

Syllabus of Core Java

(1) Introduction

Introduction – what is java, importance of java, java implementation application of java, sample program & compilation, using block of code, lexical issues (White space, identifiers, literals, comments, separators, and keyword), and java class library

(2) Data type, operators, control structures

variables, constants, declaration, literals, scope of variable, type casting, arithmetic operators, relational operators, logical operators, assignment operators, increment –decrement operators, conditional operators, bit wise operators, interface of operators, dot operators,if-else, statement, loops (while, do-while, for break, goto, continue return) switch statement, operator, array – declaration, creation, initialization, length, two-dimensional arrays, string-string arrays, string methods, stringbuffer class

(3) Introduction of classes, objects and methods

What is class, object & method, defining class, adding variables, adding methods, creating objects, constructors THIS key word, garbage collection, finalize() method, accessing class members, vectors and wrapper classes, inheritance, final variables and methods, final classes, finalizer methods, abstract methods and classes, visibility control – public access, friendly access, protected access, private protected access, String class, Command-Line arguments

(4) Inheritance

Inheritance, Member access, super class, creating multilevel Hierarchy, Method over loading & overriding, Abstract class, method, Using final to prevent overriding & overloading , the object class

(5) Packages and Interfaces

Defining packages, Access protection, importing packages, defining interfaces

(6) Exception handling

Exception types, uncaught exceptions, multiple catch clauses, nested try statements, throw, throws, finally, java's built-in exceptions, creating your own exception subclasses

(7) Multithreaded programming

creating threads, run()method, new thread, thread class, stopping & blocking threads, life cycle of thread- newborn, runnable, running, blocked, dead, waiting sleeping, suspended, blocked, using thread methods, thread exceptions, thread priority, synchronization, implementing the Runnable interface

(8) Applet

What is an Applet, applet lifecycle, applet class, applet context class, passing parameters to applet, use of java .awt graphics class and its various methods in an applet

(9) Event Handling

Event delegation model or event class hierarchy, all classes and interfaces of event delegation model, programs related to event handling covering all types of events

(10) Collection and Utilities

Map, Set, List, Iterator, Enumerator, HashSet, HashMap, Dictionary, Date, Calendar
Arrays, ArrayList, LinkedList, Stack, Queue, Vector etc...

(11) File Handling

ByteStream, CharacterStream, Reader, File, Directory, FileInputStream, FileOutputStream,
DataInputStream, DataOutputStream etc..

(12) Graphical user interface

Layout managers (FlowLayout, BorderLayout, CardLayout, GridBagLayout, GridLayout), AWT controls
(Labels, Buttons, Canvases, Checkboxes, CheckboxGroup, Choices, TextFields, TextAreas, Lists,
Scrollbars, Panels, Windows, Frames, Menus, Menubars)

(13) Java Swing

Working with JFrame, JApplet, JPanel, JTextField, JPasswordField, JButton, JCheckBox,
JRadioButton, JList, JScrollPane, JComboBox, JMenu, JMenuBar, JMenuItem, JPopupMenu, JTree,
JTable.

(14) JDBC

Statement, PreparedStatement, ResultSet, Scrollable ResultSet, Binary Statement, Character Statement