Input Completion (Emacs default, Helm, Ido, Ivy, Ivy/Counsel)

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Operation	Con Emacs, input complete	Function	Note	
 Default Ido Ivy Helm 	On Emacs, input completion is available when Emacs prompts for the name of a file, buffer, variable, function, command (and more). The input completion offers a way to complete your input. Several methods are supported, some are built-in or use a package that comes with Emacs, other require external packages. The available input completion methods are: • Emacs default completion method: use the <tab> key to get a list of potential candidates. • Ido (Interactive Do), a much more powerful completion method. Ido is distributed with Emacs. It supports what the default completion supports and mode. • With ido activated, it is used in file (C-x C-f), buffer name (C-x b), command (M-x), help for objects (<f1> o) and several other commands. • PEL provides completion for searching symbols defined in the source code file visited by the current buffer with M-g h. See Navigation</f1></tab>			
See also: Navigation	• <u>lvy</u> • Helm • Ido/Helm			
Open this PDF file. See also: <u>∑ Help/Info</u>	<f11> M-c <f1></f1></f11>	(pel-help-pdf &optional OPEN-WEB-PAGE)	Open the local copy of the <u>Sompletion/Input</u> PDF file unless a command prefix (like C-u) was used. In that case it opens the Github-hosted file instead. You can also type <f1></f1> during completion prompt to open this PDF file. See below.	
Customize PEL Input Completion Support See also: Customize	<f11> M-c <f2></f2></f11>	(pel-customize-pel &optional OTHER-WINDOW)	Customize PEL input completion support: open PEL buffer support specific group. • If OTHER-WINDOW is non-nil (use C-u), display in other window.	
Customize Emacs & external package input completion support See also: Customize	<f11> M-c <f3></f3></f11>	(pel-customize-library &optional OTHER-WINDOW)	Customize Emacs and external packages related to input completion:r. This includes the following customize groups: 1. helm 2. ido 3. ido-completing-read-plus 4. ido-grid-mode 5. ido-vertical 6. ivy 7. counsel 8. minibuffer: where the completion-style user-variable is defined. 9. smex • When a prefix argument (like C-u) opens the buffer inside another window.	
	Some of the available groups are only available when the corresponding feature is installed and loaded. PEL will prompt if a required feature is not loaded and will attempt to load it if its installed. If it is not installed, it will request it to be installed. Note that Emacs will simply refuse to load a group			
Input Completion Mode Selection	when its related feature has not previously loaded since Emacs won't know about it. PEL simplifies this. PEL controls activation of completion methods and packages via customization user-option variables listed below. Several modes can be activated. With PEL you can identify which one is used by default and change it during an Emacs session by using one of the command listed in the rows below. Available modes: 1. Ido mode completion. Built-in Emacs but not activated by default. A powerful completion with several commands available during completion to change the way the candidates are found. See the list of commands in the section below. Several other packages attempt to extend Ido or provide Ido in more prompts, including the following supported by PEL: It extends Ido to more prompting commands. It had mixed results with this package. PEL activates it when pel-use-ido-completing-read+ user-option is set to t. It extends Ido to more prompting commands. It extends Ido to M-x, and provides M-x for Ido restricted to major modes. It changes Ido match presentation to shows Ido matches in vertical lines, potentially with a match count. Similar to what Ivy does. It changes Ido match presentation to shows Ido matches in vertical lines, potentially with a match count. Similar to what Ivy does. It changes Ido match presentation to shows Ido matches in vertical lines, potentially with a match count. Similar to what Ivy does. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set to t. It was to pel-use-ido-grid-mode user-variable is set			
Select the completion mode	<f11> M-c M-c</f11>	(pel-select-completion-mode)	Prompt user for completion mode to activate. The available modes depend on what is currently activated by customization. See the list above.	
Toggle Ido ubiquitous mode	 < M-c M-u (pel-toggle-ido-ubiquitous) Toggle the 'ido-ubiquitous-mode'. This adds Ido completion to a large set of prompting commands that normally do not support Ido. Once this is activated, the new commands providing Ido completion will also provide ivy and helm completion when those modes are selected. You can add more commands with completion (eg. describe-variable) via the ido-completing-read-plus customization group by adding them to the ido-cr+-function-whitelist user-option or prevent some by adding them in the ido-cr+function-blacklist user-option. 			
Toggle smex : Ido for M-x and M-X	<f11> M-c M-x</f11>	(pel-toggle-smex)	Toggles use of smex-mode where Ido completion is available for M-x and M-X. Requires the smex external package.	
