

# CSCI – 3308 Software Development Methods and Tools

Lab 1 – Unix Systems

# *Lab Content*

- Unix Commands & Text Editor
- Regular Expressions
- Git version control
- Agile
- Database
- Web Foundation, Services, Applications
- Debugging, Testing, Continuous Integration
- Project, milestone



# *Lab 1 – Unix commands & Pair Programming*

- Setting up VM to use for the rest of this course
- Learning how to use a text editor like VIM
- Experiencing Pair Programming
- Learning Unix Commands



# *Text Editor: Vim or Emacs?*

## **VIM**

- Pre-installed
- Fast
- Can open a file, edit and quit

## **EMAC**

- Slower
- Program needs to be open 24/7 (live inside it)
- Can write own extensions, useful for note taking, games, programming, shell access, file access, listening to music, web browsing



# VIM Editor

“MODAL” text editor

## Modes of Operation:

- ✓ Insert mode
  - ✓ Command mode (default mode when you start the Vim)
  - ✓ Last-line mode
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- ✓ **‘i’ key** : to enable insert mode
  - ✓ **Escape key** : to enable command mode
  - ✓ **‘:’ key** : to enable last line mode

# *Vim: Modes and Usage*

## **Command Mode:**

v : Highlight one character at a time (visual mode)

V : Highlight one line at a time

y : Copy

p : Paste

u : Undo the last command

gg : Move to start of file

G : Move to end of file



# *Vim: Modes and Usage*

## **Last-Line Mode:**

:q => To quit the vim editor

:w => To write and save the file

:wq => To save and quit vim

:s/old/new/g => To substitute the new string with old string globally

# Unix Commands

Powerful programming in very few characters

Either enter commands at the terminal, or put them in a file and run them as a script

General Unix command format:

**command -option argument --more-options**

Example:

`grep -i "the" <filename>`

`grep` – prints lines matching the pattern

`i` – option to ignore case



# *Unix Commands*

Let us learn some basic UNIX commands:

- man
- date
- ls -ltr
- cd . .
- pwd
- mkdir, rmdir
- chmod
- cp
- rm
- mv
- ping
- ps
- top
- curl



Lets work on the Lab  
Exercises