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Indenting & Tab

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• Indent region
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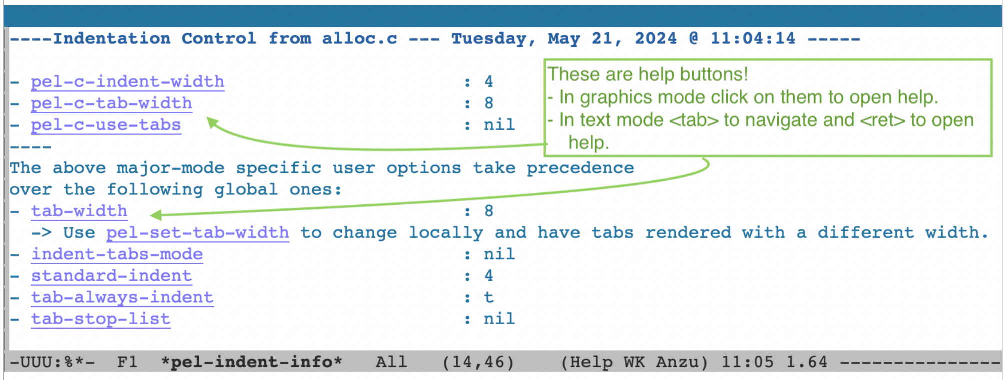
• Move to 1st non-blank
• Indenting /un-indenting rigidly
• Text alignment on newline
• Indent-tools
• Smart-shift</td><td colspan="3">Emacs controls indentation according to various rules controlled by the buffer <b>major mode</b>.
• Furthermore the behaviour of the tab key is also controlled by the major mode; it may have surprising behaviour for people learning Emacs.
• The standard behaviour may be modified by the use of major and <b>minor modes</b>.
  • Several major modes implement special indentation schemes, such as Lisp where indentation is inferred by the code itself as opposed to Python that uses indentation for defining scopes.
  • Several major modes identify a variable that sets the indentation level. Refer to the information on the programming language major mode.
  • Some programming languages (<b>such as Go</b>) impose hard-tab for indentation, using tab for indentation and space for alignment. Works very nicely.
  • Most languages never identified any rule, which led in some case to all sorts of conventions: use of both tabs and spaces, spaces only, with various number of positions for the indentation level.
  • Emacs can support anything. It can tabify or untabify source code. Impose the use of hard tab or prevent it.
  • Emacs controls the <i>display rendering</i> of hard tabs by the <b>tab-width</b> variable.
    • The go-mode, for example, will move the first non-whitespace character location inside the buffer as you modify the tab-width as indentation is entirely controlled by hard tabs. It does not change the content of the file, just the way the file looks on the screen.
  • The indentation width is often independent from the tab width but not always. Again it depends on the major mode used.
PEL supports various indentation mechanisms and also provides some of its own extensions. It also provides easy access to external packages that implement other behaviours, supporting various major modes. This includes the following:
📦 The <b>indent-tools</b> external package 🛠 PEL activates it when the <b>pel-use-indent-tools</b> user-option is turned on (set to <b>t</b>).
📦 The <b>smart-shift</b> external package 🛠 PEL activates it when the <b>pel-use-smart-shift</b> user-option is turned on (set to <b>t</b>).
Information related to indentation is described in the pages related to programming major modes. The information in this page is generic and complements the mode specific information.</td></tr>
<tr><td><b>Open this PDF file.</b>
See also: ⅀ <b>Help/Info</b></td><td><code>&lt;f11&gt; <tab&gt; &lt;f1&gt;</code></td><td>(<b>pel-help-pdf</b> &amp;optional OPEN-WEB-PAGE)</td><td>Open the ⅀ <b>Indentation</b> local PDF. If the prefix argument (like <b>C-u</b> or <b>M--</b>) is used, then it opens the remote GitHub hosted raw PDF instead. If the <b>pel-flip-help-pdf-arg</b> user-option is set it's the other way around.</td></tr>
<tr><td>⅀ <b>Customize</b> <b>PEL highlighting control</b></td><td><code>&lt;f11&gt; <tab&gt; &lt;f2&gt;</code></td><td>(<b>pel-customize-pel</b> &amp;optional OTHER-WINDOW)</td><td>Customize PEL support for indentation management
• If OTHER-WINDOW is non-nil (use <b>C-u</b>), display in other window.</td></tr>
<tr><td>⅀ <b>Customize</b> <b>Emacs indentation control</b></td><td><code>&lt;f11&gt; <tab&gt; &lt;f3&gt;</code></td><td>(<b>pel-customize-library</b> &amp;optional OTHER-WINDOW)</td><td>Customize Emacs indentation control groups: indent, indent-tools, smart-shift.
• If OTHER-WINDOW is non-nil (use <b>C-u</b>), display in another window.</td></tr>
<tr><td><b>Use hard tabs or spaces for indentation</b></td><td colspan="3">The use of hard tabs or spaces for indentation is controlled by the Emacs (customizable) variable <b>indent-tabs-mode</b>.
• 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: ⅀ <b>Whitespace</b></td></tr>
<tr><td><b>Toggle use of hard tabs for indentation in the current buffer</b></td><td>• <code>&lt;f11&gt; <tab&gt; m</code>
• <code>&lt;f11&gt; t w I</code></td><td>(<b>pel-toggle-indent-tabs-mode</b> &amp;optional ARG)</td><td>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 <b>indent-tabs-mode</b> function and provides more feedback.</td></tr>
<tr><td><b>Hard-tab "width"</b></td><td colspan="3">The current-buffer value of tab-width affects the <i>visual rendering</i> of the hard-tab character. It does not affect the content of the buffer or file.</td></tr>
<tr><td rowspan="2"><b>Set visual rendering of hard tabs for the current buffer</b>
• <b>Does not change buffer/file content</b></td><td><code>&lt;f11&gt; M-t</code></td><td>(<b>pel-set-tab-width</b> N)</td><td>Change the <b>tab-width</b> of the current buffer, only affecting the display rendering of hard tabs inserted in the buffer text. Prompts for a new value in the [2, 8] range.</td></tr>
<tr><td colspan="3">• This modifies a buffer local value of the the <b>tab-width</b> user-option. The change is temporary and affects the current buffer only.
• PEL provides a specialized user-option to set the default value of <b>tab-width</b> for several major modes. For example, to change the tab width used for all Go source code files, change the '<b>pel-go-tab-width</b>' user-option variable instead. See the documentation of each major mode for more information.</td></tr>
<tr><td><b>Tab stops</b></td><td colspan="3">Emacs keeps track of a set of "<i>tab-stop</i>" columns that can be used as reference points to align text. Something similar to <b>typewriter tab-stop</b>.</td></tr>
<tr><td><b>Change the tab stops</b>
• used by <b>M-i</b></td><td><code>&lt;f11&gt; <tab&gt; e</code></td><td>(<b>edit-tab-stops</b>)</td><td>Opens a <b>*Tab Stops* buffer</b>. Identify the tab stops in the first line with colons. Use <b>C-c C-c</b> to activate and exit the buffer.
• The tab stop take effect at the top of the buffer, as used by <b>M-i</b></td></tr>
<tr><td rowspan="2"><b>Show Indentation settings</b>

