

FOSS Elective -I: Free/Open Source Software and Linux

Unit 1. Evolution of FOSS (10%)

History of Free / Open Source Software. Discussion of important FOSS projects (linux, mozilla). Foss Licenses (GPL, BSD, CC, SIL font license)

Unit 2. Linux Distributions. (15%)

Installation of GNU/Linux (Recommended Distribution: Debian).File System Hierarchy.Startup/Shutdown - Boot loader, Runlevels (GUI, text mode). Desktop Environments (X11, GNOME, KDE)

Unit 3. Basic Administration using Linux (25 %)

Shell - Introduction, basic commands, man/info pages. User management - types of users, groups. File management - Types, Permissions. Basic Networking - TCP/IP Configuration, file sharing. Introduction to software repositories, packages - installation and maintenance. Service Management - http, standard services (ssh, network, ftp).

Unit 4. Software development tools (25%)

GNU compiler collection - c, c++, GNU Debugger. Compiling/running java programs. Build tools - make, patch/diff, Version Control System. Integrated development environment.

Unit 5. GUI Programming (25%)

GTK+ - Introduction, Glade (Interface Designer), Language bindings. Localization - Introduction, Unicode, gettext.

REFERENCES

Text Book :

1."Introduction to Linux Installation and Programming" N.B.Venkateshwarlu (Ed);B S Publishers;2005.(An NRCFOSS Publication)

Reference Books :

2.Running Linux ,Fourth Edition,Matt Welsh,Matthias Kalle Dalheimer,Terry Dawson,and Lar Kaufman,O'Reilly Publishers,Deceber 2002,ISBN:0-596-00272-6.

3.Linux Cookbook ,First Edition,Carla Schroder,O'Reilly Cookbooks Series, November 2004, ISBN:0-596-00640-3.

On-line materials

1.Open Sources:Voices from the pen Source Revolution ,First Edition,January 1999,ISBN: 1-56592-582-3.

URL:<http://www.oreilly.com/catalog/opensources/book/toc.html>

2.The Linux Cookbook:Tips and Techniques for Everyday Use,First Edition,Michael Stutz, 2001.URL:http://dsl.org/cookbook/cookbook_toc.html

3.The Linux System Administrators'Guide,Lars Wirzenius,Joanna Oja,Stephen Stafford,and Alex Weeks,December 2003.URL:<http://www.tldp.org/guides.html>

4.Using GCC ,Richard Stallman et al.URL:<http://www.gnu.org/doc/using.html>

5.An Introduction to GCC ,Brian Gough.URL:<http://www.networktheory.co.uk/docs/gccintro/>

6.Advanced Bash Scripting Guide,Mendel Cooper,June 2005.

URL:<http://www.tldp.org/guides.html>
