| **Command** | **Description** |  |
| --- | --- | --- |
| ls | Lists all files and directories in the present working directory |  |
| ls -R | Lists files in sub-directories as well |  |
| ls -a | Lists hidden files as well |  |
| ls -al | Lists files and directories with detailed information like permissions,size, owner, etc. |  |
| cd or cd ~ | Navigate to HOME directory |  |
| cd .. | Move one level up |  |
| cd | To change to a particular directory |  |
| cd / | Move to the root directory |  |
| cat > filename | Creates a new file |  |
| cat filename | Displays the file content |  |
| cat file1 file2 > file3 | Joins two files (file1, file2) and stores the output in a new file (file3) |  |
| mv file "new file path" | Moves the files to the new location |  |
| mv filename new\_file\_name | Renames the file to a new filename |  |
| sudo | Allows regular users to run programs with the security privileges of the superuser or root |  |
| rm filename | Deletes a file |  |
| man | Gives help information on a command |  |
| history | Gives a list of all past commands typed in the current terminal session |  |
| clear | Clears the terminal |  |
| mkdir directoryname | Creates a new directory in the present working directory or a at the specified path |  |
| rmdir | Deletes a directory |  |
| mv | Renames a directory |  |
| pr -x | Divides the file into x columns |  |
| pr -h | Assigns a header to the file |  |
| pr -n | Denotes the file with Line Numbers |  |
| lp -nc , lpr c | Prints “c” copies of the File |  |
| lp-d lp-P | Specifies name of the printer |  |
| apt-get | Command used to install and update packages |  |
| mail -s 'subject' -c 'cc-address' -b 'bcc-address' 'to-address' | Command to send email |  |
| mail -s "Subject" to-address < Filename | Command to send email with attachment |  |

**File Permission commands**

| **Command** | **Description** |  |
| --- | --- | --- |
| ls -l | to show file type and access permission |  |
| r | read permission |  |
| w | write permission |  |
| x | execute permission |  |
| -= | no permission |  |
| chown user | For changing the ownership of a file/directory |  |
| chown user:group filename | change the user as well as group for a file or directory |  |

**Environment Variables command**

| **Command** | **Description** |  |
| --- | --- | --- |
| echo $VARIABLE | To display value of a variable |  |
| env | Displays all environment variables |  |
| VARIABLE\_NAME= variable\_value | Create a new variable |  |
| Unset | Remove a variable |  |
| export Variable=value | To set value of an environment variable |  |

**User management commands of linux**

| **Command** | **Description** |  |
| --- | --- | --- |
| sudo adduser username | To add a new user |  |
| sudo passwd -l 'username' | To change the password of a user |  |
| sudo userdel -r 'username' | To remove a newly created user |  |
| sudo usermod -a -G GROUPNAME USERNAME | To add a user to a group |  |
| sudo deluser USER GROUPNAME | To remove a user from a group |  |
| finger | Shows information of all the users logged in |  |
| finger username | Gives information of a particular user |  |

**Networking command**

| **Command** | **Description** |  |
| --- | --- | --- |
| SSH username@ip-address or hostname | login into a remote Linux machine using SSH |  |
| Ping hostname="" or ="" | To ping and Analyzing network and host connections |  |
| dir | Display files in the current directory of a remote computer |  |
| cd "dirname" | change directory to “dirname” on a remote computer |  |
| put file | upload ‘file’ from local to remote computer |  |
| get file | Download ‘file’ from remote to local computer |  |
| quit | Logout |  |

**Process command**

| **Command** | **Description** |  |
| --- | --- | --- |
| bg | To send a process to the background |  |
| fg | To run a stopped process in the foreground |  |
| top | Details on all Active Processes |  |
| ps | Give the status of processes running for a user |  |
| ps PID | Gives the status of a particular process |  |
| pidof | Gives the Process ID (PID) of a process |  |
| kill PID | Kills a process |  |
| nice | Starts a process with a given priority |  |
| renice | Changes priority of an already running process |  |
| df | Gives free hard disk space on your system |  |
| free | Gives free RAM on your system |  |

**VI Editing Commands**

| **Command** | **Description** |  |
| --- | --- | --- |
| i | Insert at cursor (goes into insert mode) |  |
| a | Write after cursor (goes into insert mode) |  |
| A | Write at the end of line (goes into insert mode) |  |
| ESC | Terminate insert mode |  |
| u | Undo last change |  |
| U | Undo all changes to the entire line |  |
| o | Open a new line (goes into insert mode) |  |
| dd | Delete line |  |
| 3dd | Delete 3 lines |  |
| D | Delete contents of line after the cursor |  |
| C | Delete contents of a line after the cursor and insert new text. Press ESC key to end insertion. |  |
| dw | Delete word |  |
| 4dw | Delete 4 words |  |
| cw | Change word |  |
| x | Delete character at the cursor |  |
| r | Replace character |  |
| R | Overwrite characters from cursor onward |  |
| s | Substitute one character under cursor continue to insert |  |
| S | Substitute entire line and begin to insert at the beginning of the line |  |
| ~ | Change case of individual character |  |

Hope this Linux reference guide helps you!