

# Unix Commands: a Quick Reference



Here is a short list of the main commands that you can come across in demos and keys to practical assignments. As a rule, each command has some options that can change its behavior. Some of the popular options are shown in examples.

man	Reference information for any command  man man Reference documentation for the man command itself.
pwd	Print the name of the current directory
cd	Switch to another directory  cd /home/student/intro; cd .. Switch to the directory with the course materials, and then go up one level.
ls	List directory contents  ls -l ~ List the contents of the Home directory in a detailed output format.
sudo	Execute a command as a superuser (or another user)  sudo -u postgres ls /var/lib/postgresql/15/main View data directory of a cluster (known as PGDATA).
su	Switch to a superuser (or another user)  sudo su - postgres Switch to the postgres user. The “dash” sign takes into account the .profile configuration file.
cat	Print the content of a file  cat /etc/postgresql/15/main/postgresql.conf The content of the specified file.
head, tail	Print the first (last) lines of a file  sudo head -n 1 /var/lib/postgresql/15/main/postmaster.pid The first line of the specified file (contains the postmaster process ID).  tail -n 5 /var/log/postgresql/postgresql-15-main.log The last five lines of the server log.

- grep** Filter lines in a file
- ```
cat /var/log/postgresql/postgresql-15-main.log | grep FATAL
```
- Find all lines with the word “FATAL” in the output of the cat command (the pipe symbol indicates that the output of cat should be used as input for grep).
- ```
grep ^[^\#] /etc/postgresql/15/main/pg_hba.conf
```
- Regular expressions: find all lines that do not start with a hash.
- echo** Print text
- ```
sudo -u postgres echo 'work_mem = 16MB' >>
↪ /etc/postgresql/15/main/postgresql.conf
```
- Add a line to the end of the postgresql.conf file (a single > will simply rewrite the file).
- mkdir, rmdir** Create (delete) a directory
- ```
mkdir ~/ts_dir
```
- Create a directory with the specified name. You can delete only an empty directory.
- cp, mv** Copy (move) files and directories
- ```
cp /etc/postgresql/15/main/postgresql.conf postgresql.conf.backup
```
- Copy and rename the specified file in the current directory.
- ```
cd ~; mv intro/ intro_handouts/
```
- Move the directory with course handouts to a different location (i.e., rename the directory).
- rm** Delete a file
- ```
sudo rm /var/log/postgresql/postgresql-15-main.log
```
- Delete the server log file.
- ps** List active processes
- ```
ps -o pid,command --ppid `sudo head -n 1
↪ /var/lib/postgresql/15/main/postmaster.pid`
```
- List child processes of postmaster (the command in `backquotes` is replaced by its output).
- time** Run another command and measure its execution time
- ```
time sleep 1
```
- Measure execution time of the command that sleeps for one second.
- sed** Stream editor
- Sed is convenient to use in scripts. Otherwise, use a regular text editor.