Geany 0.5

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Geany 0.5
by Enrico Troeger

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Chapter 1. Introduction

1.1. About

Geany is a small and lightweight integrated development environment. It was developed to provide a small and fast IDE, which has only a few dependencies from other packages. Another goal was to be as independent as possible from a special Desktop Environment like KDE or GNOME. So it is using only the GTK2 toolkit and therefore you need only the GTK2 runtime libraries to run Geany.

The basic features of Geany are:

- syntax highlighting
- code completion
- auto completion of often used constructs like if, for and while
- auto completion of XML and HTML tags
- call tips
- many supported filetypes like C, Java, PHP, HTML, Python, Perl, Pascal
- symbol lists

1.2. Where to get

You can obtain Geany from http://geany.uvena.de or perhabs from your distributor.

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Chapter 2. Installation

2.1. Requirements

For compiling Geany yourself, you will need the GTK (>= 2.6.0) libraries and header files. You will also need the Pango, Glib and ATK libraries and header files. All these files are available at http://www.gtk.org.

Further more you need, of course, a C compiler, for the included Scintilla library a C++ compiler and the make tool.

2.2. Source Compilation

Compiling Geany is quite easy. The following should do it:

```
% ./configure
% make
% make install
```

The configure script supports several common options, for a detailed list, type

```
% ./configure --help
```

In the case, that your system lacks dynamic linking loader support, you probably want to pass the option --disable-vte to the configure script. This prevents compiling Geany with dynamic linking loader support to automatically load `libvte.so.4` if available.

Geany has been successfully compiled and tested under Debian 3.1 Sarge, Debian 3.2 Etch, Fedora Core 4, LinuxFromScratch and FreeBSD 6.0. It also compiles under Mircosoft Windows™, but there are lots of changes to the makefiles necessary.

If there are any errors during compilation, check your build environment and try to find the error, otherwise contact the author at <enrico.troeger@uvena.de>.

2.3. Binary Packages

2.3.1. Fedora

You can find packages for Fedora Core 4 on http://geany.uvena.de/ (http://geany.uvena.de) in the download section.

2.3.2. Debian

Binary packages for Debian are available at http://debian.uvena.de/ (http://debian.uvena.de). You can add one of the following lines(depending on your system) to your apt `sources.list` to get automatically get the latest version of Geany:

deb http://debian.uvena.de/ ./stable/

deb http://debian.uvena.de/ ./testing/

2.3.3. SuSE

There are not yet packages for SuSE available.

Chapter 3. Usage

3.1. Getting Started

You can start Geany in the following ways:

- From the Desktop Environment menu

  Choose in your application menu of your used Desktop Environment: Development⟶Geany.

- From the command line

  To start Geany from a command line, type the following and press **Return**:

  `% geany`

3.2. Commandline options

Table 3-1. Commandline Options

Short option	Long option	Function
-n	--no-ctags	Do not load auto completion and call tip data. Use this option, if you do not want to use them. For more information see Section 3.3.2.
-t	--no-terminal	Do not load terminal support. Use this option, if you do not want to load the virtual terminal emulator widget at startup. If you do not have `libvte.so.4` installed, then terminal-support is automatically disabled.

Short option	Long option	Function
-l	--vte-lib	Specify explicitly the path including filename or only the filename to the VTE library, e.g. `/usr/lib/libvte.so` or `libvte.so`. This option is only needed, when the autodetection does not work.
-c directory_name	--config=directory_name	Use an alternate configuration directory. Default configuration directory is `~/.geany/` and there resides `geany.conf` and some template files.
-d	--debug	Runs Geany in debug mode, which means being verbose and printing lots of information.
-?	--help	Show help information and exit.
-v	--version	Show version information and exit.
	[files ...]	Opens all given files at startup. This option causes Geany to ignore loading stored files from the last session (if enabled).

Geany supports all generic GTK options, a list is available on the help screen.

