

Bruce Barnett's Cheat Sheet for SED
From <http://www.grymoire.com/Unix/Sed.html>

Version 1.0

| SED Command Summary | | | | | | |
|---------------------|---|-------------------------------|--------------------------------|---------------------|---------------------|---------------------|
| Command | Description | Address or Range ¹ | Command makes modifications to | | | |
| | | | Input Stream | Output Stream | Pattern Space | Hold Buffer |
| = | Print line # | - | - | Y | - | - |
| ! <i>function</i> | Don't | Range | See <i>function</i> | See <i>function</i> | See <i>function</i> | See <i>function</i> |
| : label | Define a label | - | - | - | - | - |
| a \text | Append a line after | Address | - | Y | - | - |
| b label | Branch to a label | Range | - | - | - | - |
| c \text | Change a line | Range | - | Y | - | - |
| d | Delete current pattern space, and loads new line | Range | Y | - | Y | - |
| D | Deletes first line of pattern space, loads new line | Range | Y | - | Y | - |
| g | Copy hold space into pattern buffer | Range | - | - | Y | - |
| G | Append hold space into pattern buffer | Range | - | - | Y | - |
| h | Copies pattern space into hold buffer | Range | - | - | - | Y |
| H | Appends pattern space into hold buffer | Range | - | - | - | Y |
| i \text | Insert a line before | Address | - | Y | - | - |
| L | Display pattern space | Address | - | Y | - | - |
| n | Print current pattern space, loads new line | Range | Y | * | - | - |
| N | Appends new line into pattern space | Range | Y | - | Y | - |
| p | Prints current pattern space | Range | - | Y | - | - |
| P | Prints first line of current pattern space | Range | - | Y | - | - |
| q | Quit | Address | - | - | - | - |
| r filename | Read file | Address | - | Y | - | - |
| s/regexp/new/ | Substitute | Range | - | - | Y | - |
| t label | Branch after testing last substitution | Range | - | - | - | - |
| w filename | Write file | Range | - | Y | - | - |
| x | Exchanges pattern space and hold buffer | Range | - | - | Y | Y |
| y/source/dest/ | Translate (tr) | Range | - | - | Y | - |

¹ Address format: *address command*
Range format: *address1, address2 command*

Command formats:

Address command

Address1, Address2 command (Range format)

: label

! function

comment

{ command1;command2;command3 }

! { command1;command2;command3 }

| Address Formats | Meaning |
|-----------------|--|
| <i>number</i> | Line Number |
| \$ | Last Line |
| /regexp/ | All lines that match regular expression |
| \Xregexp\X | All lines that match regular expression (GNU extension) |

| | |
|--|--|
| Substitute flags | |
| s/regexp/replacement/ <i>flags</i> – <i>flags</i> may be zero or more of | |
| g | global – change all occurrences on the line |
| p | print – print the pattern space if a replacement is made |
| w file | write to the file if a replacement is made |
| <i>number</i> | change the <i>number</i> occurrence, not the first |

| Command Line Argument | Long Version of Argument (GNU extensions) | Purpose |
|-----------------------|---|--|
| -V | --version | |
| -h | --help | |
| -n | --quiet --silent | Don't print the pattern space unless explicitly stated |
| -e script | --expression=script | Execute sed script |
| -f filename | --file=filename | Execute sed commands in filename |

Examples of complex commands:

| Equivalent commands Examples showing relationship between -n, d, p, and ! | | | |
|--|-------|---------|--|
| Sed | Range | Command | Results |
| sed -n | 1,10 | p | Print first 10 lines |
| sed -n | 11,\$ | !p | Print first 10 lines |
| sed | 1,10 | !d | Print first 10 lines |
| sed | 11,\$ | d | Print first 10 lines |
| sed -n | 1,10 | !p | Print last 10 lines |
| sed -n | 11,\$ | p | Print last 10 lines |
| sed | 1,10 | d | Print last 10 lines |
| sed | 11,\$ | !d | Print last 10 lines |
| sed -n | 1,10 | d | Nothing printed |
| sed -n | 1,10 | !d | Nothing printed |
| sed -n | 11,\$ | d | Nothing printed |
| sed -n | 11,\$ | !d | Nothing printed |
| sed | 1,10 | p | Print first 10 lines twice, Then next 10 lines once |
| sed | 11,\$ | !p | Print first 10 lines twice, Then last 10 lines once |
| sed | 1,10 | !p | Print first 10 lines once, Then last 10 lines twice |
| sed | 11,\$ | P | Print first 10 lines once, Then last 10 lines twice |

| Summary of "n/N" "d/D" and "p/P" commands w/Pattern Space and Input | | | | | |
|---|------------|---------|-----------|-------------------|----------------|
| Pattern Space | Next Input | Command | Output | New Pattern Space | New Next Input |
| AB | CD | n | <default> | CD | EF |
| AB | CD | N | - | AB\nCD | EF |
| AB | CD | d | - | CD | EF |
| AB | CD | D | - | CD | EF |
| AB | CD | p | AB | CD | EF |
| AB | CD | P | AB | CD | EF |
| AB\nCD | EF | n | <default> | EF | GH |
| AB\nCD | EF | N | - | AB\nCD\nEF | GH |
| AB\nCD | EF | d | - | EF | GH |
| AB\nCD | EF | D | - | CD | EF |
| AB\nCD | EF | p | AB\nCD | AB\nCD | EF |
| AB\nCD | EF | P | AB | AB\nCD | EF |

References

- [My SED tutorial](#)
- [Heiner's SHELLdorado](#)
- [Chris F. A. Johnson's Unix Shell Page](#)
- [The Wikipedia Entry on SED](#)
- [SED one-liners](#)
- [The SED FAQ](#)