



**ADV. JAVA**

**JDBC**

**Course Syllabus**

Email Id: [durgasoftonline@gmail.com](mailto:durgasoftonline@gmail.com)

**Contact: 9927372737, 8885252627**

Website: [www.durgasoftonline.com](http://www.durgasoftonline.com)

**No of Videos: 200+**

**No of Hrs:55+**

# Adv Java JDBC Part - 1

## Topic: Introduction To JDBC

1. JDBC Agenda
2. Introduction to Advanced Java Part - 1
3. Introduction to Advanced Java Part - 2
4. JDBC in Simple Way Part- 1
5. JDBC in Simple Way Part- 2

## Topic: Evolution of JDBC & JDBC API

6. Storage Areas
7. JDBC Versions
8. Evolution of JDBC Part - 1
9. Evolution of JDBC Part - 2
10. JDBC Architecture
11. How JAVA is Platform Independent & Database Independent
12. JDBC API Part -1
13. JDBC API Part – 2

## Topic: JDBC Drivers

14. Types of Drivers : Introduction
15. Types of Drivers : Type - 1
16. Types of Drivers : Type - 2

- 17. Types of Drivers : Type - 3
- 18. Types of Drivers : Type - 4
- 19. Architecture Diagram of all JDBC Drivers
- 20. Which JDBC Driver should be used?
- 21. Difference between thick & thin Drivers
- 22. Difference between 2 - Tier & 3 - Tier Drivers
- 23. Comparison Table of All JDBC Drivers

### **Topic: Steps to Develop JDBC Application**

- 24. Step - 1: Load and Register Driver class
- 25. Step-2: Establish Connection between Java Application and DataBase
- 26. Step-3: Creation of Statement object
- 27. Prepare, send & Execute SQL Query Part- 1
- 28. Prepare, send & Execute SQL Query Part- 2
- 29. Prepare, send & Execute SQL Query Part- 3
- 30. Prepare, send & Execute SQL Query Part- 4
- 31. Step-5: Process Result from ResultSet
- 32. Step-6: Close the Connection

### **Topic: Working with All JDBC Drivers**

- 33. Working with Type -1 Driver
- 34. Working with Type - 2 Driver
- 35. Working with Type - 4 Driver

- 36. Working with Type - 3 Driver
- 37. Working with Type - 5 Driver
- 38. Summary of all JDBC Drivers
- 39. How to identify the class of a method?
- 40. AutoLoading of JDBC Driver class (New Feature from JDBC 4.0V)

### **Topic: JDBC Programs for CRUD Operations**

- 41. JDBC App - 1: Program to Create Table
- 42. JDBC App - 2: Program to Drop Table
- 43. JDBC App - 3: Program to Insert a Single Record into Employees Table
- 44. JDBC App - 4: How to Read Dynamic input from Keyboard
- 45. JDBC - App -5 & 6 : Formatting Sql Queries with Dynamic Input
- 46. JDBC App - 7 : Program to insert Multiple Rows
- 47. JDBC App - 8 : Program to Update Single Row
- 48. JDBC App - 9 : Program to Update Multiple Rows
- 49. JDBC App - 10 : Program to Delete Single Record
- 50. JDBC App - 11 : Program to Delete Multiple Rows
- 51. JDBC App - 12 : Program to Select All Rows of Employeee Table

52. JDBC App - 13: Program to Select All Rows Based on Sorting order of Salaries

53. JDBC App - 14 : Program to Select Range of Records based on Address

54. JDBC App - 15 : Program to Select Range of Records based on Salary Range

55. JDBC App-16: Select Range of Records Based on initial characters of Employee

56. Selecting Particular Columns From the Table

57. JDBC App - 17 : How to Select Particular Columns From the Table

### **Topic: JDBC Programs for Aggregate Functions**

58. Aggregate Functions

59. App -18:To display Number of Rows by SQL Aggregate Function Count(\*)

60. App -19:Select Highest/Min Salaried Employee information by Using SQL Aggregate

61. JDBC App - 20: Select Nth Highest Salaried Employee information

62. App - 21: How to display retrived data from the database through HTML

### **Topic: JDBC Execute method Loop Holes**

63. App-22: How to execute Select and Non - Select Queries by using execute() method

64. App - 23: Execute method Loop Holes: executeQuery() Vs Non -Select Query

65. App - 24: Execute method Loop Holes: executeUpdate() Vs Select Query

66. App - 25: Execute method Loop Holes: executeUpdate() Vs DDL

### **Topic: JDBC Real Time Standards**

67. Importance of Java IDEs: Eclipse, Netbeans, IntelliJ IDEA, BlueJ, JGrasp

68. How to download Eclipse and Run Hello World Program

69. How to develop and run JDBC Application on Eclipse

70. Working with Mysql Database

71. Working with Mysql Database - JDBC Information

72. To Copy Data from Oracle database to Mysql Database

73. JDBC Coding Standards

74. Program To Demonstrate JDBC Coding Standards

75. Program To Demonstrate JDBC Coding Standards with Code Reusability

## Adv Java JDBC Part - 2

### Topic: PreparedStatement

1. Life cycle of SQL Query Execution
2. PreparedStatement: Need of PreparedStatement
3. Statement Vs PreparedStatement (Performance wise)
4. Steps to develop JDBC Application by using PreparedStatement
5. Program to Demonstrate PreparedStatement
6. Program to Delete Record by Using PreparedStatement
7. Static vs Dynamic queries
8. Advantages and Limitation of PreparedStatement
9. Difference b/w Statement & PreparedStatement
10. SQL Injection Attack Introduction
11. Program to Show SQL Injection Attack with Statement Object
12. Program to Show that No change of Occurring SQL Injection Attack in PreparedStatement

