submitted To: Mr. Prashant Adhikari**

I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

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## **1. Introduction**

This exercise describes how to become more familiar with basic Linux commands and the command-line environment. First, it starts a script session, exploring commands such as `whoami`, `who`, and `finger` to look up information about your user account and the system. Next, it shows numerous ways to list files with `ls`, `ls -a`, or `ls -a -l` so that you can identify the differences. You will get to know the command `cat` while looking at the contents of some selected files, creating other new files, and appending text in those files. Among these processes is the creation of a file named `test1` using the `echo` command and another file called `test2` with the `cat` command. These will be used to check if the files exist and what they contain before trying to combine them to find out how file merging works in Linux. Finally, you will exit the script session. Accomplishing these will lead you to practically learning file handling, user commands, and working more efficiently in a Linux environment.

## **2. Objective**

This activity will help the learner understand basic commands in Linux and how to use the command line. It will start with running the script to track down a session, followed up by the users who used commands like `whoami` and `who` for various other details regarding user and system details. Next, students will list their files in different ways using `ls` commands and understand how their outputs differ. Emerging from the investigation is the exploration of a system file's contents using `cat`, creating one's own via `echo` and `cat`, and also merging the two files to learn how to merge data. Finally, the session will teach you how to navigate the Linux filesystem, view user information, and manage files easily. A simple but effective way to learn the fundamentals of Linux.

```
my script. help for more information.  
ubuntu@ubuntu:~$ script alscrip  
Script started, output log file is 'alscript'.
```

Figure 1 : Typing script a1script at the prompt.

```
ubuntu@ubuntu:~$ whoami  
ubuntu  
ubuntu@ubuntu:~$
```

Figure 2 : Type whoami to see username.

```
ubuntu@ubuntu:~$ who  
ubuntu :0 2024-12-13 15:34 (:0)  
ubuntu@ubuntu:~$
```

Figure 3 : Type who to see a list of everyone on the system.

```
ubuntu@ubuntu:~$ finger ubuntu  
finger: /dev//seat0: No such file or directory  
Login: ubuntu Name: Live session user  
Directory: /home/ubuntu Shell: /bin/bash  
On since Fri Dec 13 04:03 (UTC) on seat0 from login screen  
On since Fri Dec 13 04:03 (UTC) on :0 from :0 (messages off)  
No mail.  
No Plan.  
Login: installer Name: Ubuntu  
Directory: /home/installer Shell: /usr/bin/subiquity-shell  
Never logged in.  
No mail.  
No Plan.
```

Figure 4 : Type your username to view about yourself.

```
ubuntu@ubuntu:~$ date  
Fri Dec 13 04:30:56 UTC 2024  
ubuntu@ubuntu:~$
```

Figure 5 : To see today's date and the current time type date.

```
ubuntu@ubuntu:~$ ls  
Desktop Downloads Pictures Templates alscrip  
Documents Music Public Videos snap  
ubuntu@ubuntu:~$ ls -a
```

Figure 6 typing ls

```
ls -a: command not found
ubuntu@ubuntu:~$ ls -a
.          .cache      .profile   Downloads  Templates
..         .config    .sudo_as_admin_successful Music       Videos
.bash_logout .gvfs      Desktop    Pictures   alscript
.bashrc     .local     Documents  Public     snap
ubuntu@ubuntu:~$
```

