

CIS18A: Introduction to Linux/Unix

CLASSROOM ATC 204

WINTER 2015 : Section INFO: 00444 CIS -018A-61Y

College academic Calendar: Winter 2015

<http://deanza.fhda.edu/calendar/winterdates.html>

Instructor Information

- Name: Lalitha Krishnamurthy
- Office Hours: Not applicable ie None
- Email: krishnamurthylalitha at fhda dot edu
- Online Lab Hours: Wednesdays 845PM-10PM
- Lecture timings for CIS18A : M/W 6 PM - 750 PM

Course Description

This course is designed to discuss Linux/Unix Operating environment and its features. Linux/Unix commands, file structure, Regular expressions, shell features will be discussed Introduction to the features of the UNIX/LINUX operating system including text editing, text file manipulation, electronic mail, Internet utilities, directory structures, input/output handling, and shell features are part of the course curriculum

CIS18A Student Learning Outcome Statements (SLO)

Use the Unix/Linux Operating System utilities and shell features for basic file manipulation, networking, and communication.

Course Objectives

- Edit text using the vi editor
- Maintain file and directory system
- Establish security and file permission, Perform basic file maintenance and use information utilities
- Utilize the shells
- Run shell commands, Implement quoting rules
- Communicate with email and communication utilities
- Apply filters and use implement basic regular expression
- Use basic utilities to explore system data, user data, and common tasks: exit, passwd, who, whoami, finger, w, tty, stty, uname, clear, man, lpr, script, bc, date, cal, echo, exit
- Observe the different file types; explore filename conventions and use wildcards; use utilities that manipulate regular files: cat, more, less, ls, touch, cp, mv, rm
- Use the vi editor to edit text files with basic commands to move to a certain place in the file, add,

delete, search, replace, substitute, copy and paste, cut and paste, bring in another file, save to another file, undo redo, save, quit

- Work with the directory tree and path name convention; use utilities that work with directories: pwd, cd, mkdir, rmdir, which, whereis, find
- Investigate the concept of links and types of links; create links to regular files and directories; explore inodes
- Communicate with other users using write and talk; send and receive mail, including reply, forward, save functions; work across the network using ssh and sftp
- Demonstrate the levels of permission (ugo) and the types of permission (rwx); set file permission; explore the effects of different types of permissions; changing the permission mask
- Using features of the shell: redirection, tee, pipe, running commands one one command line, command grouping, command substitution, quoting rules, job control, variables, environment variables, aliases, command history; explore the major types of shell
- Use filters to produce a required output: more, less, head, tail, cut, paste, wc, uniq, diff, comp, sort, egrep
- Use basic regular expressions for pattern matching: atoms, anchors, operators

Detailed Class Outline

Week 1 & 2	What is Unix, Why Unix, Architectural overview of Unix, Unix versions, Unix login procedure.
Week 3 & 4	Unix utilities/commands, Unix commands structure, Unix commands passwd, id, who, whois, whoami, ps, top, Unix editors, vi, cat, less, more, pg, page and other filters
Week 4 & 5	Unix directory structure, Unix file types. Unix file related commands, ls, mkdir, rmdir, cp , mv etc. Unix file globbing.
Week 6	Review, Unix file permissions, chmod, chown
Week 7 & 8	Midterm. Unix process management: process identifiers, ps, vmstat, top, sar commands, process hierarchy, Shell basics and commands
Week 9 & 10	grep and egrep its metacharacters and examples, Xargs and examples. Introduce shell, regular expressions, File redirection, Shell Pipelines, Redirection
Week 11 & 12	Summary, Finals 6:15pm

Texts / Resources

- Book store has the first book, Please use that. It is ok to use a older version. If you prefer or have the

second one, you can also use the second book. (Not required to purchase the second one)

- A Practical Guide to Linux Commands, Editors, and Shell Programming (3rd Edition) by Mark G. Sobell (Author) ISBN-13: 978-0133085044 ISBN-10: 013308504X Edition: 3rd
- Practical Guide to the Linux, Mark Sobell, Addison-Wesley. ISBN-10: 0201895498, ISBN-13: 978-0201895490

Grading

a. In-class assignments 1 for each week for 12 weeks = 60 points, Midterm/Finals 20 points each. Absolute grading for this course (ie I will NOT be grading on a CURVE for cis18a).

b.

- A+ 97% or above
- A 94%-96%
- A- 90%-93%
- B+ 87%-89%
- B 84%-86%
- B- 80%-83%
- C+ 75%-79%
- C- 70%-74%
- D 50%-69%
- F Below 50%

CIS18A Introduction to Unix/Linux Operating System

Students, please read the following and plan accordingly

- Most students lose points because they fail to follow the rules of the class. So listen up and adhere to the rules.
- Class starts at 6pm. Please wait till then for your questions/comments
- Recording of audio/video of my lectures using your smart-device is NOT permitted.
- Your internet activities are monitored in classroom computers. Please note this
- Students who constantly chit-chat during lectures will be asked to leave the classroom.
- There is no "make-up" for FINALS - ie if you miss it you lose the points. NOTE THIS.
- If you miss the midterm (due to sickness) your finals will be 40 points comprehensive and you will NOT get extra time to get it done. So do not miss the midterm.
- Do keep all your communication about graded assignments, midterm, etc till end of class on Mar 25. Do not discard or lose them (I might use them to verify grades at end of quarter)

Rules of assignment submission below

- Assignment can be submitted once. Repeated email submission of a assignment is not allowed and such submissions will be ignored. So review your work before submission.
- Please use your full name (not nickname) as it appears in class roster for any (email) communication with instructor, Also use your first and last name correctly (refer to class roster as to how it is specified)
- Email submit your assignments and state your full name in the submission email. Also do state "cis18a student" and "assignment number" as part of email subject.
- Emails to me which do not have in subject "cis18a" and "assignment number" will be discarded and/or ignored. Please note this.
- Submit assignment via email on due date before 750pm. (Email time stamp should <=750pm of that due date). Please do not turn them in earlier than that date

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[CIS LAB ACCOUNT CREATION INFORMATION](#)

[Assignment One](#)

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[Grep.examples](#)

[Find examples](#)
[Xargs examples](#)
[Filesystem notes](#)