

Working with vi Editor

Creating a File Using vi Editor

vi Editor:

vi is a widely used text editor in Unix and Unix-like operating systems. It's a command-line-based editor known for its powerful and efficient text manipulation capabilities. vi has different modes for navigation and editing, which can be confusing for beginners but offers great flexibility once mastered.

vi Editor Modes:

Normal Mode: This is the default mode when you open a file in vi. In this mode, you can navigate the file, perform various operations, and issue commands.

Insert Mode: In this mode, you can directly insert and edit text. To enter Insert Mode from Normal Mode, press the "i" key.

Command-Line Mode: This mode is used for saving, quitting, searching, and other commands. To enter Command-Line Mode from Normal Mode, press ":" (colon).

vi Editor Options:

- r: Recover the file in case of a system crash or sudden termination.
- c <command>: Run a command after opening the file.
- n: Open the file in read-only mode.
- i <backup_extension>: Set a backup extension for files.
- +<line_number>: Open the file with the cursor at a specific line number.

Steps to Create a File Using vi Editor:

Open Terminal: Open a terminal on your Unix-like system.

Type vi <filename>: Replace <filename> with the name of the file you want to create or edit.
vi my_file.txt

Enter Insert Mode: By default, vi opens in Normal Mode. To start inserting text, press the "i" key.

Type Text: Start typing the content of your file.

Save Changes: Once you've entered your text, press the "Esc" key to exit Insert Mode and return to Normal Mode. Then, in Command-Line Mode, type:

:w

This command will save your changes.

Quit vi Editor: After saving your changes, you can quit vi by typing in Command-Line

:q

If you've made changes and want to quit without saving, use:

:q!

Save and Quit: If you want to save and quit simultaneously, use:

:wq

Navigate and Edit: While in Normal Mode, you can navigate using arrow keys or "h" (left), "j" (down), "k" (up), and "l" (right). You can delete characters with "x," delete lines with "dd," copy with "yy," paste with "p," and more.

Basic vi Editor Operating Modes

Normal Mode:

Launch the terminal and open vi by typing: vi filename (replace "filename" with the desired file name).

You'll start in Normal Mode. In this mode, you can navigate the file, delete text, copy text, and more, using single key commands.

Try navigating the cursor using "h" (left), "j" (down), "k" (up), and "l" (right) keys.

Delete a character: Press "x."

Delete a line: Press "dd."

Copy a line: Press "yy."

Paste the copied line: Press "p."

To enter Insert Mode, press "i."

Insert Mode:

After pressing "i" in Normal Mode, you're in Insert Mode.

In Insert Mode, you can type and edit text as you would in a typical text editor.

Type some text, and then press the "Esc" key to return to Normal Mode.

Command Mode:

After pressing "Esc" from Insert Mode or when initially opening vi, you're in Command Mode.

In Command Mode, you can issue various commands to save, quit, search, and more.

Save changes: Type :w and press Enter.

Quit vi: Type :q and press Enter.

Save and quit: Type :wq and press Enter.

Quit without saving changes: Type :q! and press Enter.

To enter Ex Command Mode, press ":" (colon).

Ex Command Mode:

After pressing ":" in Command Mode, you enter Ex Command Mode.

Ex commands offer more advanced functionality, like searching and replacing text.

Search for a word: Type `:/word` and press Enter (replace "word" with the word you're searching for).

Replace text: Type `:%s/old_text/new_text/g` and press Enter (replace "old_text" and "new_text" as needed).

Practice Steps:

Open your terminal and create a new text file using vi: `vi my_file.txt`.

You're in Normal Mode by default. Try navigating around using "h," "j," "k," and "l."

Delete a character: Press "x." Undo with "u."

Delete a line: Press "dd." Undo with "u."

Copy a line: Press "yy."

Paste the copied line: Move to a new line, press "p."

Enter Insert Mode by pressing "i." Type some text.

Press "Esc" to return to Normal Mode.

Save the changes: In Command Mode, type `:w` and press Enter.

Quit vi: In Command Mode, type `:q` and press Enter.

Reopen the file: `vi my_file.txt`.

Search for a word: In Ex Command Mode, type `:/search_word` and press Enter.

Replace text: In Ex Command Mode, type `:%s/old_text/new_text/g` and press Enter.

