IGATE
Speed.Agility.Imagination

1.1 SOA and Webservices

Mode Of Delivery

ILT ☐ **VC** ☐ **CBT** ☐ **RS** ☐ **WBT** ☐

Course Overview	This course is for the developer who wants to develop applications using Webservices framework of J2EE.
Target Audience	Java software engineers responsible for writing loosely coupled software components.
Hardware	Networked PCs with access to Minimum 512 MB RAM, 600 MB Hard Disk.
Software	Tomcat 4.0 or J2EE1.5 Server, JDK1.5, Windows XP or Windows 2003 OS, IE 6+.
At the end of the Training you will be able to	• Understand the concepts of Service Oriented Architecture. • Understand Webservices and SOAP protocol used for Webservices. • Understand mechanism to transform data from XML to Java objects and vice versa.
Course Non Goals	Nil

Pre-requisites	**Required Proficiency Level**
Java	Good
XML	Good
Java with XML	Good

Duration	Lecture – ILT = 4 Hrs SLM= 16 Hrs, Lab= 12 Hrs
Additional Infrastructure required	Head Phone with microphone. User Id and Password for Virtual Class.

Session wise Break up with references	
Session 1: Lecture-ILT- **(4 hours)** **SOA, Webservices Introduction** • What is Webservices? • What is SOA? • Building SOA using Webservices **SOA Fundamentals** 1. Fundamental SOA 2. Misperceptions about SOA 3. Benefits of SOA 4. Pitfalls of adopting SOA 5. Comparing SOA to past Architectures 6. Principles of Service-Orientation 7. Service Layers	1. For further details please refer to : a. http://www.versata.com/documents/wp-SOA20041015-p.pdf b. http://java.sun.com/developer/technicalArticles/WebServices/soa/ 2. T1 : a. Chapter 3: Introducing SOA b. Chapter 5: Web Services and Primitive SOA c. Chapter 8: Principles of Service-Orientation d. Chapter 9: Service Layers 3. T2: a. Chapter 1: Welcome to Web services
Session 2: SLM - (6 hours) **Building SOA (Technology and Design)** • Service Oriented Design • WSDL, SOAP, WS-BPEL basics • Composing SOA • SOA Standards • Entity-centric business/Application Service Design • SOA support in J2EE, .Net	1. For details please refer to : a. http://www.oasis-open.org/committees/download.php/15176/Erl_SOA2_Ch16.pdf 2. T1 : a. Chapter 13: Service Oriented Design (Part I: Introduction) b. Chapter 14: Service Oriented Design (Part II: SOA Composition guidelines c. Chapter 15: Service Oriented

	Design(Part III: Service Design) d. Chapter 16: Service Oriented Design(Part IV: Business Process Design) e. Chapter 18: SOA Platforms 3. T2: a. Chapter 3: SOAP: The Cornerstone of Interoperability b. Chapter 4: SOAP-RPC, SOAP-Faults, and Misunderstandings
Session 3: SLM (5 hours study + 6 hrs. Lab) **Web Services** • Developing & consuming Webservices • SOAP • SOAP programming using JAXM • WSDL	1. For details please refer to : a. http://java.sun.com/webservices/docs/1.6/tutorial/doc/ b. http://ws.apache.org/axis/ c. http://java.sun.com/developer/technicalArticles/WebServices/WSPack2/ d. http://java.sun.com/blueprints/guidelines/designing_webservices/html/ 2. T2 : a. Chapter 5: Web Services Description Language b. Chapter 7: JAX-RPC and JAXM
Session 4: SLM (5 hours study + 6 hrs. Lab) **Web Services** • UDDI • JAXR API • Publishing & Enquiring API	1. For details please refer to : a. http://java.sun.com/webservices/docs/1.6/tutorial/doc/ b. http://java.sun.com/developer/technicalArticles/WebServices/WSPack2/ c. http://java.sun.com/blueprints/guidelines/designing_webservices/html/ 2. T2 : a. Chapter 6: UDDI : Universal Description, Discover, and Integration

	b. Chapter 7: JAX-RPC and JAXM

Reference Books :

T1 : Service Oriented Architecture – Concepts, Technology and Design by Thomas erl, PEARSON Education

T2: Java Web Services by David A. Chappell & Tyler Jewell, O'REILLY publication