

Diff & Merge

Comparing and Merging Files	Emacs has two built-in packages that support comparing files: diff and ediff. The diff package is the simplest of the tow. The second, ediff is more powerful and also support file merge.		
Diff	The diff mode provides a set of commands to compare files and buffers using the simple diff-mode.		
Compare 2 files	<f11> d f	(diff OLD NEW &optional SWITCHES NO-ASYNC)	Find and display the differences between OLD and NEW files. <ul style="list-style-type: none"><li>Prompt for NEW, then OLD files.</li></ul>
Compare file with its backup	<f11> d k	(diff-backup FILE &optional SWITCHES)	Diff this file with its backup file or vice versa. <ul style="list-style-type: none"><li>Uses the latest backup, if there are several numerical backups.</li><li>If this file is a backup, diff it with its original.</li><li>The backup file is the first file given to 'diff'.</li><li>With prefix arg, prompt for diff switches.</li></ul>
Compare buffer and associated file	<f11> d b	(diff-buffer-with-file &optional BUFFER)	View the differences between BUFFER and its associated file.
Compare current and other window	<f11> d w	(compare-windows IGNORE-WHITESPACE)	Compare text in current window with text in another window. <ul style="list-style-type: none"><li>The option 'compare-windows-get-window-function' defines how to get another window.</li><li>Compares the text starting at point in each window, moving over text in each one as far as they match.</li><li>This command pushes the mark in each window at the prior location of point in that window.</li><li>If both windows display the same buffer, the mark is pushed twice in that buffer: first in the other window, then in the selected window.</li></ul>
Ediff	Ediff sessions have several commands, shown in the Ediff Quick Help buffer. Type ? to toggle Ediff Quick Help from 1 line to multiple that shows all available commands. For more info see Ediff Quick Help Commands. 👉 While showing 2 or 3 buffer/files in windows Ediff provides the v/V keys for scrolling up/down. PEL scroll sync commands can also be used to provide single line scroll synced between the windows. See the <f11>   commands in ⌘ Scrolling table.		
Display Ediff Manual	<f11> e ?	(ediff-documentation &optional NODE)	Display Ediff's manual. <ul style="list-style-type: none"><li>With optional NODE, goes to that node.</li></ul>
Display registry of active Ediff sessions	<f11> e R	<ul style="list-style-type: none"><li>(eregistry)</li><li>(ediff-show-registry)</li></ul>	Display registry of all active Ediff sessions.
Compare buffer with its file on disk	<f11> e b f	(ediff-current-file)	Compare the buffer with its file on disk. This function can be used as a safe version of revert-buffer.
Compare 2 buffers	<f11> e b b	(ediff-buffers BUFFER-A BUFFER-B &optional STARTUP-HOOKS JOB-NAME)	Compare 2 buffers. <ul style="list-style-type: none"><li>Prompts for buffer A and buffer B</li></ul>
Compare 3 buffers	<f11> e b 3	(ediff-buffers3 BUFFER-A BUFFER-B BUFFER-C &optional STARTUP-HOOKS JOB-NAME)	Compare 3 buffers. <ul style="list-style-type: none"><li>Prompts for buffer A, buffer B and buffer C.</li></ul>
Compare file with its backup	<f11> e f k	(ediff-backup FILE)	Compare a file with its backup. If there are several numerical backups, use the latest. <ul style="list-style-type: none"><li>If the file is itself a backup, then compare it with its original.</li></ul>
Compare 2 files	<f11> e f f	<ul style="list-style-type: none"><li>(ediff FILE-A FILE-B &amp;optional STARTUP-HOOKS)</li><li>(ediff-files FILE-A FILE-B &amp;optional STARTUP-HOOKS)</li></ul>	Compare 2 files. <ul style="list-style-type: none"><li>Prompts for file A and B.</li></ul>
Compare 3 files	<f11> e f 3	<ul style="list-style-type: none"><li>(ediff3 FILE-A FILE-B FILE-C &amp;optional STARTUP-HOOKS)</li><li>(ediff-files3 FILE-A FILE-B FILE-C &amp;optional STARTUP-HOOKS)</li></ul>	Compare 3 files. <ul style="list-style-type: none"><li>Prompts for file A, B and C.</li></ul>
