



# Module 2 Cheat Sheet - Introduction to Linux Commands

## Getting information

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Return your user name:

1. 1

1. whoami

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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

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

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

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**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`

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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

1. `touch a_new_file.txt`

Copied!

**Copy a file:**

1. 1

```
1. cp file.txt new_path/new_name.txt
```

Copied!

### Change file name or path:

```
1. 1
```

```
1. mv this_file.txt that_path/that_file.txt
```

Copied!

### Remove a file verbosely:

```
1. 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
```

```
1. chmod +x my_script.sh
```

Copied!

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

```
1. 1
```

```
1. chmod u+x my_file.txt
```

Copied!

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

```
1. 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
-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

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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`

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## 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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