



SecuLabs

Core Java and Advanced Java

(6 Months)

Java desktop

Application Development

Core java

- **Java basics**
 - Installing JDK (Java Development Kit)& IDE(Integrated Development Environment)
 - Classes & Methods
 - Control Statement & Arrays
- **OOPS (Object Oriented Programming)** ○
Feature And Advantages
 - Classes And Objects
 - Constructor & Overloading
 - Encapsulation & Abstraction
 - Inheritance & Polymorphism
 - Packages & Interfaces
- **Multithreading & Exceptions**
 - Multithreading programming
 - Creating & running threads
 - Exception handling
- **Using IDE (Integrated Development Environment)** ○
Eclipse for java
 - Net beans essentials
- **IP & collection framework**
 - Streams & file handling
 - Collection framework
 - Wrapper Class
- **Network programming**
 - TCP/IP (Transmission Control Protocol/Internet Protocol) Basics
 - IP (Internet Protocol) Addressing
 - TCP/UDP(Transmission Control Protocol /User Datagram Protocol)
 - Sockets
 - Designing Networked Application



GUI In java

- **Applets & AWT(Abstract Window Tool Kit)** ○
Creating applets
 - GUI(Graphical User Interface) basics
 - Abstract Window Tool Kit
- **Swings**
 - Introduction to Swings
 - Swings vs AWT (Abstract Window Tool Kit)
 - Crating GUI (Graphical User Interface) application
- **Swings Components**
 - Menus
 - Menu bars
 - Tabbed
 - Pane
 - Dialog boxes
 - Tables
 - Progress bar
 - Slider
 - Swings containers

DATABASE

- Introduction to SQL(Structured Query Language)
- Database designs concepts
- Communication with SQL(Structured Query Language)
- Data types
- JDBC(JAVA Database Connectivity)
- SQL(Structured Query Language) Basics
- RDBMS concept & My SQL(Structured Query Language)
- JDBC/ODBC bridge database
- Connectivity using DSN(Domain Name System)
- Prepared statements

Web Applications

- **JEE(Java Enterprise Edition)** ○
Introduction to JEE
 - MVC(Model view controller) architecture
- **Servlet API(Application Programming Interface)** ○
Java Servlets
 - Servlets life cycle
 - Generic and HTTP(Hyper Text Transfer Protocol) Servlet



- Using JDBC(JAVA Database Connectivity) in Servlets
- Cookies & sessions management
- **Java server pages (JSP)**
 - JSP life cycle
 - JSP architecture
 - Directives & Declaration
 - Script lets, Expression
 - Developing Dynamics WebPages
 - Using HTML with JSP pages
 - Mixing Script lets & HTML(Hyper Text Transfer Protocol)
 - Transaction Using JSP
 - Cookies & Session Management
- **Java Beans**
 - Java Beans basics
 - Java Beans API("Application Programming Interface)
- **Enterprises Java Beans**
 - EJB(Enterprises Java Beans) architecture
 - Messaging in EJB(Enterprises Java Beans)
- **Hibernate**
 - Introduction to ORM(Object-relational mapping)
 - Hibernate Basics
 - Mapping Files and POJO'S
 - Working on Hibernate
 - Use of Hibernate in a project
- **Struts**
 - Struts architecture
 - Struts Components
 - Validation Framework
 - Error Handling
 - Data Base Connectivity