

Krafting Your Skills

COURSE : Java (Core & Advance)

DURATION : 120 Hours

JAVA CORE

Basics of Java
<ul style="list-style-type: none">• Java - What, Where and Why?• History and Features of Java• Internals of Java Program• Internal Details of JVM• Variable and Data Type• Naming Convention
OOPS Concepts
<ul style="list-style-type: none">• Advantage of OOPs• Object and Class• Method Overloading• Constructor• static variable, method and block• this keyword• Inheritance• Method Overriding• super keyword• final keyword• Runtime Polymorphism• static and Dynamic binding• Abstract class and Interface• Downcasting with instanceof operator• Package and Access Modifiers• Encapsulation• Object class• Object Cloning• Java Array• Call By Value and Call By Reference

P.T.O.

String Handling

- String : What and Why?
- Immutable String
- String Comparison
- String Concatenation
- Substring
- Methods of String class
- StringBuffer class
- StringBuilder class
- toString method
- StringTokenizer class

Exception Handling

- Exception Handling : What and Why?
- Try and catch block
- Multiple catch block
- Nested try
- Finally block
- Throw keyword
- Exception Propagation
- Throws keyword
- Custom Exception

Multithreading

- Multithreading : What and Why?
- Life Cycle of a Thread
- Creating Thread
- Thread Scheduler
- Sleeping a thread
- Joining a thread
- Thread Priority
- Daemon Thread
- Thread Pooling
- Thread Group
- ShutdownHook
- Performing multiple task by multiple thread
- Garbage Collection
- Runnable class

P.T.O.

Synchronization

- Synchronization : What and Why?
- Synchronized method
- Synchronized block
- Static synchronization
- Deadlock
- Inter-thread Communication
- Interrupting Thread

Input and output

- FileOutputStream & FileInputStream
- ByteArrayOutputStream
- SequenceInputStream
- BufferedOutputStream & BufferedInputStream
- FileWriter & FileReader
- Input from keyboard by InputStreamReader
- Input from keyboard by Console
- PrintStream class
- PrintWriter class
- Reading and Writing data simultaneously
- DataInputStream and DataOutputStream

Serialization

- Serialization & Deserialization

Networking

- Socket Programming
- URL class
- Displaying data of a web page
- InetAddress class
- DatagramSocket and DatagramPacket
- Two way communication

AWT and EventHandling

- AWT Controls
- Event Handling by 3 ways
- Event classes and Listener Interfaces
- Adapter classes
- Creating Games and Applications

P.T.O.

Collection

- Collection Framework
- ArrayList class
- LinkedList class
- ListIterator interface
- HashSet class
- LinkedHashSet class
- TreeSet class
- PriorityQueue class
- ArrayDeque class
- Map interface
- HashMap class
- LinkedHashMap class
- TreeMap class
- Hashtable class
- Comparable and Comparator
- Properties class

JDBC

- JDBC Drivers
- Steps to connect to the database
- DriverManager
- Connection interface
- Statement interface
- ResultSet interface
- PreparedStatement
- ResultSetMetaData
- DatabaseMetaData
- Stored procedures and functions
- Transaction Management
- JDBC New Features

JAVA ADVANCE

Swing

- Basics of Swing
- JButton class
- JRadioButton class
- JTextArea class
- JComboBox class
- JTable class
- JColorChooser class
- JProgressBar class
- JSlider class
- Graphics in swing
- Displaying Image
- Edit Menu for Notepad
- Open Dialog Box
- Creating Notepad
- Creating Games and applications

LayoutManagers

- BorderLayout
- GridLayout
- FlowLayout
- BoxLayout
- CardLayout

Applet

- Life Cycle of Applet
- Graphics in Applet
- Displaying image in Applet
- EventHandling in Applet
- JApplet class
- Painting in Applet
- Digital Clock in Applet
- Analog Clock in Applet
- Parameter in Applet
- Applet Communication
- Creating Games

P.T.O.

Basics of Servlet
<ul style="list-style-type: none">• Servlet: What and Why?• Basics of Web• Servlet API• Servlet Interface• GenericServlet• HttpServlet• Servlet Life Cycle• Working with Apache Tomcat Server• Steps to create a servlet in Tomcat• How servlet works?• servlet in Myeclipse• servlet in Eclipse• servlet in Netbeans
ServletRequest
<ul style="list-style-type: none">• ServletRequest methods• Registration example with DB
Servlet Collaboration
<ul style="list-style-type: none">• RequestDispatcher• sendRedirect
ServletConfig
<ul style="list-style-type: none">• ServletConfig methods• ServletConfig example
ServletContext
<ul style="list-style-type: none">• ServletContext methods• ServletContext example
Attribute
<ul style="list-style-type: none">• How to set, get and remove example?

P.T.O.

Krafting Your Skills

Session Tracking
<ul style="list-style-type: none">• Cookies• Hidden Form Field• URL Rewriting• HttpSession
Event and Listener
Filter
<ul style="list-style-type: none">• Filter• Authentication Filter• FilterConfig• Useful examples