VI Mode

Introduction

Kate's VI mode is a project to bring Vim-like, modal editing to the Kate text editor and by extension to other KDE programs who share the same editor component. The project started as a Google Summer of Code project in 2008 – where all the basic functionality was written. I have continued to maintain and further develop this code and the number of missing features from Vim are slowly decreasing. Most Vim users will already be productive in Kate's VI mode. A list of what's missing is found at the bottom of the page.

This page is meant to be an updated overview of this work.

> To enable the VI input mode, go to
> **Settings → Configure Kate... → Editing → VI Input Mode**.
> It can also be toggled with the "VI Input Mode" setting in the "Edit" menu. (The default shortcut key is Meta+Ctrl+V – where Meta usually is the Windows key).

Goals

The goal of the VI mode is *not* to be a complete replacement for Vim and support *all* Vim's features. Its aim is to make the "Vim way" of text editing – and the Vim habits learned – available for programs using the Kate text editor as their internal editor. These programs include

1. The Kate Text editor
2. KWrite – KDE's simple text editor
3. KDevelop – An advanced IDE for many programming languages
4. Kile – A LaTeX editor

The VI mode aims integrate nicely with the programs and deviate from Vim's behaviour where it makes sense. For example, `:w` will open a save dialogue in Kate's VI mode.

Incompatibilities with Vim

There are only a few features of Kate's VI mode which are incompatible with Vim (not counting things missing). They are listed below together with the respective reasons.

1. **Kate:** `U` and `Ctrl+r` is redo
   Vim: `Ctrl+r` is normal redo, `U` is used to undo all latest changes on one line
   The reason for having `U` act as redo in Kate's VI mode is that the shortcut `ctrl+r` by default is taken by Kate's replace function (search and replace). By default, the VI mode won't override Kate's shortcuts (this can be configured in Settings → Configure Kate... → Editing → Vi Input Mode), therefore a redo-action needs to be available as a “regular” key press, too. Besides, the behaviour of the U command in Vim doesn't map well to Kate's internal undo system, so it would be non-trivial to support anyway.
2. **Kate:** `:print` shows the "print" dialogue
   Vim: `:print` prints the lines of the given range like its grandfather ed Commands like :print are available not only in the VI mode but for users using “regular” Kate, too – I have therefore chosen to let the `:print` command open the print dialogue – following the principle of least surprise instead of mimicking Vim's behaviour.
3. **Kate:** `Y` yanks to end of line.
   Vim: `Y` yanks whole line, just like `yy`. VI's behaviour for the `Y` command is in practice a bug; For both change and delete commands, `cc` / `dd` will do its action on the current line and `C` / `D` will work from the cursor column to the end of the line. However, both `yy` and `Y` yanks the current

line.In Kate's VI Mode `Y` will yank to the end of the line. This is described as "more logical" in the Vim documentation.

4. **Kate:** `:map` alters the selected lines of the document using the provided JavaScript expression. **Vim:** `:map` adds the provided mapping to Normal and Visual modes. The "map" command was already reserved by Kate; in 4.12+, you can use a combination of `:nmap` and `:vmap` to replace it.

Supported Commands

Supported normal/visual mode commands

Key	Description
a	Enter Insert Mode and append
A	Enter Insert Mode and append to EOL
i	Enter Insert Mode
I	Insert before first non-blank char in line
v	Enter Visual Mode
V	Enter Visual Line Mode
<c-v>	Enter Visual Block Mode
gv	Re-select Visual
o	Open new line under
O	Open new line over
J	Join lines
c	Change
C	Change to EOL
cc	Change line
s	Substitute char
S	Substitute line
dd	Delete line
d	Delete
D	Delete to EOL
x	Delete char
X	Delete char backward

