

CS1024 Enterprise Application Development using FOSS

[for Anna University B.E.(CSE), B.Tech. (IT) & MCA]

Objective: The user will become proficient in Software Development processes, Databases, Middleware components to be productive in a software development environment that uses OSS components. Improved ability to review OSS code

Total: 45 hours Pre requisite: FOSS Elective -- I OR Familiarity with its contents.

Unit -- 1: Open Standards for Enterprise Applications 9 hrs.

Application examples from Banking and e-Governance, Enterprise level requirements, Layered Architecture applications, Open Standards, Royalties, FOSS Licensing & Business models

Unit -- 2: FOSS Development Methodology & Tools 9 hrs.

Collaborative Software Development : FOSS Community structure & dynamics, Mailing lists, chat, wiki, messaging, Integrated Development Environments, Version Control (tagging, branching, merging), Issue tracking (bugs, new features), Documentation. [Recommended tools: Eclipse, Subversion, Trac/Scarab, Mediawiki, LaTeX]

Unit -- 3: Presentation Layer 9 hrs.

Client Environment : Browsers (extensions, cookies, applets), Hand-held devices, Thin clients, Web page design & Client-side scripting (XHTML, WML, AJAX, CSS, XSL). [Recommended tools : Firefox, Nvu, Open Office web module]

Unit -- 4: Datastore Layer 9 hrs.

Data modeling refresher : RDBMS fundamentals, Duplicore, Database Administration : Access control, Security; Disaster recovers (Backups, Replication). [Recommended tools: PostgreSQL, PgAdmin]

Unit -- 5: Business Logic Layer 9 hrs.

Model View Controller (MVC) Framework, Server-side programming (CGI, page templates), Data access, database connectivity , Report generation. [Recommended tools: PHP, Apache, adodb, php-pdf]

REFERENCES:

Text book:

“Enterprise Application Development using FOSS”, ed. NRCFOSS Team, An NRCFOSS (Anna University) Publication, -- being published

Reference books / web links :

UNIT 1: *F/OSS and Enterprise Applications*

URLs: <http://wiki.go-opensource.org>
<http://www.utoronto.ca/ian/talks/>
<http://www.w3.org>
<http://www.openldap.org>

UNIT 2: *FOSS Development Methodology & Tools*

1. "*Understanding Open Source Software Development*", J Feller and B Fitzgerald, Addison Wesley 2002
2. "*Shared leadership in the Apache project*" Fielding RT..CACM,42(4), April 1999.
3. "*A case study of Open Source development: The Apache Server*", A Mockus, RT Fielding, and J Herbsled.ICSE'2000.

URLs: <http://www.tutos.org>
<http://opensource.mit.edu/papers/mockusapache.pdf>
<http://gnuwin.epfl.ch/articles/en/cathedralbazaar/cathedral-bazaar.pdf>
<http://www.nongnu.org/cvs>
<http://gnu.org/software/make/manual/html-chapter/make.html>

UNIT 3: *Presentation Layer*

URLs: <http://developer.mozilla.org/en/docs/AJAX>
<http://www-128.ibm.com/developerworks/web/library/wa-ajaxintro1.html>
<http://w3.org/DOM>
<http://developer.mozilla.org>

UNIT 4: *Datastore Layer*

URLs: <http://techdocs.postgresql.org>
<http://www.varlena.com/GeneralBits>
<http://www.pgsql.ru/db/pgsearch>
<http://www.postgresql.org/docs/books/awbook.html>
<http://www.commandprompt.com/ppbook/>
<http://www.tricknology.org/foilware/>

UNIT 5: *Business Logic Layer*

URLs: <http://java.sun.com/blueprints/patterns/FrontController.html>
<http://java.sun.com/blueprints/patterns/MVC.html>
<http://struts.apache.org/>
<http://www.turbogears.org/about/index.html>
<http://www.sqlobject.org>
<http://www.cherrypy.org>
<http://kid.lesscode.org>
<http://www.mochikit.com>