Figure 7 Typing ls -a

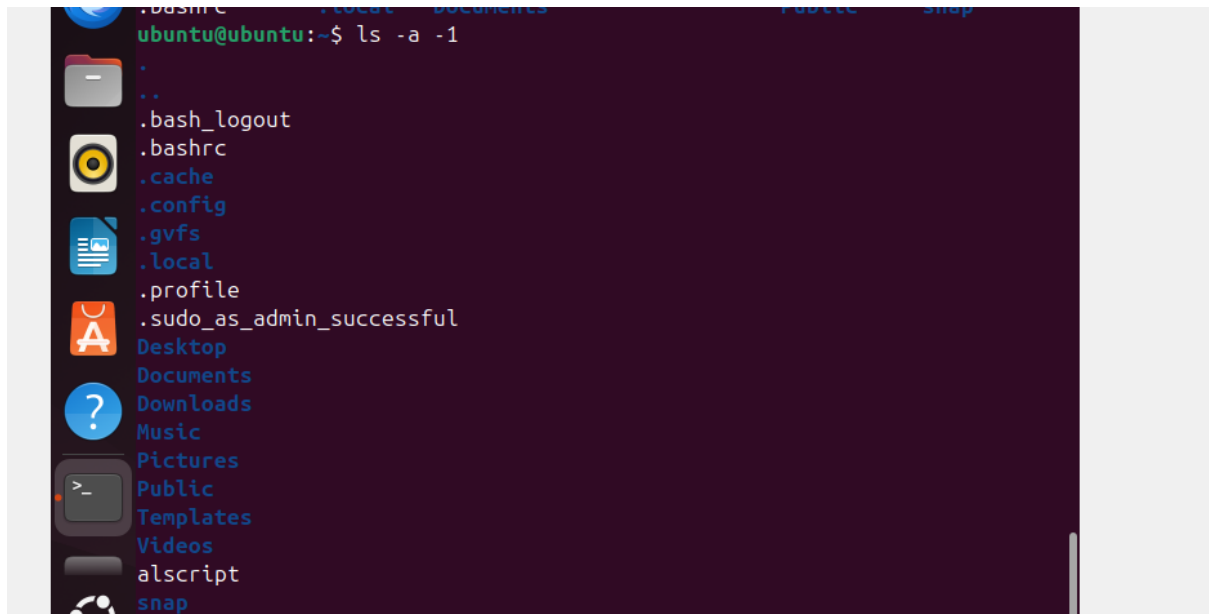


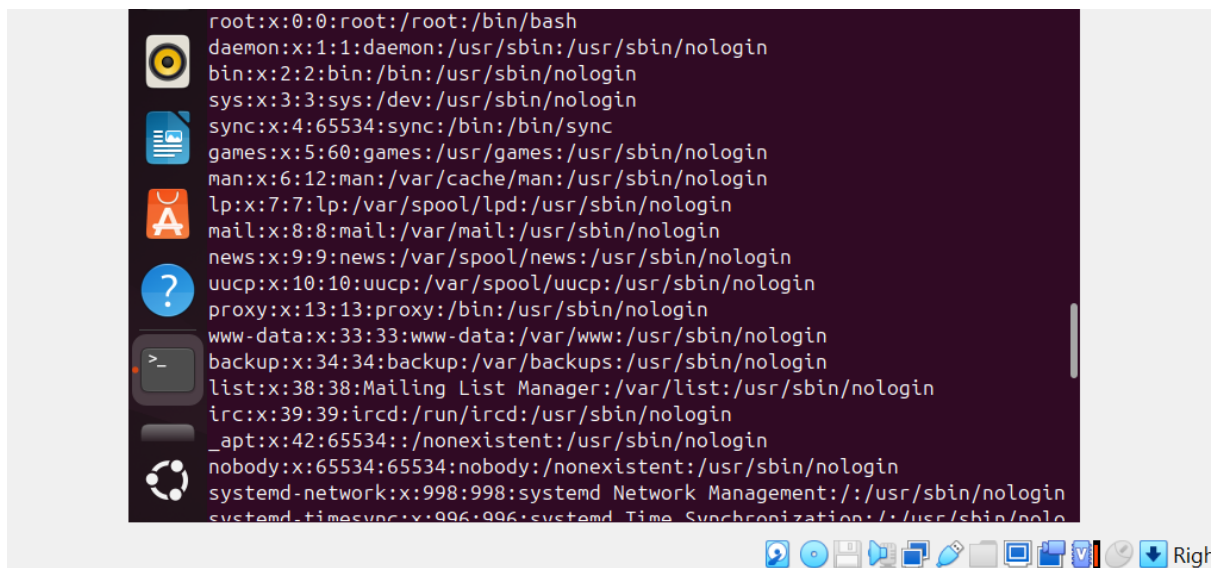
Figure 8 Typing ls -a -l

The difference between ls, ls-a, ls -a -l : are:

**ls:** Shows files and directories, but **hides hidden files**.

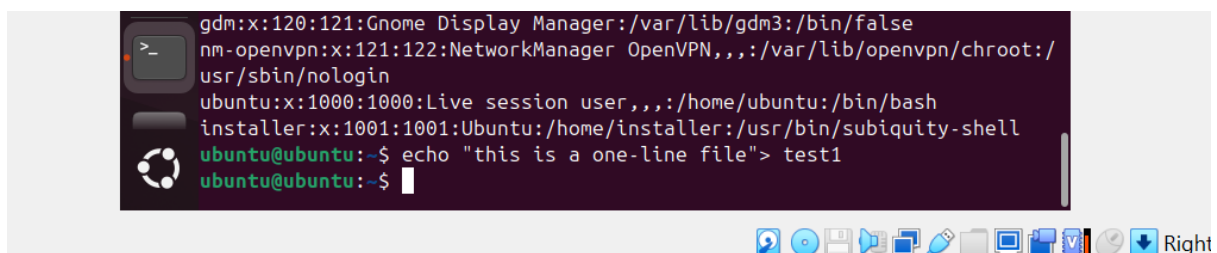
**ls -a:** Shows **all files**, including hidden ones (files starting with .).

