Department of Computer Applications (SF), St. Thomas College, Palai

Vocational Training
in
Linux Programming

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Objectives

(1) To understand and make use of linux utilities and shell scripting language to solve problems
(2) To implement in C some standard linux utilities
(3) To develop necessary skills for system programming

Unit-1 Overview of Linux : What is Linux, Linux's root in Unix, Common Linux Features, advantage of Linux,Overview of Unix and Linux architectures, Linux files system, hardware requirements for Linux, Linux standard directories. Commands for files and directories cd, ls, cp, rm, mkdir, rmdir, pwd, file, more, less,Creating and viewing files using cat, file comparisons.

Unit 2 Essential Linux commands: Processes in Linux, process fundamentals, connecting processes with pipes,redirecting input/output, Background processing, managing multiple processes, process scheduling – (at,batch), nohup command, kill, ps, who, find, sort, touch, file, file processing commands - wc, cut, paste etc Mathematical commands - expr, factor etc. Creating and editing files with vi editor.

Unit 3 Shell programming - Basics of shell programming, various types of shell available in Linux, comparisons between various shells, shell programming in bash.Conditional and looping statements, case statement, parameter passing and arguments, Shell variables, system shell variables, shell keywords, Creating Shell programs for automating system tasks

Unit-4 System administration - Common administrative tasks, identifying administrative files configuration and log files, Role of system administrator, Managing user accounts-adding & deleting users, changing permissions and ownerships, Creating and managing groups, modifying group attributes, Temporary disabling of users accounts, creating and mounting file system, checking and monitoring system performance - file security & Permissions, becoming super user using su. Getting system information with uname, host name, disk partitions & sizes, users, kernel, installing and removing packages with rpm command.

Unit-5: Simple filter commands: pr, head, tail, cut, sort, uniq, tr - Filter using regular expression grep, egrep,sed Understanding various Servers :DHCP, DNS, Squid, Apache, Telnet, FTP,Samba.