3.3. General

3.3.1. Startup

At startup, Geany loads the 15 first files from the last time, Geany was launched. You can disable this feature in the preferences dialog(see Figure 3-2). If you specify some files on the commandline, only these files will be opened. But you can find the files from the last session in the file menu. There is an item "Recent files". It contains the last 15 recently opened files. It may be that Geany not exactly loads 15 files, this depends on the compile time option GEANY_SESSION_FILES, the default is 15. For details see Section 3.5.1.

3.3.2. Global C tags

If a C file(with extension is c, cpp, h, etc.) is opened, a global tags file is loaded once, which contains many function declarations from the glibc and some other libraries, like X, Bonobo, Gnome, GTK, Glib and so on. These declarations are used for call tips and auto completion. These tags are only useful if you

are writing C or C++ source code. So if you know, that you do not need these things, you can skip loading this tag file. To do so, start Geany with the argument "-n" or "--no-ctags", for more information see Section 3.2.

3.3.3. Virtual terminal emulator widget (VTE)

If you have installed `libvte.so` in your system, it is loaded automatically by Geany. Then you have a terminal widget in the notebook at the bottom.

If Geany cannot find `libvte.so` at startup, the terminal widget will not be loaded. So there is no need to install the package containing this file in order to run Geany. Additionally, you can disable the use of the terminal widget by commandline option, for more information see Section 3.2.

You can use this terminal (from now on called VTE) nearly as an usual terminal program like xterm. There is a basic clipboard support. You can paste the content of the clipboard by pressing the middle mouse button in the VTE (on 2-button mice, the middle button can often be simulated by pressing both mouse buttons together) or by pressing the right mouse button to open the popup menu and choose Paste. To copy text from the VTE, just select the desired text and then press the right mouse button and choose Copy from the popup menu.

> **Note:** Geany tries to load `libvte.so`. If this fails, it tries to load `libvte.so.4`. If this fails too, you should check whether you installed libvte correctly. Again, Geany runs also without this library. But it could be, that the library is called something else than `libvte.so.4` (e.g. on FreeBSD 6.0 it is called `libvte.so.8`). So please set a link to the correct file (as root).
>
> ```
> # ln -s /usr/lib/libvte.so.X /usr/lib/libvte.so.4
> ```
>
> Obviously, you have to adjust the paths and set X to the number of your `libvte.so`.

3.4. Search and Replace

You can use regular expressions in the search dialog, just by activating the check box(see the image

below). Detailed information about special characters can be found in the Table 3-2.

Figure 3-1. Search dialog
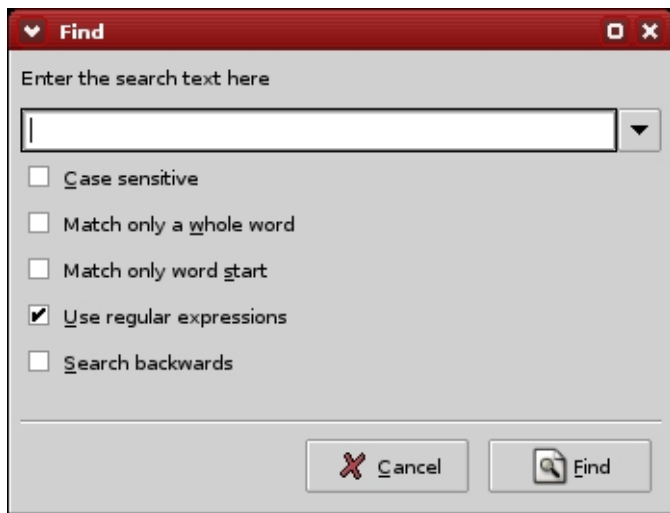
Table 3-2. Regular expressions

In a regular expression, the following characters are interpreted:	
.	Matches any character.
\(	This marks the start of a region for tagging a match.
\)	This marks the end of a tagged region.
\n	Where n is 1 through 9 refers to the first through ninth tagged region when replacing. For example, if the search string was Fred\([1-9]\)XXX and the replace string was Sam\1YYY, when applied to Fred2XXX this would generate Sam2YYY.
\<	This matches the start of a word.
\>	This matches the end of a word.
\x	This allows you to use a character x that would otherwise have a special meaning. For example, \[would be interpreted as [and not as the start of a character set.

