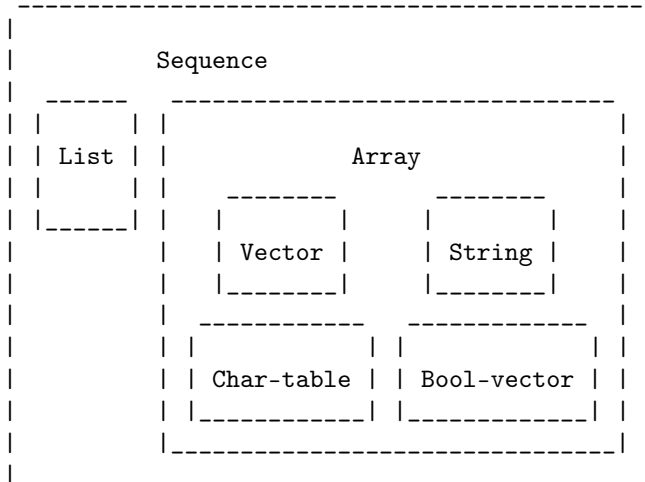# 1 Emacs CheatSheet   LANGUAGES

- PDF Link: cheatsheet-emacs-A4.pdf, Category: languages

- Blog URL: `https://cheatsheet.dennyzhang.com/cheatsheet-emacs-A4`

- Related posts: Vim CheatSheet, #denny-cheatsheets

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```
 --------------------------------------------
|                                            |
|          Sequence                          |
|  _____   _____   |
| |      | |                              | |
| | List | |            Array             | |
| |      | |                              | |
| |_____| |   _____      _____     | |
|          |  |        |    |        |    | |
|          |  | Vector |    | String |    | |
|          |  |_____|    |_____|    | |
|          |   _____  _____   | |
|          | |           | |            | | |
|          | | Char-table | | Bool-vector | | |
|          | |_____| |_____| | |
|          |_____| |
|_____|
```

1.1 Features

1.1.1 View In Emacs

Name	Comment
Move forward across one balanced expression	`forward-sexp C-M-f`
Move backward across one balanced expression	`backward-sexp C-M-b`

1.1.2 Org-mode export Latex

Name	Comment
Make page size bigger	`#+LATEX_HEADER: \usepackage[margin=0.5in]{geometry}` Link: stackexchange
Change document class	`#+LaTeX_CLASS_OPTIONS: [a4paper]` Link: stackexchange
Add the date of today	`#+LATEX_HEADER: \rhead{Updated:  \today}` Link: stackexchange
Add page number with total pages	`#+LATEX_HEADER: \rfoot{\thepage\ of \pageref{LastPage}}`

1.1.3 Buffer Operations

Name	Comment
Move to top	`(goto-char (point-min))`
Replace string by regexp	buffer-replace.el
Delete region	`(delete-region start-pos end-pos)`
Buffer string with plain text	`(buffer-substring-no-properties start-pos end-pos)`
	`(get-buffer-create BUFFER-OR-NAME)`
	`(current-buffer)`
	`(set-buffer BUFFER-OR-NAME)`
	`(kill-buffer)`
	`(set-buffer-modified-p nil)`

1.1.4   GNUS - Mail In Emacs

Name	Comment
Create delayed email	`gnus-delay-article C-c C-j`
Save mail's attachment	`gnus-summary-save-parts`
Forward mail	`gnus-summary-mail-forward`
Send gnus drafts	`gnus-draft-send-message`
Send all the sendable drafts	`gnus-draft-send-all-messages`
Add attachment	`mml-attach-file(C-c C-m f)`
Create group	`gnus-group-make-group (G m)`

1.1.5   Table in Org-mode

