Indenting & Tab

		indenting &	
Description	<u>Keystroke</u>	Function	<u>Note</u>
Indentation under Emacs O Use hard tabs or spaces for indentation Set hard-tab visual width Adjust tab stop Show tab/indent settings Align on return Insert hard-tab	 Emacs controls indentation and behaviour of the tab key according to various rules controlled by the buffer's major mode. The modes default behaviour may be modified by the use of minor modes. Several major modes identify one or several variable that control indentation levels and behaviour. Some use default indentation variables. Some programming languages (such as Go) impose hard-tab for indentation, using tab for indentation and space for alignment. Works very nicely. There are several indentation schemes: hard-tab only for indentation, spaces only for indentation, hard-tabs for indentation space for alignment, free mix of hard-tabs and spaces for indentation and whitespace. Emacs can support all those schemes. It can tabify or untabify source code. Emacs controls the display rendering of hard tabs via the tab-width customizable user-option variable. The indentation width is often independent from the tab width but not always. Again it depends on the major mode used. 		
To next tab stop tabify & untabify Behaviour of tab key Insert newline, split line Indent region Delete indentation Move to 1st non-blank Indenting /un-indenting rigidly Text alignment on newline Indent-tools	It also provides easy access to exo. The packages are activated by The indent-bars external The indent-tools external The smart-shift external The smart-tabs external External The smart-tabs.	package depel-use-indent-bars package depel-use-indent-tools package depel-use-smart-shift package depel-use-smart-tabs	
Indent-barsSmart-shiftSmart-tabs	complements the mode specific i		
Last updated on:			ut Indentation and Hard Tab Control under PEL
Open this PDF file. See also: <u>▼ Help/Info</u>	<f11> <tab> <f1></f1></tab></f11>	(pel-help-pdf &optional OPEN- WEB-PAGE)	Open the <u>Indentation</u> local PDF. If the prefix argument (like C-u or M) is used, then it opens the remote GitHub hosted raw PDF instead. If the pel-flip-help-pdf-arg user-option is set it's the other way around.
Customize PEL highlighting control	<f11> <tab> <f2></f2></tab></f11>	(pel-customize-pel &optional OTHER-WINDOW)	Customize PEL support for indentation management • If OTHER-WINDOW is non-nil (use C-u), display in other window.
∑ Customize Emacs indentation control	<f11> <tab> <f3></f3></tab></f11>	(pel-customize-library &optional OTHER-WINDOW)	Customize Emacs indentation control groups: indent, Indent-bars indent-tools, smart-shift . • If OTHER-WINDOW is non-nil (use C-u), display in another window.
Use hard tabs or spaces for indentation	The use of hard tabs or spaces for indentation is controlled by the Emacs (customizable) variable indent-tabs-mode. • Like several Emacs variable this variable has global impact, but this can be overridden by directory local value, file local value and buffer local value allowing fine control over set of files and buffers. See also: \(\Substact \) Whitespace		
Toggle use of hard tabs for indentation in the current buffer	• <f11> <tab> m • <f11> t w I</f11></tab></f11>	(pel-toggle-indent-tabs-mode &optional ARG)	Toggle whether indentation can insert hard tab characters in the current buffer. • Beep on each change to warn user of the change and display new value. • If ARG is positive set to use hard tabs, otherwise force use of spaces only. • This uses Emacs indent-tabs-mode function and provides more feedback.
Hard-tab "width"	The current-buffer value of tab-wi	idth affects the <i>visual rendering</i> of the	hard-tab character. It does not affect the content of the buffer or file.
Set visual rendering of hard tabs for the current	<f11> <tab> w</tab></f11>	(pel-set-tab-width N)	Change the tab-width of the current buffer, only affecting the display rendering o hard tabs inserted in the buffer text. Prompts for a new value in the [2, 8] range.
buffer • Does not change buffer/file content	 This modifies a buffer local value of the the tab-width user-option. PEL provides a specialized user-option to set the default value of tab-width for several major modes. For example, to change the tab width used for all Go source code files, change the 'pel-go-tab-width' user-option variable instead. See the documentation of each major mode for more information. 		