Remember, practicing these steps will help you become more comfortable with the different modes and commands in the vi editor. Over time, you'll become proficient at using vi for text editing tasks.

Commands for Deleting File Content

Delete a Character:

Position the cursor over the character you want to delete.

Press the "x" key to delete the character under the cursor.

Delete a Line:

Position the cursor on the line you want to delete.

Press the "dd" keys to delete the entire line.

Delete Multiple Lines:

Position the cursor on the first line you want to delete.

Press the number of lines you want to delete followed by the "dd" keys. For example, to delete 3 lines, press "3dd."

Delete from Cursor to End of Line:

Position the cursor where you want to start deleting.

Press the "D" (capital "D") key to delete from the cursor to the end of the line.

Delete Word:

Position the cursor at the beginning of the word you want to delete.

Press the "dw" keys to delete the word under the cursor.

Delete Word and Remain in Normal Mode:

Position the cursor at the beginning of the word you want to delete.

Press "daw" (delete around word) to delete the word under the cursor along with surrounding spaces.

Common Shortcut Keys in vi Editor:

Switch to Insert Mode:

Press "i" to enter Insert Mode before the cursor.

Press "I" (capital "I") to enter Insert Mode at the beginning of the line.

Press "a" to enter Insert Mode after the cursor.

Press "A" (capital "A") to enter Insert Mode at the end of the line.

Save and Quit:

Press ":wq" and Enter to save changes and quit the vi editor.

Quit Without Saving:

Press ":q!" and Enter to quit the vi editor without saving changes.

Undo:

Press "u" to undo the last change.

Redo:

Press "Ctrl" + "r" to redo an undone change.

Navigate to Beginning/End of Line:

Press "0" (zero) to move to the beginning of the line.

Press "\$" to move to the end of the line.

Navigate to Beginning/End of File:

Press "gg" to move to the beginning of the file.

Press "G" (capital "G") to move to the end of the file.

Search:

Press "/" to enter search mode, then type the search term and press Enter.

Press "n" to move to the next occurrence of the search term.

Replace:

Position the cursor on the character you want to replace.

Press "r" followed by the new character.

Remember that these are just a few of the many commands and shortcuts available in the vi editor. Practice and exploration will help you become more proficient and comfortable with using vi for text editing tasks.

Copying and Pasting Text in vi Editor

Normal Mode:

When you open a file in vi, you start in Normal Mode.
In this mode, you can navigate through the text and issue commands.

Copy a Line:

Position the cursor on the line you want to copy.
Press the "yy" keys. This command yanks (copies) the entire line into a buffer.

Paste Copied Line:

Position the cursor on the line where you want to paste the copied line.
Press the "p" key. This command puts (pastes) the copied line below the cursor.

Cut a Line:

Position the cursor on the line you want to cut.
Press the "dd" keys. This command deletes the line and places it in a buffer.

Paste Cut Line:

Position the cursor on the line where you want to paste the cut line.
Press the "p" key. This command puts (pastes) the cut line below the cursor.

Copy Multiple Lines:

Position the cursor on the first line you want to copy.
Press the number of lines you want to copy, followed by "yy." For example, to copy 3 lines, press "3yy."

Paste Copied Lines:

Position the cursor where you want to paste the copied lines.
Press the "p" key. This command puts (pastes) the copied lines below the cursor.

Copy to End of Line:

Position the cursor anywhere on the line you want to copy.
Press "y\$" to yank (copy) from the cursor to the end of the line.

Copy Text Within a Range of Lines:

In Normal Mode, type :<start_line>,<end_line>y and press Enter. Replace <start_line> and <end_line> with line numbers.

For example, to copy lines 5–8, type :5,8y and press Enter.

Copy Text Using Visual Mode:

Press "v" to enter Visual Mode. This mode allows you to select text using movement keys.
Navigate to select the desired text.

Press "y" to yank (copy) the selected text.

Example:

Open a file in vi: vi my_file.txt.

Position cursor on a line, press "yy" to copy it.

Move to another line, press "p" to paste the copied line.

To copy multiple lines, press "3yy" to copy 3 lines.

Move to another location, press "p" to paste the copied lines.

By mastering these commands, you can efficiently copy and paste text within the vi editor to streamline your editing tasks.

Miscellaneous vi Commands

Repeat Action:

To repeat the last change made, press "." (period).