```
#+NAME: supplies
| Date       | Category        | Amount |
|------------+-----------------+--------|
| 2014/01/14 | Supplies        |  43.97 |
| 2014/02/15 | Supplies        |  56.48 |
| 2014/02/11 | Book            |  17.99 |
| 2014/06/10 | Kinesis Keyboard | 289.16 |
| 2014/08/23 | Printer         |  99.96 |
| 2014/08/30 | Supplies        |  58.26 |
| 2014/08/22 | Books           |  18.99 |
| 2014/08/25 | Books           |   7.50 |
| 2014/09/15 | Books           |  21.49 |
| 2014/12/31 | Toner Service   | :=24.95*4 |
|------------+-----------------+--------|
|            | Total:          |        |
#+TBLFM: @>$3=vsum(@2..@-1);%.2f
```

1.2   Data Structures

1.2.1   Debug

Name	Comment
Debug a function	`edebug-defun`
Change function via advice	`defadvice` ;; Super inspiring feature!
Set default value	`(setq-default indent-tabs-mode nil)`

1.2.2   String

Name	Comment
string1 contains string2	`(string-match ".*README.org" buffer-file-truename)`
Replace by regexp	`(setq ret (replace-regexp-in-string "<hr/>" "" ret))`
Format string	`(format "%s/%s" mywordpress-server-url blog-uri)`
String replace	`(replace-string from-string to-string &optional start end)`
Replace by regexp	`(replace-regexp REGEXP TO-STRING &optional DELIMITED START END)`
replace-match	`(while (search-forward-regexp "myRegexPattern" nil t) (replace-match `
The second captured string	`(match-string 2)`
Get the position of the 2nd captured string	`(match-beginning 2) (match-end 2)`
List matched count	`(setq myStr (replace-regexp-in-string "myRegex1" "myRep1" myStr)) (cou`
Grab the start and end positions of a word	`(setq myBoundaries (bounds-of-thing-at-point 'word))`
	`(setq myStr (buffer-substring myStartPos myEndPos))`
	`(setq myStr (buffer-substring-no-properties myStartPos myEndPos))`

1.2.3   Regexp

Name	Comment
Regexp In Emacs	regexp-string-match.el
Change a given string using regex	`(replace-regexp-in-string "^ +" "" url)`
Seach regexp in some string	`(string-match myRegex myStr)`
Get captured match	`(match-string 1 myStr)`
Escape special characters	`(regexp-quote "^")`
	`(regexp-opt '=("hello" "world"))=`

1.2.4   Intger

Name	Comment
String to int	`(string-to-number STRING &optional BASE)`
Check whether it's int	`(integerp 23)`
decimal to hex	`(format "%x" 10)`
hex to decimal	`(format "%d" #xa)`

1.2.5   Array & List

- Get items from list

Name	Comment
Get the first element	`(car mylist)`
Get the nth element	`(nth n mylist)`
Get the last element	`(car (last mylist))`
Get the 2nd to the last elements	`(cdr mylist)`
Get the nth to the last elements	`(nthcdr n mylist)`
Similar to (car (car value))	`(caar value)`
Similar to (cdr (car value))	`(cdar value)`
Return the cdr of the cdr of X.	`(cddr X)`

- More about list

Name	Comment
Create a list	`(defvar my-list (list "item1, item2"))`
Add item to list	`(add-to-list 'my-list "item3")`
Head of a list	`(car '(a b c))`
Tail of a list	`(cdr '(a b c))`
Loop a list	`(dolist (item my-list) (message item))`
Concat two lists	`(nconc '("a" "b" "c") '("d" "e" "f")) link`
Return a newly created list	`(list x)`
Append x to the head of a list	`(cons x mylist)`
Append without duplication	`(add-to-list 'auto-mode-alist '("\\.gp$" .  gnuplot-mode))`
Add ELEMENT if missing	`(add-to-list LIST-VAR ELEMENT &optional APPEND COMPARE-FN)`

1.2.6   Position

Name	Comment
Return character at position	`(char-after (point))`
Return character preceding position	`(char-before (point))`
	`(setq myStr (thing-at-point 'word))`
	`(setq myStr (thing-at-point 'symbol))`
	`(setq myStr (thing-at-point 'line))`

- Insert text

Name	Comment
Insert string	`(insert "hello world")`
	`(insert-buffer-substring buffer &optional start end)`
	`(insert-buffer-substring-no-properties buffer &optional start end)`
	`(insert-file-contents myPath)`
	`(insert-file-contents-literally filename &optional visit beg end replace)`

- Delete text

Name	Comment
	`(delete-char 9)`
	`(delete-region myStartPos myEndPos)`
	`(erase-buffer)`
	`(upcase obj)`
	`(upcase-word n)`
	`(upcase-region beg end)`
	`(upcase-initials obj)`
	`(upcase-initials-region beg end)`
	`(capitalize obj)`
	`(capitalize-word n)`
	`(capitalize-region beg end)`
	`(downcase)`
	`(downcase-word n)`
	`(downcase-region beg end)`

1.2.7 DateTime

Name	Comment
Convert time to string	`(format-time-string "<%Y-%m-%d %H:%M UTC +8>" (current-time))`
Get current time	`(current-time)`
Add some offset for a time	`(time-add time (seconds-to-time seconds))`
Subtract two time values	`(time-subtract after-init-time before-init-time)`
Get second count	`(float-time (time-subtract after-init-time before-init-time))`
Return date as a list (mm/dd/yyyy)	`calendar-current-date`
	`(calendar-extract-month date)`
m1 will be changed	`(calendar-increment-month m1 y1 -1)`
	`(calendar-date-compare '((12 27 2012)) '((12 26 2012)))`
	`(calendar-holiday-list)`

1.2.8 Hook

Name	Comment
Add hook	`(add-hook 'myhook '(lambda () (insert "fun1 was called ")))`
Run each hook in myhook.	`(run-hooks 'myhook)`

1.2.9 Files

Name	Comment
Open file	`(find-file html-file)`
Save file	`(write-file html-file nil)`
Get short filename	`(file-name-nondirectory somefilename)`
Get the directory name from filename	`(file-name-directory FILENAME)`
Check file/directories existence	`(file-exists-p bfilename)`
Insert contents of file FILENAME after point	`(insert-file-contents somefilename)`
Return FILENAME's final "extension"	`(file-name-extension "test.erl")`
Return FILENAME sans final "extension"	`(file-name-sans-extension "test.erl")`
Return a list of names of files in DIRECTORY	`(directory-files DIRECTORY &optional FULL MATCH NOSORT)`
Insert contents of file FILENAME after point	`(insert-file-contents FILENAME &optional VISIT BEG END REPLACE)`
Confirm directory exists	`(file-directory-p FILENAME)`
Create directory	`(make-directory "~/.emacs.d/autosaves/" t)`
Find files by name	`(find-dired "../" "-name defined.hrl")`
read file content into a string	`(setq dddstring (with-temp-buffer (insert-file-contents "dd.txt")=`

1.3 Common Scripts

- emacs multiline regexp

```
;; http://stackoverflow.com/questions/1309050/emacs-query-replace-regexp-multiline
(setq content-str "hello
this
----
Denny
Sophia")

(message (replace-regexp-in-string
          "\n----\\(.\\|\n\\)*" "" content-str))
```

- cond: like switch or case

Link: WhenToUseIf

```
(let ((x 1))
  (cond ((eq x 0) "It's zero")
        ((eq x 1) "It's one")
        :else "It's something else")
)
```

1.4 More Resources

License: Code is licensed under MIT License.