1. **Introduction to Java**
   - What is Java
   - Java Versions and Environment
   - Features of Java
2. **Object Orientation and Java**
   - Object Oriented Programming Concepts
   - Creating Classes and Objects
   - Memory Management
   - Up Casting
   - Constructors
   - Comparing Objects
   - Inheritance
   - Polymorphism
3. **Advanced OOPS in Java**
   - Modifiers and Access Control
   - Abstract Classes
   - Interfaces
   - Packages
4. **Exception Handling**
   - Understanding Exceptions
   - Multiple Handlers
   - Nested Exception Handling
   - Creating own Exceptions
   - Practices in Java Exception Handling
5. **Multithreading in Java**
   - Java Threading Model
   - Creating Threads
   - Thread Priorities
   - Thread Synchronization
   - Inter Thread Communication
6. **String, String Buffer and String Builder in Java**
   - Understanding Various String Constructors
   - Various String Operations and Character Extraction Methods
   - Introduction to String Buffer class
   - Understanding Various String Buffer Constructors
   - Difference in String Buffer and String Builder
7. **I/O Streams and Object Serialization**
   - Java Streams
   - File Class
   - Java Input and Output Streams Hierarchy
   - File Streams

- Buffered Streams
- Object Streams and Serialization
- Deserialization
- Externalization
- NIO classes

8. **Collections Framework & Wrapper Classes**
   - Introduction of Collections Framework
   - Working with different Collections (List, Set, Map) and Iterator
9. **Generics**
   - Defining Simple Generics
   - Generics and Sub typing
   - Bounded type
   - Bounded Wildcards

10. **Inner Classes**
    - Introduction of Inner Class
    - Accessing Members of Outer class within an Inner class
    - Static Nested Classes

11. **JAVA 8 Features**
    - Lambda Expressions
    - Functional Interfaces
    - Method Reference
    - Streams
    - Memory management
12. **Design Patterns**
    - Singleton Design pattern
    - Factory Design Pattern