Change Ido Presentation Direction	<f11> M-c M-v</f11>	(pel-set-ido-geometry)	Select the way Ido shows the match selection: native, vertically or using a grid. Requires one or both of the following external packages: ido-vertical-mode, ido-grid-mode	
Show what completion mode is currently used.	<f11> ? M-c</f11>	(pel-show-active- completion-mode)	Display the completion mode currently used.	
Default Input Completion	Emacs default input completion is available when no other completion mechanism is active. The keys available to expand or act on the completed name (or symbol) are listed below. See Emacs Completion Example for a simple example of how to use completion keys. The completion-style user-option variable from the ido group controls the types of matching styles supported: basic: complete with the same beginning partial-completion: agressive completion: em-l-m matches emacs-lisp-mode. emacs22: same as basic but ignores text in minibuffer after point substring: must contain text in minibuffer & point position controls matching extension added to beginning, end and where point is located. initials: a very aggressive completion style: attempt to complete acronyms and initialisms: for example: lch matches list-command-history. The first 3 are available in the default value of completion-style. They can be added by customization: M-x customize-option RET completion-style RET to customize this variable, M-x customize-group RET minibuffer RET access its group or the PEL <f11> <f2> P M-c 6 key sequence.</f2></f11>			
Complete word	SPC	(minibuffer-complete-word)	Complete the minibuffer contents at most a single word. • After one word is completed as much as possible, a space or hyphen is added, provided that matches some possible completion. • Return nil if there is no valid completion, else t.	
Complete input	Tab	(minibuffer-complete)	Complete the minibuffer contents as far as possible. Type it twice if no input to list all choices. Return nil if there is no valid completion, else t. If no characters can be completed, display a list of possible completions. If vou repeat this command after it displayed such a list, scroll the window of possible completions.	

<u>Operation</u>	<u>Keystroke</u>	Function	<u>Note</u>
List all possible choices	?	(minibuffer-completion-help &optional START END)	Display a list of possible completions of the current minibuffer contents.
Complete and exit	• RET • C-j	(minibuffer-complete-and-exit)	Exit if the minibuffer contains a valid completion. Otherwise, try to complete the minibuffer contents. If completion leads to a valid completion, a repetition of this command will exit. If 'minibuffer-completion-confirm' is 'confirm', do not try to complete; instead, ask for confirmation and accept any input if confirmed. If 'minibuffer-completion-confirm' is 'confirm-after-completion', do not try to complete; instead, ask for confirmation if the preceding minibuffer command was a member of 'minibuffer-confirm-exit-commands', and accept the input otherwise.
Escape	C-g	(abort-recursive-edit)	Abort the command that requested this recursive edit or minibuffer input.
Select completion list window	• M-v • <pgup></pgup>	(switch-to-completions)	Select the completion list window: move point to the window listing all possible completions.
In Completion Window	The following commands	are available inside the comple	tion window listing all possible completions.
From completion window: • Select a completion	• RET • <mouse-2></mouse-2>	(choose-completion &optional EVENT)	Choose the completion at point. • If EVENT, use EVENT's position to determine the starting position.
Move to next completion	• Tab • <right></right>	(next-completion N)	Move to the next item in the completion list. • With prefix argument N, move N items (negative N means move backward).
Move to previous completion	• S-Tab • <left></left>	(previous-completion N)	Move to the previous item in the completion list.
Quit completion window	q	(quit-window &optional KILL WINDOW)	Quit the window showing it and selects the window showing the minibuffer.
Kill completion buffer	z	(kill-current-buffer)	Kill completion buffer it and delete the window showing it.
Ido Input Completion	Emacs also provides the Ido (Interactive Do) completion mechanism in a separate package, part of Emacs distribution but not activated by default. PEL activates the following extra Ido features when Ido mode is selected: Ido mode used everywhere, which for Ido mode means for both file and buffer prompts. It does: (ido-everywhere 1) Flex matching is enabled. It does: (setq ido-enable-flex-matching t) Disable need for confirmation when creating new buffers with C-x b It does: (setq ido-create-new-buffer 'always) Ido mode supports different prompts and has different keys valid for these prompts. There are several key sequences valid for all prompts and some valid for each prompt. The prompt types are listed following the key sequence that opens it: C-x C-b Prompt for buffers		
	 C-x C-f Prompt for files. C-x C-d Prompt for directory. C-x d Prompt for directory. For file prompting, Ido propose files in the current directory but can propose others. The prompt in Ido mode remembers directories that have been visited in the past (even in previous Emacs sessions) so it is able to propose files in different directories than the one holding the file visited in the current buffer. When trying to open a new file and want to avoid ido from proposing matches, type C-f to exit Ido mode, then type your new file name. However, if you want to open a file in a directory previously visited use completion: ido will be able to find it! Ido has a large number of key bindings, listed in the next 4 sections. 		
all prompts	Commands available in a	Il Ido prompts	
Open this <u>Sompletion/Input PDF</u> file or the web page See also: <u>Help/Info</u>	<f1></f1>	(pel-help-on-completion- input &optional OPEN-WEB- PAGE)	Open the input completion help PDF file. • With a prefix (like C - u) use the default browser to open the GitHub web page. • Note that if your browser can render PDF content you will then be able to easily navigate across PDF pages that have several web links. • Use the C - h key prefix to access Emacs help commands, as PEL uses <f1></f1> for this command.