Key	Description
gu	Make lowercase
guu	Make lowercase line
gU	Make uppercase
gUU	Make uppercase line
y	Yank
yy	Yank line
Y	Yank to EOL
p	Paste
P	Paste before
r.	Replace character
R	Enter replace mode
:	Switch to command line
/	Search
u	Undo
<c-r>	Redo
U	Redo
m.	Set mark
>>	Indent line
<<	Unindent line
>	Indent lines
<	Unindent lines
<c-f>	Scroll page down
<pagedown>	Scroll page down
<c-b>	Scroll page up
<pageup>	Scroll page up
<c-u>	Scroll half page up
<c-d>	Scroll half page down
zz	Centre view on cursor
ga	Print character code
.	Repeat last change
==	Align line

Key	Description
=	Align lines
~	Change case
<c-a>	Add to number
<c-x>	Subtract from number
<c-o>	Go to prev jump
<c-i>	Go to next jump
<c-w>h	Switch to left view
<c-w><c-h>	Switch to left view
<c-w><left>	Switch to left view
<c-w>j	Switch to down view
<c-w><c-j>	Switch to down view
<c-w><down>	Switch to down view
<c-w>k	Switch to up view
<c-w><c-k>	Switch to up view
<c-w><up>	Switch to up view
<c-w>l	Switch to right view
<c-w><c-l>	Switch to right view
<c-w><right>	Switch to right view
<c-w>w	Switch to next view
<c-w><c-w>	Switch to next view
<c-w>s	Split horizontally
<c-w>S	Split horizontally
<c-w><c-s>	Split horizontally
<c-w>v	Split vertically
<c-w><c-v>	Split vertically
gt	Switch to next tab
gT	Switch to prev tab
gqq	Format line
gq	Format lines
q. / q	Begin/ finish recording macro using the named macro register.

Supported motions

Key	Description
h	Left
<left>	Left
<backspace>	Left
j	Down
<down>	Down
<enter>	Down to first non blank
k	Up
<up>	Up
–	Up to first non blank
l	Right
<right>	Right
<space>	Right
$	To EOL
<end>	To EOL
	To 0 column
<home>	To 0 column
^	To first character of line
f.	Find char
F.	Find char backward
t.	To char
T.	To char backward
;	Repeat last t. or f. command
,	Repeat last t. or f. command
n	Find next
N	Find prev
gg	To first line
G	To last line
w	Word forward
W	WORD forward

Key	Description
b	Word backward
B	WORD backward
e	To end of word
E	To end of WORD
ge	To end of prev word
gE	To end of prev WORD
%	To matching item
`[a-zA-Z><]	To mark
'[a-zA-Z><]	To mark line
[[	To previous brace block start
]]	To next brace block start
[]	To previous brace block end
][	To next brace block end
*	To next occurrence of word under cursor
#	To prev occurrence of word under cursor
H	To first line of window
M	To middle line of window
L	To last line of window
gj	To next visual line
gk	To prev visual line

Supported text objects

Key	Description
iw	Inner word
aw	A word
iW	Inner WORD
aW	A WORD
i"	Inner double quote
a"	A double quote
i’	Inner single quote

Key	Description
a’	A single quote
i`	Inner back quote
a`	A back quote
ib	Inner paren
i)	Inner paren
i(	Inner paren
ab	A paren
a)	A paren
a(	A paren
iB	Inner curly bracket
o}	Inner curly bracket
i{	Inner curly bracket
aB	A curly bracket
a}	A curly bracket
a{	A curly bracket
i<	Inner inequality sign
i>	Inner inequality sign
a<	A inequality sign
a>	A inequality sign
i[	Inner bracket
I]	Inner bracket
a[	A bracket
a]	A bracket
i,	Inner comma
a,	A comma

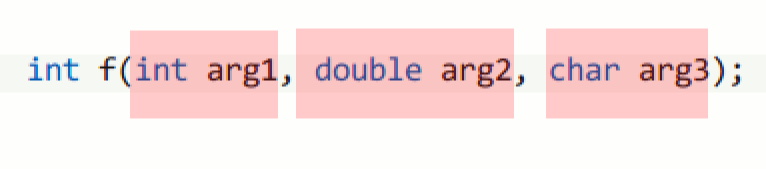
Supported insert mode commands

Key	Description
<c-d>	Unindent
<c-t>	Indent

Key	Description
<c-e>	Insert from below
<c-y>	Insert from above
<c-w>	Delete word
<c-r>.	Insert content of register
<c-o>	Switch to normal mode for one command
<c-a>	Increase number under cursor
<c-x>	Decrease number under cursor

