**UNIX COMMANDS**

**ls(list the files)**

**options:**

* **l**
* **r**
* **t**
* **a**

**Commands:**

* **ls -lrt**
* **ls -a**
* **ls log\* (this will list all the files/directories which starts with the name log)**
* **ls \*.log**

**clear (To clear the screen )**

**pwd (Present Working Directory)**

**mkdir (Make Directory)**

* **mkdir -p directoryname**
* **mkdir -p dir1 dir2 dir3**

**cd (Change Directory)**

* **cd ..**
* **cd ../..**
* **cd**

**touch**

* **touch filename**
* **touch filename1 filename2**

**vi (Visual Editor)**

* **i**
* **:wq**
* **:wq!**
* **:q**
* **:q!**
* **:set nu**
* **:set nonu**
* **:u**
* **:2**
* **:d**
* **:3d**
* **:3,5d**
* **dd**
* **:/searchstring**
* **:%s/pattern/newpattern/g**
* **:3s/pattern/newpattern/g**
* **:3s/pattern/newpattern/**
* **:3,5s/pattern/newpattern/g**
* **:3,$s/pattern/newpattern/g**
* **:$s/pattern/newpattern/g**
* **:%s/pattern/newpattern/g**
* **:s/pattern/newpattern/g**

**tac**

* **tac filename**

**mv (Move)**

* **mv npr1 npr**
* **mv npr npr2/**
* **mv npr3 npr2/npr6**

**cp (Copy)**

* **cp file1 file2**
* **cp file1 dir1/**
* **cp file1 dir1/f1**
* **cp -r dir1 dir2/**

**chmod (Change Mode)**

**(r for read(4), w for write(2), x for execute(1))**

* **chmod 777 filename**
* **chmod 764 filename**
* **chmod u+x filename**
* **chmod u+x,g+w,o-w filename**
* **chmod -R 654 directoryname**
* **chmod -R u+x directoryname**
* **chmod a+x filename**
* **chmod -R a+x directoryname**

**du (Disk Usage)**

**options:**

* **s -- size**
* **h – human readable format**

**commands:**

* **du -sh directoryname**
* **du -sh filename**
* **du -sh \***

**df (Disk Free)**

* **df -h**
* **df -h .**

**free**

* **free**
* **free -m**

**rm (Remove)**

* **rm filename**
* **rm -rf directoryname**
* **rm \*.txt**
* **rm filename1 filename2 ..**
* **rm -rf directoryname1 directoryname2 ..**

**head**

* **head filename**
* **head -5 filename**
* **head -7 filename**
* **head 5 filename**

**tail (**[**https://www.geeksforgeeks.org/tail-command-linux-examples/**](https://www.geeksforgeeks.org/tail-command-linux-examples/)**)**

* **tail filename**
* **tail -5 filename**
* **tail -8 filename**
* **tail 8 filename**
* **tail +3 excelfile**
* **tail -c -4 excelfile**
* **tail -c +3 excelfile**
* **tail state.txt -q capital.txt**
* **tail -f logfile**

|  |
| --- |
| * Tail command also comes with an **‘+’** option which is not present in the head command. With this option tail command prints the data starting from specified line number of the file instead of end. For command: * **tail +n file\_name**, data will start printing from line number ‘n’ till the end of the file specified. |

**|(Pipe)**

* **head -5 filename| tail -1**
* **head -12 filename| tail -6**

**>(redirect)**

* **head -5 filename>testfile**
* **ls -l >testfile**
* **ls>testfile**

**>> (Append)**

* **head -5 filename>>testfile**
* **ls -l >> testfile**
* **ls >> testfile**

**echo**

* **echo “welcome”**
* **echo “Hi\nGood Morning”**
* **echo -e “Hi\nGood Morning”**
* **echi -e “Hi \t Good Morning”**

**grep**

**options**

* **-i – case insensitive**
* **-w -- wordmatch**
* **-c – number of lines**
* **-e – mutli pattern match**
* **-l – list the filenames**
* **-r – recursive (check in sub- directories)**
* **^ -- starts with**
* **$ -- ends with**
* **^$ -- empty lines**
* **-v – invert match**
* **-L --invert match at the file level**
* **-n – print line numbers**
* **-o – to print the number of occurrences**

**commands**

* **grep “npr” file1**
* **grep -i “npr” file1**
* **grep -w “npr” file1**
* **grep -c -i “npr” file1**
* **grep -i -w -l “npr” file1**
* **grep -e “npr” -e “npr1” file1**
* **grep -l “npr” file2**
* **grep -l “npr” \***
* **grep “npr” \***
* **grep “^d” file2**
* **grep “npr$” file2**
* **grep “^$” file2**
* **grep -c “^$” file2**
* **grep -v “test” file2**
* **grep -L "bin" \***

