

Vi Editor:

Using the vi editor in Linux can be a bit intimidating for beginners, but it's a powerful and widely used text editor. Here are the basic steps to use vi:

Opening a File:

To open a file using vi, open a terminal and type:

“

Vi *filename*

”

Replace "filename" with the name of the file you want to edit.

Modes in vi:

vi has two main modes: *command mode* and *insert mode*.

Command Mode: This is the mode you start in. Here, you can navigate the document and issue commands.

Insert Mode: In this mode, you can actually insert and edit text.

Switching between Modes:

- To switch from command mode to insert mode, press **i**.
- To switch from insert mode to command mode, press **Esc**.

Basic Navigation in Command Mode:

Use arrow keys to move the cursor.

- h - move left
- j - move down
- k - move up
- l - move right
- O - move to the beginning of the line
- \$ - move to the end of the line
- G - move to the end of the file
- gg - move to the beginning of the file

Editing in Command Mode:

- dd - delete the current line
- x - delete the character under the cursor
- yy - copy the current line
- p - paste the copied or deleted text after the cursor

Saving and Exiting:

- `:w` - save changes
- `:q` - quit (exit vi)
- `:wq` - save and quit
- `:q!` - quit without saving (force quit)

Inserting Text in Insert Mode:

- Press `i` to enter insert mode.
- Type the text you want to insert.
- Press `Esc` to return to command mode.

Searching:

- `/search_term` - search for "search_term" forward in the document
- `?search_term` - search for "search_term" backward in the document
- Press `n` to go to the next occurrence, and `N` to go to the previous one.

Vim Editor:

Certainly! Here are some fundamental and useful Vim commands that you should know:

1. Opening and Saving Files:

- Open a file: ``vim filename``
- Save changes: In command mode, type ``:w`` and press Enter.
- Save and quit: ``:wq`` or ``ZZ`` (in command mode).

2. Basic Navigation:

- Move cursor left: ``h``
- Move cursor right: ``l``
- Move cursor up: ``k``
- Move cursor down: ``j``
- Move to the beginning of the line: ``0`` (zero)
- Move to the end of the line: ``$``

3. Text Editing:

- Enter insert mode (to start typing): ``i``
- Enter insert mode at the beginning of the line: ``I``
- Enter insert mode at the end of the line: ``A``

- Delete a character: Press `x` in command mode.
- Delete a line: `dd`
- Undo: `u`
- Redo: `Ctrl-r`

4. Copy, Cut, and Paste:

- Copy (yank) a line: `yy`
- Cut a line: `dd`
- Paste after the cursor: `p`
- Paste before the cursor: `P`

5. Search and Replace:

- Search forward: In command mode, type `/` followed by the search term and press Enter.
- Search backward: In command mode, type `?` followed by the search term and press Enter.
- Replace: In command mode, type `:%s/old/new/g` to replace all occurrences of "old" with "new" globally.

6. Visual Mode:

- Enter visual mode: `v`
- Select a block of text: Move the cursor to highlight text.
- Copy the selected text: After selecting, press `y`.
- Cut the selected text: After selecting, press `d`.
- Indent selected lines: After selecting, press `>`.

8. Splitting Windows:

- Split the window horizontally: `:split`
- Split the window vertically: `:vsplit`
- Switch between windows: `Ctrl-w` followed by an arrow key.

9. Tabs:

- Open a new tab: `:tabnew``
- Switch between tabs: ``gt`` (next tab) and ``gT`` (previous tab)
- Close the current tab: `:tabclose``

10. Miscellaneous:

- Undo changes in visual mode: ``U``
- Repeat the last command: ``.``

Nano Editor:

Nano is a simple and user-friendly text editor available on many Unix-like systems. Here's a basic guide on how to use Nano:

Opening a File:

1. Open a File:

- To open a file with Nano, use the following command:

...

nano filename

...

- Replace "filename" with the name of the file you want to edit.

Basic Navigation:

1. Moving the Cursor:

- Use the arrow keys to move the cursor up, down, left, or right.

2. Page Navigation:

- Move to the next page: ``Ctrl + V``
- Move to the previous page: ``Ctrl + Y``

Editing Text:

1. Inserting Text:

- Nano is in "Insert" mode by default. Simply start typing to insert text.

