Indenting & Tab

		muenting &	iab	
<u>Description</u>	<u>Keystroke</u>	Function	<u>Note</u>	
Indentation under Emacs	Furthermore the behaviour of the The standard behaviour may be Several major modes impler that uses indentation for defended of Several major modes identified some programming language. Most languages never identified number of positions for the Emacs can support anything Emacs controls the display of The go-mode, for example entirely controlled by hard The indentation width is often the implement other behaviours, supports various indentation implement other behaviours, supports indentation implement other behaviours, supports indentation implement other behaviours, supports indentation implement other behaviours. The indent-tools external implement indentation implement other behaviours.	e modified by the use of major and miment special indentation schemes, such fining scopes. by a variable that sets the indentation leges (such as Go) impose hard-tab for ified any rule, which led in some case indentation level. Just can tabify or untabify source code rendering of hard tabs by the tab-width le, will move the first non-whitespace of tabs. It does not change the content en independent from the tab width but mechanisms and also provides some porting various major modes. This includes the provide when the package PEL activates it when the package PEL activates it when the is described in the pages related to p	sior mode; it may have surprising behaviour for people learning Emacs. nor modes. the as Lisp where indentation is inferred by the code itself as opposed to Python evel. Refer to the information on the programming language major mode. indentation, using tab for indentation and space for alignment (works very nicely). to all sorts of conventions: use of both tabs and spaces, spaces only, with various e. Impose the use of hard tab or prevent it. the variable. character location inside the buffer as you modify the tab-width as indentation is of the file, just the way the file looks on the screen. not always. Again it depends on the major mode used. of its own extensions. It also provides easy access to external packages that	
Open this PDF file. See also: <u>N 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.	
<u>∑ Customize</u> Emacs indentation control	<f11> <tab> <f3></f3></tab></f11>	(pel-customize-library &optional OTHER-WINDOW)	Customize Emacs indentation control groups: indent, indent-tools, smart-shift. • If OTHER-WINDOW is non-nil (use C-u), display in another window.	
Set visual rendering of hard tabs for the current	<f11> M-t</f11>	(pel-set-tab-width N)	Change the tab width 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.	
buffer	 hard tabs inserted in the buffer text. Prompts for a new value in the [2, 8] range. This modifies a buffer local value of the the tab-width user-option. The change is temporary and affects the current buffer only. 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-tag-width' user-option variable instead. See the documentation of each major mode for more information. 			
Show state of text modes whether hard tabs are used for indentation, tabwidth electric-quote-mode delete-selection-mode enriched-mode overwrite-mode case folding subword, superword, glass modes visible-mode, smartdash-mode paragraph definition	inserted for indentation: • When indent-tabs-mode is act tabs and spaces. • The number of hard tabs ins characters required for indertindent-tabs-mode is not activity characters.	ve, then Emacs inserts only space he form pel- <mode>-use-tabs which</mode>	Display the state of the various text modes in the mini buffer. -UU-:F1 keymaps.c Top (1,0) Git-master (C/*la WK Anzu Modes status: - Local indent-tabs-mode : off: use spaces. Tab width = 8 - Local electric-quote-mode: off delete-selection-mode : off enriched-mode : not loaded overwrite 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: on Sentences end with 2 space characters paragraph-start : "[
Insert Literal Tab	C-q <tab></tab>	(quoted-insert ARG) <tab></tab>	Inserts a hard tab inside the file but moves the cursor to the column that represents the next multiple of tab-width .	
	,		le is controlled by a mode specific user options variable, like pel-c-tab-width for PEL to the mode specific value when the buffer is opened.	
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. By default, in text modes, tabs are set to 8 spaces, inserting hard tabs. 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.</tab>			
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. 			
	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: <u>CLBC s3.lisp</u>	С-М-ф	(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.	
Insert spaces or tabs to	M-i	(tab-to-tab-stop)	Insert spaces or tabs to next defined tab-stop column.	
$\begin{array}{c} \text{next defined tab-stop} \\ \text{column} \\ \text{See also:} \ \ \underline{\mathfrak{Pl} - C} \ , \ \underline{\mathfrak{Pl} - C + +} \\ \underline{\mathfrak{Pl} - D} \end{array}$	With PEL, for several major	 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. With PEL, for several major modes, the value of the tab-width variable is controlled by a mode specific user options variable, like pel-c-tab-width suffers in c-mode. In those buffers the value of tab-width will be by PEL to the mode specific value when the buffer is opened. 		
Insert an indented line below current line See also: <u>Nalign</u>	• M-RET • <f11> <tab> RET</tab></f11>	(pel-newline-and-indent-below)	Insert an indented line just below current line. The command can also align text vertically if this special mode was activated for the buffer with the <f11> M-RET. To see the current behaviour use <f11> t a ?: it displays whether the M-RET command aligns text or not.</f11></f11>	

RET command aligns text or not.

