

Core Java Syllabus

DAY -1 :

- How to write Java Program
- Compiling and Executing java program
- Phases of java program
- Analysis of main() method
- What is JDK, JRE, JVM, JIT
- Features of Java

DAY -2 :

- Identifiers
- Keyword
- Instance Variable, Reference Variable, Static Variable
- Static block, Non Static block
- Command line argument

DAY -3 :

- Datatypes
- Operators
- Conditional Statements
- Loops

DAY -4 :

- Array creation, operation
- Passing array to a method using varargs.
- Keyboard input by Scanner class

DAY -5 :

- Procedural Vs OOPS Concept
- Abstraction, Encapsulation, Inheritance, Polymorphism
- Class creation
- Using Object
- Property accessor & mutator methods

DAY -6 :

- Constructor, Types of Constructor
- Constructor overloading, Constructor rules
- Constructor vs Methods
- Copy Constructor

- 'this' keyword

DAY -7 :

- Access Modifiers
- Static variable, Static method
- Inner class & types

DAY -8 :

- Inheritance
- Constructor chaining
- 'super' vs super()
- Reference casting (Upcasting / downcasting)

DAY -9 :

- Creating Abstract class
- Creating Interface
- Inheriting from Abstract class
- Inheriting from Interface

DAY -10 :

- Polymorphism- Overloading , Overriding
- Dynamic method dispatch
- Method hiding
- Using final keyword.
- IS-A vs HAS-A relationship

DAY -11 :

- Creating Package
- Importing Package, Static import
- Access Protection
- Namespace management
- Creating subpackage

DAY -12:

- Creating JAR files
- String Constant Pool
- String, StringBuffer, StringBuilder
- String manipulation

DAY -13:

- Using Object class
- Using Runtime class
- Using Math class
- Using toString(), equals(),
- Deep Cloning, Shallow Cloning

DAY -14:

- What is Exception
- Exception handling mechanism
- try, catch, finally block
- Exception hierarchy
- Checked & Unchecked exception

DAY -15:

- 'throw' vs 'throws' keyword
- User defined exception
- Chained exception
- Try with resource, multi catch block

DAY -16:

- What is Thread
- Creating thread from Thread class
- Naming a thread
- Constructor of Thread class

DAY -17:

- Using sleep(), join(), isAlive() methods
- Using Priority of Thread
- Creating a thread from Runnable Interface
- Synchronization of thread

DAY -18:

- What is deadlock in Thread
- Intercommunication of Thread to avoid deadlock
- Using wait(), notify(), notifyAll()
- Life cycle of Thread
- Using stop(), suspend(), resume() method and their drawback

DAY -19:

- Types of Input Output operation
- Analysing InputStream, OutputStream, Reader & Writer classes
- Using File class for basic operation
- Searching a file in a location
- Common methods and exceptions in IO

DAY -20:

- File handling by FileInputStream, FileOutputStream, Reader, Writer classes
- Using InputStreamReader, BufferedReader class
- Binary IO Operation in File by DataInputStream & DataOutputStream class

DAY -21:

- Serialization of Objects by ObjectOutputStream and ObjectInputStream
- Use of 'transient' keyword
- Writing and reading records by RandomAccessFile
- StreamTokenizer class
- Using PipedInputStream and PipedOutputStream

DAY -22:

- Overview of Socket
- TCP/IP vs UDP protocol
- Socket application by TCP/IP
- Socket application by UDP
- Using URLConnection class

DAY -23:

- Collection, Collection Framework
- Generics in Java
- Using List interface
- ArrayList, Vector, Stack

DAY -24:

- Iterator, ListIterator
- Map interface, Hashtable, HashMap, TreeMap
- Using HashSet, TreeSet

DAY-25:

- Calander, GregorianCalander
- Formatting Date with DateFormat & SimpleDateFormat
- Properties, StringTokenizer
- Random Class
- Sorting by Comparator & Comparable
- Arrays Class, Using strictfp in datastructure

DAY -26 : NEW FEATURES IN JAVA

- New Features of jdk 1.8, 1.9, 1.10
- Lambda expression, Reflection

DAY -27:

- Java Database Connectivity
- SQL basics, Different types of Driver
- Connection with different database
- Database Manipulation (CURD Operation)
- Using DriverManager, Connection, Statement, ResultSet

DAY -28:

- Using SQL queries by PreparedStatement
- Using procedures and functions by CallableStatement
- Transaction Management
- Batch Processing

DAY -29:

- What is Applet
- Applet vs Application
- Creating Frame for desktop application
- GUI Components
- Layout Managers

DAY -30:

- Event Handling
- Event classes and Listener interfaces
- Adapter classes
- Using IDE for GUI Application