Linux Command Cheat Sheet
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File Commands
head - Preview the first few lines of a file
-n # of lines
tail - Preview the last few lines of a file
-n # of lines
ln- creates a 'link' to a file
Links are shortcuts to a file, creating a unique identifier that can be called to navigate to file rather than calling the file path
-s Create a soft link (string reference to the file)
find - Search for specific files by a given query
-name Search by filename
-type Search by file type i.e. .txt, .py, etc.
-size Search by file size
-mtime Search by time last modified
-perm Search by certain file permissions
-empty Finds empty files

File Permissions
chmod- Designate permissions to a file and what type of permissions they have
u, g, o, a → user/owner, group, other, all
r, w, x → read, write, execute
+, - → add/remove permissions
777 → read, write and execute given to all users
chown- change ownership of a file to a different user
umask- resets to default permissions
022 sets owner to read write, and group and others to read

File Compression and Archiving
tar- archive a file or extract from an existing archive
-c creates an archive
-x extract from an archive
-f name for the archive
-v sets to verbose mode
-z compress with gzip
-j compress with bzip2
gzip- compress files into a smaller size
-d decompress a file/files
zip- compress into a zip file

Process Management
ps- show running processes given a query
-aux,a all running processes
-u show processes being run by a specific user
top- shows real-time analytics on running processes (similar to Windows task manager)
kill- forcibly shutdown a process (similar to end task in Windows task manager); needs to use PID
pkill- same as kill but using the process name instead of PID
killall - shuts down multiple processes based on a query
pgrep- list processes based on a process name
pidof - shows the PID of a given process
bg - shows what process have been stopped currently and resumes their activity
wait - pauses terminal activity until a process has finished

System and Storage
uname- show system information
-all show all information
-s show kernel name
-n show domain name
-m show hardware name
df- show disk usage
du- show size of specified file or directory
free- show memory usage
uptime- show duration machine has been running
lscpu- show processor information
lspci- show PCI devices
lsusb- show USB devices connected to machine
last reboot - shows boot history of the machine
date - shows date and time
timedatectl - change date and time on machine
shutdown - start a system shutdown; [hh:mm] can be used to specify time of shutdown, or can add *now* to start it immediately

Networking
ss- more readable and faster version of netstat
ssh- secure shell; connection to a remote server given valid user credentials
scp- secure copy protocol; securely transfer files between remote systems
wget- download files from a website given the url
curl- send or retrieve information to and from a url
sftp - secure file transfer protocol

User Management
sudo- refers to a super user command
- can be used alongside any command to elevate that command's permissions, and requires a user with the proper permissions to execute a sudo command
- is required to execute certain commands
finger- shows users currently logged in and information on them
finger username- shows information on specified user
last- shows the login history, starting from most recent activity
sudo passwd -l username - prevents a user from logging into a system based on the password provided
su - username- switch the active user to another user account

Nano Commands
Ctrl + O - Save
Ctrl + X - Exit nano and choose to either save or discard changes
Ctrl + Y - Scroll up
Ctrl + V - Scroll down
Ctrl + K - Delete content from cursor to end of the line
Ctrl + U - Undo last delete (similar to Ctrl + Y in other applications)
Ctrl + W - Search for string (similar to Ctrl + F in other applications)
Alt + W - Search for string and replace with a new provided string
Alt + K - Repeat most recent string search
Alt + , - Go to the beginning of the current line Selected
Alt + . - Go to the end of the current line Selected
Alt + 6 - Copy text

Installation
sudo apt-get install, sudo apt-get install - installs an APT package based on a given package name
apt search - searches for existing packages with a specified query
apt list - lists all installed APT packages
apt show - shows details on a given package
sudo yum install - installs a YUM package based on a given package name
yum search - searches for existing packages with a specified query
yum list - lists all installed APT packages
yum show - shows details on a given package
sudo dpkg -i - installs a package using the Debian package manager
dpkg -l - lists all installed dpkg packages
sudo dpkg -i - installs a package using the Debian package manager
dpkg -l - lists all installed dpkg packages
sudo dnf install - installs a package using the DNF package manager based on a given package name
sudo rpm -i - installs a local .rpm package based on a given package name
sudo snap install - installs a Snap package based on a given package name
sudo snap find - searches for a specified Snap package in the Snap store
sudo snap list- lists all installed Snap packages
flatpak install - installs a Flatpak package based on a given package name
flatpack search - searches for an installed Flatpak package based on a query
flatpack list - lists all installed Flatpack packages

Shell Commands and Shortcuts
alias - assigns an alias to a command that can be called instead of calling the command itself
sleep - set a command to execute after a given time has passed
history - show all used commands
Ctrl + C - shuts down the currently running process
Ctrl + Z - pauses the currently running process
Ctrl + W - cuts word left of cursor
Ctrl + U - cuts text on current selected line left of cursor
Ctrl + K - cuts text on current selected line right of cursor
Ctrl + Y - paste
Ctrl + R - recalls last run command
Ctrl + O - runs last recalled command
!! - runs last executed command
exit - logout user from session

Environment Variables
export [variable_name]=value - assign value to variable
echo - show variable value given a variable name
env - list all variables created
printenv - list all variable values
unset - deinitialize a variable