Tab stops	Emacs keeps track of a set of "ta	b-stop" columns that can be used as	reference points to align text. Something similar to typewriter tab-stop.
Change the tab stops • used by M-i	<f11> <tab> e</tab></f11>	(edit-tab-stops)	Opens a *Tab Stops* buffer. Identify the tab stops in the first line with colons. Use C-c C-c to activate and exit the buffer. • The tab stop take effect at the top of the buffer, as used by M-i
Show Indentation settings	<f11> <tab> ? <f11> ? <tab> The command opens a buffer</tab></f11></tab></f11>	(pel-show-indent &optional APPEND)	Print info about indentation control in a *pel-indent-info* help-mode buffer. • Buffer-specific values of relevant user-options as buttons to use to get more info and change their customized values. Includes major-mode specific ones.
For several major modes, a PEL mode-specific user-option controls the the value of the tab-width variable for the mode. For example, pel-c-tab-width is used for c-mode buffers. Note however, that indentation for C buffer is controlled by the c-basic-offset user-option. Other major modes may	showing the indentation control for the current buffer. The first line shows the buffer name and date. The first group of user options are buffer specific and take precedence over the global user-options. The next group are global user-options that are used when they are not overridden by major-mode specific ones. inside c-mode buffers, PEL	- pel-c-indent-width - pel-c-tab-width - pel-c-use-tabs The above major-mode specific us over the following global ones (file variables): - c-basic-offset - tab-width	
provide mode specific control variables and the printed information will differ.	has user-variables that take over. • All user-option variables are help buttons; click on them (in graphics mode) or tab and return to open help on the	- standard-indent - tab-always-indent - tab-stop-list -UUU:%*- F1 *pel-indent-info* f11 TAB ?	: 4 : t : nil
Toggle text alignment on pel-newline-and-indent-below See also: <u>X Align</u>	<f11> M-RET It affects the way function 'pel-ne • If pel-newline-does-align is t, i • \$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exitit{\$\text{\$\exitit{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exitit{\$\exitit{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exitit{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exititt{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exititt{\$\text{\$\exititt{\$\text{\$\text{\$\text{\$\text{\$\text{\$\tex</f11>	ly activates <i>pel-newline-does-align</i> be following commands: pel-cc-new pel-newline	Toggle variable <i>pel-newline-does-align</i> for the local buffer. the current block: the comments, the assignments. by adding the major mode to <i>pel-modes-activating-align-on-return</i> user option. whine (assigned to <i>RET</i> in CC modes like c-mode, c++-mode and d-mode). be-and-indent-below (assigned the M-RET)
Show state of text modes • whether hard tabs are used for indentation, tabwidth • whether newline aligns text • electric-quote-mode • delete-selection-mode • enriched-mode • overwrite-mode • case folding • subword, superword, glass modes • visible-mode, smart-dash-mode • paragraph definition	When indent-tabs-mode is act The number of hard tabs ins If indent-tabs-mode is not active PEL provides user-options Text Modes Status: Local indent-tabs-mode Local newline does alige Local electric-quote-mode whitespace-mode enriched-mode overwrite mode case-fold-search subword mode visible-mode Sentences end with 2 sp paragraph-start; "^1	tive, Emacs inserts a number of hard tead depends on the amount of chard tead depends on the amount of chard tead depends on the amount of chard tead depends on the form pel- <mode>-use-tabs which the form pel-<mode>-use-tabs w</mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode></mode>	acters required for indentation and the tab-width. aracters. nich is used to initialize the indent-tabs-mode supported major modes buffers. th = 8 activated by modes (<f11> t a <f2>): (c-mode c++-mode sh-mode) ite-local-mode: not loaded. ite-whitespace: off , indicate-empty-lines: off. tion-mode : off. ite : not loaded. ite : not loaded. ite : not loaded.</f2></f11>
	- paragraph-separate: "[^L]*\$"	

