#### Introduction to Vim



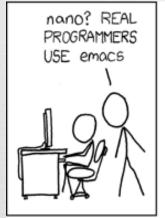
Brandon Liu CS 50—November 4, 2012

#### What is Vim?



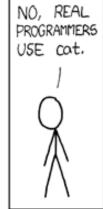
#### What is Vim?

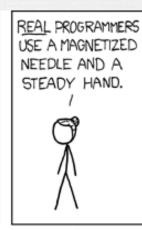


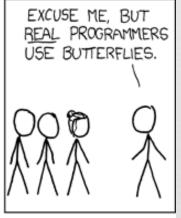






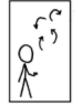








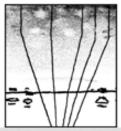
THE DISTURBANCE RIPPLES OUTWARD, CHANGING THE FLOW OF THE EDDY CURRENTS IN THE UPPER ATMOSPHERE.





THESE CAUSE MOMENTARY POCKETS OF HIGHER-PRESSURE AIR TO FORM,

WHICH ACT AS LENSES THAT DEFLECT INCOMING COSMIC RAYS, FOCUSING THEM TO STRIKE THE DRIVE PLATTER AND FLIP THE DESIRED BIT.





NICE.
'COURSE, THERE'S AN EMACS
COMMAND TO DO THAT.

OH YEAH! GOOD OL'

C-x M-c M-butterfly...

DAMMIT, EMACS.

