

# CS35L Software Construction Laboratory

Lab 1 : Nandan Parikh

Week 1; Lecture 2

# vi editor

- Open a file- **vi <filename> or vim <filename>**
- Close a file- **:q**
- Save a file- **:w**
- Save and close a file- **:wq**
- Modes:
  - Normal: Enter commands
  - Insert: Insert text
  - Visual: Like normal, but you can highlight
  - Replace: Like insert, but you replace characters as you type
  - Recording: Record a sequence of key sequences

# Emacs editor

- “The customizable, extensible, self documenting display editor”
- Customizable (no programming)
  - Users can customize font, colors, etc
- Extensible (programming required)
  - Run Lisp scripts to define new commands
- Self-documenting
  - C-h r (manual) and C-h t (tutorial)
- <https://www.gnu.org/software/emacs/refcards/pdf/refcard.pdf>
- <http://bit.ly/2CQy3H8> (some basic commands)
- <http://stanford.io/2CTWNyl>

# Getting started with emacs

- emacs already installed in linux servers
- Type emacs to enter into the editor
- Emacs has both GUI and CLI
- All emacs commands start with 'C' or 'M'
  - 'C' = ctrl; 'M' = alt (windows)/ option (Mac)
- Start emacs
  - emacs <filename>
- Exit emacs
  - C-x C-c

# Basic emacs editing

- **Insert text** by simply typing it
- **Undo** by typing C-x u
- **Save changes** by typing C-x C-s
- **Copy, cut, paste**
  - C-space (starts selecting region)
  - M-w (copy a region)
  - C-w (cuts a region)
  - C-k (kill a line)
  - C-y (yank/paste)

# Moving around

Keystrokes	Action
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C-p	Up one line
C-n	Down one line
C-f	Forward one character
C-b	Backward one character
C-a	Beginning of line
C-e	End of line
C-v	Down one page
M-v	Up one page
M-f	Forward one word
M-b	Backward one word
M-<	Beginning of buffer
M->	End of buffer
C-g	Quit current operation
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# More emacs commands

- Search – C-s
- Replace – M-%
- Accessing menu – F10
- Switch buffer – C-x b
- Switch current window – C-x o
- Kill the current window – C-x 0 (zero)
- Help – C-h

## Directory edit (dired) (C-x d)

- Creates an Emacs buffer containing list of directory contents
- Allows you to operate on files
- Allows you to navigate filesystem
- + - new directory, C-x C-f new file in directory, g - refresh dired buffer
- ! - run shell command
- <https://www.gnu.org/software/emacs/refcards/pdf/dired-ref.pdf>



## Other features

- Emacs as lisp interpreter
- Use scratch buffer
  - type (random) or (+ 1 2) or (setq x 2) then C-j
  - M-: and an expression to evaluate, e.g. ( \* 1 2 3)
- Run shell command - M-!

# Assignment 1: Hints

- Hints for first 10 questions:
  1. `man man`
  2. `which`
  3. `find`
  4. `Readlink`
  5. `--version`
  6. `man chmod`
  7. `man find`
  8. `find`
  9. `ls/sort`
  10. `localedef`
- 11-15. Use help (C-h) command of emacs