

SRM UNIVERSITY
FACULTY OF SCIENCE AND HUMANITIES
DEPARTMENT OF COMPUTER SCIENCE

Subject Code: PIT18102

Subject Name: Advanced Java Programming

Staff Name: Dr. P.Muthulakshmi

No. of Hours: 60

UNIT I		
Remote method invocation – Activation models – RMI custom sockets – Object Serialization – RMI – IIOP implementation – CORBA – IDL technology – Naming services – CORBA programming models – JAR file creation.		
Lecture Hours	Description	Book, Chapter
1,2	Remote Method Invocation	5,7
2	Activation Models	5,7
3,4	RMI Custom Sockets	5,7
5	Object Serialization	5,7
6	RMI-IIOP	5,7
7	CORBA	5,7
8	IDL	5,7
9	Naming Services	5,7
10,11	CORBA Programming Models	5,7
12	JAR file creation	5,7
UNIT II		

Database Access: Overview of JDBC, JDBC Drivers, Connecting to a Database, Statement Interfaces, ResultSets, Using MetaData. Servlet – Introduction – Types : Generic Servlet, HttpServlet – Servlet Life Cycle – Servlet Classes: Servlet, ServletRequest, ServletResponse, ServletContext, ServletConfig – Single Thread Model – Session Tracking: Cookies, URL Rewriting, Hidden Fields, The Session API		
13	Database Access: Overview of JDBC	5,3
13	JDBC Drivers	5,3
14	Connection	5,3
14	Statement	5,3
15	ResultSet	5,3
15	Metadata	5,3
16	Servlet:Introduction	5,3
17,18	Types:GenericServlet,HttpServlet	5,3
19	Lifecycle of a Servlet	5,3
20,21	Servlet Classes:Servlet, ServletRequest, ServletResponse	5,3
	ServletContext, ServletConfig	5,3
22	Single Thread Model	5,3
23,24	Session Tracking: Cookies, URL rewriting, hidden fields	5,3
	Session API	5,3
UNIT III		

JSP: JSP Overview, How JSP works, Components of a JSP page, Implicit objects, RequestDispatching: Anatomy of Request Processing, Include Directive, JSP:include Action, Forwarding Requests, RequestDispatcherObject, Model1 Vs Model2. JSP and Java Bean: Java Bean, JSP Actions, JSP and XML: XML Overview, XML Parsers, XSL Transformations with XSLT.		
25	JSP:Overview	5,6
26	How it works?	5,6
27	Components of JSP	5,6
28	Implicit Objects	5,6
29,30,31	RequestDispatching:Request Process, include directice,	5,6
	action, forwarding request, RequestDispatcher Object	5,6
32	Model1 vs Model2	5,6
33,34	JSP and Java Bean, JSP action	5,6
35,36	JSP and XML: XML Overview	5,6
37,38	parser, XSL Transformation with XSLT	5,6
UNIT IV		
EJB Architecture: Logical Architecture, Software Architecture,- View of EJB Conversation - Building and Deploying EJB's, - Roles in EJB- EJB Session Beans: constraints on session beans, Life Cycle with example- EJB Entity Beans: When to use Entity Bean, Bean-Managed Versus Container-Managed Persistence, primary keys, Entity Bean Life Cycle, Example:Container Managed Persistence, Bean-Managed persistence- Message Driven Beans: Life Cycle.		
39	Introduction to Enterprise Beans	5,9

40,41	Types: Session Bean,Entity Bean, Message Driven Bean	5,9
42	Defining clients access with interfaces	5,9
43	Contents of an Enterprise Bean	5,9
44	Life cycle of Enterprise Bean	5,9
45	Creation of Enterprise Bean, Discussion on features, Exception Handling	5,9
46	Client: application, web	5,9
47	Writing backing Bean methods	5,9
48,49	Mapping table relationships	5,9
50	Bean Managed Persistence, Primary keys for Bean Managed Persistence	5,9
51	Container Managed Persistence,Primary key for Container Managed Persistence,	5,9
52	Message driven Bean example	5,9
UNIT V		
Understanding the need for MVC – frameworks, implementing MVC with request dispatcher – defining Beans to represent the data, writing servlets to handle requests, populating Beans, storing the results, forwarding the requests, summarizing the MVC code, interpreting relative URL, three data sharing approaches, forwarding requests from JSP pages		
53	Need for MVC(Model, View, Controller)	4,15
54	Frameworks, MVC Architecutre	4,15
55	Servlets (request and response)	4,15
56	RequestDispatcher (forward, sendRedirect)	4,15
	Beans (setters, getters)	4,15
	JSP (simple tags, useBean, getProperty)	4,15

	Writing Servlet(Simple Application)	4,15
57	Summarizing MVC: Servlets(Handling Request),Bean(Storing Results), JSP(Displaying Results)	4,15
58	Data Sharing Approaches(3): Request, Session, Context	4,15
	Writing MVC program using Scope as request	4,15
59	Writing MVC program using Scope as session	4,15
60	Writing MVC program using Scope as context	4,15

Text Book:

1. Elliotte Rusty Harold,(2013)<"Java Network Programming", O'Reilly Publishers
2. Antonio Goncalves, (2010), "Beginning Java EE 6 Platform with Glass Fish 3", Second Edition
3. Phil Hanna, "JSP: The Completer Reference", Osborne/Tata MC.Graw Hill
4. Ed Roman, (2009), "Mastering Enterprise Java Beans", John Wiley and Sons Inc.
5. Tom Valesky, (2008), "Enterprise Java Beans", Addison Wesley
6. Marty Hall, Larry Brown, (2004), "core Servlets and Java Server Pages" Second Edition, Pearson Education