Description	<u>Keystroke</u>	Function	Note	
Align on return	The following commands control	indentation on return. The behaviour	can be modified and PEL provides a quick command to list relevant user options.	
Display current buffer's vertical alignment behaviour See also: <u>E Align</u>	<f11> t a ?</f11>	(pel-align-info &optional APPEND)	Print information about text aligning info in a *pel-align-info* help-mode buffer. • Prints current state and values of relevant user-options as buttons to help: • M-RET behaviour in current buffer: show if that command aligns text or not. • whether the modes are activating vertical alignment on return. • Clear previous buffer content. Use prefix arg (like C-u) to append instead.	
Insert an indented line below current line See also: <u>S Align</u>	• M-RET • <f11> <tab> RET</tab></f11>	(pel-newline-and-indent-below)	Insert an indented line just below current line. • Also align vertically if mode was activated for the buffer with <f11> M-RET. • See current behaviour with <f11> t a ?</f11></f11>	
Inserting hard tab	Regardless of <tab> key behavi</tab>	our, it is possible to insert a hard tab o	character with C-q <tab></tab>	
Insert Literal Tab	C-q <tab></tab>	(quoted-insert ARG) <tab></tab>	Inserts a hard tab inside buffer. Render text according to value of tab-width.	
Insert whitespace to next tab-stop		our, it is possible to insert spaces (or cope modified with (edit-tab-stop), boun		
Insert spaces or tabs to next defined tab-stop column	M-i	(tab-to-tab-stop)	Insert spaces or tabs to next defined tab-stop column. • Use <f11> <tab> e to modify position of the tab stops.</tab></f11>	
Tabifa 0 amabifa		· ·	e tab-stop-list and tab-width for the current buffer. e with the corresponding number of space characters while retaining the same	
Tabify & untabify	indentation and vice-versa.	The used to replace hard tabs in a in	e with the corresponding number of space characters will be retaining the same	
Replace tabs with spaces in a region	<f11> t w SPC</f11>	(untabify START END &optional ARG)	Convert all tabs in region to multiple spaces, preserving columns. If called interactively with prefix ARG, convert for the entire buffer. First select a region (Use C-x h for selecting the whole file). Then use the	
See also: <u>Simplify Whitespace</u> Replace multiple spaces	26115 to 24.45	(tabify START END &optional ARG)	untabify function to replace all tabs by spaces in that region. Convert multiple spaces in region to tabs when possible.	
with tabs in a region See also: Whitespace	<f11> t w <tab></tab></f11>	(tablity STANT END application And)	 A group of spaces is partially replaced by tabs when this can be done without changing the column they end at. If called interactively with prefix ARG, convert for the entire buffer. 	
Behaviour of Tab Key	In Emacs the behaviour of the <	Lab> key depends on the maior mode	e of the current buffer. This key is rebound by several major mode.	
<u> </u>	In text modes, tabs default to in moves to the spot under the way	nserting hard tabs corresponding to a ord above. Note that if a line is full of to	alignment at every 8 columns. However, if there is text in the above lines, the tab ext (without any space), then the tab stops controlled by the ruler take effect again. it adjusts the line indentation. according to surrounding code	
Indent current line (or region)	<tab></tab>	(indent-for-tab-command &optional ARG)	Indent the current line or region, or insert a tab, as appropriate.	
	 This function either inserts a tab, or indents the current line, or performs symbol completion, depending on 'tab-always-indent'. The function called to actually indent the line or insert a tab is given by the variable 'indent-line-function'. If a prefix argument is given, after this function indents the current line or inserts a tab, it also rigidly indents the entire balanced expression which starts at the beginning of the current line, to reflect the current line's indentation. In most major modes, if point was in the current line's indentation, it is moved to the first non-whitespace character after indenting; otherwise it stays at the same position relative to the text. If 'transient-mark-mode' is turned on and the region is active, this function instead calls 'indent-region'. In this case, any prefix argument is ignored. 			
