

## File & Directory Local Variables

Operation	Keystroke	Function	Note
<a href="#">Emacs Variables</a>	Emacs supports specifying Emacs variable values. This can be quite useful to control Emacs behaviour for specified file, file types or files or file types inside a specific location. <ul style="list-style-type: none"> <li>For example you can:                             <ul style="list-style-type: none"> <li>identify the tab-width for a specific file, or</li> <li>the imenu-generic-expression pattern for a specific type of file, extending what is already available to match the DSL you are using inside a specific directory.</li> </ul> </li> </ul> The variables can be specified using 3 methods: <ul style="list-style-type: none"> <li><b>Method 1: File Variables.</b> Written inside the file to which the variables apply, using file variables written as special comment at the top or at the bottom of the file.</li> <li><b>Method 2: Per-Directory Local Variables.</b> Written inside a special Emacs-specific file (.dir-local.el) to control the value of variables inside all or specified files in the directory or directory tree.</li> <li><b>Method 3:</b> With Emacs Lisp code that identifies class of variables for specific file types, files in a directory tree. See:                             <ul style="list-style-type: none"> <li><a href="#">Using Directory Local Variable classes for individual files @ Emacs Wiki</a></li> <li><a href="#">dir-locals-set-class-variables and dir-locals-set-directory-class @ Emacs Manual in Per-Directory Local Variables</a></li> </ul> </li> <li>This method will be required if you want to use Emacs file or directory variables for a project where those are not accepted. You can put the required code inside your init.el file. Currently PEL does not support configuring it using customization.</li> </ul>		
Open this PDF file. See also: <a href="#">🔗 Help/Info</a>	<a href="#">&lt;f11&gt; f v &lt;f1&gt;</a>	<a href="#">(pel-help-pdf &amp;optional OPEN-WEB-PAGE)</a>	Open the <a href="#">🔗 File/Directory Variables</a> PDF using method specified by the <b>pel-open-pdf-method</b> user-option or the alternate one if a <code>command-prefix</code> (like <b>C-u</b> ) was used.
<ul style="list-style-type: none"> <li><a href="#">Inside a file: File Variables</a></li> </ul>	File variables control Emacs variable for the file into which they are specified. Emacs supports 2 ways to write the file variable specification inside a file, these commands support the first of those two ways: <ul style="list-style-type: none"> <li>1: the specification of the variable written inside the very first line using the following format: <code>-*- mode: modename; var: value; ... -*-</code> <ul style="list-style-type: none"> <li>For example, inside a Lisp file: <code>-*- mode: Lisp; fill-column: 75; comment-column: 50; -*-</code></li> </ul> </li> <li>2: at the end of a file with a line containing the string <code>'Local Variables:'</code>, and ends with a line containing the string <code>'End:'</code>.                             <ul style="list-style-type: none"> <li>For example, in a C file:                                     <pre>/* Local Variables: */ /* mode: c */ /* comment-column: 0 */ /* End: */</pre> </li> </ul> </li> </ul> The following commands can be used to add, modify and remove file variable specification on the first line of a file.		
<a href="#">Add a file variable</a>	<a href="#">&lt;f11&gt; f v =</a>	<a href="#">(add-file-local-variable-prop-line VARIABLE VALUE &amp;optional INTERACTIVE)</a>	Add file-local VARIABLE with its VALUE to the <code>-*-</code> line. <ul style="list-style-type: none"> <li>This command prompts for variable name and value.</li> <li>It deletes all existing settings of VARIABLE (except 'mode' and 'eval') and adds a new file-local VARIABLE with VALUE to the <code>-*-</code> line.</li> <li>If there is no <code>-*-</code> line at the beginning of the current file buffer then this function adds it.</li> </ul>
<a href="#">Delete a file variable</a>	<a href="#">&lt;f11&gt; f v -</a>	<a href="#">(delete-file-local-variable-prop-line VARIABLE &amp;optional INTERACTIVE)</a>	Delete all settings of file-local VARIABLE from the <code>-*-</code> line.
<a href="#">Copy all directory file variables</a>	<a href="#">&lt;f11&gt; f v c</a>	<a href="#">(copy-dir-locals-to-file-locals-prop-line)</a>	Copy directory-local variables to the <code>-*-</code> line.