#### What is Vim?



- Advanced programmer's text editor
- Designed expressly for efficient text editing
- Real IDE-like features not built-in, but 1000's of plugins
- Righly customizable and extensible
- Incredibly powerful—will double or triple your productivity!

```
vimrc (~) - GVIM
 Press ? for help
                                                                                                                                                                                      otes.vim (C:\Program Files\Vim\vimfiles
                                   " while code has a very dark grey background.
  (up a dir)
                                15 set background=dark
                                                                                                                                                                                         g:notes bold headers
/Program Files/Vim/vimfiles/
                                                                                                                                                                                        lor sample_pack.vim (C:\Program Files
                                16 hi clear
 +autoload/
                                                                                                                                                                                      metacosm.vim (C:\Program Files\Vim\vimf
                                17 if exists("syntax_on")
                                       syntax reset
 +backup/
 +colors/
                                19 endif
                                                                                                                                                                                         colors_name
 +compiler/
                                                                                                                                                                                      vimrc (C:\Users\rmelton)
 +doc/
                                21 let colors name = "metacosm"
+ftdetect/
                                                                                                                                                                                         Tlist Auto Open
 +ftplugin/
                                                                                                                                                                                         Tlist Compact Format
+indent/
                                                                                                                                                                                         Tlist Ctags Cmd
 +keymap/
                                                                                                                                                                                         Tlist_Enable_Fold_Column
 +macros/
                                26 " Primary (hyper/selected/colored background)
                                                                                                                                                                                         Tlist Exist OnlyWindow
 ~plugin/
                                                                                                                                                                                         Tlist File Fold Auto Close
   -bufexplorer.vim
                                28 " Search
                                                                                                                                                                                         Tlist_Sort_Type
   -closetag.vim
                                29 hi IncSearch guibg=black guifg=cyan
                                                                                                                                                                                         Tlist Use Right Window
                                30 hi Search guibg=black guifg=cyan
                                                                                                                                                                                         Tlist WinWidth
   -color sample pack.vim
   -fuzzyfinder.vim
                                                                                                                                                                                         b:match ignorecase
   -matchit.vim
                                                                                                                                                                                         perl_extended_vars
                               C:\Program Files\Vim\vimfiles\colors\metacosm.vim [FORMAT=unix] [TYPE=VIM] [ASCII=000] [HEX=00] [POS=0022,0001][14%] [LEN=153]
   -NERD_commenter.vim
                                                                                                                                                                                         tlist_aspjscript_settings
   -NERD tree.vim
                                   amenu T&hemes.D&efault.ElfLord :colo elflord<CR>
                                                                                                                                                                                         tlist aspvbs settings
                                 8 amenu T&hemes.D&efault.Evening :colo evening<CR>
                                                                                                            41 " hi def notesLeadingSpaces ctermbg=lightred guibg=#ffdddd
   rails.vim
                                                                                                                                                                                         tlist_php_settings
   -supertab.vim
                                 9 amenu T&hemes.D&efault.Koehler :colo koehler<CR>
                                                                                                            42 hi def notesTodo ctermbg=3 guibg=lightyellow
                                                                                                                                                                                         tlist_vb_settings
                                 10 amenu T&hemes.D&efault.Morning :colo morning<CR>
                                                                                                            43 hi def notesTagRef ctermbg=3 ctermfg=4 cterm=bold guibg=lightred
   -surround.vim
                                11 amenu T&hemes.D&efault.Murphy :colo murphy<CR>
                                                                                                            44 hi def notesTagDef ctermbg=3 ctermfg=4 cterm=bold guibg=lightgreen
                                                                                                                                                                                         SimpleFoldText
   -taglist.vim
                                12 amenu T&hemes.D&efault.Pablo :colo pablo<CR>
 scripts/
                                                                                                            45 hi def notesTextLeader guifg=darkgrey ctermfg=7
 +spell/
                                13 amenu T&hemes.D&efault.PeachPuff :colo peachpuff<CR>
                                                                                                            46 endif
                                14 amenu T&hemes.D&efault.Ron :colo ron<CR>
 ~svntax/
                                15 amenu T&hemes.D&efault.Shine :colo shine<CR>
                                                                                                            48 " Default is to have bold headers
   -aspjscript.vim
   -blockhl.vim
                                16 amenu T&hemes.D&efault.Torte :colo torte<CR>
                                                                                                            49 if !exists("g:notes_bold_headers")
    CVSAnnotate.vim
                                                                                                            50 let g:notes bold headers = 0
                                18 " Recommended Themes
    javascript.vim
                               jscript.vim
   -notes.vim
                                       set smartcase " if there are caps, go case-sensitive
   -svn.vim
                                       " Indent Related {
   -SVNAnnotate.vim
                                           set shiftwidth=4 " unify
                                           set softtabstop=4 " unify
   -svnlog.vim
   -vcscommit.vim
                                           set tabstop=4 " real tabs should be 4, but they will show with set list on
   -wiki.vim
  temp/
  rgb.txt
                                69 " Folding {
                                       set foldenable " Turn on folding
                                       set foldmarker={,} " Fold C style code (only use this as default if you use a high foldlevel)
                                       set foldmethod=marker " Fold on the marker
                                       set foldlevel=100 " Don't autofold anything (but I can still fold manually)
                                       set foldopen=block,hor,mark,percent,quickfix,tag " what movements to open folds on
                                       function SimpleFoldText
                                           return getline(v:foldstart).' '
                                       endfunction "
                                       set foldtext=SimpleFoldText() " Custom fold text function (cleaner than default)
                                81 " Plugin Settings {
                                       let b:match ignorecase = 1 " case is stupid
                                       let perl extended vars=1 " highlight advanced perl vars inside strings
                                       " TagList Settings {
                                           let Tlist_Auto_Open=0 " let the tag list open automagically
                                           let Tlist Compact Format = 1 " show small menu
                                           let Tlist Ctags Cmd = 'ctags' " location of ctags
                                           let Tlist Enable Fold Column = 0 " do show folding tree
                                           let Tlist Exist OnlyWindow = 1 " if you are the last, kill yourself
( POS=0029,0007][69%] [LEN=42] ~\ vimrc [FORMAT=unix] [TYPE=VIM] [ASCII=040] [HEX=28] [POS=0075,0028][47%] [LEN=157]
                                                                                                                                                                                      < [HEX=6C] [POS=0026,0013][96%] [LEN=27]</pre>
```

#### Showcase!



See why all the cool kids use Vim

## Installing Vim



- Callinux/Unix: Comes installed with practically all distributions
- OSX: Ships with Vim, but use MacVim for a GUI: <a href="http://code.google.com/p/macvim/">http://code.google.com/p/macvim/</a>
  - ™ Tip: Use iTerm2 to support 256-color color schemes!
- Windows: Use gVim: http://www.vim.org/download.php#pc

#### Download vimfiles



- © Download my configuration files to start
- Make sure git is installed
  - > cd ~
  - > git clone http://github.com/thenovices/dotfiles
  - > ln -s dotfiles/.vim\* .
  - > git clone https://github.com/gmarik/vundle .vim/ bundle/vundle
  - > vim +BundleInstall +qall
- Repository: <a href="http://github.com/thenovices/dotfiles">http://github.com/thenovices/dotfiles</a>

## What are we doing?



- Whirlwind tour of Vim's key features
- Come back and use this powerpoint as a reference
- Real Play around with me!