**wc (Word Count)**

**options**

* **-l – number of lines**
* **-w – number of words**
* **-c – number of characters**

**commands**

* **wc file2**
* **wc -l file2**
* **wc -w file2**
* **wc -c file2**
* **head -26 filename|tail -4|wc -w**

**sed (Stream Editor)**

* **s – substitute**
* **g – global**
* **I -- case insensitive**
* **i -- Insert**
* **^$ -- empty line**
* **$s – lastline**
* **n – number**
* **p -- print**
* **d – delete**
* **a – to add**

**commands**

* **sed ‘s/unix/linux/g’ testfile1**
* **sed ‘s/unix/linux/Ig’ testfile1**
* **sed -i ‘s/unix/linux/g’ testfile1**
* **sed -i ‘s/unix/linux/Ig’ testfile1**
* **sed -i ‘s/^$/linux/g’ testfile1**
* **sed -i ‘$s/unix/linux/g’ testfile1**
* **sed -i ‘2s/unix/linux/g’ testfile1**
* **sed -i ‘2s/unix/linux/2’ testfile1**
* **sed -i ‘2,5s/unix/linux/g’ testfile1**
* **sed ‘s/unix//g’ testfile1**
* **sed -n ‘3p’ testfile1**
* **sed -n ‘3,7p’ testfile1**
* **sed -n ‘3p;7p’ testfile1**
* **sed -n ‘$p’ testfile1**
* **sed -n '/^$/p' testfile1**
* **sed -n '/^$/p' testfile1|wc -c**
* **sed ‘3d’ testfile1**
* **sed ‘3,5d’ testfile1**
* **sed ‘3d;5d’ testfile1**
* **sed ‘unix/d’ testfile1**
* **sed -i ‘3d’ testfile1**
* **sed -i ‘3,5d’ testfile1**
* **sed -i ‘3d;5d’ testfile1**
* **sed -i ‘unix/d’ testfile1**
* **sed -i '/^$/d' testfile1**
* **sed '/^$/d' testfile1**

**cut**

**options**

* **d – delimiter**
* **f – fields(column number)**

**commands**

* **cut -d “ “ -f1 excelfile**
* **cut -d “ “ -f2 excelfile**
* **cut -d “ “ -f1,3 excelfile**
* **cut -d “ “ -f1-3 excelfile**

**awk**

**options**

* **-F**
* **“ “**
* **{print $}**
* **NF**
* **NR**

**commands**

* **awk -F “ “ ‘{print $1}’ studentdata**
* **awk -F “ “ ‘{print $2}’ studentdata**
* **awk -F “ “ ‘{print $1,$3}’ studentdata**
* **awk -F “ “ ‘{print $NF}’ studentdata**
* **awk -F “ “ ‘{print $(NF-1)}’ studentdata**
* **awk -F “ “ ‘{print $(NF-2)}’ studentdata**
* **awk -F “ “ ‘NR>1 {print $NF}’ studentdata**
* **awk -F “ “ ‘NR>2 {print $NF}’ studentdata**
* **awk -F “ “ ‘NR==0 {print $0}’ studentdata**
* **awk -F “ “ ‘NR==1 , NR==3 {print $0}’ studentdata**
* **awk -F “ “ ‘NR==1 ; NR==3 {print $0}’ studentdata**
* **awk -F “ “ ‘NR==1 || NR==3 {print $0}’ studentdata**

**umask**

* **umask 022**

**lsb (Display OS version)**

**commands:**

* **lsb release -a**

**uname (Displays the OS name)**

**commands:**

* **uname**
* **uname -v**
* **uname -a**

**hostname (Displays the server/hostname)**

**chown(user and group)**

**commands**

* **chown ubuntu:ubuntu file10**
* **chown ubuntu file10 (This will change the user permission)**
* **chown :ubuntu file10 (This will change the group permission)**
* **chown -R ubuntu:ubuntu dir10**

**sudo (Super user does)**

**su (Switch User)**

**commands**

* **sudo su – this will change the user as root**
* **su username**

**find**

**Options**

* **/**
* **.**
* **path**
* **-name**
* **i**
* **-type**
* **f**
* **d**
* **mtime**
* **mmin**
* **prem**
* **empty**
* **-size**
* **maxdepth**
* **!**