In a regular expression, the following characters are interpreted:	
[...]	This indicates a set of characters, for example, [abc] means any of the characters a, b or c. You can also use ranges, for example [a-z] for any lower case character.
[^...]	The complement of the characters in the set. For example, [^A-Za-z] means any character except an alphabetic character.
$	This matches the end of a line.
*	This matches 0 or more times. For example, Sa*m matches Sm, Sam, Saam, Saaam and so on.
+	This matches 1 or more times. For example, Sa+m matches Sam, Saam, Saaam and so on.

3.5. Preferences

should be written

Figure 3-2. General tab in preferences dialog
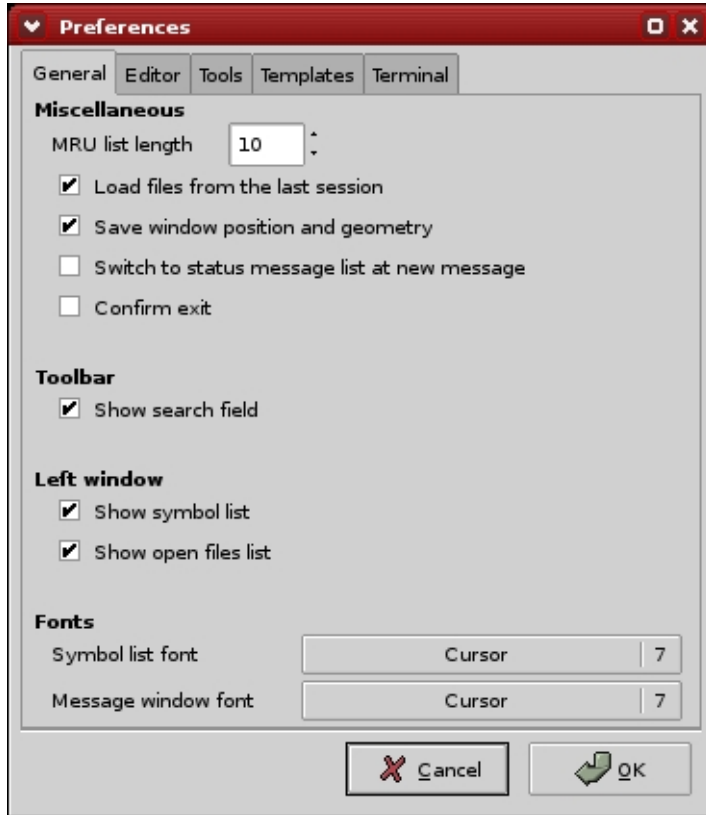
Figure 3-3. Editor tab in preferences dialog
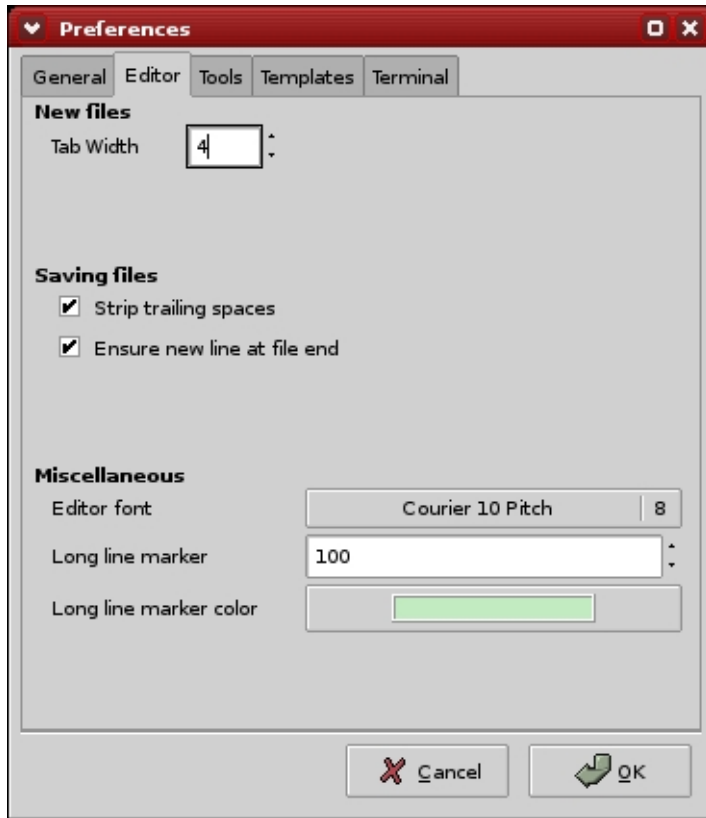
Figure 3-4. Tools tab in preferences dialog
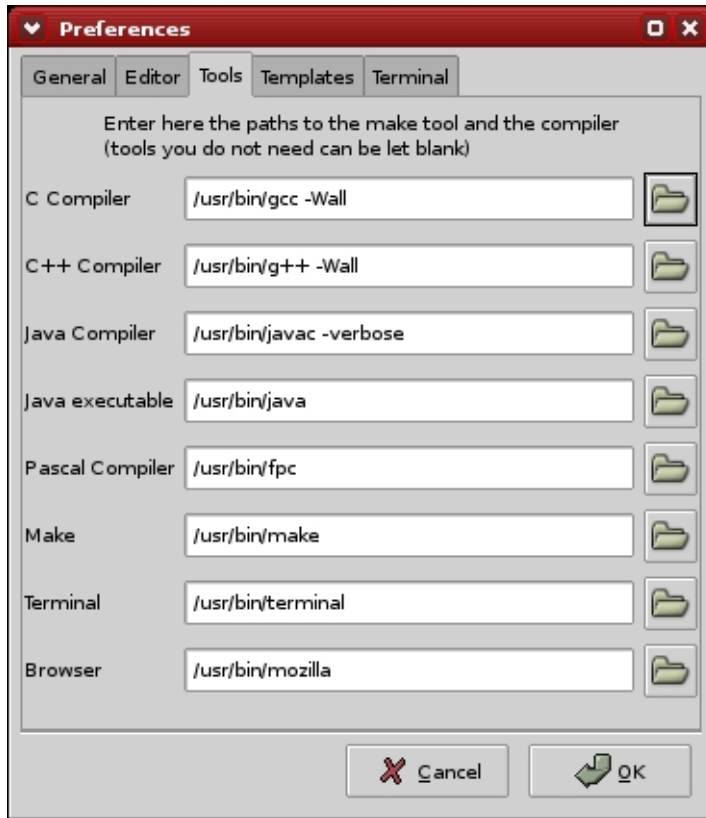
Figure 3-5. Template tab in preferences dialog
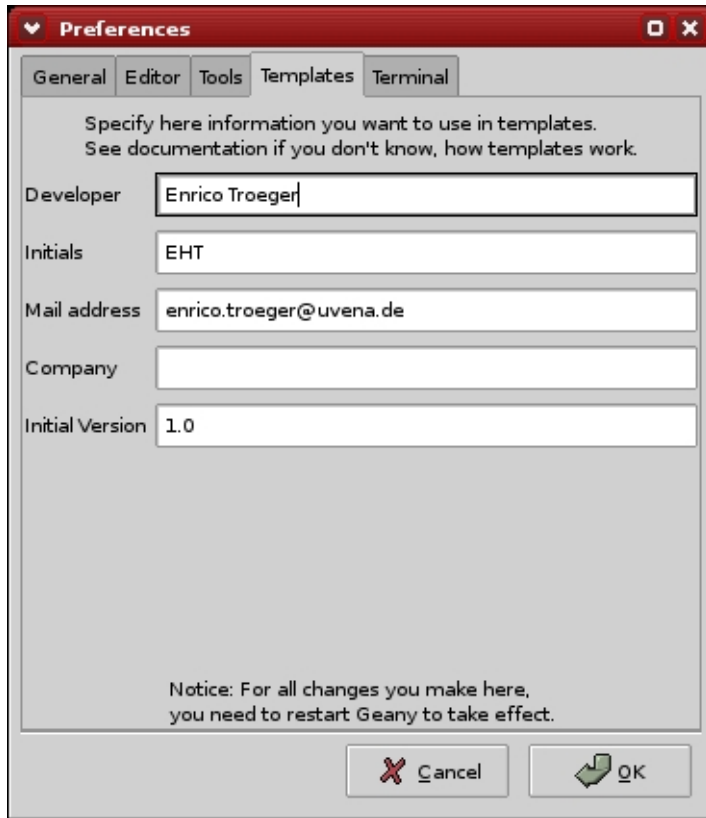
Figure 3-6. VTE tab in preferences dialog
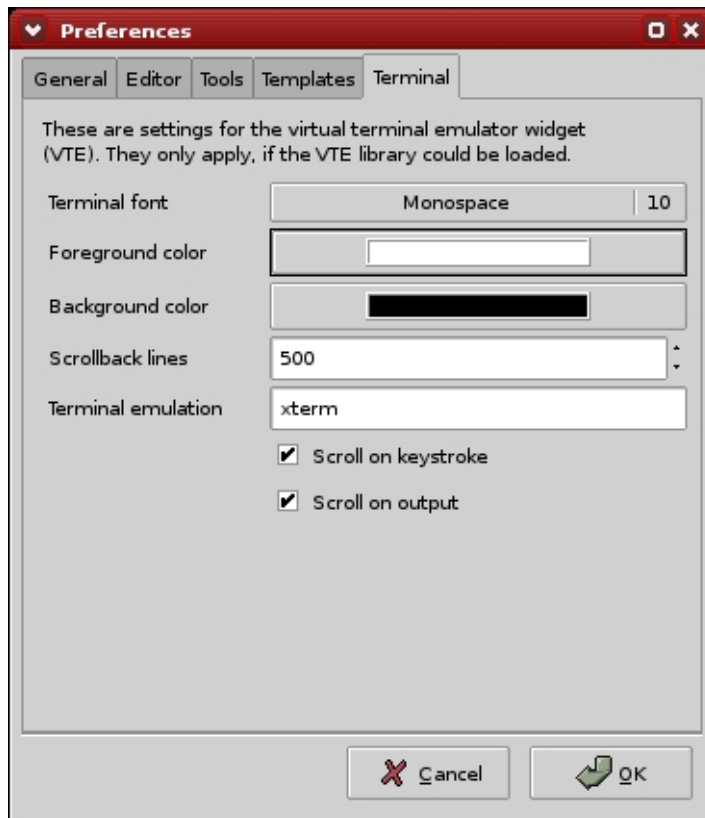
3.5.1. Compile time options