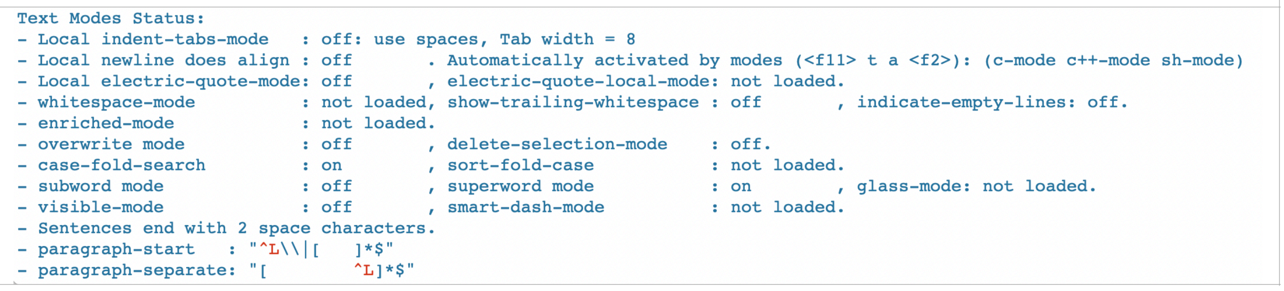
For several major modes, a PEL mode-specific user-option controls the the value of the <b>tab-width</b> variable for the mode. For example, <b>pel-c-tab-width</b> is used for c-mode buffers.</td><td><code>&lt;f11&gt; <tab&gt; ?</code></td><td>(<b>pel-show-indent</b> &amp;optional APPEND)</td><td>Print info about indentation control in a <b>*pel-indent-info*</b> 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.
• Clear previous buffer content. Use prefix arg (like <b>C-u</b>) to append instead.</td></tr>
<tr><td>The command opens a buffer 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 has user-variables that take over.
• All user-option variables are <b>help buttons</b>; click on them (in graphics mode) or tab and return to open help on the variable.</td><td colspan="2">
----Indentation Control from alloc.c --- Tuesday, May 21, 2024 @ 11:04:14 -----

