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Vim

Text editor of the Gods

"And on the seventh day,
He exited from Append Mode"

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Agenda

- Introduction
- Basics
  - Exercises!
- Where to get help
- Advanced stuff
- Customization and pointers to even more advanced stuff

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Why all the ruckus?

INTRODUCTION

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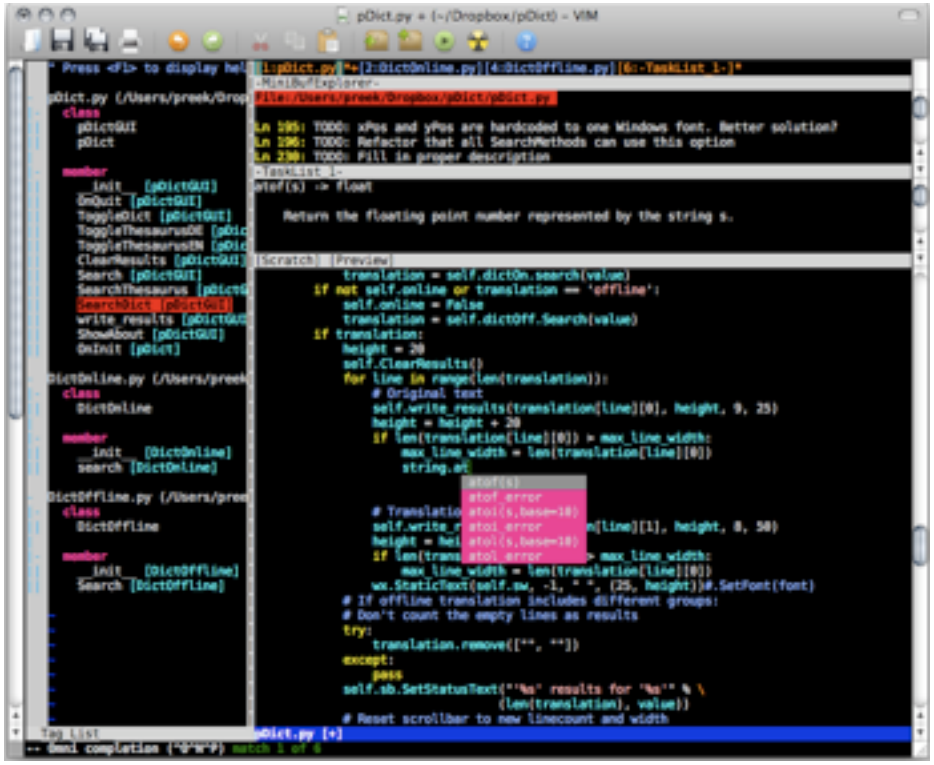
What is Vim?

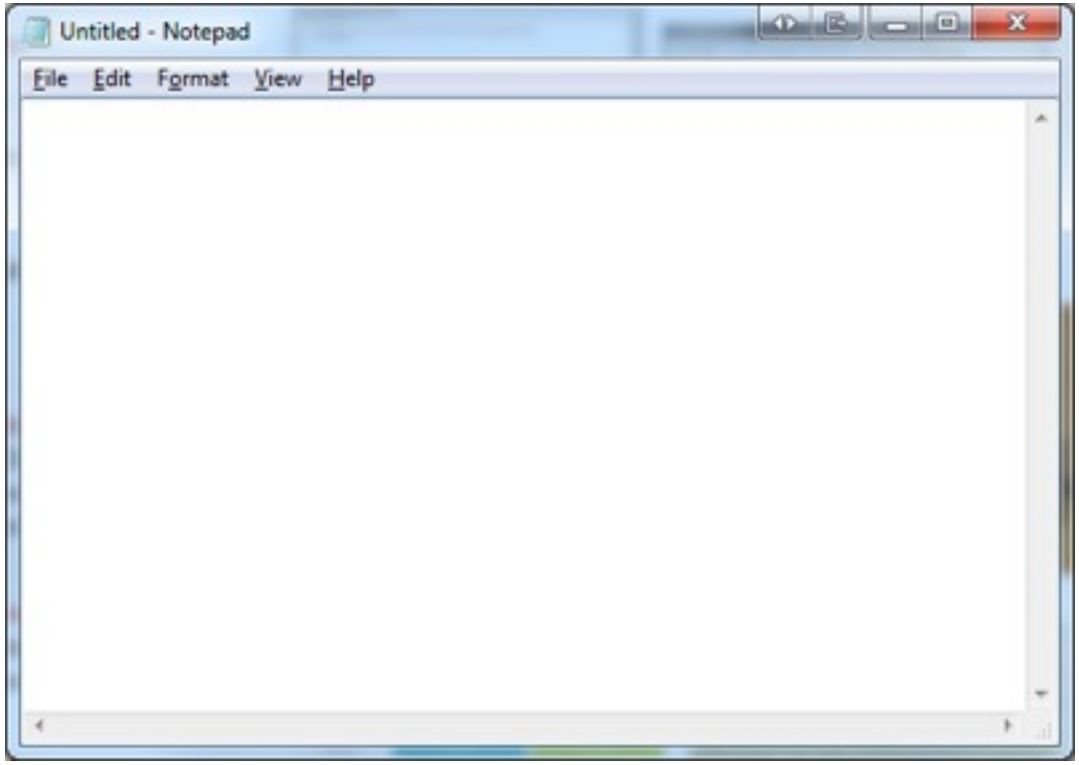
Vim is not an IDE!



