1. Introduction to reference data types
2. Reference variables and methods
3. Difference between reference data types and primitive data types
4. Difference between reference variable and static variable
5. Re-assigning a reference variable
6. Passing reference variable to method
7. Initializing reference variable of different class
8. Encapsulation
9. Upcasting & downcasting of a reference variable
10. New interface features (Java 8 & above)
11. Arrays
12. Enumerations
13. Packages and import statements
14. Static imports
15. String class, StringBuffer & StringBuilder class
16. **Exception** hierarchy, Errors, Checked and un-checked exceptions
17. Exception propagation
18. try-catch-finally block , throws clause and throw keyword, Multi catch block
19. Creating user defined checked and unchecked exceptions
20. **java.io & java.nio Package**

* Brief introduction to InputStream, OutputStream, Reader and Writer interfaces
* NIO package
* Serialization and de-serialization
* Shallow copy and deep copy

1. **Object Class & java.util Package**

* Date, DateTime, Calendar class
* Converting Date to String and String to Date using SimpleDateFormat class
* Object Class: Overriding to String, equals & hashcode method

1. **Collection**s

* Introduction to collections: Collection hierarchy
* List, Queue, Set and Map Collections
* List Collection: ArrayList, LinkedList
* Vector (insert, delete, search, sort, iterate, replace operations)
* Collections class
* Comparable and Comparator interfaces
* Queue collection
* Set Collection: HashSet, LinkedHashSet & TreeSet collection
* Backed set collections
* Map Collection: HashTable, HashMap, LinkedHashMap & TreeMap classes
* Backed Map collections

1. Generics
2. Concurrent collections
3. **MultiThreading**

* Synchronization
* Deadlock
* Wait, notify and notifyAll methods
* Producer & Consumer problem

1. Inner Class (Regular, Method local, Anonymous & static inner class)
2. Lambada Expression
3. Reflection