**ls -a -l:** Shows **all files with details** like permissions, size, owner, and date.

A terminal window with a dark purple background and white text. It lists system user accounts with their IDs, names, and home directories. On the left side of the terminal, there are several application icons: a yellow circle with a black dot, a blue document icon, an orange 'A' icon, a blue question mark icon, a terminal icon, and a circular refresh icon. The user interface at the bottom includes a taskbar with various icons and a 'Right' button.

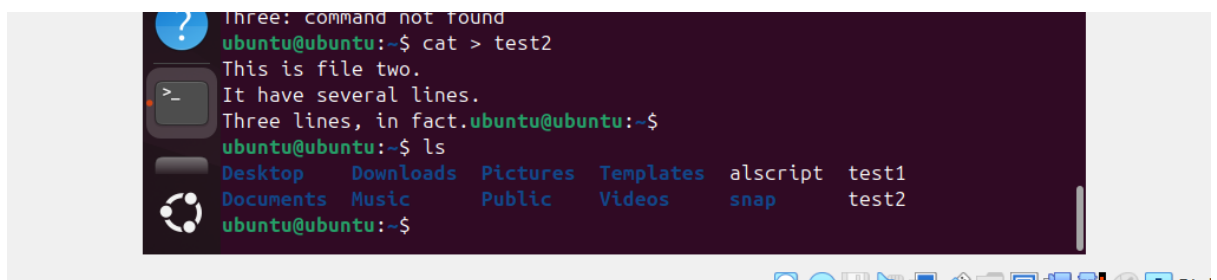
```
root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/usr/sbin/nologin
bin:x:2:2:bin:/bin:/usr/sbin/nologin
sys:x:3:3:sys:/dev:/usr/sbin/nologin
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/usr/sbin/nologin
man:x:6:12:man:/var/cache/man:/usr/sbin/nologin
lp:x:7:7:lp:/var/spool/lpd:/usr/sbin/nologin
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:/run/ircd:/usr/sbin/nologin
_apt:x:42:65534::/nonexistent:/usr/sbin/nologin
nobody:x:65534:65534:nobody:/nonexistent:/usr/sbin/nologin
systemd-network:x:998:998:systemd Network Management:/:/usr/sbin/nologin
systemd-timesync:x:996:996:systemd Time Synchronization:/:/usr/sbin/nologin
```

Figure 9 Checking what is in the file

A terminal window with a dark purple background and white text. It shows the execution of the 'echo' command to create a file named 'test1'. On the left side of the terminal, there are several application icons: a terminal icon, a circular refresh icon, and a circular arrow icon. The user interface at the bottom includes a taskbar with various icons and a 'Right' button.

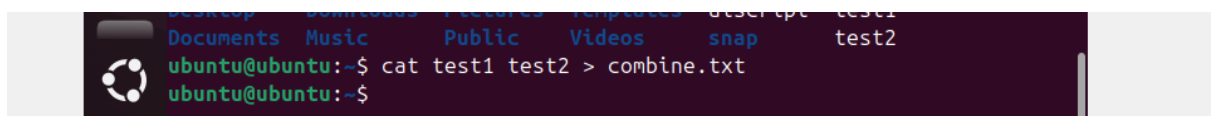
```
gdm:x:120:121:Gnome Display Manager:/var/lib/gdm3:/bin/false
nm-openvpn:x:121:122:NetworkManager OpenVPN,,,:/var/lib/openvpn/chroot:/usr/sbin/nologin
ubuntu:x:1000:1000:Live session user,,,:/home/ubuntu:/bin/bash
installer:x:1001:1001:Ubuntu:/home/installer:/usr/bin/subiquity-shell
ubuntu@ubuntu:~$ echo "this is a one-line file"> test1
ubuntu@ubuntu:~$
```

Figure 10 Creating the file named test 1

A terminal window with a dark purple background and white text. It shows the execution of 'cat' and 'ls' commands to create and list files. On the left side of the terminal, there are several application icons: a blue question mark icon, a terminal icon, a circular refresh icon, and a circular arrow icon. The user interface at the bottom includes a taskbar with various icons and a 'Right' button.

