# PEL Topics Index

## Emacs Reference Cards

👆 With PEL you can access these via the `<f11> ? e r` key sequence.
See Ⅱ **Help/Info**

These are links to the PDF version of official English version of the quick reference cards for **GNU Emacs** and popular external packages. PEL documents Emacs key bindings as well, these cards provide useful complement to what PEL provides.

| Emacs | Calc | Gnus | Magit Cheatsheet | Org | Viper |
|-------|------|------|------------------|-----|-------|
| Emacs survival card | Dired | Gnus booklet | Magit Ref-card | | VIP |

## ➢ PEL Overview

- **PEL repo**
- **PEL Readme**
- **PEL Manual**
- **PEL NEWS** 📝
- **Discussions**

- General Information.
- Development Information
- Migration Guide

This table holds links to the **PEL file tables**. Each cell holds a hyperlink to the GitHub hosted raw PDF table.

👆 For the best user experience, use a browser that can render PDF directly instead of downloading.
- **Mozilla Firefox** (version > 78) does that perfectly. You may need to activate a plug-in for other browsers.
- With that in place, you can browse through all the PDFs and reach a vast amount of information quickly.

👆 From within Emacs open this topic index PDF by typing the `<f11> ? <f1>` key sequence. More help topics with `<f11> ? p` keys.

👆 The symbols, **colour coding** and various other conventions are described in the ➢**Legend** PDF.

| ➢Legend | ➢Recommended Emacs User Option | ➢Themes |
|---------|-------------------------------|---------|
| ➢PEL | ■iMenu/Speedbar support | ■PEL Naming Conventions |
| ➢CRiSP ⮂ Emacs | | |

## OS Desktop Key Bindings
(Bindings that don't clash with PEL)

| macOS Fct Keys | macOS Keys | Ubuntu 16.04 Desktop Keys | |
|----------------|-----------|---------------------------|--|
| | terminal settings | Mint 20 Desktop Keys | |

## 🚦 Feature Comparisons

| 🚦Completion Modes Compatibility | 🚦Speedbar/iMenu Mode Compatibility | 🚦Shells/Terminals Comparisons | |
|--------------------------------|-----------------------------------|-------------------------------|--|

## Key Prefixes & Suffixes

| Ⅱ■Modifier Keys | Ⅱ■Numkeypad | ➢PEL | Keys - Fn | Keys - F11 |
|-----------------|-------------|------|-----------|------------|

## Ⅱ Emacs Features

- A **Guided Tour of Emacs**.
- **Awesome-Emacs**
- **MELPA** and **GNU ELPA**

The PEL tables named at right describe Emacs commands & key bindings for concepts & features. The cell color is light-blue for major mode, light-red for minor mode. Emacs commands can be executed by name or bound to key sequences. The commands may have **arguments** and keys can express them.
- **Emacs Keys**
- **Numeric Arguments**

You can also:
- **Run Command by Name**

Emacs uses a concept of modes:
- **Emacs Major and Minor Modes**
  - **Major Modes**
  - **Minor Modes**
  - **Choosing Modes**

PEL provides key sequences to toggle minor modes.

Cells link titles starting with only Ⅱ are Emacs generic features, blue links are external packages. The green links are mostly PEL extensions.

