CSE105:CREATIVE ENGINEERING WORKSHOP

L:0 T:0 P:3 Credits:2

Course Outcomes: Through this course students should be able to

CO1 :: apply various commands to install and configure Linux environment

CO2 :: use Linux commands and perform various tasks using command-line.

CO3 :: apply filters and regular expressions to perform complex search.

CO4 :: apply commands to manage users and groups using command-prompt.

CO5 :: understand and write shell scripts to perform various tasks related to system administration.

CO6 :: use different program development tools to manage program versions and manual pages.

List of Practicals / Experiments:

Linux Basics and Its Installation

- Installation of Ubuntu
- The Unix Architecture
- Basic linux evironment kde and gnome

System Utilities

- General Purpose Utilities-I(cal, date, echo, printf, bc, script)
- General Purpose Utilities-II(passwd, who, uname, tty, stty etc)
- command structure

The File System

- File and directory management commands: mkdir, rmdir, cat, touch, rm
- Basic commands: cal, pwd, date, whoami, man, ls
- basic commands: pwd, cd, mkdir, rmdir, cat, touch, cp, rm, mv, man, ls, clear, expr, read, su, umask, chmod, history, grep

The Shell

- Pattern Matching Using Wild Cards
- Redirection and Pipes

Filters and Regular Expressions

- Basic grep regular expression
- Extended grep expressions

Essential System Administration

- user management commands (useradd, userdel, usermod)
- group management commands (groupadd,groupdel,groupmod)

vi editor

- starting vi
- moving within a file (k,j,h,I,$,0,W,B,(,))
- scrolling commands (Ctrl+d, Ctrl+f, Ctrl+u, Ctrl+b)
- editing and inserting in files (I, A, O, R, S)
- deleting characters (X, Dw, d^, d$, Dd)

- Copy-paste commands (Yy, p, P)
- save and exit (q, q!, w, w!, wq)

Shell programming

- shell scripts
- making scripts interactive
- command line arguments
- the logical operators
- if condition
- using test and []
- case condition
- while loop
- for loop
- functions
- arrays

Manual page

- Writing manual pages

Program development tools

- version control with RCS

Text Books:

1. UNIX CONCEPTS AND APPLICATIONS by SUMITABHA DAS, MCGRAW HILL EDUCATION
2. BEGINNING LINUX PROGRAMMING by NEIL MATTHEW, RICK STONES, WILEY

References:

1. DESIGN OF THE UNIX OPERATING SYSTEM by MAURICE J. BACH, PRENTICE HALL
2. BEGINING REDHAT LINUX 9 by SANDEEP BHATTACHARYA, WROX PROGRAMMER