

YMCA University of Science & Technology, Faridabad
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Class : MCA 4th Semester		
Course : Advanced Java Programming (MCA-16-202)		Faculty Name : Dr. Preeti Sethi
Course Objective	To familiarize the students with the various advanced concepts of Java Programming including Swings, Servlets , JDBC, AWT Programming and Beans	
Sno	Name of Topic	Hours
Unit-I : Numbers , Strings and Collections		10 hrs.
1	The Numbers Classes, Formatting Numeric Print Output, Strings	2
2	Converting Between Numbers and Strings, Manipulating Characters in a String	1
3	The String Builder Class, Autoboxing and Unboxing	2
4	The Collection Interface, The Set Interface	2
5	The List Interface, Map interface	2
6	Generics and Annotation	1
Unit-II : I/O in JAVA		10 hrs.
7	I/O Streams, Byte Streams, Character Streams, Buffered Streams	2
8	Scanning, Formatting, I/O from the Command Line, Data Streams, Object Streams	2
9	File I/O, The Path Class, Path Operations	1
10	File Operations, Checking a File or Directory, Deleting a File or Directory, Copying a File or Directory, Moving a File or Directory	3
11	Managing Metadata (File and File Store Attributes), Reading, Writing, and Creating Files, Random Access Files	2
Unit-III : AWT & SWINGS		11 hrs.
12	AWT Class Hierarchy, Creating Containers and adding Components	2
13	Layout, Panels, event Handling, Adapter Classes	2
14	Dialog Boxes, Scrollbar, Menus	2
15	Difference between AWT and Swings, Containment	2

	Hierarchy of Swings	
16	Adding Components, JTextField, JPasswordField,JTable, JComboBox,JProgressBar, JList,JTree, JColorChooser, Dialogs	3
	Unit-IV : Servlets & JDBC	9 hrs.
17	Advantages over applets, Servlet alternatives and features,	1
18	Servlet Architecture, Servlet Lifecycle,GenericServlet, HttpServlet,	2
19	Passing and Retrieving parameters to servlets, Server Side Include, Cookies, filters, Security Issues	2
20	Introduction to JDBC, JDBC vs. ODBC	1
21	JDBC Drivers, JDBC Architecture,	1
22	JDBC Classes and Interfaces	2
	Unit-V : JAVA BEANS & JAVASCRIPT	13 hrs.
23	Introduction and Advantages of JavaBeans, JDK Introspection	2
24	JavaBeans API,EJB, Introduction to Struts Framework.	2
25	Need of JavaScript	1
26	Features and Basic Programming constructs of JavaScript(variables, arrays, and functions)	3
27	Objects	2
28	Dialog Boxes	1
29	Event Handling	2
	Total	53 hrs.

TEXT BOOKS

1. Uttam K. Roy, “ Advanced Java Programming”, Oxford University Press
2. Ivan Bayross,” HTML, DHTML, Java Script, Perl & CGI”, BPB Publication.
3. Internet & Web Technologies – Raj Kamal, TMH
4. Herbert Shield “ The complete reference-JAVA2” , TMH