| Ⅱ Abbreviations | Ⅱ Diff & Merge | Ⅱ Grep | Ⅱ Marking | Ⅱ Scrolling | Ⅱ Tab Bar |
|-----------------|----------------|--------|-----------|-------------|-----------|
| Ⅱ Align | Ⅱ Dired | Ⅱ Help/Info | Ⅱ Menus | Ⅱ Search/Replace | T Templates |
| Ⅱ Auto-Completion | Ⅱ Display - Lines | Ⅱ Hide/Show | Ⅱ Mode Line | Ⅱ Sessions | Ⅱ Text Modes |
| Ⅱ Autosave/Backup | Ⅱ Drawing | Ⅱ Highlight (colors) | Ⅱ Mouse | Ⅱ start Shells/REPLs | Ⅱ Time Tracking |
| Ⅱ Bookmarks | Ⅱ Enriched Text | Ⅱ ibuffer-mode | Ⅱ Narrowing | Ⅱ shell-mode | Ⅱ Transpose text |
| Ⅱ Buffers | Ⅱ Faces/Fonts | Ⅱ Indentation | Ⅱ Navigation | Ⅱ term-mode | Ⅱꭙ Treemacs |
| Ⅱ Case Conversions | ➢P Fast Startup | Ⅱ Input Method | Ⅱ Outline | Ⅱ vterm-mode | Ⅱ Undo/Redo |
| Ⅱ Close/Suspend | Ⅱ File-mngt | Ⅱ Inserting Text | Ⅱ Packages | Ⅱꭙ Smartparens | Ⅱ VCS-Git ꭙMagit |
| Ⅱ Comments | Ⅱ File/Dir Variables | Ⅱ Key-Chords | Ⅱꭙ Projectile | Ⅱ Sorting | Ⅱ VCS-Mercurial |
| Ⅱ Completion/Input | Ⅱ Fill/Justify | Ⅱ Keyboard Macros | Ⅱ Rectangles | Ⅱ Speedbar | Ⅱ VCS-Subversion |
| Ⅱ Counting | Ⅱ Frames | 𝔓Ⅱꭙ- Lispy | Ⅱ Registers | Ⅱ Spell Checking | Ⅱ Web |
| Ⅱ𝕄 CUA | | | | Ⅱ SyntaxCheck | Ⅱ Whitespace |
| Ⅱ Cursor | | | | | Ⅱ Windows |
| Ⅱ Customize | | | | | Ⅱ Xref - Cross Refs |
| Ⅱ Cut & Paste | | | | | |

| 𝔓Ⅱ - Emacs Lisp concepts & tools | 𝔩 display-buffer | 𝔩⁂ - ELisp Types | 𝔩 ERT (regr-testing) | 𝔩 Hooks | |
|----------------------------------|------------------|------------------|---------------------|---------|--|

## XRef - Cross Reference Tools
See also: Ⅱ **Xref**

Emacs supports various cross reference mechanisms described in the Ⅱ **Xref** table. These mechanisms take advantage of various external tools and integrate with them. Notes about those tools are available in the tables listed in this section.

| 🔒Xref-Support | 🔒Xref-Backend | | |
|---------------|----------------|--|--|

PEL supports installation and partial setup of the following tools:

## Build Tools & Preprocessor

PEL has support for several build tools but they are not all documented in a page.
- **Nix** 📦 Requires **nix-mode** external package 🔲 activated when **pel-use-nix-mode** user-option is tuned on.
- **Tup** 📦 Requires **tup-mode** external package 🔲 activated when **pel-use-tup** user-option is tuned on.

**Command Line Scripting Languages:**

**bash, sh, zsh**

| 𝔓Ⅱ - M4 | 𝔓Ⅱ - Make    gmake | | |
|---------|---------------------|--|--|

## Data Serialization

| Ⓓ CWL | Ⓓ YAML | | |
|--------|--------|--|--|

Utility: **GNU readline**

## Data Modelling/ Specification

| Ⓢ ASN.1 **asn1-mode** | Ⓢ MIB **snmp-mode** | Ⓢ **YANG** | |
|-----------------------|---------------------|------------|--|

## Hardware Description Languages

| Verilog 🚧future | VHDL 🚧future | | |
|-----------------|--------------|--|--|

## Text Markup Languages

| 𝕄 AsciiDoc | 𝕄 Markdown | 𝕄 Org-Mode | 𝕄 reStructuredText |
|-----------|-----------|-----------|---------------------|

**OS App Control Scripting Languages**

### • Graphics Markup

| 𝕄 Graphviz Dot | 𝕄 MscGen | 𝕄 PlantUML | |
|----------------|----------|-----------|--|

𝔓Ⅱ🍎- AppleScript

## Programming Languages
**Main Paradigm of Programming Language Families**
- *Actor Model:* Ⓐ
- *Concatenative* Ⓚ
- *Concurrent:* Ⓒ
- *Functional:* ⓕ   *Pure:* Ⓕ
- *Imperative:* ⓘ or no token
- *Object Oriented* ∞
- *Has Syntactic Macros:* ⓜ

