IGATE Global Solutions Ltd.

Enterprise Java Bean 3.0

Lab Guide

Table of Contents

Introduction

These hands-on labs will expose you to work with Application Server.
Deploying an application comprising of Servlets, JSP, JDBC, EJBs, Webservices on JBoss or Weblogic Server or Websphere Application Server

Setup Checklist for EJB

Setup

Here is what is expected on your machine in order for the lab assignments to work.

Minimum System Requirements

- Intel Pentium III or higher
- Microsoft Windows XP or 2003.
- Memory: 1GB of RAM
- 1 GB hard disk space
- VGA or higher resolution monitor
- Mouse or other pointing device
- JDK version 1.5 with help, Netscape or IE
- Connectivity to Oracle database
- Eclipse3.3 IDE
- JBoss4.2 /WebLogic / Websphere Server

Lab Exercise 1: Library Management System

Estimated time to complete this exercise: 16 **hrs**

Objective:

Development of an online Library Management System (LiMS)

Abstract of the project

This project is aimed at developing an online Library Management System (LiMS) for the college library. This is an Intranet based application that can be accessed throughout the campus. This system can be used to search for books/magazines, reserve books, find out who is having a particular book, put in requests to buy a new book etc. This is one integrated system that contains both the user component and the librarian component. There are features like email notifications/reminders, report generators etc in this system.

Functional components of the project

Following is a list of functionalities of the system. More functionality that you find appropriate can be added to this list. And, in places where the description of functionality is not adequate, you can make appropriate assumptions and proceed.

There are registered people in the system (students, faculty, librarian etc). Each one of them may have some exclusive privileges (faculty, for example, could borrow reference books for a short period, while students cannot).

1. A person should be able to

   - login to the system through the first page of the application

   - change the password after logging into the system

   - see the status of the books/journals borrowed/reserved by him and the respective due dates and other relevant details

   - search for a particular book/journal based on the name of the book/name of the author/subject/etc and also list for books/journals based on the name of the autor/subject etc

- reserve a particular book/journal borrowed by others currently

- cancel the reservation made earlier for a particular book/journal

- see who has borrowed a particular book/journal and when is the due date for the same

- place requests for purchasing new books to the library, by giving details about the name of the book, name of the author, publisher etc.

- get help about the LiMS on how to use the different features of the system

2. As soon as a reservation is made for a particular book, an automatic message/mail should be sent to the person who made the reservation about the details. Then, a message/mail should be sent to people who are having the book currently, stating a reservation has been made on that book.

3. Automatic message/mail should be sent to the users about the expiry of due dates for the books/journals borrowed by them. An advance notification (say, 4 days before the expiry of the due date) should be sent as well.

4. The librarian should be able to

- include new books/journals or remove some books from the inventory

- add new users to the system

- see the purchase requests for new books and be able to approve/reject the same

- ruturn and issue book operation

Technology uses:

> *Front End :–*
>   1. Servlets
>   2. JSP
>   3. JSF
>   4. Struts
>   5. Java Mail

- ➢ *Business Logic Components and Services :- EJB3.0*
    1. Session Bean
    2. Entity Bean
    3. Web Services

- ➢ *Application Servers(any one) :-*
    1. JBoss Server 4.2
    2. WebLogic Server 9.0
    3. WebSpher Server with RAD 7.0

- ➢ *Databases(any one):-*
    1. HSQL
    2. MySQL
    3. Oracle
    4. SQL Server

(Note- Create the business logic components using EJB3.0 and the web based GUI using JSF/JSP/servlet/Struts which access these components to perform different operations)