Toggle inclusion of ignored files.	C-a	(ido-toggle-ignore)	Toggle ignoring files specified with 'ido-ignore-files', a list of regexps or functions matching file names to ignore. • For example, traditional behavior is not to list files whose names begin with a #, for which the regexp is '\'#'. You can customize this user-option variable in the ido customization group.
Toggle case sensitivity in the search	• C-c • M-c	(ido-toggle-case)	Toggle the value of 'ido-case-fold' which controls whether searching for buffer or file name should ignore case. The C-c binding is often hidden by the C-c key prefix used by various packages. PEL adds the M-c key binding to the common ido key map for that purpose. This is quite useful in OS that treat their file names are can sensitive names (like Unix and Linux, but unfortunately not MacOS!) or just if you want to quickly access names that have specific upper or lower case letters in it. For example using case sensitive matching will help select a Makefile.
Toggle prefix matching method	С-р	(ido-toggle-prefix)	Toggle the value of user-option variable 'ido-enable-prefix'. It's nil by default. Non-nil means only match if the entered text is a prefix of file name. This behavior is like the standard Emacs completion. If nil, match if the entered text is an arbitrary substring. For example: "base" will match pel—base.el if ido-enable-prefix is nil, but no it is is t.
Toggle regular expression matching See also: <u>∑ Search/</u> Replace	C-t	(ido-toggle-regexp)	Toggle the value of 'ido-enable-regexp' to enable Ido to perform matching using regular expressions. This is nil (off) by default. You can customize this user-option variable. Regular expression matching is useful to select file with specific extensions. See \(\subseteq \) Search/Replace for Emacs regular expression meta characters.
Edit absolute name	С-е	(ido-edit-input)	Edit absolute buffer/file/directory name entered so far with Ido; terminate by RET to return to matching mode. • If cursor is not at the end of the user input, move to end of input. • When this is selected the matching mechanism is paused. It restarts with RET. • Use this to edit a match, to make a selection of a choice then edit the name, for example to create a file that has almost the same name as another existing file. Then type C-j to force Ido to use that name and open a new file.
Complete current selection	Tab	(ido-complete)	Try and complete the current pattern amongst the item names.
Complete current selection or insert space	SPC	(ido-complete-space)	Try completion unless inserting the space makes sense.
Select match, create buffer/file if none	C-j	(ido-select-text)	Select the buffer or file named by the prompt. • If no buffer or file exactly matching the prompt exists, maybe create a new one.
Select first match	• C-m • RET	(ido-exit-minibuffer)	Exit minibuffer, but make sure we have a match if one is needed. • Select the first element in the list of possible match.
Select next match	• C • C-s • <right></right>	(ido-next-match)	Move to next match element. Put first element of 'ido-matches' at the end of the list.

### dischart first match ### 3-grC ide-tak-first-match ### Under Little are better as incut text. Leave the cursor at the and of input text. ### Under Little are better and text. Leave the cursor at the end of input text. ### Under Little are better and text. Leave the cursor at the end of input text. ### Under Little are better and text. Leave the cursor at the end of input text. ### Under Little are better and text. ### Under Little are better are better and text. ### Under Little are better and text. ### U	<u>Operation</u>	<u>Keystroke</u>	Function	<u>Note</u>
Mode is directory money Carlot Security Securit	Select previous match	· ·	(ido-prev-match)	Move to last match element. Put last element of 'ido-matches' at the front of the list.
In the company has yet states prices. Sogie and armite resping option.		_		
C-8	Undo Ido directory merge	C-z	directory &optional TEXT	
Show all possible completions all discontinued to use the turnary dops are red file. 2			,	When argument REMOVEP is non-nil, the currently matched items are instead removed from
Move backward in user- input or change to buffer promoted C=2	Take/edit first match	M-SPC	(ido-take-first-match)	Suseful, like C−e to edit a match and create a new file with similar name. Then type C−j to
Move forward in users		?	(ido-completion-help)	Show possible completions in a "*File Completions*" buffer.
C-x C-b C-d switch to identified in the control for find in the control find in	input or change to buffer	С-Б		Move backward in user input. When reaching the left-most character switch to a buffer prompt.
