



Faculty of Science
Bachelor of Computer Application
VI Semester
Paper- DSE-I
Subject: Advance Java

Course Outcomes

CO. No.	Course Outcomes	Cognitive Level
CO 1	To understand the concepts and features of object-oriented programming.	U, K
CO 2	To examine key aspects of Java Standard API library such as util, io, applets, and swings. GUI-based controls.	K,U, Apply
CO 3	To learn Java's exception handling mechanism, multithreading, packages, and interfaces.	U, K
CO 4	To develop skills in internet programming using applets and swings.	U, Analyze
CO 5	To develop skills of client-side scripting. To familiarize the student with client-server architecture and development of web applications using Java technologies.	U, Analyze Apply

Credit and Marking Scheme

	Credits	Marks		Total Marks
		Internal	External	
Theory	2	40	60	100
Practical	2	60	40	100
Total	4		200	

Evaluation Scheme

	Marks	
	Internal	External
Theory	3 Internal Exams of 20 Marks (During the Semester) (Best 2 will be taken)	1 External Exams (At the End of Semester)
Practical	3 Internal Exams (During the Semester) (Best 2 will be taken)	1 External Exams (At the End of Semester)



[Handwritten signatures]



Bachelor of Computer Application (BCA)
VI Semester

Subject: Advance Java
Paper: DSE-I

Content of the Course
Theory

No. of Lectures (in hours per week): 2 Hrs. per week

Total No. of Lectures: 60 Hrs.

Maximum Marks: 60

Units	Topics	No. of Lectures
I	Introduction of Java, Applet Class: Life Cycle of an Applet. The Applet Tag and their attributes, Passing Parameter to an Applet, Graphics in Applet. AWT: Event Handling: Event Handling Mechanism, the Delegation Event Model, Event Classes, Sources of Events, Event Listener Interfaces.	12
II	AWT controls, Adapter Classes, Layout Managers, and Menus. Swings: JButton, JLabel, JTextField, JTextArea, JPasswordField, JCheckBox, JRadioButton, JComboBox, JTable. JList, JScrollBar, JMenuItem & JMenu, JPopupMenu, JCheckBoxMenuItem, JTree, JTabbedPane, JPanel, JFrame, JScrollPane.	12
III	Java Database Connectivity(JDBC): Introduction, JDBC Driver, DB Connectivity steps, Connectivity with Oracle. MySQL and MS Access, Connection Interface. Statement Interface, ResultSet Interface, Prepared Statement.	12
IV	Servlet: Servlet API, Servlet interface. Generic Servlet class, Http Servlet class, Life Cycle of a Servlet, Servlet Request Interface, Request Dispatcher interface. Servlet Config Interface, Servlet Context Interface, cookies, hidden form field. Http Session. Data Access with Servlets: Connecting to a Database. Retrieving Data.	12
V	JSP Overview: JSP- Life Cycle: JSP Compilation, JSP initialization. JSP Execution, JSP Cleanup. JSP Syntax: The Scriplet, JSP Declarations, JSP Expression, JSP Comments, JSP Directives, JSP Actions, JSP Implicit Objects, Control Flow Statements, decision-making statements, Loop Statements, JSP Operators, JSP Literals, JSP Directives, JSP- Client Request: The HttpServletRequest Object, HTTP Header Request Example. JSP- Server Response: The HttpServletResponse Object, HTTP Header Response Example. JSP Form Processing: GET method, POST method, Reading Form Data using JSP.	12

References

Text Books:

- The Complete Reference: Java 2 - 5Ed, Herbert Schildt, Tata McGraw-Hill Publishing Company Limited.
- Java Servlet Programming Bible. S. Rajagopalan, R. Rajamani, R. Krishnaswamy, and S. Vijendran, WILEY Dreamtech India Pvt. Lmt.
- The Complete Reference: Java 2 - 5Ed, Herbert Schildt, Tata McGraw - Hill Publishing Company Limited.

Reference Books:

- Java Examples in a Nutshell - by David Flanagan
- The Java AWT Reference by John Zukowski Publisher: O'Reilly & Associates, Inc.
- The Java Class Libraries: An Annotated Reference by Patrick Chan, Rosanna Lee Publisher: Addison-Wesley



List of Practical

1. WAP to demonstrate object cloning.
2. WAP to demonstrate the use of super keyword.
3. WAP to demonstrate the use of this keyword.
4. WAP to demonstrate the use of inner class.
5. WAP to demonstrate the use of static keyword.
6. WAP to demonstrate multiple inheritances using the interface.
7. WAP to run multiple threads at a time.
8. WAP to demonstrate use of user-defined Package.
9. WAP to demonstrate thread synchronization.
10. WAP to demonstrate Layout managers.
11. WAP to demonstrate adapter classes.
12. WAP to create registration form with proper layout.