Compare revision of buffer with file revision	<f11> e f r	(ediff-revision &optional FILE STARTUP-HOOKS)	Compare versions of the current buffer, if the buffer is visiting a file under version control.
Compare common files in 2 directories	<f11> e d d	<ul style="list-style-type: none"><li>(edirs DIR1 DIR2 REGEXP)</li><li>(ediff-directories DIR1 DIR2 REGEXP)</li></ul>	Compare files common to two directories. <ul style="list-style-type: none"><li>Prompts for directory A and B and a regexp to identify files. If empty: select all files.</li></ul>
Compare common files in 3 directories	<f11> e d 3	<ul style="list-style-type: none"><li>(edirs3 DIR1 DIR2 DIR3 REGEXP)</li><li>(ediff-directories3 DIR1 DIR2 DIR3 REGEXP)</li></ul>	Compare files common to three directories. <ul style="list-style-type: none"><li>Prompts for directory A, B and C and a regexp to identify files: if empty: selects all files.</li></ul>
Compare versions of files in a given directory	<f11> e d r	<ul style="list-style-type: none"><li>(edir-revisions DIR1 REGEXP)</li><li>(ediff-directory-revisions DIR1 REGEXP)</li></ul>	Compare versions of files in a given directory. <ul style="list-style-type: none"><li>Ediff selects only the files that are under version control.</li><li>Prompts for directory and regexp to identify files: if empty: selects all files.</li></ul>
Compare text in 2 windows word-by-word	<f11> e w w	(ediff-windows-wordwise DUMB-MODE &optional WIND-A WIND-B STARTUP-HOOKS)	Compare text visible in 2 windows word-by-word. <ul style="list-style-type: none"><li>Uses current and other (next) window.</li></ul>
Compare text in 2 windows line-by-line	<f11> e w l	(ediff-windows-linewise DUMB-MODE &optional WIND-A WIND-B STARTUP-HOOKS)	Compare text visible in 2 windows line-by-line. <ul style="list-style-type: none"><li>Uses current and other (next) window.</li></ul>
Compare 2 regions word-by-word	<f11> e r w	(ediff-regions-wordwise BUFFER-A BUFFER-B &optional STARTUP-HOOKS)	Compare text visible in 2 regions word-by-word. <ul style="list-style-type: none"><li>Prompts for the 2 buffers and regions.</li></ul>
Compare 2 regions line-by-line	<f11> e r l	(ediff-regions-linewise BUFFER-A BUFFER-B &optional STARTUP-HOOKS)	Compare text visible in 2 regions line-by-line. <ul style="list-style-type: none"><li>Prompts for the 2 buffers and regions.</li></ul>
Patch file(s) and compare	<f11> e p f	<ul style="list-style-type: none"><li>(epatch &amp;optional ARG PATCH-BUF)</li><li>(ediff-patch-file &amp;optional ARG PATCH-BUF)</li></ul>	Query for a file name, and then run Ediff by patching that file. <ul style="list-style-type: none"><li>If optional PATCH-BUF is given, use the patch in that buffer and don't ask the user.</li><li>If prefix argument ARG, then: if even argument, assume that the patch is in a buffer. If odd -- assume it is in a file.</li></ul>
Patch a buffer then compare	<f11> e p b	<ul style="list-style-type: none"><li>(epatch-buffer &amp;optional ARG PATCH-BUF)</li><li>(ediff-patch-buffer &amp;optional ARG PATCH-BUF)</li></ul>	Run Ediff by patching the buffer specified at prompt. <ul style="list-style-type: none"><li>Without the optional prefix ARG, asks if the patch is in some buffer and prompts for the buffer or a file, depending on the answer.</li><li>With ARG=1, assumes the patch is in a file and prompts for the file.</li><li>With ARG=2, assumes the patch is in a buffer and prompts for the buffer.</li><li>PATCH-BUF is an optional argument, which specifies the buffer that contains the patch. If not given, the user is prompted according to the prefix argument.</li></ul>
Merge			
Merge 2 files	<f11> e m f	<ul style="list-style-type: none"><li>(ediff-merge FILE-A FILE-B &amp;optional STARTUP-HOOKS MERGE-BUFFER-FILE)</li><li>(ediff-merge-files FILE-A FILE-B &amp;optional STARTUP-HOOKS MERGE-BUFFER-FILE)</li></ul>	Merge two files without ancestor. <ul style="list-style-type: none"><li>Prompt for FILE-A and FILE-B, the names of the files to be merged.</li></ul>