2. Deleting Text:

- Use the Backspace key to delete the character before the cursor.

3. Cut, Copy, and Paste:

- Ctrl+K = cut the text
- Ctrl + U = paste the text

4. Search and Replace:

- Search: `Ctrl + W`, then enter the search term and press Enter.
- Replace: `Ctrl + \`, then enter the search and replace terms and press Enter.

5. Undo and Redo:

- Nano doesn't have a specific undo command. You can use the undo key combination for your terminal, typically `Ctrl + Shift + Z`. Redo is not supported.

Saving and Exiting:

1. Save Changes:

- Press **Ctrl + O**, then press Enter to save the changes.

2. Exit Nano:

- Press **Ctrl + X** to exit Nano. If there are unsaved changes, Nano will prompt you to save before exiting.

Other Commands:

1. Help:

- Press **Ctrl + G** to open the help menu, which provides information on available commands.

2. Line Numbers:

- Press **Ctrl + C** to display the current line number and column at the cursor position.

Nano is a straightforward text editor, and these basic commands should help you perform common tasks

“SED” stream editor

Used on Unix systems to edit files quickly and efficiently. It takes input from the file name provided by the user and print the output in the terminal.

Sed -n '3p' filea

It will print the 3rd line from the filea

To see **the range of lines** in a particular file

Sed -n '3,6p' filea

```
root@ubuntu:/home/simran/folder18# sed -n '3p' filea
roy                HR
root@ubuntu:/home/simran/folder18# sed -n '3,6p' filea
roy                HR
Sunny              Marketing
rishab             Finance
root@ubuntu:/home/simran/folder18#
```

Now we have following file:

```
root@ubuntu:/home/simran/folder18# cat filea
Data
Employees      Departments
roy            HR
Sunny          Marketing
rishab         Finance
sneha          HR
Priya          Accounts
root@ubuntu:/home/simran/folder18#
```

If we want to see employees from HR department only:

Sed -n '/HR/p' filea

```
root@ubuntu:/home/simran/folder18# sed -n '/HR/p' filea
roy                HR
sneha              HR
root@ubuntu:/home/simran/folder18#
```

Now if you want to see some particular lines only then **we use multiple expressions** with “sed” command.

Sed -n -e '3p' -e '4p' filea

```

root@ubuntu:/home/simran/folder18# sed -n -e '3p' -e '4p' filea
roy                HR
Sunny              Marketing
root@ubuntu:/home/simran/folder18# sed -n -e '4p' -e '5p' filea
Sunny              Marketing
rishab             Finance
root@ubuntu:/home/simran/folder18#

```

Similarly, if you want to see employees from HR and Finance departments

Sed -n -e '/HR/p' -e '/Finance/p' filea

```

root@ubuntu:/home/simran/folder18# sed -n -e '/HR/p' -e '/Finance/p'
filea
roy                HR
rishab             Finance
sneha              HR
root@ubuntu:/home/simran/folder18#

```

If you are seeing particular line let's say line number 3 and with line number 3 you want to see just the two lines next to it

sed -n '2,+2p' filea

```

root@ubuntu:/home/simran/folder18# sed -n '2,+2p'
filea
Employees      Departments
Sunny           Marketing
rishab          Finance

```

If you want to see even number of lines:

Sed -n '1~2p' filea

```

root@ubuntu:/home/simran/folder18# sed -n '1~2p' filea
Data
Sunny           Marketing
sneha           Marketing
Priya           Account

root@ubuntu:/home/simran/folder18# cat filea
Data
Employees      Departments
Sunny           Marketing
rishab          Finance
sneha           Marketing
firoz           Marketing
Priya           Account
roy             Marketing

```

If you want to see odd number of lines:

sed -n '2~2p' filea

```

root@ubuntu:/home/simran/folder18# cat filea
Data
Employees    Departments
Sunny        Marketing
rishab       Finance
sneha        Marketing
firoz        Marketing
Priya        Account
roy          Marketing

root@ubuntu:/home/simran/folder18# sed -n '2~2p' filea
Employees    Departments
rishab       Finance
firoz        Marketing
roy          Marketing
root@ubuntu:/home/simran/folder18#

