



# Module 2 Cheat Sheet - Introduction to Linux Commands

## Getting information

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**Return your user name:**

1. 1

1. whoami

Copied!

**Return your user and group id:**

1. 1

1. id

Copied!

**Return operating system name, username, and other info:**

1. 1

1. uname -a

Copied!

**Display reference manual for a command:**

1. 1

1. man top

Copied!

**List available man pages, including a brief description for each command:**

1. 1

1. man -k .

Copied!

**Get help on a command:**

```
1. 1
```

```
1. curl --help
```

Copied!

**Return the current date and time:**

```
1. 1
```

```
1. date
```

Copied!

## Navigating and working with directories

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**List files and directories by date, newest to last:**

```
1. 1
```

```
1. ls -lrt
```

Copied!

**Find files in directory tree that end in .sh:**

```
1. 1
```

```
1. find -name \'\*.sh\'
```

Copied!

**Return path to present working directory:**

```
1. 1
```

```
1. pwd
```

Copied!

**Make a new directory:**

```
1. 1
```

```
1. mkdir new_folder
```

Copied!

**Change the current directory:**

**Up one level:**

```
1. 1
```

```
1. cd ../
```

Copied!

### To home:

1. 1

1. `cd ~`` or ``cd`

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**To some other directory:** `cd path_to_directory`

### Remove directory verbosely:

1. 1

1. `rmdir temp_directory -v`

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## Monitoring system performance and status

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### List selection of/all running processes and their PIDs:

1. 1

1. `ps`

Copied!

1. 1

1. `ps -e`

Copied!

### Display resource usage:

1. 1

1. `top`

Copied!

### List mounted file systems and usage:

1. 1

1. `df`

Copied!

## Creating, copying, moving, and deleting files:

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**Create an empty file or update existing file's timestamp:**

- 1
1. touch a\_new\_file.txt

Copied!

**Copy a file:**

- 1
1. cp file.txt new\_path/new\_name.txt

Copied!

**Change file name or path:**

- 1
1. mv this\_file.txt that\_path/that\_file.txt

Copied!

**Remove a file verbosely:**

- 1
1. rm this\_old\_file.txt -v

Copied!

## Working with file permissions

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**Change/modify file permissions to 'execute' for all users:**

- 1
1. chmod +x my\_script.sh

Copied!

**Change/modify file permissions to 'execute' only for you, the current user:**

- 1
1. chmod u+x my\_file.txt

Copied!

**Remove 'read' permissions from group and other users:**

- 1
1. chmod go-r

Copied!

## Displaying file and string contents

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### Display file contents:

1. 1

1. cat my\_shell\_script.sh

Copied!

### Display file contents page-by-page:

1. 1

1. more ReadMe.txt

Copied!

### Display first 10 lines of file:

1. 1

1. head -10 data\_table.csv

Copied!

### Display last 10 lines of file:

1. 1

1. tail -10 data\_table.csv

Copied!

### Display string or variable value:

1. 1

2. 2

1. echo "I am not a robot"

2. echo "I am \$USERNAME"

Copied!

## Basic text wrangling

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### Sorting lines and dropping duplicates:

#### Sort and display lines of file alphanumerically:

1. 1

```
1. sort text_file.txt
```

Copied!

### In reverse order:

```
1. 1
```

```
1. sort -r text_file.txt
```

Copied!

### Drop consecutive duplicated lines and display result:

```
1. 1
```

```
1. uniq list_with_duplicated_lines.txt
```

Copied!

### Displaying basic stats:

#### Display the count of lines, words, or characters in a file:

##### Lines:

```
1. 1
```

```
1. wc -l table_of_data.csv
```

Copied!

##### Words:

```
1. 1
```

```
1. wc -w my_essay.txt
```

Copied!

##### Characters:

```
1. 1
```

```
1. wc -m some_document.txt
```

Copied!

### Extracting lines of text containing a pattern:

Some frequently used options for grep:

Option	Description
-n	Print line numbers along with matching lines
-c	Get the count of matching lines
-i	Ignore the case of the text while matching

Option	Description
-v	Print all lines which do not contain the pattern
-w	Match only if the pattern matches whole words

**Extract lines containing the word "hello", case insensitive and whole words only:**

```
1. 1
1. grep -iw hello a_bunch_of_hellos.txt
```

Copied!

**Extract lines containing the pattern "hello" from all files in the current directory ending in .txt:**

```
1. 1
1. grep -l hello *.txt
```

Copied!

**Merge two or more files line-by-line, aligned as columns:**

Suppose you have three files containing the first and last names of your customers, plus their phone numbers.

**Use paste to align file contents into a Tab-delimited table, one row for each customer:**

```
1. 1
1. paste first_name.txt last_name.txt phone_number.txt
```

Copied!

**Use a comma as a delimiter instead of the default Tab delimiter:**

```
1. 1
1. paste -d "," first_name.txt last_name.txt phone_number.txt
```

Copied!

**Use the cut command to extract a column from a table-like file:**

Suppose you have a text file whos rows consist of first and last names of customers, delimited by a comma.

**Extract first names, line-by-line:**

```
1. 1
1. cut -d "," -f 1 names.csv
```

Copied!

**Extract the second to fifth characters (bytes) from each line of a file:**

1. 1

1. `cut -b 2-5 my_text_file.txt`

Copied!

**Extract the characters (bytes) from each line of a file, starting from the 10th byte to the end of the line:**

1. 1

1. `cut -b 10- my_text_file.txt`

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## Compression and archiving

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**Archive a set of files:**

1. 1

1. `tar -cvf my_archive.tar.gz file1 file2 file3`

Copied!

**Compress a set of files:**

1. 1

2. 2

1. `zip my_zipped_files.zip file1 file2`

2. `zip my_zipped_folders.zip directory1 directory2`

Copied!

**Extract files from a compressed zip archive:**

1. 1

2. 2

1. `unzip my_zipped_file.zip`

2. `unzip my_zipped_file.zip -d extract_to_this_directory`

Copied!

## Working with networking commands

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**Print hostname:**

1. 1

1. `hostname`

Copied!



Send packets to URL and print response:

- 1. 1
- 1. ping www.google.com

Copied!

Display or configure system network interfaces:

- 1. 1
- 2. 2
- 1. ifconfig
- 2. ip

Copied!

Display contents of file at a URL:

- 1. 1
- 1. curl <url>

Copied!

Download file from a URL:

- 1. 1
- 1. wget <url>

Copied!

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Change Log

Date (YYYY-MM-DD)	Version	Changed By	Change Description
2023-05-04	1.4	Benny Li	Added code blocks
2023-04-26	1.3	Nick Yi	QA Pass
2023-04-10	1.2	Nick Yi	ID Review
2023-02-14	1.1	Jeff Grossman	Update to reflect module content
2022-12-23	1.0	Jeff Grossman	Split from existing reading and added new content

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