**1-Compress a file by compress, gzip, zip commands and decompress it again. State the differences between compress and gzip commands.**

compress bench.py

uncompress -v bench.py.Z

gzip bench.py

gunzip bench.py.gz

zip bench.zip bench.py

unzip bench.zip

difference between compress and gzip :

compress: older but faster

gzip: will get better compression results

they both use different compression algorithms

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

For zip files: unzip -l

For gzip and .z files: zcat

**3-** **Backup /etc directory using tar utility**

sudo tar -cf bckup.tar /etc

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

find ~/ -type f -mtime -2

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

sudo find /etc -user root

**6-** **Find all directories in your home directory**

find ~/ -type d

**7-** **Write a command to search for all files on the system that, its name is “.profile”**

sudo find / -name ".profile"

**8-** **Identify the file types of the following: /etc/passwd, /dev/pts/0, /etc, /dev/sda**

file /etc/passwd

file /dev/pts/0

file /etc

file /dev/sda





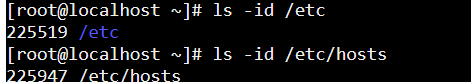
**9-** **List the inode numbers of /, /etc, /etc/hosts.**

ls -id /

ls -id /etc

ls -id /etc/hosts





**10.** **Copy /etc/passwd to your home directory, use the commands diff and cmp, and Edit in the file you copied, and then use these commands again, and check the output.**

cp /etc/passwd ~/passwd2

diff /etc/passwd ~/ passwd2

cmp /etc/passwd ~/ passwd2



diff /etc/passwd ~/ passwd2

cmp /etc/passwd ~/ passwd2

**11.** **Create a symbolic link of /etc/passwd in /boot**

sudo ln -s /etc/passwd /boot/passwd

**12.** **Create a hard link of /etc/passwd in /boot. Could you? Why?**

**No.**

Hard links can’t be made for /etc/passwd in /boot because they must be on the same file system. /etc/passwd and /boot are usually on different file systems

They can only be created for files, not directories.