The *Comma* Text Object

This is something that I have been missing in Vim. The *comma* text object makes it easy to modify parameter lists in C-like languages and other comma separated lists. It is basically the area between two commas or between a comma and a bracket. In the line shown in the illustration to the right, the three ranges this text object can span are highlighted in red.



```
int f(int arg1, double arg2, char arg3);
```

Comma text object ranges. If the cursor is over, say, “arg2”, pressing c i , (“change inner comma”) would delete “double arg2” and place the cursor between the two commas in insert mode. A very convenient way to change a function's parameters.

Emulated Vim Command Bar

Kate 4.11 introduced a hidden config option that make `/`, `?` and `:` bring up a new search/ command in place of the usual Kate Find / Replace / Command-line bar. The bar is intended to replicate many of the features of Vim's command bar, and also to fix many of the issues with Kate Vim mode's interaction with Kate's Find/Replace bar (interactive replace not working; incremental search not positioning the cursor correctly; not usable in mappings/macros; etc).

The following shortcuts are provided by the emulated command bar; as with Vim, these can be remapped with cmap, cnoremap, etc:

Key	Description
<c-r>.	insert contents of register.
<c-r><c-w>	Insert word under the (document) cursor.
<c-p>	Invoke context-specific completion (see below) move back/ up in the completion list.
<c-p>	Move forward/ down in the completion list.
<c-space>	Kate Vim Extension. Auto-complete word from document.
<c-d>	Kate Vim Extension. In a sed-replace expression *(i.e. s/find/replace/[g][c][i])*, clear the "find" term and place the cursor there.
<c-f>	Kate Vim Extension. In a sed-replace expression *(i.e. s/find/replace/[g][c][i])*, clear the “replace” term and place the cursor there.
<c-g>.	Kate Vim Extension. As with ., insert the content of the named register, but escape it in such a way that when used with a search, we search for the literal content of the register; not the content of the register interpreted as a regex.

The "context-specific completion" is decided as follows:

- In a search bar (`/` or `?`), auto-complete from search history (which includes searches initiated via `*` ; and `#` ; searches done in sed-replace expressions; etc.)
- In an empty command bar (`:`), auto-complete from command history (NB: auto-completion of command names is invoked automatically when you begin typing).
- In a command-bar containing a sed-replace expression (e.g. `:s/find/replace/gc`), if the cursor is positioned over "find", auto-complete from the "search" history; if over the "replace", auto-complete from the history of "replace" terms.

When executing a sed-replace expression in the command bar with the "c" flag (e.g. `s/find/replace/gc`), a Vim-style interactive search/replace expression will be initiated.

Some example usages of the emulated command bar, with GIF animations, are given in this blog. In 4.11, the emulated command bar can be enabled by setting the hidden config option "Vi Input Mode Emulate Command Bar" to `true` in your katerc/kwriterc/kdeveloprc.

Missing Features

As stated earlier, the goal of Kate's VI Mode is not to support 100% of Vim's features, however, there are some features which are sorely missed

- Visual block mode – especially the ability to prepend/append text to the visual block selection.
- Having ex commands available in other programs than the Kate application.
- The search code needs improvement and the * and # commands should just be regular searches.

If you miss other features or want to help on the ones mentioned above, feel free to contact me or send patches! :-)

Change Log

- **2010-05-16:**
  Initial version. Collected the information from blog entries and README files to make a single source of current information.
- **2010-05-17:**
  `Ctrl+A` and `Ctrl+X` added (increment/decrement number under cursor).
- **2010-08-30:**
  Moved page to kate-editor.org.
- **2010-09-10:**
  Fixed the text on the comma text object and made some formatting fixes
- **2021-02-03:**
  Converted key-binding tables to markdown for hugo.

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