(although it can come close)

What is Vim?

Vim is a text editor



ON STEROIDS

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Why Vim?

Speed speed *speed*!

People always say “I’m limited by thinking time, not typing time.”

But when I have thought of the change I want to apply to my program, *it helps my flow if I can apply it quickly!*

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Why Vim? (ct'd)

- Fast
- Highly configurable
- Plug-ins
- Built-in syntax highlighting for every language known to man
- Available on every platform

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A bit of history

- 1976: vi (Bill Joy at Berkely)
  - ADM-3A
  - “VIsual mode” of line editor “ex”
- 1987: Stevie (Tim Thompson)
  - Atari ST
  - “ST Editor for VI Enthusiasts”
- 1991: Vim (Bram Molenaar)
  - “Vi IMproved”

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Let's get set up

- Start (g)Vim, look at it, then close it
- Visit http://rix0r.nl/bootcamp
- Download the vimrc file and put it in your Vim installation under one of the following names:
  - Windows:

    ```
    C:\Program Files (x86)\Vim\_vimrc
    ```

  - Linux, Mac:

    ```
    ~/.vimrc
    ```

- Start again, then compare

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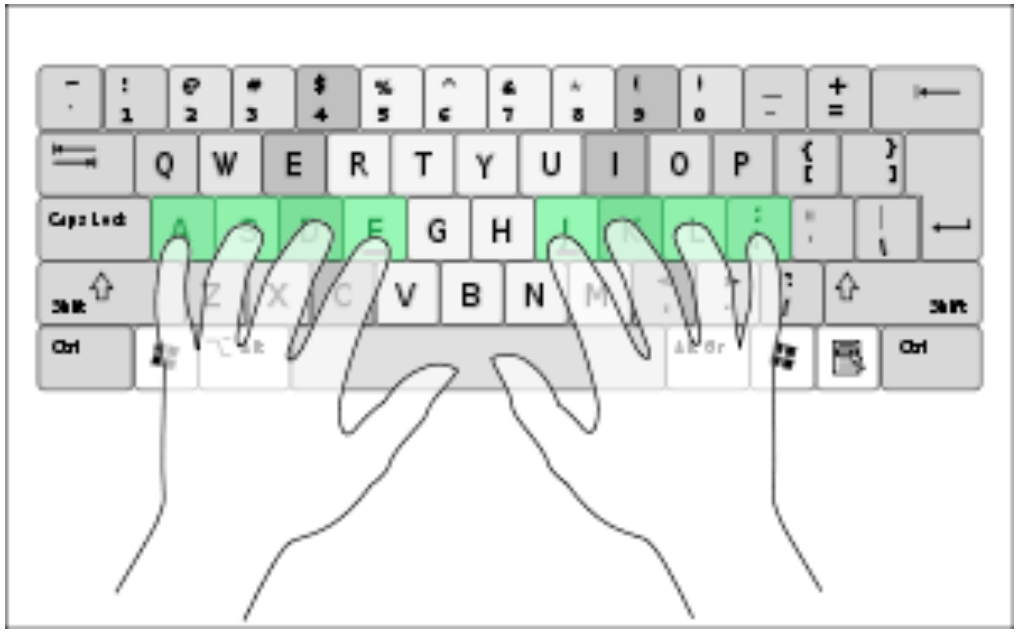
Why doesn't this @#$%!
key do what I expect?

