BASH Cheat Sheet

2017 ICOS Big Data Summer Camp

Most BASH commands

- follow the pattern `$ [command] [options] [input] [output]`
- tell you how to use them if you type `$ [command] --help`
- have a manual file with more info `$ man [command]`
- are explained with examples if you google them “bash [command] example”

Command	Description	Quit	Example
`!!`	Repeat the previous command.		
`cat`	Concatenate. Takes the contents of a file and puts them on the end of something else (your screen, another file, etc.)	`[ctrl]+C`	`cat file.txt`
`cd`	Change Directory. Move from one folder (directory) to another.		`cd my_folder/data`
`cp`	Copy. Make a copy of a file. See also: mv.	`[ctrl]+C`	`cp original.html copy.html`
`diff`	Difference. Print a list of all lines that are different between two files.	`[ctrl]+C`	`diff old.csv new.csv`
`echo`	Echo. Repeat whatever I type next.		`echo "Hello, World!"`
`emacs`	Editor Macros. Program for editing files. Advanced users. See also: vi, nano, pico.		
`find`	Find. Search for files that match some criteria (size, date modified, name, type, and more).	`[ctrl]+C`	`find . -name "*.html" -size +100k`
`grep`	Search for lines of text that match a pattern and print them (similar to [ctrl]+F or [cmd]+F). See also: sed.	`[ctrl]+C`	`grep “href” kitten.html`
`head`	Print just the top (head) of a file. See also: tail.	`[ctrl]+C`	`head long_file.txt`
`htop`	Hisham Table of Processes. Like "top", but with more information and colors.	`[ctrl]+C`	`htop`
`ll`	List Long. The same as "ls -l". Will show the size, owner, date, and permissions for all files in the current directory.	`[ctrl]+C`	`ll -h`
`ls`	List files in the current directory.	`[ctrl]+C`	`ls`
`man`	Manual. Show the manual entry for a command to see how to use it and what the options are. (Use arrow keys to scroll.)	`Q`	`man cat`
`mkdir`	Make Directory. Create a new directory (folder). See also: rmdir.		`mkdir new_folder`
`mv`	Move a file or directory. See also: cp.	`[ctrl]+C`	`mv file.txt subfolder/file.txt`
`nano`	Same as "pico" but released as free software.	`[ctrl]+X`	`nano my_code.py`
`pico`	Pine Composer. Very simple program for editing files in the terminal. See also: vi, nano, emacs.	`[ctrl]+X`	`pico my_code.py`

Command	Description	Quit	Example
pwd	Print Working Directory. Show the full path of what directory (folder) you are currently in.		pwd
rm	Remove. Deletes the specified file(s). Does not send things to a trash folder. They are gone forever.	[ctrl]+C	rm unwanted_file.doc
rmdir	Remove Directory. Deletes a specified directory/folder. See also: mkdir.	[ctrl]+C	rmdir unwanted_directory
script	Make a record of everything that I type and everything that appears in my terminal until I type "exit." Then save that as a file.	"exit"	
sed	Stream Editor. The sed command can do a lot, but it's most useful function is find and replace in text. See also: grep.	[ctrl]+C	sed 's/dog/cat/g' dog.txt > cat.txt
split	Splits a file into multiple smaller files. See also cat, which can put them back together.	[ctrl]+C	split big_file.csv
ssh	Secure Shell. Connect to a remote server's command line.	"exit"	ssh my.server.umich.edu
tail	Print just the bottom of a file. See also: head.	[ctrl]+C	tail long_file.txt
top	Table Of Processes. Shows running processes memory use. Like WIndows system monitor or Mac activity monitor. See also: htop.	[ctrl]+C	top
uname	Unix Name. Print the name and versio n of my operating system.		uname -a
vi	Visual (line editor). A program for editing files in the terminal. Intermediate and advanced users. See also: pico, nano, emacs.	[esc]+[:]+Q	vi my_code.py
wc	Word Count. Count many lines, words, and characters are in something.	[ctrl]+C	wc essay.txt
wget	Web Get. Download something from an internet URL.	[ctrl]+C	wget bbc.co.uk

Symbol	Use
*	Wildcard. Select everything. Can be combined with other characters, e.g. "*.txt" would match all files ending in ".txt" and "ls *.txt" will list the files that end in ".txt".
>	Overwrite. Take the output of the argument to the left and use it to replace the contents of what is on the right. E.g. "cat updates.txt > latest.txt" will replace whatever is in 'latest.txt' with whatever is in 'updates.txt'.
>>	Append. Take the output of the argument to the left and add it to end end of what is on the right. E.g. "cat updates.txt >> all.txt" will add whatever is in 'updates.txt' to the end of ‘all.txt' after what is already in there.
|	Pipe (usually above the [enter] key). Use the output of the command to the left as input for the command to the right. E.g. in order to count the files in a directory, you can type "ls | wc -l". ls outputs a list of files, one per line. That list is sent ("piped") to the word count utility with the "-l" option to count lines. The result is the count of files.
;	End previous command, begin a new one. E.g. “echo “We’re in”; pwd” would first print the words “We’re in” and then it would print the path of the current working directory.