Emacs has major mode support for several programming languages. PEL currently adds extra support for some of them, listed below.

| BEAM Programming Languages | Functional Languages | Javascript target | Lisp Family Languages | Lisp-like Languages |
|----------------------------|----------------------|-------------------|-----------------------|---------------------|
| Curly Bracket Languages | Java Virtual Machine Languages | ML Family Languages | Scheme Language Dialects | Stack Based Languages |

The following lists the programming languages in alphabetical order.
- The cell colours give a coarse indication of the programming language family(ies).

- The programming languages supported by PEL are listed here in alphabetical order.
- Emacs (and PEL) also provides basic support for other programming languages not listed here.

**Future support** for Crystal, Elm, Kotlin, Lua, Purescript, ReasonML, Seed7, Typescript, Zig and documentation of support for Ada, Fortran, Javascript, Java, Modula, Pascal (based on my need for them or requests (if any)).

| Ada 🚧future | 𝔓Ⅱ - D        ⓘⓕⒶ | 𝔓Ⅱ - Gambit        ⓕⓜ | 𝔓Ⅱ - Janet        ⓘⓕⓜ | Objective-C 🚧future | Scala 🚧future |
|--------------|---------------------|-------------------------|-------------------------|---------------------|---------------|
| 𝔓Ⅱ - Arc        ⓕⓜ | Dart 🚧future | 𝔓Ⅱ - Gerbil        ⓕⓜⒶ | Java 🚧future | 𝔓Ⅱ - OCaml        ⓘⓕ | 𝔓Ⅱ - Scheme        ⓕⓜ |
| 𝔓Ⅱ - C | Eiffel 🚧future | 𝔓Ⅱ - GNU Guile        ⓕⓜ | 𝔓Ⅱ - Javascript 🚧 | Pascal 🚧future | Seed7 🚧future |
| 𝔓Ⅱ - C++ | 𝔓Ⅱ - Elm 🚧future        Ⓕ | 𝔓Ⅱ - Gleam | 𝔓Ⅱ - Julia        ⓜ | 𝔓Ⅱ - Perl | Swift 🚧future |
| 𝔓Ⅱ - Chez        ⓕⓜ | 𝔓Ⅱ - Elixir        ⒸⓂⓕⒶ | 𝔓Ⅱ - Go | Kotlin 🚧future | 𝔓Ⅱ - Python | 𝔓Ⅱ - Tcl 🚧future ⓕⓘ |
| 𝔓Ⅱ - Chibi        ⓕⓜ | 𝔓Ⅱ - Emacs Lisp | Groovy 🚧future | 𝔓Ⅱ - LFE        ⒸⓂⓕⒶ | 𝔓Ⅱ - Purescript        Ⓕ | 𝔓Ⅱ - Typescript 🚧 |
| 𝔓Ⅱ - Chicken        ⓕⓜ | 𝔓Ⅱ - Erlang        ⒸⓕⒶ | 𝔓Ⅱ - Haskell        Ⓕ | Lua 🚧future | 𝔓Ⅱ - Racket        ⓕⓜ | 𝔓Ⅱ - UNIX Shell |
| 𝔓Ⅱ - Clojure        ⓕⓜ | Factor        Ⓚⓕ∞ⓜ | Haxe 🚧future | Modula 🚧future | 𝔓Ⅱ - ReasonML | 𝔓Ⅱ - V |
| Common Lisp        ⓕⓜ | 𝔓Ⅱ - Forth        Ⓚ | 𝔓Ⅱ - Hy (python) ⓜ | 𝔓Ⅱ - NetRexx | 𝔓Ⅱ - REXX | Zig 🚧future |
| Crystal 🚧future | Fortran 🚧future | | 𝔓Ⅱ - Nim        ⓜ | 𝔓Ⅱ - Ruby | |
| | | | | 𝔓Ⅱ - Rust | |