

## Training: Capstone Courseware 168 JDBC Programming



### TRAINING TERMS

2025-06-27 | 1 day | Virtual Classroom

### TRAINING GOALS:

Version 6.0.1

This one-day course covers the fundamentals of database programming in Java using **JDBC (Java Database connectivity)** in an incremental fashion, to get the programmer up to speed quickly and then to layer a deeper understanding of JDBC upon that foundation. This course has been designed to work with any of these relational database management systems:

- Apache Derby 10.6
- Oracle, version 9i, 10g, or 11g
- Lab exercises use SQL99 constructs whenever possible in order to be relevant to databases from all vendors.

This revision of the course targets Java 6.

### CONSPECT:

- Chapter 1. Database and SQL Fundamentals
  - Relational Databases and SQL
  - SQL Versions and Code Portability
  - Database, Schema, Tables, Columns and Rows
  - DDL - Creating and Managing Database Objects
  - DML - Retrieving and Managing Data
  - Sequences
  - Stored Procedures
  - Result Sets and Cursors
  - Using SQL Terminals
- Chapter 2. JDBC Fundamentals
  - What is the JDBC API?
  - JDBC Drivers

- Making a Connection
- Creating and Executing a Statement
- Retrieving Values from a ResultSet
- SQL and Java Datatypes
- SQL NULL Versus Java null
- Creating and Updating Tables
- Handling SQL Exceptions and Proper Cleanup
- Handling SQLWarning
- The JDBC 4.0 Cause Facility
- Chapter 3. Advanced JDBC
  - SQL Escape Syntax
  - Using Prepared Statements
  - Using Callable Statements
  - Scrollable Result Sets
  - Updatable Result Sets
  - Transactions
  - Commits, Rollbacks, and Savepoints
  - Batch Processing
  - Alternatives to JDBC
- Chapter 4. Introduction to Row Sets
  - Row Sets in GUI and J2EE programming
  - Advantages of RowSets
  - RowSet Specializations
  - Using CachedRowSets
- Appendix A. Learning Resources
- Appendix B. Course Schema
- Appendix C. Methods and Types

## REQUIREMENTS:

- Experience in [Java Programming](#) is essential. The student must be comfortable with object-oriented Java, interfaces and abstract classes - Course 103 is excellent preparation.
- Understanding of basic SQL usage or other work with relational databases will be helpful, but is not required.

## Difficulty level



## CERTIFICATE:

The participants will obtain certificates signed by Capstone Courseware.

## TRAINER:

Authorized Capstone Courseware Trainer.