**File commands**

- `ls`: Directory listing
- `ls -al`: Formatted listing with hidden files
- `cd dir`: Change directory to dir
- `cd`: Change to home
- `pwd`: Show current directory
- `mkdir dir`: Create a directory dir
- `rm file`: Delete file
- `rm -r dir`: Delete directory dir
- `rm -f file`: Force remove file
- `rm -rf dir`: Remove directory dir
- `cp file1 file2`: Copy file1 to file2
- `cp -r dir1 dir2`: Copy dir1 to dir2; create dir2 if it doesn’t exist
- `mv file1 file2`: Rename move file1 to file2. If file2 is an existing directory, moves file1 into directory file2
- `ln -s file link`: Create symbolic link link to file
- `touch file`: Create or update file
- `cat > file`: Places standard input into file
- `more file`: Output the contents of file
- `head file`: Output the first 10 lines of file
- `tail file`: Output the last 10 lines of file
- `tail -f file`: Output the contents of file as it grows, starting with the last 10 lines

**System Info**

- `date`: Show the current date and time
- `cal`: Show the month’s calendar
- `uptime`: Show current uptime
- `w`: Display who is online
- `whoami`: Display who you are logged in as
- `finger user`: Display information about user
- `uname -a`: Show kernel information
- `cat /proc/cpuinfo`: Show CPU information
- `cat /proc/meminfo`: Memory information
- `man command`: Show the manual for command
- `df`: Show disk usage
- `du`: Show directory space usage
- `free`: Show memory and swap usage
- `whereis app`: Show possible locations of app
- `which app`: Show which app will be run by default

**Compression**

- `tar cf file.tar files*`: Create a tar named file.tar containing files
- `tar xf file.tar`: Extract the files from file.tar
- `tar czf file.tar.gz files*`: Create a tar with GZip compression
- `tar xzf file.tar.gz`: Extract a tar using GZip
- `gzip file`: Compress file and renames it to file.gz
- `gzip -d file.gz`: Decompresses file.gz back to file

**Process Management**

- `ps`: Display all currently active processes
- `top`: Display all running processes
- `kill pid`: Kill process pid
- `killall proc`: Kill all processes named proc
- `bg`: Lists stopped or background jobs; resume a stopped job in the background
- `fg`: Brings the most recent job to the foreground
- `fg a`: Brings job a to the foreground

**File Permissions**

- `chmod octal file`: Change the permissions of file to octal, which can be found separately for user, group, and world by adding:
  - `4` - read (r)
  - `2` - write (w)
  - `1` - execute (x)
- Examples:
  - `chmod 777 file`: read, write, execute for all
  - `chmod 755 file`: read, write, execute for owner, read, write, execute for group and world. For more options, see `man chmod`.

**SSH**

- `ssh user@host` : Connect to host as user
- `ssh host`: Connect to host as user
- `ssh-copy-id user@host`: Connect to host on port port as user
- `add your key to host for user to enable a keyed or passwordless login`

**Searching**

- `grep pattern file`: Search for pattern in files
- `grep -r pattern dir`: Search recursively for pattern in dir
- `find file`: Search for pattern in the output of command find all instances of file

**Network**

- `ping host`: Ping host and output results
- `whos domain`: Get whois information for domain
- `dig domain`: Get DNS information for domain
- `dig -x host`: Reverse lookup host
- `wget file`: Download file
- `wget -c file`: Continue a stopped download

**Installation**

- Install from source:
  - `./configure` : Install
  - `make` : Install
  - `make install` : Install
  - `dpkg -i pkg.deb` : Install
  - `rpm -Uhv pkg.rpm` : Install

**Shortcuts**

- `Ctrl+C`: Halts the current command
- `Ctrl+Z`: Stops the current command, resume with fg in the foreground or bg in the background
- `Ctrl+D`: Log out of current session, similar to exit
- `Ctrl+W`: Erases one word in the current line
- `Ctrl+U`: Erases the whole line
- `Ctrl+R`: Type to bring up a recent command
- `!!`: Repeats the last command
- `exit`: Log out of current session
- `*`: Use with extreme caution