

Chapter 5

Short Questions with Answers

Q1: What is the purpose of text preprocessing in operating systems?

- Prepares raw text for editing, formatting, or further processing.
- Removes errors, adjusts spacing, and structures content.
- Example: Using `sort` to arrange student names alphabetically.

Q2: What is the vi editor and how is it used for text preprocessing?

- A standard UNIX/Linux text editor.
- Used for creating, editing, and modifying files.
- Example: Writing C code using `vi program.c`.

Q3: How do you open a file in the vi editor for text preprocessing?

- Use command `vi filename`.
- Opens file in command mode.
- Example: `vi notes.txt` opens text file.

Q4: What are the different modes in the vi editor, and how do they relate to text preprocessing?

- **Command Mode:** For navigation and commands.
- **Insert Mode:** For writing text.
- **Last-line Mode:** For saving and quitting.
- Example: Press `i` for insert mode to type new text.

Q5: How can you navigate within a file using the vi editor?

- Use keys `h` (left), `l` (right), `k` (up), `j` (down).
- Allows moving across lines and characters.
- Example: Press `5j` to move 5 lines down.

Q6: List down any five text processing commands?

- `cut`, `fmt`, `fold`, `join`, `sort`.
- Each helps in formatting or organizing text.
- Example: `sort data.txt` arranges file contents.

Q7: How many modes are in vi editor?

- Three modes: **Command**, **Insert**, **Last-line**.
- Each mode has different functions.
- Example: `:wq` in last-line mode saves and quits.

Q8: Write a note on Cut command?

- Extracts sections of text by columns or characters.
- Useful for breaking data fields.
- Example: `cut -c1-5 file.txt` shows first 5 characters.

Q9: Write a note on Fmt Command?

- Formats text into proper paragraphs.
- Adjusts line length neatly.
- Example: `fmt -w 40 file.txt` formats text to 40 columns wide.

Q10: Write a note on Fold Command?

- Breaks long lines into shorter ones.
- Helps readability in terminal.
- Example: `fold -w 30 file.txt` folds lines at 30 characters.

Q11: Write a note on Join Command?

- Joins lines from two files based on common fields.
- Useful for merging data.
- Example: `join file1 file2` combines lines with same key.

Q12: Write a note on Sort Command?

- Arranges lines of text in ascending/descending order.
- Works on words, numbers, or fields.
- Example: `sort marks.txt` arranges student marks.

Q13: How to open file in vi editor?

- Type `vi filename` in terminal.
- Opens the file in command mode.
- Example: `vi report.txt`.

Q14: List down the keys used for cursor movement?

- `h` → left, `l` → right, `k` → up, `j` → down.
- Also `0` → start of line, `$` → end of line.
- Example: `5h` moves left by 5 characters.

Q15: How to exit vi editor?

- Use `:wq` to save and quit.
- Use `:q!` to quit without saving.
- Example: `:wq` saves file changes.

📖 Long Questions with Answers

Q1: Explain vi editor modes in Unix/Linux.

- **Command Mode:** Default mode for navigation and commands.
- **Insert Mode:** Entered using `i`, `a`, `o` for text typing.
- **Last-line Mode:** Accessed by `:` for save, quit, or search.
 - Example: `i` to insert text, `:wq` to save and exit.

Q2: How to compose text in vi editor in Unix/Linux?

- Open file using `vi filename`.
- Press `i` to switch to insert mode and start typing.
- After writing, press `Esc` → type `:wq` to save and exit.
 - Example: `vi hello.c` → write program → save with `:wq`.

Q3: Explain uniq command with all flags.

- **Purpose:** Removes duplicate lines in a file.
- **Flags:**
 - `-c` → counts duplicates.
 - `-d` → displays duplicates only.
 - `-u` → unique lines only.
 - Example: `uniq -c names.txt` shows names with count.

Q4: Explain sort command with all flags.

- **Purpose:** Sorts text lines.

- **Flags:**

- -r → reverse order.
- -n → numeric sort.
- -u → unique results.
- -k → sort by specific column.
 - *Example: `sort -n marks.txt` sorts by numeric values.*

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