# Vim Basics — Beginner Friendly Notes

Vim is a powerful text editor that has **three main modes** and many shortcuts. This guide is for beginners.

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## 1 Vim Modes

### 1. Normal Mode

- Default mode when you open Vim.
- Press **Escape (Esc)** to return to normal mode from other modes.
- Run Vim commands:
- `:<vim command>` → e.g., `:set number`, `:set relativenumber`, `:set shiftwidth=4`, `:set number!`
- `:!<bash command>` → e.g., `:!ls`, `:!pwd`

### 2. Insert Mode

- You must be in normal mode to enter insert mode.
- Ways to enter insert mode:
- `i` → insert before the cursor
- `a` → insert after the cursor
- `o` → insert a new line below the current line

### 3. Visual Mode

- Used to select text.
- Types of visual mode:
- `v` → visual character mode
- `Shift + v` → visual line mode
- `Ctrl + v` → visual block mode

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## 2 Basic Vim Shortcuts

| Shortcut | Action |
| --- | --- |
| `d` | delete content before the word |
| `D` | delete content after the cursor |
| `dd` | delete the whole line |
| `3dd` | delete 3 lines |
| `c` | change (deletes content and goes to insert mode) |

| Shortcut | Action |
| --- | --- |
| `y` | copy (yank) |
| `h` | move cursor left |
| `j` | move cursor down |
| `k` | move cursor up |
| `l` | move cursor right |
| `r` | replace a single character |
| `w` | jump to next word |
| `b` | jump to previous word |
| `dw` | delete a word |
| `2dw` | delete 2 words |
| `diw` | delete the whole word under cursor |
| `ciw` | change word under cursor |
| `e` | jump to end of word |
| `I` | move to beginning of line (insert) |
| `0` | move cursor to beginning of line |
| `$` | move cursor to end of line |
| `d0` | delete from cursor to beginning of line |
| `yiw` | copy a word |
| `ci"` | change content inside quotes |
| `%` | jump between matching parentheses |
| `d%` | delete including parentheses |
| `t*` | jump before occurrence of `*` |
| `f*` | jump to occurrence of `*` |
| `T*` | jump backward before `*` |
| `gg` | move to beginning of file |
| `Shift+G` | move to end of file |
| `123G` | move to line 123 |
| `>` | indent right |

| Shortcut | Action |
| --- | --- |
| `<` | indent left |
| `==` | auto-indent current line |
| `gg=G` | auto-indent entire file |
| `#` | jump to previous occurrence of word under cursor |
| `*` | jump to next occurrence of word under cursor |
| `m` | mark a position (`ma` to mark, `'a` to go back) |
| `zz` | center current line on screen |
| `.` | repeat previous command |
| `dt"` | delete until quotation mark |
| `"7p` | paste from register 7 |

## 3 Searching and Replacing

- Find a word: `:/<word>`
- `n` → next occurrence
- `N` → previous occurrence
- Replace: `:%s/<old>/<new>/g`
- Use visual mode to select text and replace in selection.

## 4 Registers and Macros

- `:reg` → shows contents of registers
- Macros:
- `qa` → start recording in register `a`
- Press `q` again to stop recording
- `@a` → execute macro stored in register `a`

## 5 Installing Neovim

```
sudo apt install neovim
```

- You can install plugins for additional functionality (e.g., via `vim-plug`).

# 6 Extra Tips for Beginners

1. **Undo / Redo:**
2. `u` → undo

3. `Ctrl + r` → redo

4. **Save and Quit:**

5. `:w` → save
6. `:q` → quit
7. `:wq` → save and quit

8. `:q!` → quit without saving

9. **Move Faster:**

10. `Ctrl + d` → scroll down half page

11. `Ctrl + u` → scroll up half page

12. **Split Windows:**

13. `:split filename` → horizontal split
14. `:vsplit filename` → vertical split

15. `Ctrl + w + h/j/k/l` → move between splits

16. **Tabs:**

17. `:tabnew filename` → open new tab
18. `gt` → next tab

19. `gT` → previous tab

20. **Use** `:help` whenever unsure:

21. `:help <command>` → detailed explanation of the command