Linux Cheat Sheet

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user / group commands	
id <user_name_optional>	prints user and group info of specified user
whoami	prints current user id
groups	list of groups the user belongs to
cat /etc/group	list of all groups in system
groupadd <group_name>	adds a new group
groupdel <group_name>	delete a group
useradd -m <user_name>	creates a new user. -m will add home directory as well
usermod -aG <group_names> <user_name>	adds user to a one or more groups. - a is append, G is followed by a list of supplementary groups
usermod -G <new_group_names> <user_name>	because -a is not used, it will add a new group list removing the old supplementary groups.
usermod -g <group_name> <user_name>	changes the users primary group
userdel -r <user_name>	removes the user. -r will remove the home directory and mail spool

directory commands	
pwd	prints the location of current working directory
mkdir <directory_name>	creates a new directory
cd <directory_path>	change directory to the directory path given
cd /	change directory to the root directory
cd ~	change directory to the home directory
cd ..	change directory to one level up
cd -	change directory to the previously changed directory
rmdir <directory_name>	removes a directory
rm -r <directory_name>	removes a directory with its subdirectory and files
rm <file_name>	removes a file
cp <source> <destination>	copy a existing file to a new file
cp -R <source> <destination>	copy a existing directory to a new directory
mv <source> <destination>	moves a file or directory to a new destination. Use it ro rename a file or directory

permissions	
chmod <permission> <filename>	permission is a 3 digit numeric value indicating owner,group and others given as the total of the below numbers read=4 , write=2, execute=1 ex. chmod 751 file.txt owner has all(4+2+1=7) permissions, group has read and execute(4+1=5) permission and others have execute(1) permission
chmod +r <filename>	gives read permission to the file for all users +w = add write permission +x = add execute permission
chmod -r <filename>	removes read permission from the file for all users -w = remove write permission -x = remove execute permission
chmod a+r <filename>	gives read permission to the file for all users a+r = read permission to all users(owner, group & others) u+r = read permission to the owner g+r = read permission to the group o+r = read permission to others
chmod g+rx <filename>	gives read and execute permission to the file for the group
chmod u+r,g+rw,o+x file.txt	gives read permission to owner, read and write permission to group and execute permission to others
chown <new_owner_name> <file_name>	changes the owner of the file

system information commands	
uname -a	gets os and kernel information
hostnamectl	get hostname, os name, kernel and architecture
hostname	get hostname
ip addr	get the ip address
dmidecode	system hardware component information

memory / cpu	
free -h	free and used memory
cat /proc/meminfo	file having realtime information on memory
cat /proc/cpuinfo	file containing cpu information
lscpu	another command that lists cpu information
lshw	list hardware information

processess	
uptime -s	time since system is up
ls -ld /proc/<process_id>	time since process is up
ps -ef	lists all running process
top	real time resource usage. you can press "q" to exit

listing files and directories	
ls	list files and folders
ls -l	long list files and folders
ls -lrt	long list files and folders in reverse order of time
ls -lrSh	long list files and folders in reverse order of Size and human readable format
ls -a	list hidden files and foldres as well
du -h	disk usage in human readable format

file commands	
touch <file_name>	creates a new file without any content
cat <file_name>	reads and displays the file content
cat> file_name	creates a file, prompts you to add input. Press Ctrl+D to save
cat>> file_name	appends to end of an existing file, prompts you to add input. Press Ctrl+D to save.

search	
find / -type f -name file1.txt	search for a file named file1.txt starting from the root directory
find . -name file1.txt	search for a file named file1.txt starting from the current directory
find / -type d -name mydir	search for a directory named mydir starting from the root directory
find / -perm 755	all files and directories starting from the root directory having 755 permission
find / -user root	all files and directories starting from the root directory having owner as root
find / -mtime 2	files modified in last 2 days
find / -size +100M	files greater than 100 MB
find / -mmin -5	files modified in last 5 mins
locate file1.txt	find file1.txt from the db index rather than performing a real search.
grep <search_text> *	find which file in the current directory has the specified search text
grep -B 1 -A 4 'search_text' file.txt	prints 1 line before and 4 lines after the search text from the file.txt

tar and zip	
tar -cvf file.tar *	create a tarfile named file.tar containing all files and folders in current directory
tar -xvf file.tar	extracts the tar file to the current directory
zip file.zip *	compresses the current directory contents to a zip file
unzip file.zip	unzips the zipped file to the current directory

vi editor	
vi <file_name>	Opens a file in vi editor
i,a,I,A	insert mode i = insert in current cursor location a = append character next to cursor I = Insert Beginning Of Line A = Append End Of Line o = Creates New line below current line O = Creates New line above current line
ESC	takes you to command mode
dd	deletes a line in the location of the cursor
u	undo
/search_string	Press enter search forward n = next matching search string N = next matching search string in reverse
?search_string	Press enter to search backward n = next matching search string N = next matching search string in reverse
ESC :q	quit without saving
ESC :wq	save and quit from editor