Second S	input or change to non-	C-f	,	 C-x C-b C-f switch to 'ido-find-file'. C-x C-f C-f fallback to non-ldo 'find-file'. C-x C-d C-f fallback to non-ldo brief 'dired'.
touffer prompts Change to Bluffer window See also: ∑ Buffers C = C = C (ido-enter-find-file) Dop into find-file) C = C = C (ido-enter-find-file) Dop into find-file) Dop into find-file file from buffer witching. C = C = C (ido-wite-find-file) Dop into find-file) Dop into find-file file from buffer witching. Deen an iBuffer window. See also: ∑ Buffers C = S = D (ido-bury-buffer-a-th-ead) Dop into find-file file from two into file file for much buffer. Kill buffer identified as the first match C = K (ido-kill-buffer-a-th-ead) Dop into find-file from two into file first match C = K (ido-kill-buffer-a-th-ead) Dop into find-file from two into file first match C = K (ido-kill-buffer-a-th-ead) Dop into find-file from two into file first match C = K (ido-kill-buffer-a-th-ead) Dop into file first match Dop into file file file file file file file file		C-d		If at end of user input, perform magic actions:
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Change to Buffer window C=2 C=5 Suffers	buffer prompts	In C-x b buffer prompts	s, all common commands are av	vailable plus the commands listed below. See <u>∑ Buffers</u>
Sea also ∑ Buffers CNALPIERS NOSELECT SHRINK FOLIAGE Bury buffer C-S-b (60-bury-buffer-at-head) Bury the buffer at the head of the ido matches, moving it a the end of the list of matching buffers, before the name of current buffer. Kill buffer identified as the first match of the list of matching buffers C-c (c-c) (60-toggle-virtual-buffers) In C-x d or C-x C-d (60-toggle-virtual-buffers) In C-x d or C-x C-d (60-toggle-virtual-buffers) Change to buffer prompts C-x C-b (60-enter-avirtch-buffer) C-x C-b (60-enter-avirtch-buffer) Change to non-ido listing directory in search C-x C-d (60-enter-avirtch-buffer) Change to non-ido listing directory in search C-x C-d (60-enter-avirtch-buffer) Enter Direct buffer C-x C-d (60-enter-defect) Com/MANID Previous directory in search C-x C-d (60-enter-defect) Glob-enter-defect) Com/MANID To next directory in list To next directory in list C-y C-y (60-enter-defect) Glob-prev-work-directory) To next directory in list C-y C-y (60-enter-defect) Glob-prev-work-directory) Composited directory in list C-y C-y (60-enter-defect) Glob-prev-work-directory) Composited directory in list Composited directory in list Glob-prev-work-directory) Composited directory in list Glob-prev-work-directory Composited directory in list Composited directory level Composited directory in list Glob-defect-backward- Unsupposited directory in list Glob-defect-directory depoiled CLEAR) Composited directory Composited di	Change to file prompt	C-x C-f	(ido-enter-find-file)	Drop into 'find-file' from buffer switching.
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Care	See also: <u>∑ Buffers</u>		QUALIFIERS NOSELECT SHRINK	See <u>Suffers</u> for more information on ibuffer command.
If cursor is not at the end of the use imput, delete to end of inputors	Bury buffer	C-S-b	(ido-bury-buffer-at-head)	
With virtual buffers on, you see names of buffers that have been opened recently even if have been closed since then. This incline the recently opened. Clange to buffer prompt C-x C-b (ido-enter-switch-buffer) Drop into 'ido-switch-buffer from file switching.		C-k	(ido-kill-buffer-at-head)	
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Change to non-ido listing directory C-x C-f (ido-fallback-command Apptional FALLBACK-COMMAND) Enter Direct buffer C-x C-d (ido-next-match-dir) (ido-next-match-dir) (ido-next-match-dir) (ido-next-match-dir) (ido-next-match-dir) (ido-prev-match-dir) (iff work directories have been merged, cycle through directories for first matching file. If work directories have been merged, cycle through directories for first matching file. If noext directory in list (ido-prev-mork-directory) (ido-prev-mork-directory) (ido-prev-mork-directory) (ido-next-work-directory) (ido-next-work-directory) (ido-next-work-directory) (ido-next-work-directory) (ido-next-work-directory) (ido-next-work-directory) (ido-delete-backward-updir cOUNT) County (ido-delete-backward-updir cOUNT) County (ido-delete-backward-updir cOUNT) County (ido-delete-backward-updir cOUNT) County (ido-delete-backward-updir county) (ido-dele	 dir prompts 	In C-x d or C-x C-d o	lirectory related prompts, all cor	mmon commands are available plus the commands listed below. See <u>∑ File-mngt</u>
Septional FALLBACK-COMMAND Enter Dired buffer C - x C - d (ido-enter-dired) Drop into 'dired' from file switching: open the Dired buffer with current directory name. Next directory in search Cdown> (ido-next-match-dir) Find next directory in match list. If work directories have been merged, cycle through directories for first matching file. Previous directory in search Sup> (ido-prev-mork-directory) Change to next working directory in match list. If work directories have been merged, cycle through directories for first matching file. To next directory in search Sup> (ido-prev-work-directory) Change to next working directory in list. To previous directory in search Sup	Change to buffer prompt	С-ж С-ь	(ido-enter-switch-buffer)	Drop into 'ido-switch-buffer' from file switching.
