Certificate Course in Core Java (J2SE)

Lectures: 40 hrs
Practical: 40 hrs
Total: 80 hrs

Objective of the Course

The course is designed to provide programming fundamentals using JAVA

Learnning Outcomes:

- Implement object oriented programming concepts
- Use and create package and interfaces in a java program.
- Understanding of advance website development tools.
- Use Graphical user interface in java program.
- Creates applets.

Course Contents

1. Introduction of OOPs	04 hours
2. Class and its Objects	02 hours
3. Inheritance	04 hours
4. Packages and Interfaces	06 hours
5. Variables and Inner Classes.	06 hours
6. Exception handling	06 hours
7. Java I/O	06 hours
8. String	10 hours
9. Multithreading	10 hours
10. applet	10 hours
11. Event Handling	10 hours
12. Swing and its Component Layout	06 hours

Detailed Syllabus

1. **Introduction of OOPs:** Summarized overview of Object Orientd programming Technique.
2. **Class and its objects:** Define class and its object, Constructor, types of Constructor , Default Constrauctor, method oveloading, constructor overloading.
3. **Inhritance** : Define inheritance and its type.Constructor in inheritance , super kerword, method overriding.
4. **Package and interface** : Define Pacakage , how to use it, How to acces multiple inhritance using interface, dyanamic binding ,
5. **Variables and Inner Classes:** Types of variable , use of static keyword , Inner classes and its importance.
6. **Exception Handling:** Define Exception, How to handle exception , checked and unchecked exception , custome exception , try , catch and finally keywords.
7. **Java I/O:** How to take input from different devices.Hierarchy of java io class.

8. **String:** String methods, StringBuffer class and its methods.

9. **Multithreading :** Creating thread and running it, Multiple Thread acting on singl e object, Synchronization, Thread communication, Thread group, Thread priorities, Daemon Thread, Life Cycle of Thread.

10. **applets:** Defining the applet and Applet class, life cycle of applets , Font class , Graphics.

11. **Event Handling :** Define Event and its class ,Listener , Adapter, MouseListener, MouseMotionListener, KeyListener.

12. **Swing and its Component Layout:** Swing components and Container, different layout , FlowLayout, BorderLayout , GridLayout.

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References:

1. SCJP Sun Certified Programmer by Kathy Sierra and Bert Bates
2. Complete Reference by TMH.
3. Java SE8 for Programmers (3rd Edition) (Deitel Developer Series) by Paul Deitel and Harvey Deitel
4. www.tutorialspoint.com/**java**/
5. www.javatpoint.com/**java**-tutorial
6. www.udemy.com/**java**-tutorial/