Synergetics

Workshop Details:

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| Duration: | 3 Days |
| Description: | This course is designed by Java professionals in a way that the course will progress from introducing you to the Language Fundamentals, Object Oriented Concepts, Exception Handling, Collections, JDBC, File Handling and Unit Testing using Junit. |
| Training Methodology: | The workshop will follow Synergetics methodology of   * Concept Visualization * Active Experimentation * Application Development.   The workshop will be 100% Hands-On with each participant having access to system during the session |
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Setup Requirements:

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| Hardware and Software Requirements: | Participant’s as well as Trainer’s Machine are required to have:  Hardware   * Intel Pentium 4 [2+ GHz recommended] * 4 GB RAM * 50 GB HDD space * LAN connectivity * Good Internet connectivity and bandwidth   Software [Installed]  Windows 10  Java 8 / Java 11  Eclipse (Must match with bit architecture of machine)  MySql5 / Oracle11g  The installable must match in bits architecture of the machine.   * A shared disk-space among participants and trainer for trainer to share training stuff with participants. * Internet connection to fetch maven dependencies. |
| Training Lab Requirements: | Whiteboard 6 feet by 4 feet (minimum)  Whiteboard markers – Red, Blue, Green, Black  Video Projector (1024 X 768 resolutions) |
| Basic SWs required: | Win zip, MS Office – Word, Excel, PowerPoint, Acrobat reader, Firefox Nightly Browser, Google Chrome latest, Internet Explorer latest |

Course Content

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| **Day 1** | * Programming Fundamental with Java   + Keywords   + Primitive Data Types   + Operators and Assignments   + Variables and Literals   + Flow Control: Java’s Control Statements   + Logic building exercise using Java Program   + Difference between JDK/JRE/JVM   + Arrays * Classes & Objects   + Classes and Objects   + Packages   + Access Specifiers   + Constructors - Default and Parameterized   + this reference   + using static keyword * OOP with Java   + Inheritance   + Using super keyword   + The instanceOf Operator   + Method & Constructor overloading   + Method overriding   + @Override annotation |
| **Day 2** | * Interfaces & Abstract Classes   + Abstract class   + Interfaces   + default methods   + static methods on Interface   + Runtime Polymorphism * Exception Handling   + Exception Types   + Exception Hierarchy   + Try-catch-finally   + Try-with-resources   + Multi catch blocks   + Throwing exceptions using throw * Exploring Java Basics and Unit Testing   + The Object Class   + Wrapper Classes   + Type casting   + Using Scanner Class   + String Handling   + Unit Testing using Junit   + Understanding annotations e.g. @Test, @Before, @After etc.   + assertEquals, assertTrue etc.   + Running test cases |
| **Day 3** | * Collection Framework   + Collection Interfaces   + Implementing Classes   + Iterating Collections (using foreach & iterator)   + Comparable and Comparator   + Map Interface   + Implementing Classes   + Iterating Map * Basics of File Handling   + Overview of I/O Streams   + Reading data from File   + Writing data to file   + Copy file * JDBC   + Understanding the JDBC basics   + Connecting to a database   + Reading and Writing data to database |