# http://bit.ly/SGgrya

## Vim Philosophy



- 1. Modal Editing
- 2. Operators and Motions

#### The Modal Editor



- Reystrokes take different actions depending on your mode
- Why? We spend more time reading and editing than typing!
- Normal mode: All keystrokes are interpreted as commands
- Insert mode: Regular typing as you know it
- Visual mode: Highlighting
- ca ... more!

## Surviving in Vim

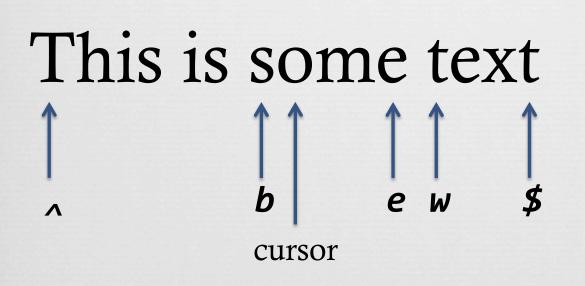


- ⟨ESC⟩ Always gets you back to normal mode

#### Advanced movement



Vim is all about saving keystrokes! Many many motion commands.



- begin line
beginning
end
word
- end line

## Operator-Motion Model



## Operators



CR d - Delete

**C** − Change (delete and go into insertion mode)

**♥** - Yank (Copy)

**♥** V – Visual/Highlight

Combine with motions to great effect! Type an operator twice to act upon the entire line.

#### More Common Commands



- ∇ Visual line highlighting
- **O** Create new line below and go into insertion mode
- **≈ X** Delete character under cursor
- **CRU** − Undo (very helpful <sup>©</sup>)
- Append to end of line (goes into insertion mode)

## Text Objects



- **₩** word (delimited by punctuation)
- **₩** word (delimited by whitespace)
- matching set of parentheses (also [], {}, <>, ", "")
- $\mathbb{C}$ t XML tag (e.g. <a href="html"></a href="html"></a>)

# Putting it all together



## Find and Replace



- Searches in the document for some string
- **≈ n** Goes to next occurrence
- **№** N Goes to previous occurrence
- \*\*S/foo/bar replace all occurrences of 'foo' with 'bar' in the entire document. (Key token: '%')
- You can use regular expressions as well!

#### What now?



- Once you've mastered the basics, gradually pick up more and more Vim tricks.
- Rearn one thing at a time (crucial!)
- Residual Explore Vim plugins.

## Advanced Topics



- **Windows**
- ca Tabs
- **Buffers**
- **Macros**
- **Marks**
- **Wisual Blocks**

## Popular Plugins



- Surround.vim
- Rugitive.vim (Git integration)
- Rails.vim (Rails integration)

- Snipmate.vim (Textmate-like snippets)

#### Resources and Links



- vimtutor (30-minutes) and :help usr\_02.txt (manual)
- Learn Vim Progressively (good way to start off)
  <a href="http://yannesposito.com/Scratch/en/blog/Learn-Vim-Progressively/">http://yannesposito.com/Scratch/en/blog/Learn-Vim-Progressively/</a>
- Treasure Trove of Vim Tricks:

  <a href="http://stackoverflow.com/questions/1218390/what-is-your-most-productive-shortcut-with-vim/1220118#1220118">http://stackoverflow.com/questions/1218390/what-is-your-most-productive-shortcut-with-vim/1220118#1220118</a>
- Why do those nutheads use Vim? (like a showcase) <a href="http://www.viemu.com/a-why-vi-vim.html">http://www.viemu.com/a-why-vi-vim.html</a>
- Comprehensive list of Vim tips and tricks (advanced!!)
  <a href="http://rayninfo.co.uk/vimtips.html">http://rayninfo.co.uk/vimtips.html</a>
- Brandon's dotfiles: http://github.com/thenovices/dotfiles
- Vim Adventures!! http://vim-adventures.com/

#### More Advanced Links



- http://vimcasts.org
- https://github.com/tpope/tpope
- https://github.com/ryanb/dotfiles
- https://github.com/languages/VimL