<u>Description</u>	<u>Keystroke</u>	Function	<u>Note</u>	
Toggle text alignment on	<f11> M-RET</f11>	(pel-toggle-newline-indent-align)	Toggle variable <i>pel-newline-does-align</i> for the local buffer.	
pel-newline-and-indent- below See also: <u>∑ Align</u>	• If pel-newline-does-align is t, i		e current block: the comments, the assignments. tivated (set to t) by adding the major mode to the list in the pel-modes-activating-	
	align-on-return user option. This affects the behaviour of the following commands: pel-cc-newline (assigned to RET in CC modes like c-mode, c++-mode and d-mode). pel-newline-and-indent-below (assigned the M-RET)			
Show state of pel-newline- and-indent-below See also: <u>Nalign</u>	<f11> t a ?</f11>	(pel-show-if-newline-aligns)	Display the behaviour of M-RET in the current buffer: show if that command aligns text or not. Print the information in the echo area.	
Change the tab stops	M-x 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. Again, the tab stop take effect at the top of the buffer,	
Change the tab width	M-: (setq tab-width N)	globally with (setq-default tab-width above two). Note that any literal tab in the buffichanging the tab-width, the layout new tab-width value.	ults to 8 in emacs. It can be set locally inside a buffer with (setq tab-width N) or N). The M-: keystroke allows evaluating a lisp expression interactively (as the er impact the location of the column where the next character shows. When shown in the window that contains literal tabs will be modified according to the cal value of tab-width is controlled by PEL and set to the value of a mode specific th in c-mode buffers.	
Make <tab> insert space/ tab</tab>	M-: (setq indent-tabs- mode nil/t)		By default, pressing <tab> insert literal (hard) tabs inside the file. The indent-tabs-mode variable controls that: set to t it inserts tabs, set to nil it inserts spaces.</tab>	
Next line, indented	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.	
Indent Region	С-м-\	(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'.	
Move to fist nonbank character on the line	M-m	(back-to-indentation)	Move point to the first non-whitespace character on this line.	
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.	
Delete Indentation, join this line to the previous one See also: • <u>S Cut & Paste</u> • <u>S Whitespace</u>	M-^	(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.	
Indent relative to line	<f11> <tab> r</tab></f11>	(indent-relative &optional FIRST-	Space out to under next indent point in previous nonblank line.	
above	The following line shows the	ONLY UNINDENTED-OK) indentation points in this lin	An indent point is a non-whitespace character following whitespace.	
	^ ^ ^	^ ^ ^		
	 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. 			
Indenting and un- indenting rigidly	The first command allows you 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		
Indent/Unindent rigidly See also: ∑ Key-Chords See also: • 對I - C	• C-x <tab> • <f11> <tab> <tab> • <tab>q</tab></tab></tab></f11></tab>	(pel-indent-rigidly &optional N)	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 also 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</tab>	
• <u>MI - C++</u> • <u>MI - D</u> • <u>M reStructuredText</u>		➤ PEL uses the above instead of the standard: (indent-rigidly START END ARG & optional INTERACTIVE)	indent-rigidly, described below the dashed line. ———————————————————————————————————	
	The capabilities are controlled by • S- <right> indent-rigit • S-<left> indent-rigit • <right> indent-rigit • <left> indent-rigit Typing any other key deactivates • The S-<right> and S-<left a<="" for="" is="" major="" of="" pel,="" pel-c-tab-width="" revalue="" several="" th="" with="" •=""><th>the variable indent-rigidly-map with be ally-right-to-tab-stop ally-left-to-tab-stop ally-left the transient mode. **E> keys indent/de-indent to the next modes, the indentation is controlled by automatically stored into tab-width who cau-mode uses C-x, to invoke this co</th><th>t tab-stop position, which is controlled by the tab-width user option. y a mode-specific user option variable . For example, for buffers in c-mode, the</th></left></right></left></right></left></right>	the variable indent-rigidly-map with be ally-right-to-tab-stop ally-left-to-tab-stop ally-left the transient mode. **E> keys indent/de-indent to the next modes, the indentation is controlled by automatically stored into tab-width who cau-mode uses C-x, to invoke this co	t tab-stop position, which is controlled by the tab-width user option. y a mode-specific user option variable . For example, for buffers in c-mode, the	

