**Day 1**

1. Lesson 1: Introduction to Java
   1. Introduction to Java
   2. Features of Java
   3. Evolution in Java
   4. Understanding JVM in detail
      1. Class loader
      2. Execution Engine
      3. Garbage Collection
      4. Byte Code verifier
   5. Developing software in Java
2. Lesson 2: Eclipse3.7 as an IDE
   1. Installation and Setting up Eclipse
   2. Introduction to Eclipse IDE
   3. Creating and Managing Java Projects
3. Lesson 3: Language Fundamentals
   1. Language Fundamentals
   2. Data Types
   3. Variables
   4. Methods and Parameter Passing
   5. Method with Variable Argument Lists
   6. Keywords
   7. Operators and Assignments
   8. Flow Control: Java’s Control Statements
   9. Objects and Classes
   10. Arrays

**Day 2(Language Fundamentals continued…………)**

* 1. Declaring Type Safe Enums
  2. OOPS Features in Java
  3. Other Modifiers
  4. Nested Classes
  5. The Object Class
  6. The System Class
  7. String Handling
  8. Wrapper Classes
  9. Simple formatted I/O and Scanner

1. Lesson 4: Packages and Interfaces
   1. What is an Interface?
   2. Packages
   3. Access Specifiers and Modifiers
   4. Abstract classes and Why abstract classes.

**Day 3**

1. Lesson 5: Exception Handling
   1. Exception Handling – Fundamentals
   2. Exception Types
   3. Handling Exceptions
   4. Creating Application Specific Exceptions(User defined)
2. Lesson 6: Collections
3. Collections Framework
4. The Collection API
   * 1. Interfaces and Implementations
5. Collection Interface
   * 1. Iterators
     2. The Comparator interface

1. Generics
   * 1. What are and why Generics?
     2. Usage of Generics
     3. Generics and sub-typing
     4. Wildcard, Bounded Wildcard
     5. Defining your Generic class
     6. Type erasure
     7. Interoperating with non-Generic code

**Day 4(Collection continued…)**

1. Enhanced For Loop
2. AutoBoxing with Collections
3. Implementing Classes
4. The Legacy Classes and Interfaces
5. Lesson 7: Files and Streams
6. Overview of I/O Streams
7. Types of Streams
8. The Byte-stream I/O hierarchy
9. Character Stream Hierarchy
10. Buffered Stream
11. Data Stream
12. Object Stream(Serialization and DeSerialization)

**Day 5( Files and Streams continued….)**

1. Scanning and Formatting
2. Predefined Streams
3. Lesson 8: Property Files
4. What are Property Files?
5. Types of Property files
6. User Specific Properties
   * 1. How to use load() and store() functions
7. System Properties

**Day 6**

1. Lesson 9: Log4J 2.0
2. What is Logging?
3. Why Logging is required
4. What is Log4j?
5. Log4j Concepts
   * 1. Logger
        1. Logger Priority levels
        2. What is the usage and implantation of debug(), info(), warn(), error(), fatal(), and log()
     2. Appender
        1. Types of Appenders
     3. Layout
        1. Types of Layouts
6. Installation of Log4j
7. Configuring Log4j
8. Programmatic configuration
9. Using Property File
10. Using XML File
11. Pros and Cons of Log4J
12. Comparison between Log4J and java.util.logging package
13. Lesson 10: Annotations
14. What is an Annotation?
15. Advantages of Annotations
16. Types of Annotations
17. Creating Annotations
18. Using Annotations

**Day 7 (Annotations Continued….)**

1. Why Reflection ?
2. Understanding java.lang.reflect package.
3. Testing User defined Annotations using Reflection
4. Introduction to Multithreading in Java
5. Multithreading
6. Main Thread
7. Creating threads
   * 1. Thread Class
     2. Runnable Interface
8. Thread Life Cycle
9. Thread Scheduling

**Day 8**

1. Introduction to Applet
2. Understanding Applet life Cycle methods
3. Creating own Applet
4. Understanding appletviewer utility
5. Embedding Applet in Html Page
6. Example Using Threads in Applet
7. Lesson 13: Java Database Connectivity (JDBC 3.0)
8. Introduction to JDBC
   * 1. What is JDBC ?
     2. What does JDBC do?
     3. Why JDBC?
9. Database Connectivity Architecture
   * 1. Type 1 – JDBC-ODBC Bridge
     2. Type 2 – Java Native API
     3. Type 3 – Java to Network Protocol
     4. Type 4 – Java to Database Protocol
10. JDBC APIs
11. Database Access Steps
    * 1. Loading Driver using Class.forname() and DriverManager.registerDriver()
      2. Establishing the connection
      3. Creating JDBC Statements
         1. Simple Statement
         2. Prepared Statement

**Day 9 (JDBC continued ………..plus doubt solving session)**

* + - 1. Callable Statement
    1. Getting Data from a Table
    2. Insert data into Table
    3. Update table data
  1. Using Rowsets and understanding their importance.
  2. Using transaction Management

**Day 10……………………Miniproject**

**Day 11…………………...Miniproject**