VIM BASICS

Most important principle

Keep fingers on the home row

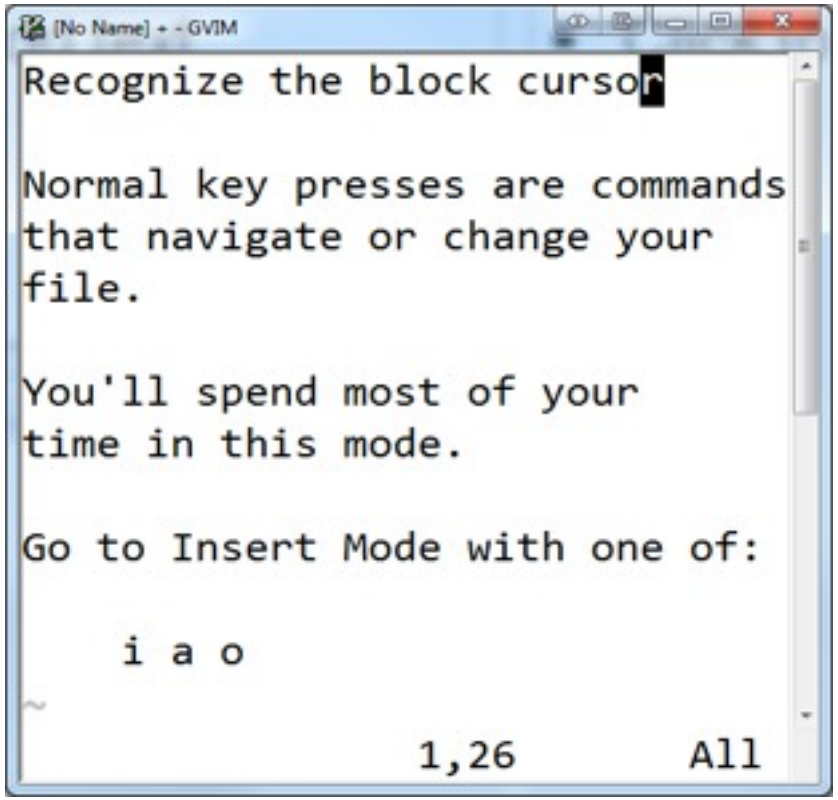


No mouse, no CTRL-hotkeys!

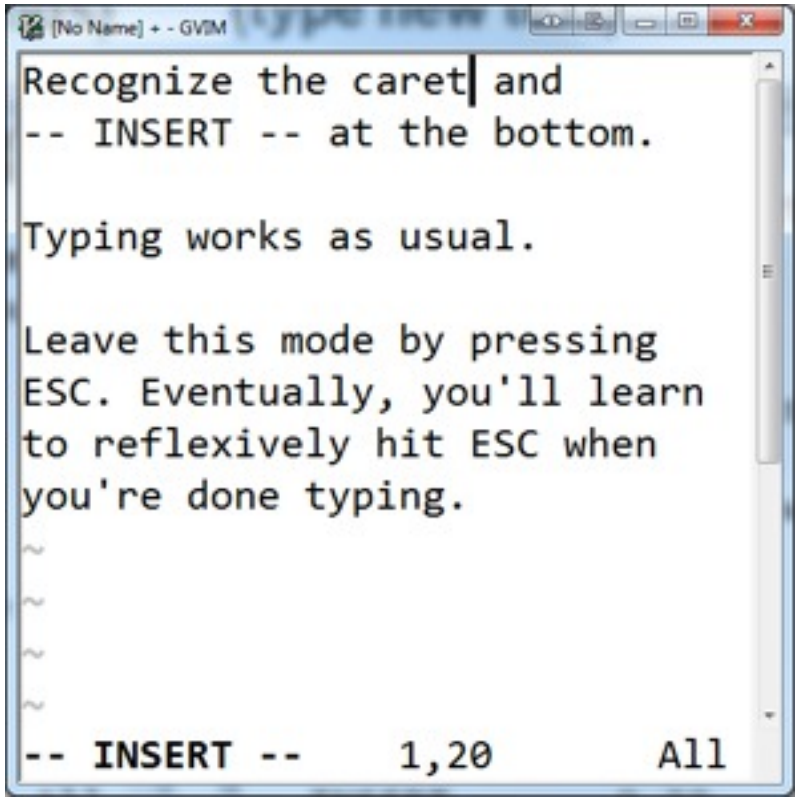
(No RSI!)

