

**GNU Emacs
Quick Reference Guide
for CS61B**

Bullets (●) mark a suggested starting set of commands. Daggers (†) denote key bindings that are not standard in GNU Emacs. *ARG* denotes the prefix numeric argument (entered with **C-u** or **M-digit**).

Cursor motion.

C-f	Forward character.●
M-f	Forward word.●
C-e	Forward to end of line.●
C-b	Backward character.●
M-b	Backward word.●
C-a	Backward to start of line.●
M-e	Forward sentence.
M-[Forward paragraph.
M-a	Backward sentence.
M-]	Backward paragraph.
C-n	Next line.●
C-p	Previous line.●
M-<	Beginning of buffer.●
M->	End of buffer.●
C-v	Scroll text up one screen (or <i>ARG</i> lines).●
M-v	Scroll text down (or <i>ARG</i> lines).●
M-g	Go to line number <i>ARG</i> .†
M-x what-line	Display line number.
C-M-v	Scroll other window up one screen (or <i>ARG</i> lines).

Marking regions of text

C-@	Set mark at point.●
C-x C-x	Exchange mark and point.●
C-SPC	Same as C-@ .
M-@	Set mark after end of next word.
M-h	Set mark and point around current paragraph.
C-x h	Set mark and point around current buffer.

Deletion and yanking

DEL	Delete character before cursor.●
M-DEL	Delete word before cursor and add to kill buffer.●

C-d	Delete character at cursor.●
M-d	Delete word at and after cursor and add to kill buffer.●
C-k	Delete to end of line and add to kill buffer.●
M-W	Delete current region, and add to kill buffer.†●
M-\	Delete surrounding blanks and tabs.
M-SPC	Delete all but one surrounding blank.
C-x C-o	Delete all but one surrounding blank line.
C-M-w	Cause next command, if a kill, to append to previous kill buffer, instead of new one.
C-y	Insert text from kill buffer at point.●
C-u C-y	Insert text from kill buffer at point without moving point.
M-y	Replace preceding C-y text with next most recent kill buffer.
M-w	Copy region to kill buffer, no deletion.

Indentation

TAB	Indent according to mode.●
LF	Same as RET TAB .
M-;	Indent and start comment.
M-LF	Continue comment on next line.
C-x TAB	Indent region rigidly by <i>ARG</i> .
C-M-\	Indent region according to mode.●

Search

C-s	Search forward.●
C-s C-s	Same as C-s with last string.●
C-r	Search backward.●
C-r C-r	Same as C-r with last string.●
C-u C-s	Search forward for regular expression.
M-x occur	Display lines matching a regular expression.
M-x grep	Display results of UNIX grep utility.
M-x count-matches	

The following subcommands are valid during a search.

RET	End search.●
DEL	Undo effect of last search character typed.●
C-g	Abort search.●
C-s	Search for next match forward.●
C-r	Search for next match backward.●
C-q	Quote next character.
C-w	Extend search string with next word.
LF	Extend search string with rest of line.

Replacement

M-q Query replace.●†
M-Q Query replace regular expression.†
M-x delete-matching-lines
M-x delete-non-matching-lines

During a query-replacement, the following are valid responses to prompts.

SPC Make replacement and go to next.●
DEL Skip replacement and go to next.●
RET End replacement.●
! Replace all remaining instances without asking.●
C-r Enter recursive edit; return with **C-M-c**.

Regular expressions

. Match any character.●
^ Match at start of line.●
\$ Match at end of line.●
[...] Match any character in the '...'.●
[^...] Match any character except those in '...'.●
***** Match 0 or more of pattern to left.●
+ Match 1 or more of pattern to left.
? Match 0 or 1 of pattern to left.
\c Quotes *c*, except for the following.
\b Match at beginning or end of word.
\B Match except at beginning or end of word.
\| Match either pattern to left or right.
\(...\) Grouping.
\n Match copy of whatever matched *n*th group.

Miscellaneous editing

C-o Insert newline after cursor.
C-t Transpose characters.
M-t Transpose words.
C-x C-t Transpose lines.
M-u Convert whole word to upper case.
M-l Convert whole word to lower case.
M-c Capitalize word.

Files

C-x C-f Find file; load if needed.●
C-x 4 C-f Find file in other window.●
C-x C-s Save file.●
C-x C-w Write to explicitly-named file.
C-x i Insert file at cursor.
M-x recover-file Recover file after disaster from auto-save file.
M-x revert-buffer Throw away changes to buffer and restore from file.

Buffers and windows

C-x o Put cursor in other window.●
C-x 1 Grow current window to full screen.●
C-x 2 Split current window vertically.●
C-x b Put named buffer in window.●
C-x 0 Remove current window.
C-x 3 Split current window horizontally.
C-x C-b List all buffers.
C-x k Delete buffer.

Shells

M-x shell Run UNIX shell in a buffer.●
M-| Execute single shell command on region.
With *ARG*, replaces region.

Commands active in shell buffers:

RET Send current line to shell.●
TAB Complete preceding file name.●
C-c C-c Send interrupt to shell.●
C-c C-u Erase current input line.●
C-c C-z Send stop signal to shell.●
C-c C-d Send EOF to shell.

Compilation, debugging, and tags

M-x compile Execute command (by default, *make*) asynchronously.●
C-x ' Position to next error or next line found by **M-x grep** command.●
M-x kill-compiler Stop active *compile*.
M-x visit-tags-table Specify file containing tags produced by *etags*.●
M-. Display source for given tag.●

C-u M-. Find next alternate definition for last tag.●
C-x 4 . Display source for tag in other window.
M-x tags-search
M-x tags-query-replace Look for pattern in all files
 named in tags table.
M-x tags-apropos Display matching tags.

M-x gdb Run GNU debugger on file.
M-x gjdb Run Java debugger on class.

Mouse commands

Left, middle, and right buttons are **LB**, **MB**, and **RB**.
LB Put cursor at mouse. Dragging marks region.
MB Paste text from window-system cut buffer at
 mouse.
RB Extend region to pointer and copy into cut
 and kill buffers. Clicking twice deletes region.
C-LB Select a buffer.

Commands valid in **gdb** and **gjdb** modes.

C-c C-s Step.●
C-c C-n Next.●
C-c < Up stack.●
C-c > Down stack.●
C-c C-r Finish.●
C-x SPC In any source file, sets a break point.●
C-c C-i Stepi (gdb only).

Help and documentation

M-x manual-entry UNIX man page for given topic.
C-h a Look up names of matching commands.●
C-h b Display key bindings.●
C-h f Help for **M-x** function.●
C-h C-h Help for **C-h**.●
C-h i Run info browser.●
C-h k Help for key.●
C-h m Help for current mode.
C-h t Tutorial.
C-h w Key containing function.

Inside an ***info*** buffer (result of **C-h i**), the following are defined.

m Select menu item.●
l Go to last-visited node.●
? Get help for browser.●
u Go to node's parent.●
n Go to next node in sequence.●
q Leave browser.●
. Go to top of node.
d Go to top-level node.