- pel-c-indent-width   : 4
- pel-c-tab-width   : 8
- pel-c-use-tabs   : nil

The above major-mode specific user options take precedence
over the following global ones:
- tab-width   : 8
  -&gt; Use pel-set-tab-width to change locally and have tabs rendered with a different width.
- indent-tabs-mode   : nil
- standard-indent   : 4
- tab-always-indent   : t
- tab-stop-list   : nil

-UUU:%*- F1 *pel-indent-info*   All   (14,46)   (Help WK Anzu) 11:05 1.64 ---------------

These are help buttons!
- In graphics mode click on them to open help.
- In text mode &lt;tab&gt; to navigate and &lt;ret&gt; to open help.</td></tr>
<tr><td rowspan="2"><b>Toggle text alignment on pel-newline-and-indent-below</b>
See also: ⅀ <b>Align</b></td><td><code>&lt;f11&gt; M-RET</code></td><td>(<b>pel-toggle-newline-indent-align</b>)</td><td>Toggle variable <i>pel-newline-does-align</i> for the local buffer.</td></tr>
<tr><td colspan="3">It affects the way function '<b>pel-newline-and-indent-below</b>' operates.
• If <i>pel-newline-does-align</i> is t, it aligns several syntactic element in the current block: the comments, the assignments.
• 🎛 set modes that automatically activates <i>pel-newline-does-align</i> by adding the major mode to <b>pel-modes-activating-align-on-return</b> user option.
• This affects the behaviour of the following commands: <b>pel-cc-newline</b> (assigned to <b>RET</b> in CC modes like c-mode, c++-mode and d-mode).
<b>pel-newline-and-indent-below</b> (assigned the <b>M-RET</b>)
• See the list with <code>&lt;f11&gt; t a ?</code></td></tr>
<tr><td rowspan="3"><b>Show state of text modes</b>
• whether hard tabs are used for indentation, tab-width
• 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