<u>Description</u>	<u>Keystroke</u>	Function	<u>Note</u>
Indent line(s) rigidly	• <f6> <tab> • <f11> <tab> c</tab></f11></tab></f6>	(pel-indent-lines &optional N)	Indent current or marked lines by N indentation levels
	Works with point anywhere on All lines touched by the region A special argument N can spec If a negative number is specifie If a region is marked, the funct characters in all affected lines. Use C-g to de-activate the reg Handles presence of hard tabs If indent-tabs-mode is non-region.	are indented. cify more than one indentation level. It d, 'pel-unindent-lines' is used. ion does not deactivate it to allow report gion. the indentation is created with a mix ny hard tab in the indentation of the m	eated execution of the command. It also modifies the region to include all
Un-indent line(s) rigidly	<pre>• <backtab> • <f6> <backtab> • <f11> <tab> C</tab></f11></backtab></f6></backtab></pre>	(pel-unindent-lines &optional N)	Un-indent current line or marked lines by N indentation levels.
	If a region was marked, the funcharacters in all affected lines Use C-g to de-activate the reg Handles presence of hard tabs If indent-tabs-mode is non-region.	are un-indented. tion does not deactivate it to allow rep action does not deactivate it to allow re gion. : iii the indentation is created with a mix by hard tab in the indentation of the m	epeated execution of the command. It also modifies the region to include all
Controlling use of 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. PEL provides the following related commands. See also: Whitespace		
Toggle use of hard tabs and only spaces for indentation in the current buffer	<f11> t w I</f11>	(pel-toggle-indent-tabs-mode &optional ARG)	Toggle use of hard tabs or spaces for indentation in 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.
Replacing Tabs with spaces or spaces with tabs	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</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 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></tab></f11>	(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.
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	<f11> <tab> ></tab></f11>	(indent-tools-hydra/body)	Activate the e body in the "indent-tools-hydra" hydra.
Nee also: 191 - Python	C-c >		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: <u>∑ Hide/Show</u>	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', 1: '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-goto-end-of-tree', n: 'indent-tools-goto-parent', d: 'indent-tools-goto-parent', d: 'indent-tools-goto-previous-sibling', p: 'indent-tools-goto-previous-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		-UUU:F1 somedata.yml All (1,0) (YAML WK Fly Anzu) Indent Navigation Actions

-	-		
Smart-shift	It is implemented as a minor or activates-minor-modes user-PEL to activate the smart-shift PEL controls it through custom The smart-shift external PEL also provides the pel commands that shift line(s). change the prefix key to use	r global minor mode that must be enable options to activate it automatically. You mode in the current buffer or globally nization user-options: package PEL activates it when the l-smart-shift-keybinding user-option By default the key bindings are using O	region of lines right or left but also up or down. bled first. You can identify the smart-shift-mode inside one of the pel- <mode>- but can also use the commands manually or through the key bindings provided by for all buffers. be pel-use-smart-shift user-option is turned on (set to t). that allows you to select additional alternative key bindings for the smart-shift C-c as a key prefix. With PEL you can also use a control key for the cursor or dings are shown below but only one of them will be available at any given time.</mode>
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.
Shift line or region right	• C-c <right> • C-c <c-right> • <f9> <right></right></f9></c-right></right>	(smart-shift-right &optional ARG)	Shift the line or region to the ARG times to the right. With PEL one of the extra key bindings can be enabled via the pel-smart-shift-keybinding user-option. So unlike other cells only one of the last 2 key bindings is available in the smart-shift minor mode.
Shift line or region left	• C-c <left> • C-c <c-left> • <f9> <left></left></f9></c-left></left>	(smart-shift-left &optional ARG)	Shift the line or region to the ARG times to the left. With PEL one of the extra key bindings can be enabled via the pel-smart-shift-keybinding user-option. So unlike other cells only one of the last 2 key bindings is available in the smart-shift minor mode.
Shift line or region up	• C-c <up> • C-c <c-up> • <f9> <up></up></f9></c-up></up>	(smart-shift-up &optional ARG)	Shift the line or region to the ARG times to the upwards. With PEL one of the extra key bindings can be enabled via the pel-smart-shift-keybinding user-option. So unlike other cells only one of the last 2 key bindings is available in the smart-shift minor mode.
Shift line or region down	• C-c <down> • C-c <c-down> • <f9> <down></down></f9></c-down></down>	(smart-shift-down &optional ARG)	Shift the line or region to the ARG times to the downwards With PEL one of the extra key bindings can be enabled via the pel-smart-shift-keybinding user-option. So unlike other cells only one of the last 2 key bindings is available in the smart-shift minor mode.

Function

Note

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

Description

Keystroke

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

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