

## Course Design Document

Course Code	
Course Name	JDBC

Duration (in days)	2	Proficiency Level	Fundamental
Pre-requisites	<ul style="list-style-type: none"> <li>Core Java</li> <li>Oracle PL-SQL</li> </ul>	Target Audience	Campus Hires

### Learning Outcome

At the end of the program, participants will learn

- About Java Database Connectivity
- How to Get Started with JDBC?
- Performing Basic CRUD Operations Using JDBC
- Working with Stored Procedures
- How to manage Transactions
- Working with Metadata

### Day wise Session Plan

Day	Unit	Objectives	Hours
1	Introduction to JDBC	<ul style="list-style-type: none"> <li>Introduction to JDBC</li> <li>Architecture of JDBC</li> <li>Role of Driver Manager</li> <li>Understanding JDBC Driver Types</li> </ul>	1
	Getting Started with JDBC	<ul style="list-style-type: none"> <li>Overview</li> <li>Setting up the Development Environment for Java</li> <li>Setting up the Development Environment for Oracle Database</li> <li>Demo: Connecting to Oracle Database using JDBC</li> <li>Managing Database resources</li> <li>Handling JDBC Exceptions</li> </ul>	3
	Performing Basic CRUD Operations Using JDBC	<ul style="list-style-type: none"> <li>Introduction</li> <li>Executing Static SQL Statements</li> <li>Iterating Through ResultSets</li> <li>Understanding Scrollable ResultSets</li> <li>Demo: Working with Scrollable ResultSets</li> <li>Understanding Updatable ResultSets</li> <li>Demo: Managing Data Using Updatable ResultSets</li> <li>Understanding PreparedStatement</li> <li>Demo: Retrieving Data Using PreparedStatement</li> <li>Demo: Inserting the Record</li> <li>Demo: Updating the Record</li> <li>Demo: Removing the Record</li> <li>Summary</li> </ul>	4

2	Working with Stored Procedures	<ul style="list-style-type: none"> <li>• Understanding Callable Statements</li> <li>• Calling Stored Procedures – IN Parameter</li> <li>• Calling Stored Procedures – Batch Processing</li> <li>• Calling Stored Procedures – OUT Parameter</li> <li>• Calling Stored Procedures – IN OUT Parameter</li> </ul>	2
	Managing Transactions	<ul style="list-style-type: none"> <li>• Understanding Transaction Management</li> <li>• Demo: Implementing Transaction Management</li> </ul>	2
	Working with Metadata	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• Accessing Database Metadata</li> <li>• Accessing ResultSet Metadata</li> </ul>	2
	Console App	<ul style="list-style-type: none"> <li>• Building a console-based app using Core Java and JDBC features.</li> </ul>	2
		<b>Total Hours</b>	16