Search and Replace:

Search for a word: Press "/" to enter search mode, type the word, press Enter.

Replace word: Position cursor on word, type ":s/old/new/g" and press Enter.

Replace all occurrences: Use ":s/old/new/gc" to replace with confirmation.

Jump to Line:

Go to a specific line: In Normal Mode, type ":<line_number>" and press Enter.

Indentation:

Indent a line: Position cursor on line, press ">>"

Unindent a line: Position cursor on line, press "<<"

Marking Text:

Set a mark: In Normal Mode, press "m" followed by a letter (e.g., "ma").

Jump to mark: In Normal Mode, press "'" (backtick) followed by the mark letter (e.g., "a").

Split and Join Lines:

Split line at cursor: Press "s" in Normal Mode.

Join lines: Position cursor on the first line, type ":join" and press Enter.

Line Number Display:

Toggle line numbers display: In Normal Mode, type ":set number" or ":set nonumber" and press Enter.

Examples:

Search and Replace:

Search for "apple": Press "/" and type "apple," Enter.

Replace "apple" with "orange": Type ":s/apple/orange/g" and Enter.

Jump to Line:

Go to line 25: In Normal Mode, type ":25" and Enter.

Indentation:

Indent a line: Position cursor on line, press ">>.."

Unindent a line: Position cursor on line, press "<<."

Marking Text:

Set mark "a": In Normal Mode, press "ma."

Jump to mark "a": In Normal Mode, press "`a."

Split and Join Lines:

Split line at cursor: Press "s" in Normal Mode.

Join lines: Position cursor on the first line, type ":join" and press Enter.

Toggle Line Numbers Display:

Display line numbers: In Normal Mode, type ":set number" and Enter.

Hide line numbers: In Normal Mode, type ":set nonumber" and Enter.

Remember that mastering these miscellaneous commands will enhance your productivity and efficiency when working with the vi editor. Regular practice is key to becoming proficient.

Searching in vi Editor

Basic Searching:

In Normal Mode, press "/" to enter search mode.

Type the word or pattern you want to search for, and press Enter.

To find the next occurrence, press "n." To find the previous occurrence, press "N."

Pattern Searching in vi Editor:

Regular Expression Patterns:

vi supports regular expressions for advanced pattern matching.

Common patterns: . (any character), * (zero or more occurrences), ^ (start of line), \$ (end of line).

Case-Insensitive Search:

Use the "\c" or "\C" modifier before the search pattern to make the search case-insensitive or sensitive, respectively.

Example: ^csearch or ^CSearch.

Substitution of Text in vi Editor:

Substitute Command:

In Normal Mode, press ":" to enter Command-Line Mode.

To replace the first occurrence of a word with another word, use :s/old_word/new_word/.

To replace all occurrences on the current line, add "g" flag :s/old_word/new_word/g.

To replace all occurrences in the entire file, use :%s/old_word/new_word/g.

To confirm each replacement interactively, use :%s/old_word/new_word/gc.

Substitute with Patterns:

Regular expressions can be used in the substitute command.

Example: :%s/d+/NUMBER/g replaces all occurrences of digits with "NUMBER."

Examples:

Basic Searching:

Open a file in vi: vi my_file.txt.

Press "/" and type "search_term," Enter.

Press "n" to find the next occurrence.

Pattern Searching:

Open a file in vi: vi my_file.txt.

Press "/" and type ^start, Enter to find lines starting with "start."

Press "/" and type end\$, Enter to find lines ending with "end."

Case-Insensitive Search:

Open a file in vi: vi my_file.txt.

Press "/" and type ^csearch, Enter to find "search" regardless of case.

Substitution of Text:

Open a file in vi: vi my_file.txt.

Press ":" to enter Command-Line Mode.

Type :%s/old_text/new_text/g, Enter to replace all occurrences of "old_text" with "new_text."

Substitute with Patterns:

Open a file in vi: vi my_file.txt.

Press ":" to enter Command-Line Mode.

Type :%s/d+/NUMBER/g, Enter to replace all digits with "NUMBER."

Important Tips:

Be cautious when using substitutions, especially with the "g" (global) flag, to avoid unintended replacements.

Regular expressions can be powerful but require practice to use effectively.

By understanding and practicing these techniques, you can efficiently search for patterns and perform text substitutions in the vi editor to enhance your text editing workflow.