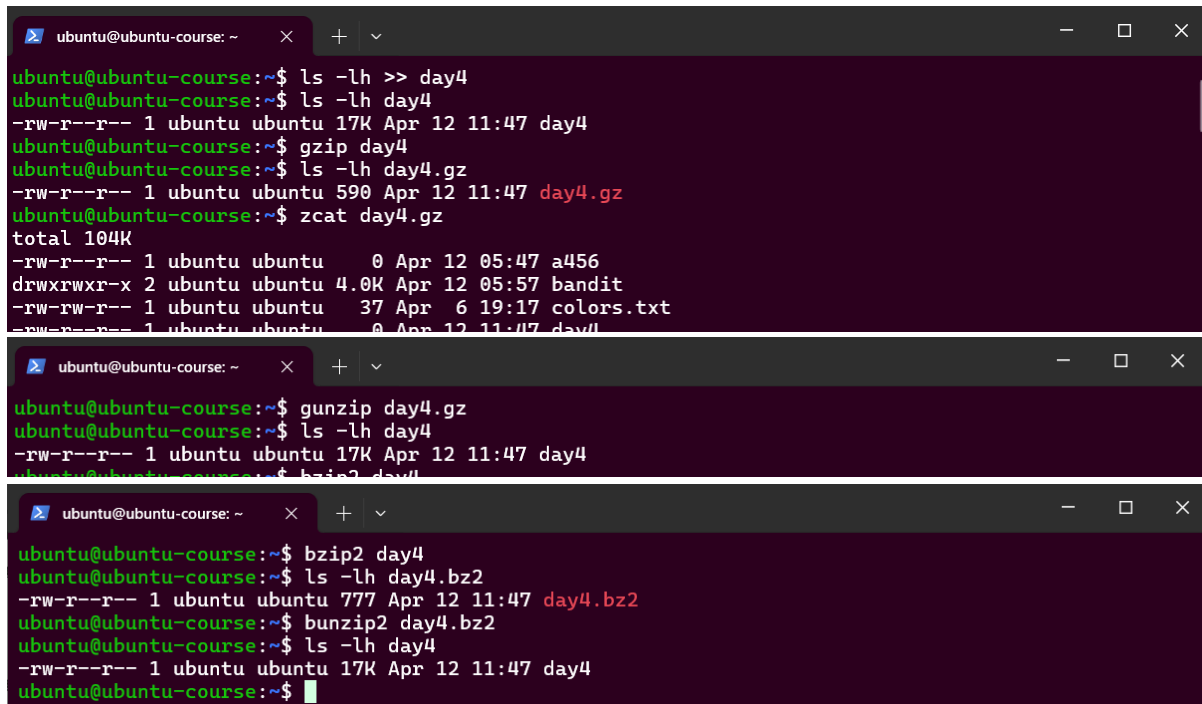## Introduction to Linux and Bash Scripting

Lab 5

Name: Omar Mohamed Ibrahim

Track: Data Engineer – Zagazig

---

1. List the Compress a file by gzip and bzip2 commands and decompress it again. State the differences between two commands.

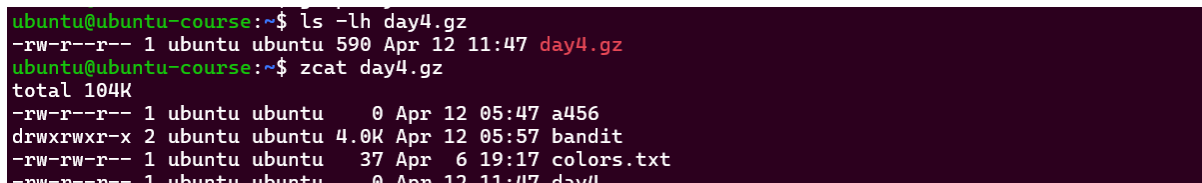**gzip** is *faster* than bzip2 but on the other hand **bzip2** provides better *compression ratio*.

but in my case the actual gzip is smaller than bzip2 and when I searched a bit, I found It is usually the bzip2 size is smaller than gzip but it depends on several factors not a strict role.

---

2. What is the command used to view the content of a compressed file

Zcat command

3. Backup /etc directory using tar utility

```
ubuntu@ubuntu-course:~$ sudo cp -r /etc ./backup
ubuntu@ubuntu-course:~$ ls -lh
total 132K
-rw-r--r--    1 ubuntu ubuntu    0 Apr 12 05:47 a456
drwxr-xr-x 108 root   root   4.0K Apr 12 12:19 backup
```

```
ubuntu@ubuntu-course:~$ tar cf backup.tar backup/ 2> /dev/null
ubuntu@ubuntu-course:~$ ls -lh
total 3.4M
-rw-r--r--    1 ubuntu ubuntu    0 Apr 12 05:47 a456
drwxr-xr-x 108 root   root   4.0K Apr 12 12:19 backup
-rw-r--r--    1 ubuntu ubuntu 3.3M Apr 12 12:22 backup.tar
```

4. Starting from your home directory, find all files that were modified in the last two day.

```
ubuntu@ubuntu-course:~$ find ~ -type f -mtime -2 2> /dev/null | head
/home/ubuntu/.lesshst
/home/ubuntu/f1
/home/ubuntu/a456
/home/ubuntu/bandit/2
/home/ubuntu/bandit/3
/home/ubuntu/bandit/0
/home/ubuntu/bandit/4
/home/ubuntu/bandit/1
/home/ubuntu/bandit/5
/home/ubuntu/s3.sh
ubuntu@ubuntu-course:~$
```

5. Starting from /etc, find files owned by root user.

```
ubuntu@ubuntu-course:~$ find /etc -type f -user 'root'  2> /dev/null | head
/etc/kernel/preinst.d/intel-microcode
/etc/kernel/postrm.d/zz-update-grub
/etc/kernel/postrm.d/initramfs-tools
/etc/kernel/postinst.d/zz-update-grub
/etc/kernel/postinst.d/unattended-upgrades
/etc/kernel/postinst.d/initramfs-tools
/etc/kernel/postinst.d/xx-update-initrd-links
/etc/dpkg/dpkg.cfg.d/needrestart
/etc/dpkg/origins/ubuntu
/etc/dpkg/origins/debian
ubuntu@ubuntu-course:~$
```

6. Find all directories in your home directory

```
ubuntu@ubuntu-course:~$ find ~  -type d 2> /dev/null | head
/home/ubuntu
/home/ubuntu/.cache
/home/ubuntu/.config
/home/ubuntu/.config/procps
/home/ubuntu/bandit
/home/ubuntu/etc
/home/ubuntu/etc/kernel
/home/ubuntu/etc/kernel/install.d
/home/ubuntu/etc/kernel/preinst.d
/home/ubuntu/etc/kernel/postrm.d
ubuntu@ubuntu-course:~$
```

7. Write a command to search for all files on the system that, its name is ".profile".

```
ubuntu@ubuntu-course:~$ find / -type f -name ".profile" 2> /dev/null | head
/etc/skel/.profile
/home/ubuntu/etc/skel/.profile
/home/ubuntu/.profile
/home/ubuntu/backup/skel/.profile
ubuntu@ubuntu-course:~$
```