Modal Editing

Normal mode (navigate, edit, commands)



Insert mode (type new text)



Moving around

- Only move in normal mode
- Arrow keys work, but…
  - Don't use them!
    (they're too far away from the home row)
  - Use hjkl instead
  - My `.vimrc` will force you >:)

- Also more complex movements such as:

  w b 0 ^ $ G

  (explained shortly)

First steps!

1. Start Vim
2. Go to Insert Mode, type something
3. Go back to Normal Mode
4. Move around
5. GOTO 2

- See if you can figure out what the different commands mean.
- Protip: Try I, A, O as well!

CHEAT SHEET

Normal→Insert
i a o
Insert →Normal
ESC
Movement
h j k l
w b 0 ^ $ G

From now on, we won't discuss Insert Mode any more. It's boring.

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Commands

- Letter keys are commands in Normal mode
- Usually they (try to) have a mnemonic:
  - append
  - insert
  - open new line (sometimes we cheat a little)
  - undo
- Motion
  - word (forward)
  - back
  - ^ $ like in regex
  - 0 gg G ummm… (try it out)

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Commands (2)

- All commands take a repetition.
- Some commands take an object, or a motion. For example:
  - delete
  - change (delete + go to Insert mode)

Commands (3)

- Learn this:

  <count> <command> <motion>

- Try it out somewhere in a document:

  d w

  2 c w

- But also:

  80 a – ESC

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Copy and paste

- delete == *cut*
- paste (or P to paste before)
- *copy* is called yank (also takes a motion)
- To operate on the “current line”:
  - dd or yy
- Try it:
  - 4yyP

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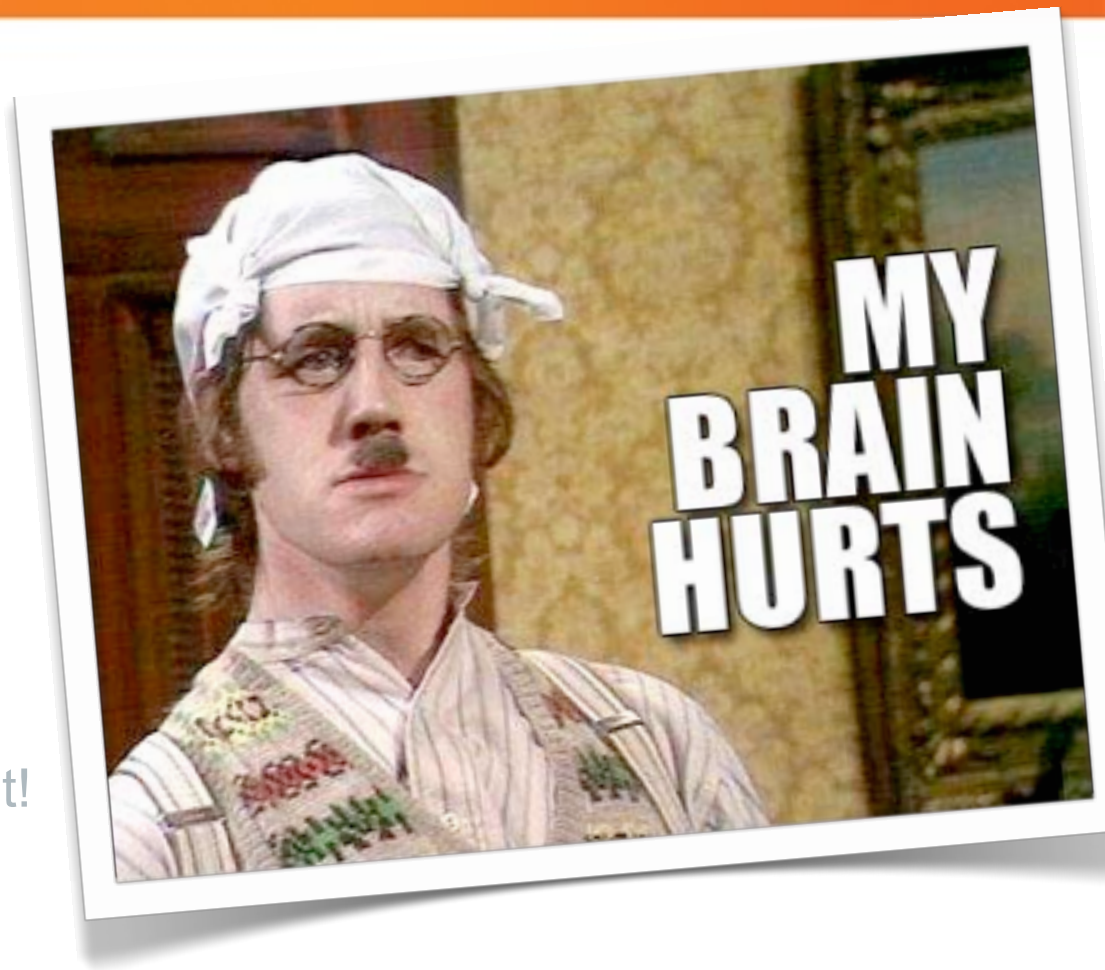

