Core Java 8 and Development Tools

Lesson 00: Java SE 8

Course Goals and Non Goals

- Course Goals
  - Implementing OOPs features in Java
  - Developing Java Desktop Applications
  - Use of Core JDK 1.8 API including JDBC 4.0
  - Testing using Junit 4
  - Logging Application using Log4J
  - Implementing Multithreading
- Course Non Goals
  - Developing GUI applications

Pre-requisites

- Basic Programming Concepts
- OOPs
- DBMS/SQL
- XML

Intended Audience

- Developers new to Java technology

Day Wise Schedule

- Day 1
  - Lesson 1:Introduction to Java
  - Lesson 2: Eclipse 4.4 (Luna) as an IDE
  - Lesson 3: Language Fundamentals
  - Lesson 4: Classes and Objects
- Day 2
  - Lesson 5: Exploring Basic Java Class Libraries
  - Lesson 6: Inheritance and Polymorphism
- Day 3
  - Lesson 7: Abstract Classes and Interfaces
- Day 4
  - Lesson 9 : Exception Handling
  - Lesson 10: Array
- Day 5
  - Lesson 11: Collection
  - Lesson 12: Generics

Day Wise Schedule

- Day 6
  - Lesson 13: File IO
  - Lesson 14: Introduction to Junit 4
- Day 7
  - Lesson 15: Property Files
  - Lesson 16: Java Database Connectivity (JDBC 4.0)
- Day 8
  - Lesson 17: Introduction to Layered Architecture
- Day 9
  - Lesson 19: Logging with Log4J
  - Lesson 20: Multithreading
- Day 10
  - Lesson 21: Lambda Expressions
  - Lesson 22: Stream API
- Day 11
  - Lesson 23: Debugging Concepts

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References

- Books:
  - Java, The Complete Reference; by Herbert Schildt
  - Thinking in Java; by Bruce Eckel
  - Beginning Java 8 Fundamentals by Kishori Sharan
- Websites:
  - Java home page: http://java.sun.com/
  - JDK 1.8 documentation: http://docs.oracle.com/javase/8/docs/
  - Multithreading : https://docs.oracle.com/javase/tutorial/essential/concurrency/index.html

Next Step Courses

- Servlets
- JSP

Other Parallel Technology Areas

- C ++
- C#.Net
- Visual Basic.Net