

Curriculum for semester V

Course code: CS-511 T

Total Credit: 2

Periods: 3 per week (50 Minutes each)

DSE-1A(1)

Course Title: A1: Advanced JAVA

Marks: 50 (UA: 40 + IA: 10)

Prerequisites:- Knowledge of core Java Programming

Learning Objectives:-

- To understand the Advanced Java features & Programming.

Learning Outcomes

On completion of the course, the students will be able to:

- Implement Networking and Data base connectivity in Java for given application.
- Implement webpage with dynamic content and server side web application using Servlet and JSP.
- Use web application framework JSF to build user interfaces.
- Apply Model-View-Controller architecture to build complex
- client-server applications.

Course Outline

Unit – 1: JDBC

JDBC Introduction JDBC Architecture, Types of JDBC Drivers, Introduction to major JDBC Classes and Interface, creating simple JDBC Application, Types of Statement (Statement Interface, PreparedStatement, CallableStatement), Exploring ResultSet Operations.

Socket Programming: URL class, InetAddress class, URLConnection class, DatagramSocket class, client side & Server side program

Unit – 2: Overview of Applet & Servlet API

Applet: Applet life cycle, applet tag, param tag, Graphics class, applet program, awt package.

Servlet API : Servlet Interface, GenericServlet, HttpServlet, Servlet Life Cycle, Servlet, Example How servlet works? ServletRequest, ServletResponse, Servlet Collaboration, RequestDispatcher, Attribute in ServletSessionTracking, SessionTechniques, Cookies in ServletCookies: Login & Logout,.

Unit – 3: JSP

Java Server Pages Introduction to JSP , Comparison with Servlet, JSP Architecture, JSP: Life Cycle, Scripting Elements, Directives, Action Tags, Implicit Objects, Expression Language(EL), JSP Standard Tag Libraries(JSTL), JST tags :Function Tags, Formatting Tags, XML Tags, SQL tags .

Unit -4 : JSP Standard Tag Libraries(JSTL)

Struts2 Introduction What is Struts Struts2 Features Model1 vs Model2 Struts 2 Core

Components Interceptors Value, StackAction, ContextAction, Invocation OGNL Struts 2 Architecture

Unit– 5 Test and Tutorial

Reference Books :

- 1) Black Book “ Java server programming” J2EE, 1st ed., Dream Tech Publishers, 2008. 3. Kathy walrath ”
- 2) Complete Reference J2EE by James Keogh mcgraw publication
- 3) Professional Java Server Programming by Subrahmanyam Allamaraju, Cedric Buest Wiley Publication
- 4) SCWCD, Matthew Scarpino, Hanumant Deshmukh, Jignesh Malavie, Manning publication
- 5) Core Java, Volume II: Advanced Features by Cay Horstmann and Gary Cornell Pearson Publication
- 6) Java Persistence with Hibernate by Christian Bauer, Gavin King
- 7) Spring in Action 3rd edition , Craig walls, Manning Publication
- 8) Hibernate 2nd edition, Jeff Linwood and Dave Minter, Beginning Après publication
- 9) Java Server Faces in Action, Kito D. Mann, Manning Publication
- 10) JDBCTM API Tutorial and Reference, Third Edition, Maydene Fisher, Jon Ellis, Jonathan Bruce, Addison Wesley
- 11) Beginning JSP, JSF andTomcat, Giulio Zambon, Apress
- 12) JSF2.0 CookBook, Anghel Leonard, PACKT publication
- 13) Advanced Java, M. T. Savaliya, dreamtech