Output example ➨</td><td><code>&lt;f11&gt; t m ?</code></td><td>(<b>pel-show-text-modes</b>)</td><td>Display the state of the various text modes in the mini buffer.</td></tr>
<tr><td colspan="3">☝ Quickly show several settings inside the mode line: the tab settings, text alignment on newline, whitespace mode, etc…
• When <b>indent-tabs-mode</b> is active, Emacs inserts a number of hard tabs and spaces.
  • The number of hard tabs instead depends on the amount of characters required for indentation and the <b>tab-width</b>.
• If indent-tabs-mode is not active, then Emacs inserts only space characters.
• 🎛 PEL provides user-options of the form <b>pel-&lt;<i>mode</i>&gt;-use-tabs</b> which is used to initialize the indent-tabs-mode supported major modes buffers.</td></tr>
<tr><td colspan="3">
Text Modes Status:
- Local indent-tabs-mode   : off: use spaces, Tab width = 8
- Local newline does align : off   . Automatically activated by modes (&lt;f11&gt; t a &lt;f2&gt;): (c-mode c++-mode sh-mode)
- Local electric-quote-mode: off   , electric-quote-local-mode: not loaded.
- whitespace-mode   : not loaded, show-trailing-whitespace : off   , indicate-empty-lines: off.
- enriched-mode   : not loaded.
- overwrite mode   : off   , delete-selection-mode   : off.
- case-fold-search   : on   , sort-fold-case   : not loaded.
- subword mode   : off   , superword mode   : on   , glass-mode: not loaded.
- visible-mode   : off   , smart-dash-mode   : not loaded.
- Sentences end with 2 space characters.
- paragraph-start   : "^L\\|[   ]*$"
- paragraph-separate: "[^L]*$"</td></tr>
</table>

Description	Keystroke	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: ⅀ **Align**	`<f11> t a ?`	(**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: ⅀ **Align**	• `M-RET` • `<f11> <tab> RET`	(**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 ?`
Inserting hard tab	Regardless of `<tab>` key behaviour, it is possible to insert a **hard tab character** with `C-q <tab>`		
Insert Literal Tab	`C-q <tab>`	(**quoted-insert** ARG) <tab>	Inserts a hard tab inside buffer. Render text according to value of **tab-width**.
Insert whitespace to next tab-stop	Regardless of `<tab>` key behaviour, it is possible to insert spaces (or combinations of hard tab and spaces) to put point to the next "tab-stop" with `M-i` • The location of tab-stops can be modified with (**edit-tab-stop**), bound to `<f11> <tab> e` .		
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.
	• The exact location of the next tab stop is identified by the value of the **tab-stop-list** and **tab-width** for the current buffer.		
Tabify & untabify	The following two commands can be used to **replace hard tabs in a file with the corresponding number of space characters** while retaining the same indentation and vice-versa.		
Replace tabs with spaces in a region See also: ⅀ **Whitespace**	`<f11> t w SPC`	(**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 *untabify* function to replace all tabs by spaces in that region.
Replace multiple spaces with tabs in a region See also: ⅀ **Whitespace**	`<f11> t w <tab>`	(**tabify** START END &optional ARG)	Convert multiple spaces in region to tabs when possible. • 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 `<tab>` key depends on the major mode of the current buffer. This key is rebound by several major mode. • In text modes, tabs default to inserting hard tabs corresponding to a alignment at every 8 columns. However, if there is text in the above lines, the tab moves to the spot under the word above. Note that if a line is full of text (without any space), then the tab stops controlled by the ruler take effect again. • In several programming modes the tab key does not insert anything, it adjusts the line indentation. according to surrounding code		
Indent current line (or region)	`<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>`	**indent-for-tab-command** &optional ARG)	In **Lisp** related modes. indent-line-function = indent-relative. • tab-always-indent = t
	☝️ Several major modes adjust the behaviour of the tab key to perform semantically aware indentation, such as what is being done in Lisp.		
	`<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**	`C-M-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	`C-j`	(**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	`C-M-o`	(**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.		

