Basics of Java

✔ Java - What, Where and Why?
✔ History and Features of Java
✔ Internals of Java Program
✔ Difference between JDK,JRE and JVM
✔ Internal Details of JVM
✔ Variable and Data Type
✔ Unicode System
✔ Naming Convention

OOPS Conecpts

✔ Advantage of OOPs
✔ Object and Class
✔ Method Overloading
✔ Constructor
✔ static variable, method and block
✔ this keyword
✔ Inheritance (IS-A)
✔ Aggregation and Composition(HAS-A)
✔ Method Overriding
✔ Covariant Return Type
✔ super keyword
✔ Instance Initializer block
✔ 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
✔ strictfp keyword
✔ Creating API Document

String Handling

✔ String : What and Why?
✔ Immutable String
✔ String Comparison
✔ String Concatenation

- ✔ Substring
- ✔ Methods of String class
- ✔ StringBuffer class
- ✔ StringBuilder class
- ✔ Creating Immutable 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
- ✔ Exception Handling with Method Overriding
- ✔ Custom Exception

Nested Classes

- ✔ Nested Class : What and Why?
- ✔ Member Inner class
- ✔ Annonymous Inner class
- ✔ Local Inner class
- ✔ static nested class
- ✔ Nested Interface

Multithreading

- ✔ Multithreading : What and Why?
- ✔ Life Cycle of a Thread
- ✔ Creating Thread
- ✔ Thread Schedular
- ✔ 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

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
✔ CharArrayWriter
✔ Input from keyboard by InputStreamReader
✔ Input from keyboard by Console
✔ Input from keyboard by Scanner
✔ PrintStream class
✔ PrintWriter class
✔ Compressing and Uncompressing File
✔ Reading and Writing data simultaneously
✔ DataInputStream and DataOutputStream
✔ StreamTokenizer class

Serialization

✔ Serialization & Deserialization
✔ Serialization with IS-A and Has-A
✔ transient keyword

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

Swing

✔ Basics of Swing
✔ JButton class
✔ JRadioButton class
✔ JTextArea class
✔ JComboBox class
✔ JTable class
✔ JColorChooser class
✔ JProgressBar class
✔ JSlider class
✔ Digital Watch
✔ 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
✔ Animation 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

Reflection API

- ✔ Reflection API
- ✔ newInstance() & Determining the class object
- ✔ javap tool
- ✔ creating javap tool
- ✔ creating appletviewer
- ✔ Accessing private method from outside the class

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
- ✔ Connectivity with Oracle
- ✔ Connectivity with MySQL
- ✔ Connectivity with Access without DSN
- ✔ DriverManager
- ✔ Connection interface
- ✔ Statement interface
- ✔ ResultSet interface
- ✔ PreparedStatement

- ✔ ResultSetMetaData
- ✔ DatabaseMetaData
- ✔ Storing image
- ✔ Retrieving image
- ✔ Storing file
- ✔ Retrieving file
- ✔ Stored procedures and functions
- ✔ Transaction Management
- ✔ Batch Processing
- ✔ JDBC New Features
- ✔ Mini Project

Java New Features

- ✔ Assertion
- ✔ For-each loop
- ✔ Varargs
- ✔ Static Import
- ✔ Autoboxing and Unboxing
- ✔ Enum Type
- ✔ Annotation

etc.

Internationalization

- ✔ Internationalization
- ✔ ResourceBundle class
- ✔ I18N with Date
- ✔ I18N with Time
- ✔ I18N with Number
- ✔ I18N with Currency