Next directory in search Cdown> (ido-next-match-dir) Find next directory in match list. If work directories have been merged, cycle through directories for first matching file.	_	C-x C-f	&optional FALLBACK-	Drop into a non-ido directory listing command: no interpretation, no proposal, accept input as typed.
If work directories have been merged, cycle through directories for first matching file. Previous directory in list cup>	Enter Dired buffer	C-x C-d	(ido-enter-dired)	Drop into 'dired' from file switching: open the Dired buffer with current directory name.
If work directory in list - < - If work directories have been merged, cycle through directories for first matching file.	Next directory in search	<down></down>	(ido-next-match-dir)	
M-p Control Country		<up></up>	(ido-prev-match-dir)	
list • M-n (ido-delete-backward-updir op up 1 directory level of backspace> (ido-delete-backward-updir coUNT) Delete char backwards, or at beginning of buffer, go up one level. Delete chars backwards to go up 1 directory level M- ② (ido-delete-backward-word-updir COUNT) Delete all chars backwards, or at beginning of buffer, go up one level. Go up 1 directory level C- ② (ido-up-directory & coptional CLEAR) Go up one directory level. Re-read directory C-1 (ido-reread-directory) Read current directory again.	To next directory in list	_	(ido-prev-work-directory)	Change to next working directory in list.
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 May be useful if cached version is no longer valid, but directory timestamp has not chan (e.g. with FTP or on Windows). Wide directory M-d (ido-wide-find-dir-or-delete-dir &optional DIR) Move to previous directory, delete current directory component. Move to previous directory in file name, push current input on stack. Previous directory in file name, push first match on stack. M-f (ido-push-dir-first) Move to previous directory in file name, push first match on stack. Expand absolute path of the directory and leave Ido prompting mode. Remove directory from history M-m (ido-make-directory) Prompt for DIR to create in current directory. 	Go up 1 directory level	c- ⊠		Go up one directory level.
Move to previous directory, push it in list of choices. M—b (ido-push-dir) Move to previous directory in file name, push current input on stack. Previous directory in search M—v (ido-push-dir-first) Move to previous directory in file name, push first match on stack. Remove directory from history M—k (ido-wide-find-file-or-pop-dir ARG) Expand absolute path of the directory and leave Ido prompting mode. Remove directory from history M—k (ido-forget-work-directory) Remove current directory from the history M—m (ido-make-directory & optional DIR) Prompt for DIR to create in current directory.	Re-read directory	C-1	(ido-reread-directory)	May be useful if cached version is no longer valid, but directory timestamp has not changed
directory, push it in list of choices. Previous directory in search M-v (ido-push-dir-first) Move to previous directory in file name, push first match on stack. M-f (ido-wide-find-file-or-popdir ARG) Expand absolute path of the directory and leave Ido prompting mode. Remove directory from history M-k (ido-forget-work-directory) Remove current directory from the history M-m (ido-make-directory experiments) Prompt for DIR to create in current directory.	Wide directory	M-d	,	
search M-f (ido-wide-find-file-or-popdir ARG) Expand absolute path of the directory and leave Ido prompting mode. Remove directory from history M-k (ido-forget-work-directory) Remove current directory from the history M-m (ido-make-directory & optional DIR) Prompt for DIR to create in current directory.	directory, push it in list of	м-ь	(ido-push-dir)	Move to previous directory in file name, push current input on stack.
Remove directory from history M-m (ido-forget-work-directory) M-m (ido-make-directory experiment) Prompt for DIR to create in current directory.		M-v	(ido-push-dir-first)	Move to previous directory in file name, push first match on stack.
history M-m (ido-make-directory & Prompt for DIR to create in current directory. & optional DIR)		M-f	,	Expand absolute path of the directory and leave Ido prompting mode.
M-m (ido-make-directory & Prompt for DIR to create in current directory. & Apptional DIR)	_	M-k	,	Remove current directory from the history
		M-m	,	Prompt for DIR to create in current directory.