Delete Indentation, join line to the previous one See also: ⅀ **Cut & Paste** ⅀ **Whitespace**	• `M-^` • `<f11> ⌫ 6` • `<f6> 6`	(**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.
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	Keystroke	Function	Note
Indenting and un-indenting rigidly	The following commands provide non-semantic indentation of the current line or marked region. • The first command allows you to use further keystrokes to fine-tune the indentation back and forth using cursor keys. That's probably all you ever need to use. • Currently, PEL also provides the last 2 commands that indent or un-indent the current line or marked region. Once used, the region remains marked to allow further use of the command.		
Indent/Unindent rigidly See also: ⅀ **Key-Chords** See also: • 𝔓𝔏 - C • 𝔓𝔏 - C++ • 𝔓𝔏 - D • Ɱ reStructuredText	• `C-x <tab>` • `<f11> <tab> <tab>` • `<tab>q`	**(pel-indent-rigidly &optional N)** — — — — — — — — — — — — ✂ PEL uses the above instead of the standard: (**indent-rigidly** START END ARG &optional INTERACTIVE)	Indent rigidly the marked region or current line N times. • **If a region is marked**, it uses 'indent-rigidly' and provides the same prompts to control indentation changes. • **If no region is marked**, it operates on current line(s) identified by the numeric argument N (or if not specified N=1): • N = [-1, 0, 1] : operate on current line • N > 1 : operate on the current line and N-1 lines below. • N < -1 : operate on the current line and (abs N) -1 lines above. 📦☑ With PEL, the **`<tab>q`** key-chord is available when **pel-use-key-chord** is non-nil. See ⅀ **Key-Chords**. ☝ Command numeric prefix **is available** with the key-chord binding. ✂ PEL rebinds this key, but it extends the functionality: **pel-indent-rigidly** uses indent-rigidly, described below the dashed line. — — — — — — — — — — — — — — — — — — — Indent all lines starting in the region. • If called interactively with no prefix argument, activate a transient mode in which the indentation can be adjusted interactively by typing **`<left>`**, **`<right>`**, **`S-<left>`**, or **`S-<right>`**.
	Both of these commands activate a transient mode where Emacs prompts for extra keys to control how to indent. Indenting and un-indenting is possible. The capabilities are controlled by the variable *indent-rigidly-map* with by default provides: • **`S-<right>`** indent-rigidly-right-to-tab-stop • **`S-<left>`** indent-rigidly-left-to-tab-stop • **`<right>`** indent-rigidly-right • **`<left>`** indent-rigidly-left Typing any other key deactivates the transient mode. • The **`S-<right>`** and **`S-<left>`** keys indent/de-indent to the next tab-stop position, which is controlled by the **tab-width** user option. • With PEL, for several major modes, the indentation is controlled by a mode-specific user option variable . For example, for buffers in c-mode, the value of **pel-c-tab-width** is automatically stored into tab-width when the buffer is opened. ⚠️ If you use the cua-mode: the cua-mode uses **`C-x`**, to invoke this command when cua-mode is active, type it really fast or type **`C-x C-x <tab>`** (or use the PEL binding **`<f11> <tab> <tab>`**).		
Indent line(s) rigidly	• `<f6> <tab>` • `<f11> <tab> c`	(**pel-indent-lines** &optional N)	Indent current or marked lines by N indentation levels
	• Works with point anywhere on the line. • All lines touched by the region are indented. • A special argument N can specify more than one indentation level. It defaults to 1. • If a negative number is specified, 'pel-unindent-lines' is used. • If a region is marked, the function does not deactivate it to allow repeated execution of the command. It also modifies the region to include all characters in all affected lines. • Use **`C-g`** to de-activate the region. • Handles presence of hard tabs: • If indent-tabs-mode is non-nil the indentation is created with a mix of hard-tabs and space characters. • If indent-tabs-mode is nil, any hard tab in the indentation of the marked lines is replaced by the proper number of spaces. Hard tabs after first non-whitespace character on the line are left.		
Un-indent line(s) rigidly	• `<backtab>` • `<f6> <backtab>` • `<f11> <tab> C`	(**pel-unindent-lines** &optional N)	• Un-indent current line or marked lines by N indentation levels.
	• Works with point is anywhere on the line. • All lines touched by the region are un-indented. • If region was marked, the function does not deactivate it to allow repeated execution of the command. • If a region was marked, the function does not deactivate it to allow repeated execution of the command. It also modifies the region to include all characters in all affected lines • Use **`C-g`** to de-activate the region. • Handles presence of hard tabs: • If indent-tabs-mode is non-nil the indentation is created with a mix of hard-tabs and space characters. • If indent-tabs-mode is nil, any hard tab in the indentation of the marked lines is replaced by the proper number of spaces. Hard tabs after first non-whitespace character on the line are left.		
Indent-tools	The **indent-tools** external package provides several commands to indent, un-indent and navigate across indented text levels. • It provides a minor mode and a key **hydra** that provides all of these commands. 📦 The **indent-tools** external package ☑ PEL activates it when the **pel-use-indent-tools** user-option is turned on (set to **t**). • This also automatically activates the **hydra** external package. 🎛 PEL provide a global key binding to its key hydra and provides the ability to activate the proposed key binding globally and for python mode: • **pel-indent-tools-key-bound** : activates the **`C-c >`** key binding either globally or for python-mode only.		
Open the indent-tools hydra See also: 𝔓𝔏 - Python	• `<f11> <tab> <f7>` • `<f7> <tab>` • `C-c >`	(**indent-tools-hydra/body**)	Activate the "indent-tools-hydra" hydra. 🎛 With PEL, this key binding is only available when: • globally, when **pel-indent-tools-key-bound** is set to **globally**, • in python-mode only when **pel-indent-tools-key-bound** is set to **python**. • The actual key is selected by indent-tools **indent-tools-keymap-prefix** user-option, the default is **`C-c >`**