There are some options which can only changed at compile time. To change these options, look into `src/geany.h` to change these settings. To find it, look for a block of lines starting with "#define GEANY_*".

Table 3-3. Compile time options

Option	Description	Default
GEANY_MAX_OPEN_FILES	The limit how many files can be open at the same time.	25

Option	Description	Default
GEANY_SESSION_FILES	How many files should be reopened from the last run. Obviously, the value should be smaller than GEANY_MAX_OPEN_FILES.	15
GEANY_WORDCHARS	These characters define the word boundaries.	(look at sourcecode)
GEANY_MAX_AUTOCOMPLETE_WORDS	How many auto complete suggestions should Geany provide.	30
GEANY_STRING_UNTITLED	A string used as name for new files. Be aware that the string can be translated, so change it only if you know what you are doing.	untitled

3.6. File types

should be written

3.7. Templates

Geany supports several templates for file headers, multiline comments(frame comments), function descriptions, a typical ChangeLog entry and a short GPL notice. To use this templates, just open the edit menu or open the popup menu by right-clicking in the editor widget, and choose "Insert Comments" and insert templates as you want.

Some templates like file header or ChangeLog entry, will always be inserted at the top of the file.

To insert a function description, the cursor must be inside of the function, so that the function name can be determined automatically. The description will be positioned correctly one line above the function, just check it out. If the cursor is not inside of a function or the function name cannot be determined, you cannot insert a function description.