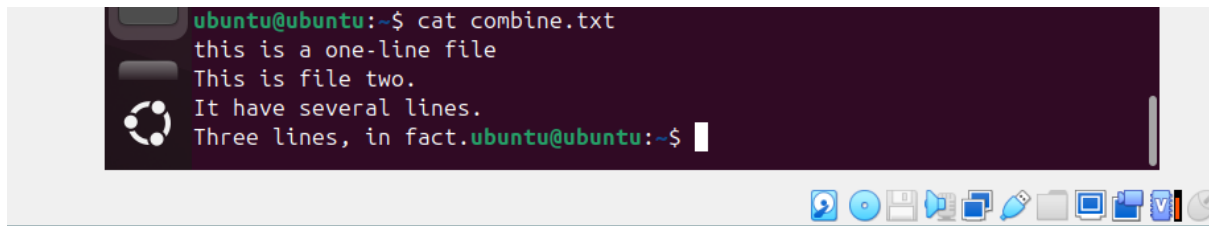
```
Three: command not found
ubuntu@ubuntu:~$ cat > test2
This is file two.
It have several lines.
Three lines, in fact.ubuntu@ubuntu:~$
ubuntu@ubuntu:~$ ls
Desktop  Downloads  Pictures  Templates  alscript  test1
Documents Music      Public    Videos    snap      test2
ubuntu@ubuntu:~$
```

Figure 11 Creating another file using this command

A terminal window with a dark purple background and white text. It shows the execution of the 'cat' command to combine the contents of 'test1' and 'test2' into a new file named 'combine.txt'. On the left side of the terminal, there are several application icons: a circular refresh icon and a circular arrow icon. The user interface at the bottom includes a taskbar with various icons and a 'Right' button.

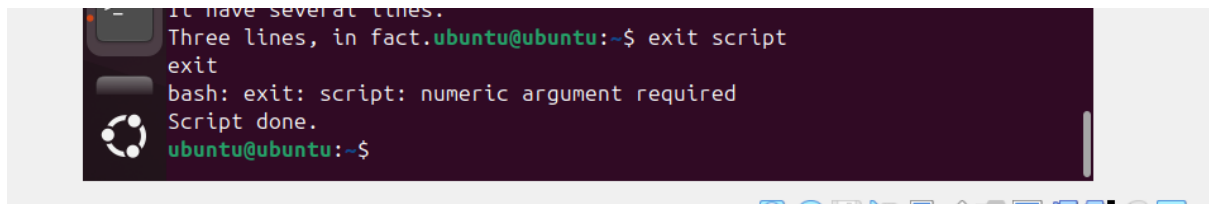
```
Desktop  Downloads  Pictures  Templates  alscript  test1
Documents Music      Public    Videos    snap      test2
ubuntu@ubuntu:~$ cat test1 test2 > combine.txt
ubuntu@ubuntu:~$
```

Figure 12 Showing that the file exists and what it contains

A terminal window with a dark purple background. The prompt is 'ubuntu@ubuntu:~\$'. The command 'cat combine.txt' has been entered, and the output is displayed: 'this is a one-line file', 'This is file two.', 'It have several lines.', and 'Three lines, in fact.'. The prompt is now 'ubuntu@ubuntu:~\$' with a cursor. The window has a standard Ubuntu desktop taskbar at the bottom with various icons.

```
ubuntu@ubuntu:~$ cat combine.txt
this is a one-line file
This is file two.
It have several lines.
Three lines, in fact.ubuntu@ubuntu:~$
```

Figure 13 Combining test 1 and test 2

A terminal window with a dark purple background. The prompt is 'ubuntu@ubuntu:~\$'. The command 'exit script' has been entered, resulting in an error: 'bash: exit: script: numeric argument required'. Below the error, it says 'Script done.' and the prompt is 'ubuntu@ubuntu:~\$'. The window has a standard Ubuntu desktop taskbar at the bottom.

```
It have several lines.
Three lines, in fact.ubuntu@ubuntu:~$ exit script
exit
bash: exit: script: numeric argument required
Script done.
ubuntu@ubuntu:~$
```

Figure 14 Exiting the script

### 3. Conclusion

This exercise introduces students to simple Linux commands for using a shell script to gain access to a Linux system. We find the username using the command `whoami`, whereas `who` returns a list of all currently logged-in users. If you want to know more information concerning an account, you can use `finger`. The command `date` shows the current date and time set in your system. Variations of `ls` show how file listings could include those with hidden files (using `ls -a`) or with further properties (`ls -a -l`). The `cat` command as it lists out the contents of files, creates files, and concatenates to form a new file. Finally, exiting the script saved all interactions to show how efficiently Linux can be utilized to manage files and access user information.