Show next element in search history (next-history-element N) Puts next element of the minibuffer history in the minibuffer. With argument N, it uses the Nth following element.	Show next element in search history	<pgdn></pgdn>	(next-history-element N)	Puts next element of the minibuffer history in the minibuffer. With argument N. it uses the Nth following element.
Previous file name M-o (ido-prev-work-file) Change to previous working file name in list. These 2 commands seem to have invalid docstrings, I assume the function names are	-	М-о	(ido-prev-work-file)	Change to previous working file name in list. These 2 commands seem to have invalid docstrings, I assume the function names are correct. They move from file to file but i's not obvious what the direction is. More investigation is

Operation	<u>Keystroke</u>	Function	Note
Next fil entame	M-C-o	(ido-next-work-file)	Change tonext working file name in list.
Show previous element in	<pgup></pgup>	(previous-history-element	Puts previous element of the minibuffer history in the minibuffer.
search history	- 5-2-	N)	With argument N, it uses the Nth previous element.
Search for file matching input	M-s	(ido-merge-work- directories)	Search (and merge) work directories for files matching the current input string. • This searches in all Ido remembered directories, supporting the match mechanisms. • For example, if you want to open the file std_base_type.h while editing some Python file but you know you visited a C directory that had that file, type "_base" followed by M-s
file prompts	In C-x C-f file prompt	ts, all common commands, direct	d commands and the following commands are available. See File-mngt
Delete disk file at head	C-k	(ido-delete-file-at-head)	Delete disk file identified at the head of the matches. Prompt for deleting the file. Then return to the prompt.
Insert word at point in file-name prompt	С-о	(ido-copy-current-word ALL)	Append the word located at the location of the currently edited buffer (used just before the prompt stated) to the file name used in the prompt. This is a way to quickly build a file name using the current directory and the new word (which will include the file extension if there is any in the word at point).
Insert file name of current buffer to prompt	C-w	(ido-copy-current-file-name ALL)	Insert file name of current buffer. • If repeated, insert text from buffer instead. • Use this to create or search for file with the same name as but with a different extension than current one.
Toggle literal reading fo file	M-1	(ido-toggle-literal)	Toggle literal reading of this file. • When reading a file literally, Emacs visit it in Fundamental mode and does not interpret the type of file and does not use the major mode normally associated with the file.
Ivy/Counsel/Swiper	Ivy is another powerful completion engine, with a lot of support over a large number of packages. Ivy is easy and intuitive to use; it shows all potential candidates on several lines. It supports several commands. The commands and key bindings are listed in the following sections. PEL adds the <f1> key binding to open this page, although Ivy provides a well written help page that is accessible with C-h m and contains most of this information.</f1>		
	See the <u>Ivy, Counsel, Sv</u> Requires <u>Ivy</u> external	_	when the pel-use-ivy user-option is set to t .
Open this <u>Completion/Input</u> PDF file or the web page See also: <u>Help/Info</u>	<f1></f1>	(pel-help-on-completion- input &optional OPEN-WEB- PAGE)	Open the input completion help PDF file. • With a prefix (like C − u) use the default browser to open the GitHub web page. • Solve that if your browser can render PDF content you will then be able to easily navigate across PDF pages that have several web links. • Use the C − h key prefix to access Emacs help commands, as PEL uses 1 > for this command.
Help for Ivy	C-h m	(ivy-help)	Open a window with the help for 'ivy'.
Keys for selection navigation	Ivy display selections over	, , ,	ng keys to navigate through them.
Select next candidate	• C-n • <down></down>	(ivy-next-line)	Select next candidate
Select previous candidate	• C-p • <up></up>	(ivy-previous-line)	Select previous candidate
Scroll to next page	C-v	(ivy-scroll-up-command)	Next page of candidates
Scroll to previous page	M-v	(ivy-scroll-down-command)	Previous page of candidates
Select first candidate	M-<	(ivy-beginning-of-buffer)	Select first candidate
Select last candidate	M->	(ivy-end-of-buffer)	Select last candidate
Keys for single selection	The following commands	s act on a single item selection.	
Select candidate end exit	• C-m • RET	(ivy-done)	Exit the minibuffer with the selected candidate. • Exit with the current action.
Select item and execute single action	м-о	(ivy-dispatching-done)	Select item and prompt for a specific action. One of: o: default operation for the context. i: insert copied textin buffer w: copy selection text
Select candidate/ continue directory completion	с-ј	(ivy-alt-done &optional ARG)	Exit the minibuffer with the selected candidate. • When the candidate is a directory, enter it. Otherwise, exit with the current action. • When ARG is t, exit with current text, ignoring the candidates.