	The behaviour of the tab key vastly differ between major modes. This ranges from not moving the cursor at all if the indentation is identified as correct for the current context, to cycling through various potential positions to just what someone new to Emacs would expect. Much more has to be documented on the behaviour of that key and how it can be controlled and customized. It's quite possible that the best way to document its behaviour would be to place a description inside the table of each major mode.			
	<tab></tab>	indent-for-tab-command &optional ARG)	In Lisp related modes. indent-line-function = indent-relative. • tab-always-indent = t	
	Several major modes adjust the	ne behaviour of the tab key to perform	semantically aware indentation, such as what is being done in Lisp.	
	<tab></tab>	(c-indent-line-or-region &optional ARG REGION)	In C related modes: Indent active region, current line, or block starting on the line. In Transient Mark mode, when the region is active, reindent the region. With prefix argument, rigidly reindent the expression starting on current line. Otherwise reindent just the current line.	
Indent lines of list after point Example: CLBC s3.lisp	С-М-q	(indent-sexp & optional ENDPOS) (c-indent-exp & optional SHUTUP-P)	Indent each line of the list starting just after point. The command used depends on the major mode of the current buffer.	
Newline & indent				
Insert new-line and maybe indent	С-ј	(electric-newline-and-maybe-indent)	Add new line and indent next line. Indentation is controlled by the variable left-margin. Pressing Tab anywhere on the line also indents the line properly.	
Insert new-line and maybe indent	RET	(pel-cc-newline &optional N)	Insert a newline and perhaps align. With argument N repeat N times. • For newline insertion, operate according to the value of the variable 'pel-cc-newline-mode'.	
Split current line & indent	С-м-о	(split-line &optional ARG)	Split current line, moving portion beyond point vertically down. If the current line starts with 'fill-prefix', insert it on the new line as well. With prefix ARG, don't insert 'fill-prefix' on new line.	
Indent Region	C-M-\	(indent-region START END &optional COLUMN)	Indent each nonblank line in the region. • A numeric prefix argument specifies a column: indent each line to that column. • With no prefix argument, the command chooses one of these methods and indents all the lines with it: 1. If 'fill-prefix' is non-nil, insert 'fill-prefix' at the beginning of each line in the region that does not already begin with it. 2. If 'indent-region-function' is non-nil, call that function to indent the region. 3. Indent each line via 'indent-according-to-mode'.	
Indent relative to line above	<f11> <tab> r (indent-relative & optional FIRST-ONLY UNINDENTED-OK) Space out to under next indent point in previous nonblank line. An indent point is a non-whitespace character following whitespace. The following line shows the indentation points in this line. • If FIRST-ONLY is non-nil (ie. using C-u prefix) then only the first indent point is considered. • If the previous nonblank line has no indent points beyond the column point starts at, then 'tab-to-tab-stop' is done, if both FIRST-ONLY and UNINDENTED-OK are nil, otherwise nothing is done. • If there isn't a previous nonblank line and UNINDENTED-OK is nil, call 'tab-to-tab-stop'. Essentially, this command inserts whitespace at point, until point is aligned with the first non-whitespace character on the previous line (actually, the last non-blank line). If point is already farther right than that, run tab-to-tab-stop instead—unless called with a numeric argument, in which case do nothing.</tab></f11>			
Delete Indentation, join line to the previous one See also: Cut & Paste Whitespace	• M-^ • <f11> © 6 • <f6> 6</f6></f11>	(delete-indentation &optional ARG)	Join this line to previous and fix up whitespace at join. If there is a fill prefix, delete it from the beginning of this line. With argument, join this line to following line.	
∑ Whitespace Move to fist nonbank character on the line	M-m	(back-to-indentation)	Move point to the first non-whitespace character on this line.	

