

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	
<i>s/regexp/replacement/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](#)