Each template can be customized to your needs. The templates are in the configuration directory, which is in ~/.geany/ (see Section 3.2 for further information about configuration directory). Just open the desired template with an editor (ideally Geany ;-)) and edit the template as your needs. There are some wildcards which will be automatically replaced by Geany at startup.

All wildcards must be enclosed by "{" and "}", e.g. {date}.

In the configuration dialog you can find a tab "Templates"(see Figure 3-5). You can define the default values which will be inserted in the templates. You should restart Geany after made changes, because they are only read at startup.

Since Geany 0.3 there are also templates for creating new files. They can be found in `~/.geany/`, too. All template files for creating new files begin with template.filetype. followed by the filetype. At creating a new file with a filetype template, the template for the fileheader is automatically prepended. Please note, that the complete behaviour is still under development and will probably be changed in one of the next releases. Sorry.

Table 3-4. Template wildcards

Wildcard	Description	Available in following templates
developer	The name of the developer.	filetypes, file header, function description, ChangeLog entry
initial	The initials of the developer name, e.g. "ET" for Enrico Troeger or "JFD" for John Foobar Doe.	filetypes, file header, function description, ChangeLog entry
mail	The email address of the developer.	file header, function description, ChangeLog entry
company	The company name, the developer is working for.	filetypes, file header, function description, ChangeLog entry
year	The current year in the format: YYYY	filetypes, file header, function description, ChangeLog entry
version	The initial version of a new file.	filetypes, file header, function description, ChangeLog entry
date	The current date in the format: YYYY-MM-DD	filetypes, file header, function description, ChangeLog entry
untitled	The string "untitled" (this will be translated to your locale), used in filetype templates	filetypes, file header, function description, ChangeLog entry
datetime	The current date and time in the format: DD.MM.YYYY HH:mm:ss ZZZZ	file header, function description
filename	The filename of the current file. Only available for the file header template.	file header

Wildcard	Description	Available in following templates
gpl	This wildcard inserts a short GPL notice.	file header
functionname	The function name of the function at cursor position. This wildcard will only be replaced in the function description template.	function description

If you need any other wildcards or a special date/time format, please email the author `<enrico.troeger@uvena.de>`.

Appendix A. Geany key mapping

A.1. Geany key mapping

The following table lists several useful key codes, which you can use in Geany.

Table A-1. Key Table

Key	Function
File operations	
Ctrl-N	Create new file
Ctrl-O	Open file
Ctrl-S	Save current file
Ctrl-R	Reload the current file. All unsaved changes will be lost.
Ctrl-Shift-S	Save all open files
Ctrl-W	Close current file
Alt-D	Close all open files
Editing operations	
Ctrl-X	Cut the current selection and copy it into the clipboard
Ctrl-C	Copy the current selection into the clipboard
Ctrl-V	Paste the content of the clipboard at the current position
Ctrl-Z	Undo the last action
Ctrl-Y	Redo the last action
Ctrl-G	Duplicate the current line
Ctrl-A	Select all
Ctrl-D	Comment current line or selection
Ctrl-Space	Show auto completion list
Ctrl-Return	Show list of available(in the workspace) macros and variables
Alt-Space	Show call tips for the current function or method
Shift-Space	Insert just a blank. Useful after typing if or while, to explicitly suppress the use of construct auto completion
Ctrl-Shift-R	Reload the tag/symbol list
Finding text	

Key	Function
Ctrl-F	Open find dialog
F3	Find next
Building files	
F8	Compile the current file.
F9	Build the current file.
Shift-F9	Build the current file with the make tool.
F5	Execute the current file in a terminal emulation.
Miscellaneous	
Ctrl-Left	Moves the cursor to the left word boundary.
Ctrl-Right	Moves the cursor to the next word.
Alt-Left	Switch to the previous open document
Alt-Right	Switch to the next open document
Ctrl-+	Zoom in the text
Ctrl--	Zoom out the text
Ctrl-P	Open preferences dialog
F1	Show help
F6	Switch to VTE widget
F11	Switch to fullscreen mode
F12	Switch to Scribble widget
Ctrl-Q	Quit

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The hypothetical commands 'show w' and 'show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than 'show w' and 'show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989 Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.