Description	<u>Keystroke</u>	Function		<u>Note</u>	
Indenting and un- indenting rigidly	The first command allows you to use.	e non-semantic indentation of the curro to use further keystrokes to fine-tune ne last 2 commands that indent or un-	the indentation back an	d forth using cursor keys. T	
Indent/Unindent rigidly See also: Key-Chords	• C-x <tab> • <f11> <tab> <tab> • <tab>q</tab></tab></tab></f11></tab>	(pel-indent-rigidly &optional N)	If a region is mark to control indentation If no region is mark argument N (or if no N = [-1, 0, 1] : 0 N > 1 : operate N < -1 : operate Output N < -1 : operate	on changes. rked, it operates on current of specified N=1): operate on current line on the current line and N-1 on the current line and (abs is issued use the keys listed)	nd provides the same prompts line(s) identified by the numeric lines below.
FEL rebinds this key, but extends the functionality: pel-indent-rigidly uses indent-rigidly, described below the dashed line.		➤ PEL uses the above instead of the standard: (indent-rigidly START END ARG &optional INTERACTIVE)	which the indentati	g in the region. ly with no prefix argument, a on can be adjusted interacti ft>, or S- <right>.</right>	
See also: • PL - C • PL - C++ • PL - D • M reStructuredText	controlled by the variable indent- • S- <right> indent-rigi • <right> indent-rigi Typing any other key deactivates • The S-<right> and S-<le for="" is<="" major="" of="" pel,="" pel-c-tab-width="" several="" td="" value="" with="" •=""><td>the transient mode. ft> keys indent/de-indent to the nex modes, the indentation is controlled b automatically stored into tab-width wi cua-mode uses C-x, to invoke this co</td><td>S-<left> inc <left> inc <tt a="" buffer="" is="" mode-specific="" nen="" opened<="" position,="" tab-stop="" td="" the="" user="" whi="" y=""><td>dent-rigidly-left-to-tab-stop dent-rigidly-left ich is controlled by the tab-v option variable . For examp</td><td>width user option. ble, for buffers in c-mode, the</td></tt></left></left></td></le></right></right></right>	the transient mode. ft> keys indent/de-indent to the nex modes, the indentation is controlled b automatically stored into tab-width wi cua-mode uses C-x, to invoke this co	S- <left> inc <left> inc <tt a="" buffer="" is="" mode-specific="" nen="" opened<="" position,="" tab-stop="" td="" the="" user="" whi="" y=""><td>dent-rigidly-left-to-tab-stop dent-rigidly-left ich is controlled by the tab-v option variable . For examp</td><td>width user option. ble, for buffers in c-mode, the</td></tt></left></left>	dent-rigidly-left-to-tab-stop dent-rigidly-left ich is controlled by the tab-v option variable . For examp	width user option. ble, for buffers in c-mode, the
		y-chord is available when pel-use-key is available with the key-chord bindin		∑ Key-Chords.	
Indent line(s) rigidly	<f6> <tab> <f11> <tab> c Works with point anywhere on All lines touched by the region</tab></f11></tab></f6>		Indent current or mark	ked lines by N indentation le	vels
	A special argument N can specific If a negative number is specific If a region is marked, the funct characters in all affected lines. Use C-g to de-activate the regional Handles presence of hard tabs If indent-tabs-mode is non-tabs-mode is non-tabs-mode.	cify more than one indentation level. Ited, 'pel-unindent-lines' is used. ion does not deactivate it to allow repigion. it is: inil the indentation is created with a miny hard tab in the indentation of the mindentation of th	eated execution of the o	ce characters.	·
Un-indent line(s) rigidly	If a region was marked, the fur characters in all affected lines Use C-g to de-activate the reg Handles presence of hard tabs If indent-tabs-mode is non-indepth.	are un-indented. tion does not deactivate it to allow repond to a low repond	peated execution of the epeated execution of the x of hard-tabs and space	e command. It also modifie ce characters.	s the region to include all
Indent-tools	It provides a minor mode and a The indent-tools external par This also automatically active PEL provide a global key bino	ge provides several commands to inde a key hydra that provides all of these of ckage PEL activates it when the p vates the hydra external package. ding to its key hydra and provides the and activates the C-c > key binding	commands. el-use-indent-tools us ability to activate the pro	er-option is turned on (set to	o t).
Open the indent-tools	• <f11> <tab> <f7></f7></tab></f11>	(indent-tools-hydra/body)	Activate the "indent-to	ools-hydra" hydra.	
hydra See also: <u>ಭැ - Python</u>	• <f7> <tab> • C-c ></tab></f7>		 globally, when pel- in python-mode on	•	set to globally ,
	The heads for the associated hyders: 'indent-tools-indent'		Indent	Navigation	Actions
	 'indent-tools-indent-tools-indent-tools-indent-tools-indent-tools-comme 'indent-tools-comme 'indent-tools-uncomme 'indent-tools-indent-tools-indent-tools-indent-tools-indent-tools-kill-tree 'indent-tools-copy-h 'indent-tools-select', 	s', end-of-defun', ent', ment', paragraph', end-of-level', ', ydra/body',	> indent < de-indent l end of level end of fn p paragraph SPC space undo	j v k A n next sibling p previous sibling u up parent d down child e end of tree	<pre>K kill i imenu C Copy c comment U uncomment (paragraph) f fold q quit</pre>
	e: 'indent-tools-goto-er u: 'indent-tools-goto-pr d: 'indent-tools-goto-cl S: 'indent-tools-select-r n: 'indent-tools-goto-nr p: 'indent-tools-goto-pr i: 'helm-imenu', j: 'forward-line', k: 'previous-line', SPC: 'indent-tools-indent-	arent', nild', end-of-tree', ext-sibling', revious-sibling',			
See also: <u>National Hide/Show</u>	_: 'undo-tree-undo', L: 'recenter-top-bottom f: 'yafolding-toggle-ele q: exit	, ,	√ The f key toggles t again to display it bac	_	nce to hide the sub-tree, press-