	Tab	(ivy-partial-or-done)	Complete the minibuffer text as much as possible. • Attempt partial completion, extending the current input as much as possible. • Tab Tab is the same as C-j.
	С-м-ј	(ivy-immediate-done)	Exit the minibuffer with current input instead of current candidate. Exit with the current action, calling it on the current input instead of the current candidate. This is useful especially when creating new files or directories - often the input will match an existing file, which you don't want to select.
Select a candidate with avy	• C-' • M-H	(ivy-avy)	Select a candidate from the current page with <u>avy</u> and exit with the current action. Any works by typing 2 characters that are replaced with a highlight to use. The C-' binding only works in graphics mode. When pel-use-avy is t, PEL adds the M-H key binding that works also in terminal mode. Requires the <u>avy</u> and <u>ivy-avy</u> external packages PEL activates both of them when the pel-use-avy user option is set to t.
Keys for multiple selections	The following commands	s act on a multiple item selection	n, which is used in some context.
	C-M-m	(ivy-call)	Non-exiting version of C-m
	C-M-n	(ivy-next-line-and-call)	Combines C-n and C-M-m.
	С-М-р	(ivy-previous-line-and-call)	Combines C-p and C-M-m.
	С-М-о	(ivy-dispatching-call)	Non-exiting version of M-o
Keys that alter minibuffer input	The following commands	s modify the user input, using the	e history of previously selected items.
Next input in history	M-n	(ivy-next-history-element)	Select the next history element or symbol/URL at point.
Previous input in history	М-р	(ivy-previous-history- element)	Select the previous history element or symbol/URL at point.
			I.

<u>Operation</u>	<u>Keystroke</u>	Function	<u>Note</u>
	C-r	(ivy-reverse-i-search)	Start a recursive completion session to select a history element.
	м-ј	(ivy-yank-word)	Insert the sub-word at point into the minibuffer.
Narrow selection to current matches	• S-SPC • C-SPC	(ivy-restrict-to-matches)	Deletes the current input, and resets the candidates list to the currently restricted matches. • This is how lvy provides narrowing in successive tiers. • The S-SPC binding only works in graphics mode. PEL adds the C-SPC key binding that works also in terminal mode.
Other			
Copy selections in kill ring Saving current	M-w	(ivy-kill-ring-save)	Copies the selected candidates to the kill ring; when the region is active, copies the active region.
completion in buffer		(in , 200, w)	Course the comment condidates to a new buffer the list in active in the growth offer
List selection in separate buffer	C-c C-o	(ivy-occur)	Saves the current candidates to a new buffer; the list is active in the new buffer.
Select item from buffer	• RET • <mouse-1></mouse-1>	(ivy-occur-press-and- switch)	Used in the new buffer calls the appropriate action on the selected candidate.
Using ivy Hydra	 When in Hydra, C-o or i resumes editing. Hydra reduces key strokes, for example: C-n C-n C-n is C-o jjjj in Hydra. Besides certain shorter keys, Hydra shows useful info such as case folding and the current action. Additionally, here are the keys that are otherwise not bound: < and > adjust the height of the minibuffer. c (ivy-toggle-calling) - toggle calling the current action each time a different candidate is selected. M (ivy-rotate-preferred-builders) - rotate regex matcher. w and s scroll the actions list. Minibuffer editing is disabled when Hydra is active. 		
	Requires the hydra ex	ternal package 🛂 PEL provide	s Hydra when pel-use-hydra user option is set to t .
Start ivy Hydra	C-0	(hydra-ivy/body)	Invokes Hydra menus with key shortcuts.
Helm Input Completion	The Helm external package is very powerful and comes with a large set of features. It does not use the minibuffer and does not use the <tab> key for completion; you just need to type some part of the text you search for and Helm will pattern match it. Once you enter a command with Helm input completion a Helm buffer shows a list of potential match with the most probable on top. The list is updated as you type and refine your search pattern. You can resize the Helm window when it is opened. You can navigate the pattern match list, select one or several matches (for some of the commands that open the Helm buffer like when you type C−x b to switch/open other buffer or when you type C−x C−f to find/open file(s). You can also perform other actions on the selections such as opening a file as root. And you can perform a Helm action and keep the Helm window open (as it normally closes right after you made your selection for the command you were executing. And Helm comes with extensions of other commands, like running top and allowing pattern match to filter the list of processes you want to see. See the document title "A package in a league of its own: Helm" for a more comprehensive overview with screen shots. PEL provides a basic configuration for Helm that is similar to the extended config described in that document. But it does not set Helm values that can be customized. Customize Helm with M−x customize−group helm or with <f11> <f2> g helm. (See also: Customize)</f2></f11></tab>		
Operation inside Helm buffer	PEL sets the Helm global prefix to be C-c h . Once helm mode is active (or ido/helm mode) you can execute global Helm commands via that prefix key. Helm buffer windows opens up as soon as you launch a Helm session. The following sections describe the commands available inside Helm buffer window.		
