

SREENIVASA INSTITUTE of TECHNOLOGY and MANAGEMENT STUDIES

II MCA - II Semester

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16MCA225A

WEB SERVICES

Course Objectives:

- To provide fundamental concepts of Web Service Architecture.
- To gain knowledge about SOAP, WSDL, UDDI and XML to create web services.

Syllabus:

UNIT I : Introduction to Web Services

The definition of web services - basic operational model of web services - tools and technologies enabling web services - benefits and challenges of using web services

UNIT II : Web Services Architecture

Web services Architecture and its characteristics - core building blocks of web services - standards and technologies available for implementing web services - web services communication - basic steps of implementing web services - developing web services enabled applications.

UNIT III : Core fundamentals of SOAP

SOAP Message Structure - SOAP encoding -, SOAP message exchange models - SOAP communication and messaging - SOAP security. Developing Web Services using SOAP – Building SOAP Web Services - developing SOAP Web Services using Java - limitations of SOAP.

UNIT IV : Describing Web Services

WSDL – WSDL in the world of Web Services - Web Services life cycle - anatomy of WSDL definition document - WSDL bindings - WSDL Tools – Features of WSDL - limitations of WSDL. Discovering Web Services – Service discovery - role of service discovery in a SOA - service discovery mechanisms - UDDI – UDDI Registries - uses of UDDI Registry.

UNIT V : Approaches of UDDI

Programming with UDDI -UDDI data structures - support for categorization in UDDI Registries - Publishing API - Publishing information to a UDDI Registry - searching information in a UDDI Registry - deleting information in a UDDI Registry - limitations of UDDI. Web Services Interoperability – Means of ensuring Interoperability. Web Services Security – XML security frame work - XML encryption - XML digital signature - XKMS structure - guidelines for signing XML documents.

Course Outcomes:

- Known about the basic principles of Web Service Architecture, its components and techniques.
- Understand the architecture of web services.
- Able to design and develop web services using protocol.
- Understand technology underlying the service design.

TEXT BOOKS :

1. Developing Java Web Services, 2008, R. Nagappan, R. Skoczylas, R.P. Sriganesh, Wiley India.
2. Developing Enterprise Web Services, 2008, S. Chatterjee, J. Webber, Pearson Education.

REFERENCE BOOKS :

1. Building Web Services with Java, 2/e, 2008, S. Graham and others, Pearson Education.
2. Java Web Services Architecture, 2005, McGovern, et al., Morgan Kaufmann Publishers.
3. Web Services, 2005, G. Alonso, F. Casati and others, Springer.
4. XML, Web Services and the Data Revolution, F.P.Coyle, Pearson Education.
5. Java Web Services, D.A. Chappell & T. Jewell, O'Reilly,SPD.

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