**commands**

* **find . -name file10**
* **find . -iname file10**
* **find . -type f -iname file10**
* **find . -type d -iname file10**
* **find /home/ubuntu/devops/ -type f -iname file10**
* **find /home/ubuntu/devops/ -type d -iname dir10**
* **find . -type f -mtime +5**
* **find . -type f -mtime -5**
* **find . -type f -mtime +90**
* **find . -type f -mtime -90**
* **find . -type f -mmin -5**
* **find . -type f -mmin +5**
* **find . -type f -prem 664**
* **find . -type f ! -prem 664**
* **find . -type f -empty**
* **find . -type f -size 4k**
* **find . -type f -size 4M**
* **find . -type f -iname -maxdepth 1 file10**
* **find . -type f -maxdepth 1 -mmtime +10**
* **find . -type f -iname '\*log' -mmin -10 – this will list only the log files which were modified in the last 10 minutes**

**xargs – Pass the output in the sequential order**

**link**

**options**

* **ln -s**
* **ln**

**commands:**

* **ln -s studentdata softlink**
* **ln studentdata hardlink**

**ps(process status)**

**options:**

* **ps : print all the process for the current user and terminal**
* **ps -e : Print all the process within the system**
* **ps -ef : print all the process with more detailed information**
* **ps -u username: print the process started by specific user**

**commands:**

* **ps**
* **ps -e**
* **ps -ef**
* **ps -u phani**

**kill (This is used to stop the process forcefully)**

**command:**

* **kill -9 PID**

**uptime(To check how long the system has been running and load average)**

**command:**

* **uptime**

**Port numbers:**

* **ssh and scp -- 22**
* **telnet – 23**
* **http – 80**
* **https – 443**
* **dns -- 53**

**telnet**

**command:**

* **telent 172.132.41.2 22**

**netstat**

**command:**

* **netstat -ntlpu**
* **netstat -t**
* **netstat -u**

**login to the remote server**

**command:**

* **ssh** [**ubunutu@172.132.41.2**](mailto:ubunutu@172.132.41.2)

**scp**

**command:**

* **scp file10** [**ubuntu@172.132.41.2:/homeubuntu**](mailto:ubuntu@172.132.41.2:/homeubuntu)
* **scp -r file10** [**ubuntu@172.132.41.2:/homeubuntu**](mailto:ubuntu@172.132.41.2:/homeubuntu)

**rsync**

**command:**

* **rsync file10** [**ubuntu@172.132.41.2:/homeubuntu**](mailto:ubuntu@172.132.41.2:/homeubuntu)
* **rsync -r file10** [**ubuntu@172.132.41.2:/homeubuntu**](mailto:ubuntu@172.132.41.2:/homeubuntu)

**lsof (list of open files)**

**options:**

* **-u**
* **-p**

**Commands:**

* **lsof -p pid**
* **lsof -u username**

**whoami (Current logged-in user)**

**who (All users logged into the system)**

**whereis (This will display the location of the executables)**

**Command:**

* **whereis ls**
* **whereis cp**

**cat /etc/passwd (This will display the number of users created in the server)**

**date (Display current date and time)**

**options:**

* **D**
* **d**
* **A**
* **a**
* **M**
* **m**
* **H**
* **h**
* **S**
* **T**

**command:**

* **date**
* **date ‘+%D’: it will display date in mm/dd/yy**
* **date ‘+%d’: it will display only date**
* **date ‘+%A’: it will display day**
* **date ‘+%a’: it will display the first 3 letters of specific day**
* **date ‘+%M’: it will display minutes**
* **date ‘+%m’: it will display month in number(11 for november)**
* **date ‘+%h’: it will display month name**
* **date ‘+%H’: it will display hours**
* **date ‘+%S’: it will display Seconds**
* **date ‘+%T’: it will display time in the 24h format**

**Gracefull stop:**

**sudo service servicename stop**

**sudo service servicename start**

**sudo service servicename restart**

**sudo service servicename status**

**sudo systemctl stop servicename**

**sudo systemctl start servicename**

**sudo systemctl status servicename**

**sudo systemctl restart servicename**

**& (This will execute the command in the background)**

**Command:**

* **ls &**

**adduser (Create a new user)**

**sudo adduser Phani**

**sudo deluser username (Delete user)**

**sudo passwd username (To set the password)**

**sudo passwd -d username (To remove the password)**

**top/htop**

**wget (Download the file from the URL)**

**command:**

* **wget url**

**Install/remove the service:**

**sudo apt install maven**

**sudo apt list –installed**

**sudo apt remove maven**

**sudo apt update**

**Zip/Unzip file:**

**Command:**

* **tar -xvf zipfilename**
* **tar -cvf zipfilename filename**

**ping (To check if the server is reachable or not)**

* **ping servrename**
* **ping google.com**

**Strees**

**stress -c 8 --timeout 10**

**nslookup**

**This is used to fetch the server details using the domain the name**

**nslookup domianname**