

• Java' Language –Syllabus(Core)

Course Duration (2 Months)

Introduction to Java

The Basics of Java-A brief history of Java, The Java, Architecture, Java Features. Importance of

Java to the Internet Java Applets and Applications, Fundamentals of Object Oriented Programming,

Concepts of OOP, Benefits of OOP, Java and C++, Java Environment, Java Development Kit,

Application programming Interface (API). Getting started with JDK, Java program structure,

Using Java with Other Tools

Language Basics

Java tokens, Java character set, Keywords, Identifiers, Literals, Separators . Constant Variables.

Data types. Type casting Constants, Variables and their Scope, Operator and Expressions, Arithmetic

Operators, Relational & Conditional Operators, Logical Operators:, Assignment Operators, Increment

& Decrement Bitwise operator, special Operators, Precedence of Operators

Control Flow statements

If & If else statements, switch Statement, for loop, while do loop, Branching.

Objects and Classes in Java

Introduction to classes, Defining a class. Creating objects, Methods, Constructors and Access Specifiers

Application of Constructor. Parameterized Constructors, Overloading Methods and Constructors,

Access control Modifiers Public, Private and Protected. Static. Final and Abstract Modifiers and

Method overriding, Inheritance basics, Method overriding

Arrays Strings and Vectors

Arrays one-dimensional array Multidimensional array, Strings, String class, Working with Strings,

String Buffer class, Vector and wrapper class, Vector Constructors, Working with vector methods, wrapper Class.

Packages and Interfaces

Using Java interfaces, Defining an interface, Implementing an interface, Extending an Interface, Using

Java Packages, Defining a Package , Brief discussion on CLASSPATH, Access Protection, Importing

a package, Java API Package,

Exception handling

Introduction to Exception Handling, why use Exception Handling, Fundamentals of Exception Handling.

Exceptions & their types, Common Exceptions, Using Exception Handling using try and catch, Multiple

Catch Statement, Nested try Statements, Methods available to Exceptions, Throwing your own Exception.

Applet programming

Writing Applets, The Basics of Applets, Life Cycle of an Applet, Painting the Applet, The Applet Tag,

Security Restrictions when using Applets. Taking Advantage of the Applet API, Finding and Loading

data Files, Displaying short Status Strings, Displaying Documents in the Browser Playing Sounds

Defining and Using Applet Parameters

Note :- More than 100 programs will be practiced during the course