<u>Description</u>	<u>Keystroke</u>	Function	<u>Note</u>	
indent-bars		A minor-mode that displays vertical bars over each indentation level. The style of the bars is customizable. The <u>indent-bars</u> external package A PEL activates it when the <u>pel-use-indent-bars</u> user-option is turned on (set to t).		
Toggle indent-bars	<f11> <tab> b b</tab></f11>	(indent-bars-mode &optional ARG)	Toggle showing bars that indicate indentation. A minor mode.	
Reset indent bar config	<f11> <tab> b r</tab></f11>	(indent-bars-reset &rest R)	Reset indent-bars config.	
Reset style of indent bars	<f11> <tab> b s</tab></f11>	(indent-bars-reset-styles &rest R)	Reset all styles' colors and faces. • Useful for calling after theme changes.	
Smart-shift	The <u>smart-shift</u> external package simplifies shifting a complete line or region of lines right or left but also up or down. It is implemented as a minor or global minor mode that must be enabled first.			
∑ Customize with: <f11> <tab> s <f2></f2></tab></f11>	 Automatically activate the smart-shift-mode in specified major mode by customizing the pel-<mode>-activates-minor-modes user-options.</mode> You can also use the commands manually or through the key bindings provided by PEL to activate the smart-shift-mode in the current buffer or globally for all buffers. PEL controls it through customization user-options: The smart-shift external package PEL activates it when the pel-use-smart-shift user-option is turned on (set to t). PEL also provides the pel-smart-shift-keybinding user-option that allows you to select whether the shift keys used by smart-shift mode is the default provided keys only or whether you also want to activate another set. The default are always available when smart-shift mode is active: C-c <right>, C-c <left>, C-c <up> and C-c <down>.</down></up></left></right> PEL can also activate one of the following extra key binding sets: Using the control cursor key: C-c C-<right>, C-c C-<left>, C-c C-<up> and C-c C-<down>.</down></up></left></right> Using the <f9> key as prefix: <f9> <right>, <f9> <left>, <f9> <up> and <f9> <down></down></f9></up></f9></left></f9></right></f9></f9> 			
Toggle smart-shift mode in current buffer	<f11> <tab> s</tab></f11>	(smart-shift-mode &optional ARG)	Activate/de-activate the smart-shift mode in the current buffer. Activate the line-shift key bindings listed below, in the current buffer. With PEL, the actual key binding selected for the line shift commands depend on the value of the pel-smart-shift-keybinding user-option.	
Toggle smart-shift mode globally	<f11> <tab> S</tab></f11>	(global-smart-shift-mode &optional ARG)	Toggle Smart-Shift mode in all buffers. With prefix ARG, enable Global Smart-Shift mode if ARG is positive; otherwise, disable it. Smart-Shift mode is enabled in all buffers where 'smart-shift-mode-on' would do it.	
When smart-shift mode is active:			ovided by PEL can be enabled via the pel-smart-shift-keybinding user-option. s, only one of the last 2 key bindings is available in the smart-shift minor mode.	
Shift line or region right	• C-c <right> • C-c C-<right> • <f9> <right></right></f9></right></right>	(smart-shift-right &optional ARG)	Shift the line or region to the ARG times to the right.	
Shift line or region left	• C-c <left> • C-c C-<left> • <f9> <left></left></f9></left></left>	(smart-shift-left &optional ARG)	Shift the line or region to the ARG times to the left.	
Shift line or region up	• C-c <up> • C-c C-<up> • <f9> <up></up></f9></up></up>	(smart-shift-up &optional ARG)	Shift the line or region to the ARG times to the upwards.	
Shift line or region down	• C-c <down> • C-c C-<down> • <f9> <down></down></f9></down></down>	(smart-shift-down &optional ARG)	Shift the line or region to the ARG times to the downwards	
smart-tabs	The smart-tabs external	package 🛂 PEL activates it when the	ne pel-use-smart-tabs user-option is turned on (set to t).	
Toggle smart-tabs mode	<f11> <tab> M-s</tab></f11>	(smart-tabs-mode &optional ARG)	Toggle smart-tabs minor mode. • Intelligently indent with tabs, align with spaces!	