Woah, hold up there for a bit!

CATCHING OUR BREATH

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Effective learning

- How am I supposed to remember all of this stuff?
  - You're not!
- As you're editing, try to find small ways to be more efficient left and right
  - Over time, it'll integrate into your subconscious and muscle memory
- Downside: you'll grow to hate every editor that doesn't have Vim keybindings

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Get help

- Vim's help is extensive and awesome
- Type :help and a subject or keybinding or option
  - :help
  - :help i
  - :help motion
  - :help text-objects
  - :help textwidth
  - etc.

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Well, that's pretty neat!

ADVANCED VIM USAGE

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Saving effort

- We can do basic editing. How about we save ourselves some typing?
- The workhorse command: .
  - Redoes whatever your last command was at the current cursor position.
  - Try it: type d w or i hi <ESC> and go around through the text pressing .
- Ctrl-N, Ctrl-P: word completion inside the current file.
  - It's not IntelliSense but it saves a lot of typos

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Searching

- Search for a character on the same line:
  - f forward
  - t till
  - F and T do the same but backward
- Search anywhere in the document:
  - / searches forward (accepts regexes!)
  - ? searches backward
  - After searching, use n or N to move between matches
- Quick searches:
  - * searches for the word under the cursor
  - % searches for a matching ([< { brace

Searching is a motion!

- Which means you can combine it with a command!
- In programming, you'll typically want to use (change)
- For example:
  - myObject.doSomeThingy(); `c t ;`
    (⇧ cursor here)
  - (x * (x – 1)) / (N / 2) `c %`
    ⇧

Text Objects

- Motions are relative to where the cursor is
- Text objects are similar, but it doesn't matter where the cursor is:

inside / around + word / paragraph / sentence (< { [' "

- Try this:
  - c i "
  - d a p

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Registers

- delete, yank and paste operate on registers
  - By default, registers 0, 1, 2, 3, ...
  - But you can use any letter as a register!

- Type “x before the delete/yank/paste command
- These are saved between Vim sessions
  - So you can copy/paste between files
  - Or store code snippets in registers!
- Type :reg to see what’s in every register

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But there's more

- Things to explore that we don't have time for right now:
  - Bookmarks (m <letter>, then ‘ <letter>)
  - Visual mode (v V Ctrl-V, on Windows Ctrl-Q)
    - Block prepend/append!
  - Macro's (q <letter> ... q, then @ <letter>)
  - Windows and buffers (only applicable to Vim proper

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Vim Plugins for IDEs

- Eclipse: vrapper (free), Viable (commercial)
- NetBeans: jvi
- Visual Studio: VsVim (free), ViEmu (comm)
- Qt Creator: FakeVim built-in

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Plugins for Vim itself

- Not compatible with IDEs, probably
- http://www.vim.org/scripts
  - File types, browsers, fuzzy search, ...
- *Pathogen* seems to be the new standard
- Jan Ouwens has a good tip on putting your Vim configuration and plugins in Dropbox: http://blog.jqno.nl/configuration-sharing-with-dropbox-part-1-vim

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That's all you need to know

Now go forth and VIM!

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