

Branch: B.Sc.(IT)	Semester-III
Subject Code: 3202	Lecture: 02 Credit: 02
Course Opted	Core Course Practical - 8
Subject Title	JAVA PROGRAMMING - LAB

Course Objectives:

- To make students aware of various OOP concepts and their implementations.
- To enable students to install and use various versions of JAVA & some of its editors.
- To enable students to write, compile, run & debug java programs using core java language.
- Implementation of various OOP entities like classes, objects, inheritance etc. using java.
- To learn JAVA dealing with GUI & IO devices.
- Learning advanced Java features like Generics, Multi-Threading, Autoboxing etc.

Course Outcomes:

- Basic knowledge of programming in JAVA.
- Experience with developing and debugging software in Java.
- Developing software skills for developing real world applications using Java Programming language.

Modules	Sr. No.	Topic and Details	No. of Lectures/ Practicals Assigned	Marks Weightage %
UNIT - I	1	Introduction and Programming with java: Installing & Setting Up Java Environment And Various Java Editors. Developing First Java Program, Implementation of Data Types, Type conversion & Casting, Java Automatic Conversions, Casting Incompatible Types, Arrays: one, Multi-dimensional, Operators: Arithmetic, Modulus Assignment, Increment & Decrement, Relational Boolean, Logical operators. Control Statements: All Control Statements, Jump Statement. Classes & Objects: Class Fundamentals- General form, Simple class, Declaring Objects, Assigning Object reference variables.	2	4
	2	Implementation of Constructor & Methods: Constructors, This keyword, Garbage Collection, Finalise() method, A stack Class	1	2
UNIT-II	3	Implementation of Method Overloading: Overloading Recursion, Static.	1	2
	4	Inheritance: Implementing Inheritance & Method Overriding: Basics, Using Super, Multilevel, Overriding, Dynamic Method dispatch.	2	4
	5	Method Overriding Dynamic Method Dispatch, Why Overridden Methods? Applying Method Overriding, Using final methods.	2	4
	6	Special Features of java: Implementing Abstract classes Interface & packages, Packages Access Protection, Importing Package, Interface.	2	4
	7	Strings: Implementations of String Handling functions	2	4

UNIT-III	8	Exception Handling: Implementation of try catch, Multiple catch, Nested Try, throw, throws, finally statements Java's Built-in- Exception	2	4
	91	Implementation of threading: Single and Multiple thread	2	4
UNIT-IV	10	I/O: Implementation of Console I/O functions, I/O operations from a file using Reader & Writer classes, I/O operations from a file using InputStream & OutputStream classes	2	4
	11	Applets: Implementation of I/O functions, Implementation of Applet- Initialization and Termination, Init(), Start(), Paint(), Stop(), Destroy(), Overriding update(), Simple Applet Display Methods(), Repainting, Using Status window, The HTML Applet tag, Passing parameters to Applets.	2	4
	12	Networking classes and interfaces: InetAddress, Factory Methods, Instance Methods, TCP/IP client sockets, whois URL, Format URL connection, TCP/IP Server sockets, Datagrams, DatagramPacket, Datagram server and client.	1	2
	13	Implementation of AWT& Layout Managers: Control fundamentals, Adding & Removing controls, Responding to controls, Basic of Swings: Panels, Checkbox, Dialogs and frames, Using menus, Using the adapter class , Using Buttons, Listeners	2	4
	14	Database Connectivity: Database connectivity with JDBC	2	4
		TOTAL	25	50

Text Book:

1. Herbert Schildt, "Java 2 the Complete Reference J2se", 5TH Edition , TMH,2003.

Reference Books:

1. Programming with Java A Primer, E. Balaguruswamy Tata McGraw Hill Companies.
2. Java Programming John P. Flynt Thomson 2nd.
3. Java Programming Language Ken Arnold Pearson.
4. Big Java, Cay Horstmann 2nd edition, Wiley India Edition.