See also: ⅀ Hide/Show	The heads for the associated hydra are:
	>: 'indent-tools-indent',
	<: 'indent-tools-demote',
	E: 'indent-tools-indent-end-of-defun',
	c: 'indent-tools-comment',
	U: 'indent-tools-uncomment',
	P: 'indent-tools-indent-paragraph',
	l: 'indent-tools-indent-end-of-level',
	K: 'indent-tools-kill-tree',
	C: 'indent-tools-copy-hydra/body',
	s: 'indent-tools-select',
	e: 'indent-tools-goto-end-of-tree',
	u: 'indent-tools-goto-parent',
	d: 'indent-tools-goto-child',
	S: 'indent-tools-select-end-of-tree',
	n: 'indent-tools-goto-next-sibling',
	p: 'indent-tools-goto-previous-sibling',
	i: 'helm-imenu',
	j: 'forward-line',
	k: 'previous-line',
	SPC: 'indent-tools-indent-space',
	_: 'undo-tree-undo',
	L: 'recenter-top-bottom',
	f: 'yafolding-toggle-element',
	q: exit
			`Indent           | Navigation         | Actions`
			`------------------+--------------------+-----------`
			`> indent         | j v                | K kill`
			`< de-indent      | k ʌ                | i imenu`
			`l end of level   | n next sibling     | C Copy…`
			`E end of fn      | p previous sibling| c comment`
			`P paragraph      | u up parent        | U uncomment (paragraph)`
			`SPC space        | d down child       | f fold`
			`_ undo           | e end of tree      | q quit`
			
			☝ The **f** key toggles the element folding. Press once to hide the sub-tree, press-again to display it back.

Description	**Keystroke**	**Function**	**Note**
Smart-shift 𝛴 **Customize** with: `<f11> <tab> s <f2>`	The **smart-shift** 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. • Automatically activate the smart-shift-mode in specified major mode by customizing the **pel-<mode>-activates-minor-modes** user-options. • 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>`. • 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>`. • Using the `<f9>` key as prefix: `<f9> <right>` , `<f9> <left>` , `<f9> <up>` and `<f9> <down>`		
Toggle smart-shift mode in current buffer	`<f11> <tab> s`	(**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`	(**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:	☝ As described above, with PEL only **one** of the extra key bindings provided by PEL can be enabled via the **pel-smart-shift-keybinding** user-option. So unlike other key binding description cells in this and other tables, 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>`	(**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>`	(**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>`	(**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>`	(**smart-shift-down** &optional ARG)	Shift the line or region to the ARG times to the downwards

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. 2. Use only space characters for indentation. Popular in C like languages. Also popular in Python. 3. 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 line of source code. • 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 does not yet integrate the smarttabs package. 🚧 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?	
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