Indentation - References

Title & URL	Description
Understanding GNU Emacs and Tabs	Overview description of how Emacs handle the Tab key, often used for strict indentation in many editors. In Emacs it can do much more.
GNU Emacs Manual - Indentation	
GNU Emacs Manual - Indentation for Programs	
Indentation Basic Concepts Tutorial @ XEmacs	A tutorial on indentation written by KaiGrossjohann

Tabs or space for indentation??

There are several views on the use of hard-tab and space characters for indenting source code. They are:

1. Use only hard-tab for indentation. Uncontrolled use of tabs or spaces for alignment.

- Use only space characters for indentation. Popular in C like languages. Also popular in Python.
 Use hard tabs for indentation, and space character for alignment.
- · Method 1 was popular originally since it reduces file size when hard tab size was always the same. But soon it became possible to identify a different number of character positions to render a hard tab. And then it became impossible to guarantee the rendering of code indentation and alignment when the number of hard-tabs did not match the indentation level of
- A reaction to this problem is to use Method 2 where hard-tabs are banned. The rendering is therefore always the same no matter what the size of a hard tab is since you don't use any. This however increases the size of files. Not a problem for storage today you'd say, but perhaps a problem for data transfer and/or power consumption.
 Method 3 is used by some programming environments. The Go programming language imposes the use of hard-tabs for indentation. And if you want to align text at the right of the indentation level, you use spaces.
 To use this method in other programming languages, you can use the smart-tabs-mode explained in the Smart-Tabs Emacs Wiki page.

Emacs support all modes. It has 2 different buffer local variables that are important and control the rendering of hard-tabs and the indentation:

- tab-width: How many columns a hard-tab occupies, the distance between tab-stops. indentation offset variable: a variable for each major mode, like **c-basic-offset** for CC modes (C, C++, Java, etc...), that identifies the number of columns per indentation level.

PEL provides access to the smarttabs package but it's not yet fully configured for programming modes nor tested. 🚧 For CC modes it provides PEL user-options that control the indentation using method 2.

Using method 3 requires a better understanding from all developers working on the source code with all their editors being able to handle the mix of hard tab and space characters correctly.

Smarttabs @ GitHub	Starttabs source code repository.
Indentation Styles for Curly Bracket Languages	
Indentation Styles @ Wikipedia	
StackOverflow - Emacs BSD/Allman Style with 4 Space Tabs?	
GNU Emacs Manual - Styles	
Emacs BSD/Allman Style with 4 Space Tabs?	
Emacs: Linux Kernel Style but with Allman/BSD Style Braces?	

Title & URL	Description	
Emacs Wiki - Indenting C		
Indent preprocessor directives as C code in emacs	Does not fully address the way I want to have multi-indentations for pre-processor	
elisp code - ppindent.el	Implements pre-processor indentation with the # always in the first column. Not yet exactly what I want.	
Demystify C++ Metaprograms using Emacs		
Programming in C++, Rules and Recommendations	ellemtel style	