<ul style="list-style-type: none"> <li><a href="#">Per-Directory Local Variables</a></li> </ul>	Emacs supports directory local variables that can apply to all files inside a given directory and its sub-directory tree. <ul style="list-style-type: none"> <li>The variables can be restricted by major modes and sub-directories.</li> <li>These files are stored inside a file named <code>.dir-locals.el</code> stored in the directory it controls.</li> <li>File local variables override directory local variables, so main settings may be stored inside the directory and can then be fined-tuned inside files.</li> <li>Normally directory local variables are stored inside a file named <code>.dir-locals.el</code>. It can also be stored inside the file <code>.dir-locals-2.el</code>. Emacs loads them both, and loads the <code>-2</code> file after the other. That way you can put the <code>.dir-locals.el</code> under version control and use the other to make personal or temporary customizations.</li> </ul> The following commands can be used to create and modify the content of the <code>.dir-locals.el</code> file located in the <b>current</b> directory. <div> <span>👉</span> If you are familiar with Emacs Lisp it is probably easier to edit the <code>.dir-locals.el</code> file directly, following the format described in the <a href="#">Emacs Manual Directory Local Variables</a> section and to be aware of the security concerns and the ability to force customization of settings that may be identified as unsafe by reading the <a href="#">Safety of File Variables</a> section. You may want to customize the value of <b>safe-local-variable-values</b> to allow some of your values. In any case, it's best to check the code in <code>.dir-locals.el</code> and to check the value of <code>safe-local-variable-values</code>.                     </div> <div> <span>⚠️</span> Directory variables are loaded <b>after</b> the major mode and its hooks are executed, preventing mode hooks to see the variables.                     <div> <span>📖</span> Because Emacs <b>normal-mode</b> function calls <code>(set-auto-mode)</code> first and later calls <code>(hack-local-variables)</code> if at all. <b>Two techniques</b> exists to circumvent this problem, and PEL uses them to allow controlling important variables like <b>imenu-generic-expression</b> the controls the parsing to extract imenu items.                     </div> </div>		
<a href="#">Add a directory variable</a>	<a href="#">&lt;f11&gt; f v D =</a>	<a href="#">(add-dir-local-variable MODE VARIABLE VALUE)</a>	Add directory-local VARIABLE with its VALUE and MODE to <code>.dir-locals.el</code> .
<a href="#">Delete a directory variable</a>	<a href="#">&lt;f11&gt; f v D -</a>	<a href="#">(delete-dir-local-variable MODE VARIABLE)</a>	Delete all MODE settings of file-local VARIABLE from <code>.dir-locals.el</code> .
<a href="#">Copy file local variable to directory .dir-locals.el</a>	<a href="#">&lt;f11&gt; f v D C</a>	<a href="#">(copy-file-locals-to-dir-locals)</a>	Copy file-local variables to <code>.dir-locals.el</code> .
<a href="#">Others</a>	The following commands can be used to see and control the current directory.		
<a href="#">List/change buffer's current default directory</a>	<b>M-x cd RET</b>	<b>(cd DIR)</b>	Prompt: shows current directory and allows to change the buffer's default directory to a new DIRectory. <ul style="list-style-type: none"> <li>If your environment includes a 'CDPATH' variable, try each one of that list of directories (separated by occurrences of 'path-separator') when resolving a relative directory name.</li> <li>The path separator is colon in GNU and GNU-like systems.</li> </ul>

### File & Directory Local Variables — References

Topic & Link	Description
<a href="#">GNU Emacs Manual: File Variables</a>	Describes the concept of Emacs file variables
<a href="#">GNU Emacs: Safety of File Variables</a>	Describes the concept of Emacs directory local variables
<a href="#">GNU Emacs: Per-Directory Local Variables</a>	Describes the safety issues related to Emacs file variables and Emacs way of dealing with safety.
<a href="#">Local Variables @ Emacs Wiki</a>	Short and sweet overview of the concept with description of the interaction with mode hooks. Must read for Emacs Lisp dev.