



# GNU/Linux IDE's

(integrated development environments)

Created by Robin van Grinsven



```
User@linux:~# touch presentation.odp
```

# Intro

Only target C++ development.

Text editors separate.

Why not Visual studio.

```
User@linux:~# presentation.odt << slide intro.odp
```

# IDE's

Alternatives - 48

Comments - 5

Reviews - 4

Website

48 IDE's  
15 for C++

## Alternatives to Microsoft Visual Studio for Linux with any license



Netbeans\*: build in terminal



Eclipse\*: extensible development platform



Visual Studio Code: striped down visual studio.



Kdevelop\*: extensible by plugins, KDE project



Code::Blocks\* : meet the most demanding needs for it users



CodeLite\* : light weight ide



Clion : a jetbrains project



Monodevelop\* : featurefull IDE.  
Also used in unity

```
User@linux:~# presentation.odp << slide IDE's.odp
```

\* opensource

Resources: <https://alternativeto.net>

# Text editor's

## Alternatives to GNU Emacs for Linux



Atom \*: new hackable editor



Emacs \*: highly customizable and flexible text editor. But start stripped down. Tiled windows management.



Sublime : slick designed text editor.



Vim\* : really light weight. Advanced text editor. In terminal



Geany\*: small lightweight text editor



Gedit\*: Gnome text editor. Syntax Highlight



Kate\*: KDE desktop environment text editor. With many plugins



Nano\*: basic text terminal editor from linux

# Unix commands for IDE's behavoir

- Compiling: gcc/g++
- Run command: ./excuteable
- Debug: gdb
- Deassembly : objdump
- Source control: git –push –pull
- Praser generator: bison
- Marco processor : m4
- Automated compiling: make, Autoconf, Automake, Libtool

# IDE's requests

- File management
  - Saves
  - Project management
  - Source control
- Code evaluation
  - Compiler
  - Debugger
  - Disassembler
  - Break point support
- Text Editing
  - Multi cursor
  - Auto tabbing
  - Find and replace

# File management

For this multiple features are developed:

- Auto saving
- Buffer editing(not editing the original file directly)
- Buffer saving.
- Project Files overview
- Auto generate header files
- Auto generate project compiler file
- sources control support: git, perforce, svn

# Comparison file management

programs	Auto-save(AS)	Buffer(AS)	Overview	Header Files	ProjectM File	Source control
Code::Blocks	Plugin	-	Yes	Basic	.cbp	Plugin: svn,git
CodeLite	Integrated: plugin	-	Yes	Full	no	Plugin:svn,git
Eclipse	Plugin	-	Yes	No	.eclipseproduc t	Plugin: git
Emacs	Change config	Yes	No	No	No	VC:git,svn, plugin: p4v
Mono-develop	Yes	-	Yes	Basic	mdtool	svn,git, plugin p4v
sublime	Yes	-	Yes	no	no	git,svn
vim	plugin	-	no	no	no	Plugin: git,svn,p4v
Visual studio code	Yes	-	Yes	Basic	Yes	Plugin: git,P4v Extern: svn



# Code evaluation

programs	Compiler	Debugger	Profiler	Disassambler	Break point
Code::Blocks	MinGW + custom	GNU GDB	Yes	yes	yes
CodeLite	GCC, Clang, VC + custom	Yes(multi-threading)	Valgrind	LLVM	Yes
Eclipse	External	yes	Yes	yes	yes
Emacs	GCC,make, terminal interface	GDB GUD	Yes(text)	External	Yes GUD
Mono-develop	GCC + custom	yes	no	no	no
sublime	External	plugin	no	External	Yes Xdebug
vim	External	plugin	no	External	Hard to use
Visual studio code	own	own	?	?	?

# Text editing

- Auto indent
- Find and replace
- Multi cursor
- Function list
- Multi window
- Spell checking
- Auto completion
- Code folding

# Text editing

programs	Auto indent	Find and replace	Multi cursor	Class browser	Multi window	Spellcheck	Auto completion	Code folding
Code::Blocks	yes	yes	no	Yes	yes	No	yes	yes
CodeLite	plugin	yes	Build in	yes	yes	plugin	Poor	no
Eclipse	Yes	Yes	yes	yes	yes	Yes	Yes	Yes
Emacs	Yes	Yes	Plugin	Yes	Yes(tile design)	Yes	Yes(iron)	yes
Mono-develop	Yes	Yes	No	Yes	yes	No	yes	?
sublime	Yes	yes	yes	Yes(over project)	Yes: no overlaps	Yes	yes	yes
vim	Yes	yes	plugin	plugin	Yes	Yes	yes	yes
Visual studio code	Yes	yes	Yes	yes	Yes :no overlaps	plugin	Yes(intelliJ)	yes

Source, own website forums, [wiki:Comparison\\_of\\_text\\_editors](#), [Comparison\\_of\\_integrated\\_development\\_environments](#). Slant.co











































# Notable feature's for program's

























- Mono develop: visual studio key binding
- Code blocks: read MSVC files.
- Emacs: highly customizable.
- sublime : quick navigation trough code/ slick design.
- Vim: very light weight
- Visual studio code: slick design

# Con's for the programs

- Mono develop: No deassembler.
- Code blocks: cannot display data structure. unstable
- Emacs: short-cut heavy design. And use layout of rare used keyboard.
- sublime : text editor
- Vim: work in terminal
- Visual studio code: name similar to visual studio. Makes hard to find it's own features

# Slant result

	#1 Vim	32  8 	–	Windows; macOS; *nix; iOS; A...	Vim Licen
	#2 Qt Creator	34  4 	–	–	–
	#3 GNU Emacs	10  1 	\$0	–	–
	#4 CodeLite	9  1 	–	Windows, OS-X and Linux	GPL
	#5 Netbeans	8  1 	–	Windows, macOS, Linux	–
	#6 CLion	31  15 	–	Windows, MacOS, Linux	Propriet
	#7 Spacemacs (emacs)	5  0 	–	Windows, MacOS, Linux	GPLv3
	#8 Geany	7  2 	Free	Windows; OSX; *nix	GPL
	#9 KDevelop	7  1 	–	–	–
	#10 Atom	3  0 	–	Windows, Mac, Linux	MIT
	#11 Visual Studio Code	6  4 	–	Windows; macOS; Linux	MIT
	#12 CodeBlocks	9  2 	–	–	–
	#13 Neovim	3  1 	–	Windows; macOS; *nix	Apache
	#14 Sublime Text	6  2 	\$70	Windows; macOS; Linux	Propriet

	#15 Gnome Builder	6  1 	0	–	–
	#16 Microsoft Visual ...	0  2 	–	Windows, Mac OS X	–
	#17 Eclipse (CDT)	4  6 	–	–	–
	#18 SlickEdit	1  0 	–	–	–
	#19 SpaceVim (Vim/N...)	0  0 	–	–	–
	#20 spf13-vim	0  0 	–	–	–
	#21 Ninja IDE	0  0 	–	–	–
	#22 PyCharm	0  6 	–	–	–