

JAV150 : Java Programmer Certification

Code : JAV150 **Duration :** 2 days **Category :** Java

Audience :

Experienced Java developers who want to prepare themselves for the Java programmer exam step 1 and 2.

Prerequisites :

Knowledge and experience with object oriented concepts and Java programming is required to participate in this course.

Realization :

The course has a hands-on nature. The theory is interspersed with practical exercises. Several mock exams with exam test questions are discussed. The course material is in English.



Java Programmer Certification



Contents :

In the course Java Programmer Certification participants are prepared for the Java 7 programmer exam step 1 and 2 and the Java 8 programmer exam step 1. Special attention is paid to issues that are often perceived as difficult such as concurrency and synchronization. Special attention is also paid to topics like generics, collection classes, database access with JDBC and new I/O. On the basis of test questions and mock exams, the topics that are part of the exam are treated. Subjects such as declaration and access control, object orientation, assignments, and operators, flow control, exceptions and assertions, strings, I/O formatting and parsing, inner classes, concurrency and synchronization are discussed as well. Depending on the interest of the participants certain items can be covered in more depth.

Module 1 : Concurrency

- Concurrency Package
- Concurrency Package Benefits
- Contents Concurrency Package
- Task Scheduling Framework
- Executor Interface
- ExecutorService
- Executors Class
- Callables and Futures
- ScheduledExecutorService
- Synchronizers
- Semaphores
- CountdownLatch
- CyclicBarrier
- Exchanger
- Concurrent Collections

Module 2 : Generics

- Generics explained
- Syntax Generic Class
- Need for Generics
- Benefits of Generics
- Generic Characteristics
- Type Erasure
- Generic Class Examples
- Generics and Subtyping
- Wildcards
- Bounded WildCard
- Raw Types
- Type Unsafe Raw Types
- Generic Methods
- Collection Framework

Module 3 : Collection Framework

- Collections Framework
- Framework branches
- Primitive data types
- Legacy Collections
- Collection Interface
- Iterators
- Concrete Collections
- List Interface
- Set and Sorted Set
- Comparable
- Comparator
- Map Interface
- Optional Methods

Module 4 : Database Access with JDBC

- JDBC Architecture
- JDBC Drivers and URL's
- Database Connections
- Executing Statements
- Querying Databases
- Update Statements
- Retrieving Results
- Handling Errors
- Prepared Statements
- Database Metadata
- Transactions
- Commit and Rollback
- Rowset Interfaces
- Using RowsetProvider

Module 5 : New IO

- What is NIO?
- Synchronous I/O Processing
- Asynchronous I/O Processing
- Working with Buffers
- IO Channels
- Selectable Channels
- Selectors
- Selection Keys
- Character Sets
- Using Path Class
- Directory Traversing
- PathMatcher class
- Using WatchService