

Sed Cheatsheet

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Quick reference for sed stream editor

Sed is a stream editor for filtering and transforming text. This cheatsheet covers common editing tasks, addressing, substitutions, and in-place edits.

Syntax

General command forms.

<code>sed 'script' file</code>	Run sed script on a file
<code>sed -n 'script' file</code>	Suppress auto-print, print only with p
<code>printf '%s\n' "text" sed 'script'</code>	Read from stdin
<code>sed -e 'cmd1' -e 'cmd2' file</code>	Multiple commands
<code>sed -f script.sed file</code>	Read commands from file

Options

Common CLI flags.

<code>sed -n 'script' file</code>	Suppress auto-print
<code>sed -E 'script' file</code>	Extended regex (GNU and BSD)
<code>sed -r 'script' file</code>	Extended regex (GNU only)
<code>sed -i 'script' file</code>	Edit in place (GNU sed)
<code>sed -i.bak 'script' file</code>	Edit in place with backup

Substitution

Replace text with `s/old/new/` .

<code>sed 's/old/new/' file</code>	Replace first match on each line
<code>sed 's/old/new/g' file</code>	Replace all matches
<code>sed 's/old/new/2' file</code>	Replace second match
<code>sed 's/old/new/Ig' file</code>	Case-insensitive replace (GNU sed)
<code>`sed 's</code>	<code>/usr</code>
<code>sed -n 's/old/new/p' file</code>	Print only lines with replacements
<code>sed 's/old/new/w out.txt' file</code>	Write changed lines to file

Addresses

Apply commands to specific lines.

<code>sed '3s/a/b/' file</code>	Substitute on line 3 only
<code>sed '1,5s/a/b/' file</code>	Lines 1 through 5
<code>sed '/pattern/s/a/b/' file</code>	Lines matching pattern
<code>sed '3,/pattern/s/a/b/' file</code>	Line 3 through first match
<code>sed '/start/,/end/d' file</code>	Delete range between patterns

Print And Delete

Control output and remove lines.

<code>sed -n 'p' file</code>	Print all lines (same as <code>cat</code>)
<code>sed -n '3p' file</code>	Print line 3 only
<code>sed -n '/pattern/p' file</code>	Print matching lines
<code>sed -n '1,5p' file</code>	Print range of lines
<code>sed 'd' file</code>	Delete all lines (prints nothing)
<code>sed '3d' file</code>	Delete line 3
<code>sed '/pattern/d' file</code>	Delete matching lines

Insert, Append, Change

Add or replace whole lines.

<code>sed '2i\\new line' file</code>	Insert before line 2
<code>sed '2a\\new line' file</code>	Append after line 2
<code>sed '2c\\new line' file</code>	Replace line 2
<code>sed '/pattern/i\\new line' file</code>	Insert before matches
<code>sed '/pattern/a\\new line' file</code>	Append after matches

Other Commands

Useful non-substitution commands.

<code>sed 'y/abc/xyz/' file</code>	Translate characters
<code>sed '=' file</code>	Print line numbers
<code>sed 'q' file</code>	Quit after first line
<code>sed '3q' file</code>	Quit after line 3
<code>sed 'n' file</code>	Read next line, skip current output
<code>sed 'N' file</code>	Append next line to pattern space
<code>sed '/pattern/r other.txt' file</code>	Read file after matches
<code>sed '/pattern/w out.txt' file</code>	Write matching lines to file

In-Place Editing

Write changes back to files.

<code>sed -i 's/old/new/g' file</code>	Edit in place (GNU sed)
<code>sed -i.bak 's/old/new/g' file</code>	Edit in place with backup
<code>sed -i '' 's/old/new/g' file</code>	Edit in place on macOS/BSD
<code>sed -i -e 's/a/b/' -e 's/c/d/' file</code>	Multiple edits in place

Regular Expressions

Use regex and capture groups.

<code>sed 's/[0-9]\{4\}/YEAR/' file</code>	Replace 4-digit numbers
<code>sed -E 's/[0-9]{4}/YEAR/g' file</code>	Extended regex (GNU and BSD)
<code>sed 's/(foo)bar/\lbaz/' file</code>	Capture group (basic)
<code>sed -E 's/(foo)bar/\lbaz/' file</code>	Capture group (extended)
<code>sed -E 's#(https?)://#\1://#' file</code>	Use groups and alternate delimiter

Line Selection

Select by position or pattern.

<code>sed -n '1p' file</code>	First line
<code>sed -n '\$p' file</code>	Last line
<code>sed -n '1~2p' file</code>	Every 2nd line (GNU sed)
<code>sed -n '/error/,+2p' file</code>	Match plus next 2 lines
<code>sed -n '/start/,/end/p' file</code>	Print between patterns

Common Patterns

Useful one-liners.

<code>sed 's/[:space:]]\+\$//'</code> file	Trim trailing whitespace
<code>sed 's/^[[:space:]]\+//'</code> file	Trim leading whitespace
<code>sed 's/[:space:]]\+ /g'</code> file	Collapse whitespace
<code>sed '/^#/d; /^\$/d'</code> file	Remove comments and blank lines
<code>sed -n 'n;p'</code> file	Print even lines