Resize Helm Window	Use the following comma	and to reposition the Helm buffe	r window from horizontal to vertical, going through the 4 possible quadrants of the frame.
Resize Helm window	C-t	(helm-toggle-resplit-and- swap-windows)	Multi key command to re-split and swap helm window. First call runs 'helm-toggle-resplit-window', and second call within 1s runs 'helm-swap-windows'.
Navigate Helm Pattern buffer	The following commands	s move the currently selected pa	ttern line in the Helm pattern buffer list
Move to next pattern	• C-n • <down></down>	(helm-next-line &optional ARG)	Move selection to the next ARG line(s). • When numeric prefix arg is > than the number of candidates, then move to the last candidate of current source (i.e. don't move to next source).
Move to previous pattern	• C-p • <up></up>	(helm-previous-line &optional ARG)	Move selection to the ARG previous line(s). • Same behavior as 'helm-next-line' when called with a numeric prefix arg.
Move down 1 page	• C-v • <pgdn></pgdn>	(helm-next-page)	Move selection forward with a pageful.
Move up 1 page	• M-v • <pgup></pgup>	(helm-previous-page)	Move selection back with a pageful.
Move to top of list	M-<	(helm-beginning-of-buffer)	Move selection at the top of helm buffer list.
Move to end of list	M->	(helm-end-of-buffer)	Move selection at the bottom of helm buffer list.
Select patterns in Helm Pattern buffer	The following commands	s, available only for some input li	ists, allow you to mark several patterns to be processed.
Toggle line selection	• C-SPC • C-@	(helm-toggle-visible-mark ARG)	Toggle helm visible mark at point ARG times. If ARG is negative toggle backward.
Select all	м-а	(helm-mark-all &optional ALL)	Mark all visible unmarked candidates in current source. • With a prefix arg mark all visible unmarked candidates in all sources.
Operate on selection	The following commands	are used to act on the selected	l items from the Helm list
Copy Helm selection to current buffer	• C-c C-i • C-c <tab></tab>	(helm-copy-to-buffer)	Copy selection or marked candidates to 'helm-current-buffer'. Note that the real values of candidates are copied and not the display values.
Act on current selection(s)	RET	(helm-maybe-exit-minibuffer)	If Helm session has completed the search and is displaying the result, exit the helm session and act on the current selection, doing what corresponds to the command that launched the Helm session. The action applies to all selected candidates and is applied inside the window that was current when the Helm session started. so if point is inside window A when you issue a C-x C-f command to find a file and select several files then these files will be opened in buffers whose window will split the area of the previous window A.

<u>Operation</u>	<u>Keystroke</u>	Function	Note	
Act on current selection(s) List possible actions First is the native action Other possible actions follow. The list depends on the original command.	• <tab> • C-i</tab>	(helm-select-action)	Select an action for the currently selected candidate(s). • If action buffer is selected, back to the helm buffer. • If several actions are possible, display a menu of possible actions, their assigned function key (for the first 12 possible action), a short descriptive link that may include possible key binding for the action. • The list of possible actions can be quite long. For example, the list of actions shown in a Helm session opened to visit a file can include about 50 different actions that range from just visiting the file to diffing it, making a backup, compiling it, opening in hexadecimal editing, etc • The action applies to all selected candidates and is applied inside the window that was current when the Helm session started. so if point is inside window A when you issue a C-x C-f command to find a file and select several files then these files will be opened in buffers whose window will split the area of the previous window A.	
Perform action on current pattern without quitting Helm	• C-j • C-M-i	(helm-execute-persistent- action &optional ATTR SPLIT)	Perform the associated action ATTR without quitting helm. • The action applies to the current pattern, not lines that might have been selected.	
Helm Help	Once Helm is running th	ne following command open Heli	ms manual.	
Open Helm Manual (in Org mode format)	• C-h m • C-c ?	(helm-help)	Generate helm's help according to 'help-message' attribute. If 'helm-buffer' is empty, provide completions on 'helm-sources' to choose its local documentation. If source doesn't have any 'help-message' attribute, a generic message explaining this is added instead. The global 'helm-help-message' is always added after this local help.	
Launching Helm Search	The rest of this tabl	e needs to be completed.		
Helm special commands	Helm provides the following commands that integrate with other tools. With PEL, when Helm or Ido/Helm mode is active the <f11> h key prefix is active giving quick access to these useful helm commands.</f11>			