```

Now how to read expressions from a file

Lets assume we have this following file having expression written in it

```

root@ubuntu:/home/simran/folder18# cat file1
3p
4p
5p
root@ubuntu:/home/simran/folder18#

root@ubuntu:/home/simran/folder18# sed -n -f file1
filea
Sunny        Marketing
rishab       Finance
sneha        Marketing
root@ubuntu:/home/simran/folder18# cat fiea
cat: fiea: No such file or directory
root@ubuntu:/home/simran/folder18# cat filea
Data
Employees    Departments
Sunny        Marketing
rishab       Finance
sneha        Marketing
firoz        Marketing
Priya        Account
roy          Marketing

```

How to replace a word in a file:

(* with these commands we are just seeing the modified data but not actually doing any change in original file)

sed 's/Marketing/Accounts/g' filea

Here s is substitute and g is to Global


```
root@ubuntu:/home/simran/folder18# cat filea
Data
Employees    Departments
Sunny        Marketing
rishab       Finance
sneha        Marketing
firoz        Marketing
Priya        Account
roy          Marketing

root@ubuntu:/home/simran/folder18# sed 's/Marketing/Accounts/g' filea
Data
Employees    Departments
Sunny        Accounts
rishab       Finance
sneha        Accounts
firoz        Accounts
Priya        Account
roy          Accounts
```

Now if you want to replace the words but not in whole file :

We have following file:

```
root@ubuntu:/home/simran/folder18# cat filea
Data
Employees    Departments
Sunny        Marketing
rishab       Finance
sneha        Marketing
firoz        Marketing
Priya        Account
roy          Marketing
```

Now changing the word of particular file (Replacing word Finance in line number 4)

sed '4 s/Finance/Admin/g' filea

```
root@ubuntu:/home/simran/folder18# sed '4 s/Finance/Admin/g' filea
Data
Employees    Departments
Sunny        Marketing
rishab       Admin
sneha        Marketing
firoz        Marketing
Priya        Account
roy          Marketing
```

Now except 4th line we need to change the department name throughout the file

sed '4! s/Finance/Admin/g' filea

```
root@ubuntu:/home/simran/folder18# cat filea
Data
Employees      Departments
Sunny          Marketing
rishab         Finance
sneha          Marketing
firoz          Finance
Priya          Account
roy            Marketing

root@ubuntu:/home/simran/folder18# sed '4! s/Finance/Admin/g' filea
Data
Employees      Departments
Sunny          Marketing
rishab         Finance
sneha          Marketing
firoz          Admin
Priya          Account
roy            Marketing
```

Now how to do changes in the original file by using these commands:

sed -i '4! s/Finance/Admin/g' filea

```
root@ubuntu:/home/simran/folder18# sed -i '4! s/Finance/Admin/g' filea
root@ubuntu:/home/simran/folder18# cat filea
Data
Employees      Departments
Sunny          Marketing
rishab         Finance
sneha          Marketing
firoz          Admin
Priya          Account
roy            Marketing
```

Now how to change department of a particular user

sed '/rishab/ s/Finance/Admin/g' filea

```
root@ubuntu:/home/simran/folder18# sed '/rishab/s/Finance/Admin/g' filea
Data
Employees      Departments
Sunny           Marketing
rishab          Admin
sneha           Marketing
firoz           Admin
Priya           Account
roy            Marketing
Show Applications
root@ubuntu:/home/simran/folder18#
```

How to delete lines

sed '1d' filea

It will delete the first line in the filea

Sed '\$d' filea

It will delete the last line in the file

```
root@ubuntu:/home/simran/folder18# sed '1d' filea
Employees      Departments
Sunny           Marketing
rishab          Finance
sneha           Marketing
firoz           Admin
Priya           Account
roy            Marketing

root@ubuntu:/home/simran/folder18# sed '$d' filea
Data
Employees      Departments
Sunny           Marketing
rishab          Finance
sneha           Marketing
firoz           Admin
Priya           Account
roy            Marketing
root@ubuntu:/home/simran/folder18#
```

Deleting particular lines in the file:

```
? root@ubuntu:/home/simran/folder18# sed '2,3d' filea
a
Data
> rishab          Finance
sneha           Marketing
firoz           Admin
Priya           Account
roy            Marketing
```