Merge 2 files with ancestor	<f11> e m F	<ul style="list-style-type: none"> <li>(ediff-merge-with-ancestor FILE-A FILE-B FILE-ANCESTOR &amp;optional STARTUP-HOOKS MERGE-BUFFER-FILE)</li> <li>(ediff-merge-files-with-ancestor FILE-A FILE-B FILE-ANCESTOR &amp;optional STARTUP-HOOKS MERGE-BUFFER-FILE)</li> </ul>	Merge two files with ancestor. <ul style="list-style-type: none"> <li>Prompt for FILE-A and FILE-B, the names of the files to be merged, and FILE-ANCESTOR, the name of the ancestor file.</li> </ul>
Merge 2 buffers	<f11> e m b	(ediff-merge-buffers BUFFER-A BUFFER-B &optional STARTUP-HOOKS JOB-NAME MERGE-BUFFER-FILE)	Merge buffers without ancestor. <ul style="list-style-type: none"> <li>Prompt for BUFFER-A and BUFFER-B, the buffers to be merged.</li> </ul>
Merge 2 buffers with ancestor	<f11> e m B	(ediff-merge-buffers-with-ancestor BUFFER-A BUFFER-B BUFFER-ANCESTOR &optional STARTUP-HOOKS JOB-NAME MERGE-BUFFER-FILE)	Merge buffers with ancestor. <ul style="list-style-type: none"> <li>Prompts for BUFFER-A and BUFFER-B, the buffers to be merged, and BUFFER-ANCESTOR, their ancestor.</li> </ul>
Merge versions of files in a directory	<f11> e m d	<ul style="list-style-type: none"> <li>(edir-merge-revisions DIR1 REGEXP &amp;optional MERGE-AUTOSTORE-DIR)</li> <li>(ediff-merge-directory-revisions DIR1 REGEXP &amp;optional MERGE-AUTOSTORE-DIR)</li> </ul>	Merge versions of files in a given directory. <ul style="list-style-type: none"> <li>Ediff selects only the files that are under version control.</li> <li>Prompts for directory and regexp to identify files: if empty: selects all files.</li> </ul>
Merge versions of files in a directory using other versions as their ancestors	<f11> e m D	<ul style="list-style-type: none"> <li>(edir-merge-revisions-with-ancestor DIR1 REGEXP &amp;optional MERGE-AUTOSTORE-DIR)</li> <li>(ediff-merge-directory-revisions-with-ancestor DIR1 REGEXP &amp;optional MERGE-AUTOSTORE-DIR)</li> </ul>	Merge versions of files in a given directory using other versions as ancestors. <ul style="list-style-type: none"> <li>Ediff selects only the files that are under version control.</li> <li>Prompts for directory and regexp to identify files: if empty: selects all files.</li> </ul>
Merge file commons to 2 directories	<f11> e m c	<ul style="list-style-type: none"> <li>(edirs-merge DIR1 DIR2 REGEXP &amp;optional MERGE-AUTOSTORE-DIR)</li> <li>(ediff-merge-directories DIR1 DIR2 REGEXP &amp;optional MERGE-AUTOSTORE-DIR)</li> </ul>	Merge files common to two directories. <ul style="list-style-type: none"> <li>Run Ediff on a pair of directories, DIR1 and DIR2, merging files that have the same name in both.</li> <li>The third argument, REGEXP, is nil or a regular expression; only file names that match the regexp are considered.</li> <li>MERGE-AUTOSTORE-DIR is the directory in which to store merged files.</li> </ul>
Merge file commons to 2 directories with ancestors	<f11> e m C	<ul style="list-style-type: none"> <li>(edirs-merge-with-ancestor DIR1 DIR2 ANCESTOR-DIR REGEXP &amp;optional MERGE-AUTOSTORE-DIR)</li> <li>(ediff-merge-directories-with-ancestor DIR1 DIR2 ANCESTOR-DIR REGEXP &amp;optional MERGE-AUTOSTORE-DIR)</li> </ul>	Merge files in directories DIR1 and DIR2 using files in ANCESTOR-DIR as ancestors. <ul style="list-style-type: none"> <li>Ediff merges files that have identical names in DIR1, DIR2.</li> <li>If a pair of files in DIR1 and DIR2 doesn't have an ancestor in ANCESTOR-DIR, Ediff will merge without ancestor.</li> <li>The fourth argument, REGEXP, is nil or a regular expression; only file names that match the regexp are considered.</li> </ul>
Merge 2 versions of visited file	<f11> e m r	(ediff-merge-revisions &optional FILE STARTUP-HOOKS MERGE-BUFFER-FILE)	Merge two versions of the file visited by the current buffer.
Merge 2 versions of visited file with ancestor	<f11> e m R	(ediff-merge-revisions-with-ancestor &optional FILE STARTUP-HOOKS MERGE-BUFFER-FILE)	Merge two versions of the file visited by the current buffer with ancestor.
Specialized Ediff	Some packages provide specialization of Ediff-based comparisons.		
<b>ParInfer EDiff</b> Diff current code before/.after ParInfer modifications (See also: ¶¶I - Emacs Lisp)	<ul style="list-style-type: none"> <li>&lt;f12&gt; a D</li> <li>&lt;f11&gt; SPC l a D</li> </ul>	(parinfer-diff)	Diff current code and the code after applying Indent Mode in Ediff. Use this to browse and apply the changes. <div>  Requires the <a href="#">parinfer</a> package. </div> <div>  PEL activates this when the <b>pel-use-parinfer</b> customize variable is set to <b>t</b>. </div>

Diff & Merge — References

emacs vdiff github project	
Using Emacs as a merge program @ Mercurial Wiki	
GNU Emacs Ediff Manual	The built-in Ediff package has a lot of features. These are described in this manual. Support for file diff of 2 or 3 files, 3-way merge, diff with backup, directory level diffs, version control aware, etc...