UNIX Commands: Quick Reference

This is a short list of the main commands that you can find in demonstrations and practice tasks. Most commands have options that change their behavior. Some common options are shown in the examples.

man   General help on any command

```
man man
```
Help for the man command itself.

pwd   Display the path of the current working directory

cd   Change the current directory

```
cd /home/student/dev1; cd ..
```
Go to the directory containing course materials, and then to the directory one level above.

ls   List the contents of the current directory

```
ls -l ~
```
List the contents of the Home directory in a detailed format.

sudo   Run a command with superuser (or other user) privileges

```
sudo -u postgres ls /var/lib/postgresql/16/main
```
View the cluster data directory (known as PGDATA).

su   Switch to superuser (or another user)

```
sudo su - postgres
```
Switch to the postgres user. The "-" sign pulls the settings in the .profile file.

cat   Display the contents of a file

```
cat /etc/postgresql/16/main/postgresql.conf
```
The contents of a file at the specified location.

tee   Output the data to the console and write it to a file

```
echo '\timing on' | tee -a .psqlrc
```
Add the line to the file and display it on the screen.

head, tail   Display the beginning (or the end) of a file

```
sudo head -n 1 /var/lib/postgresql/16/main/postmaster.pid
```
The first line of the specified file (contains the postmaster process ID).

```
tail -n 5 /var/log/postgresql/postgresql-16-main.log
```
The last five lines of the server message log.

grep	**Filter out specific lines from a file**

```
cat /var/log/postgresql/postgresql-16-main.log | grep FATAL
```
Find lines with the word "FATAL" in the output of the cat command
(vertical bar redirects the output of the cat command to the grep input).

```
grep ^[^#] /etc/postgresql/16/main/pg_hba.conf
```
Regular expressions: all lines of the file that do not start with a number sign.

sort	**Sort lines**

```
ls /etc/postgresql/16/main | sort
```
Sort the list of files in the specified directory by file name.

echo	**Display text**

```
sudo -u postgres echo 'work_mem = 16MB' >>
 /etc/postgresql/16/main/postgresql.conf
```
Append a line to the end of postgresql.conf file (> will overwrite the file).

mkdir, rmdir	**Create (delete) a directory**

```
mkdir ~/ts_dir
```
Create the specified directory. You can only delete an empty directory.

cp, mv	**Copy (move) a file or directory**

```
cp /etc/postgresql/16/main/postgresql.conf postgresql.conf.backup
```
Copy the specified file to the current directory under a different name.

```
cd ~; mv dev1/ dev1_handounts/
```
Move the course materials directory to another location (rename it).

rm	**Delete a file**

```
sudo rm /var/log/postgresql/postgresql-16-main.log
```
Delete the server log.

find	**Find files**

```
sudo find /etc -name postgresql
```
Find files and directories by name in the /etc directory and its subdirectories.

```
find /etc -maxdepth 1 -name *.conf -type f
```
Find files ending with .conf in the /etc directory (excluding subdirectories).

```
sudo find /var/lib/postgresql/16/main -size +10M -size -20M
```
Find files larger than 10MB but smaller than 20MB in the /var/lib/postgresql/16/main
directory and its subdirectories.

time   Execute another command and mark the time

```
time sleep 1
```

How long does a command that pauses for one second run?

date   Display the current date and time

```
date '+%D_%T'
```
The current date and time in the specified format.

ps   List of processes

```
ps -o pid, command --ppid `sudo head -n 1
   /var/lib/postgresql/16/main/postmaster.pid`
```
A list of postmaster child processes

(a command in backticks is replaced by its output when executed).

sed   Stream text editor

Use a regular text editor. Sed is useful in scripts.

base32   Encoding and decoding

```
base32 -w0 somefile.bin
```
Encodes files or standard input according to RFC 4648.

The encoded output is represented as a printable string.