### Topic: Stored Procedures and CallableStatement

13. Stored Procedures Introduction
14. Create and execute Stored Procedure in Oracle Part-1
15. Create and execute Stored Procedures in Oracle Part-2
16. Java Code for calling Stored Procedures
17. Mapping Java Types to database Types by using JDBC Types

- 18. Process to call Stored Procedure from java application by using CallableStatement
- 19. Stored Procedures Application - 1
- 20. Stored Procedures Application - 2
- 21. Stored Procedures Application - 3
- 22. Stored Procedures With CURSORS Part - 1
- 23. Stored Procedures With CURSORS Part - 2
- 24. Stored Procedures With CURSORS Applications
- 25. CallableStatement Functions Part - 1
- 26. CallableStatement Functions Part - 2
- 27. CallableStatement Functions Part - 3
- 28. Statement vs PreparedStatement vs CallableStatement

### **Topic: Batch Updates**

- 29. Need of Batch Updates Part-1
- 30. Need of Batch Updates Part-2
- 31. How to implement Batch updates
- 32. Program to Demonstrate Batch Updates with PreparedStatement
- 33. Batch updates summary
- 34. In JDBC How Many Execute Methods Are Available



### **Topic: Working with Date Values**

- 35. Difference between java.util.Date and java.sql.Date
- 36. Inserting Date Values into the Database
- 37. Program-1 for inserting Date values into the Database
- 38. Program-2 for inserting Date values into the Database
- 39. Program for Retrieving Date values from the Database
- 40. Handling Date Values For Database Operations-FAQs

### **Topic: Working with BLOB and CLOB Types**

- 41. Working with Large Objects (BLOB And CLOB) Introduction
- 42. Steps to insert BLOB type into database
- 43. Program to Demonstrate insert BLOB type into database
- 44. Need of Buffer Concept in I/O Operations
- 45. Program to to Retrieve BLOB type from Database
- 46. Program to insert CLOB type file in the database
- 47. Program to Retrieving CLOB Type from Database

### **Topic: Connection Pooling**

- 48. Connection Pooling Introduction
- 49. Process to implement Connection Pooling
- 50. Program to Demonstrate Connection Pooling for Oracle & MySQL Databases
- 51. Difference Between getting Connection From DriverManager & DataSource Object

## **Topic: Working with Properties**

- 52. Properties Introduction
- 53. Program to Demonstrate use of Properties file
- 54. Program to Demonstrate use of Properties file Program - 1
- 55. Program to Demonstrate use of Properties file Program - 2
- 56. How many getConnection() methods are available in DriverManager class

## **Topic: Transaction Management & Savepoint**

- 57. Transaction Management Introduction
- 58. Transactions Properties & Types of Transactions
- 59. How to Implement Transaction
- 60. Program to demonstrate Transactions
- 61. Savepoint Introduction
- 62. Program to Demonstrate Savepoint
- 63. Transaction Concurrency Problems
- 64. Transaction Isolation levels
- 65. How many Transaction Isolation Levels are defined in JDBC

## **Topic: Working with MetaData**

- 66. MetaData Introduction
- 67. DatabaseMetaData
- 68. Program to display Table Names present in Database By using DatabaseMetaData

69. ResultSetMetaData Introduction

70. ResultSetMetaData Programs 1 & 2

71. ParameterMetaData

### **Topic: JDBC with Excel Sheets**

72. JDBC with Excel Sheets Introduction

73. Program to read data from excel and copy into Oracle Database

### **Topic: Working with ResultSet Types**

74. ResultSet Types Introduction

75. ResultSet Types (Read Only ,Updatable ,Forward only (Non-Scrollable),Scrollable)

76. Differences Between Scrollable and Non-Scrollable ResultSets

77. How to get Required ResultSet

78. List of allowed methods on Non-Scrollable / Scrollable ResultSets

79. What is the difference Between absolute() and relative() methods?

80. Iterating records in both forward & backward direction by using SCROLLABLE Result

81. Navigating Records by using SCROLLABLE ResultSet

82. Reflecting Database updates by using SCROLL SENSITIVE ResultSet Type-1,2 & 4 D

83. Updatable ResultSet and Delete operation

- 84. Update Record of ResultSet
- 85. Insert Operation by using Updatable ResultSet
- 86. Updatable ResultSets Summary
- 87. ResultSet Holdability Introduction
- 88. Program to check ResultSet Holdability
- 89. Summary of ResultSet Types

### **Topic: Working with RowSets**

- 90. RowSets Introduction
- 91. Types of RowSets
- 92. How to create RowSet objects
- 93. JdbcRowSet
- 94. To Insert Records by using JdbcRowSet
- 95. To Update Records by using JdbcRowSet
- 96. To Delete Records by using JdbcRowSet
- 97. CachedRowSet Introduction
- 98. To Demonstrate Disconnected CachedRowSet
- 99. To Retrieve Records by using CachedRowSet
- 100. To Insert Records by using CachedRowSet
- 101. To Update Records by using CachedRowSet
- 102. To Delete Records by using CachedRowSet
- 103. WebRowSet Introduction
- 104. To Retrieve Records by using WebRowSet

105. To Insert & delete Records by using WebRowSet

106. JoinRowSet Introduction

107. To Retrieve Records by using JoinRowSet

108. FilteredRowSet Introduction

109. To Retrieve Records by using FilteredRowSet

110. Summary of JDBC RowSets

111. Event Handling Mechanism for RowSets

112. Differences Between ResultSet and RowSet

### **Topic: Working with RowId**

113. RowId Interface

114. RowId lifetime

### **Topic: Topmost Important JDBC Interview FAQs**

115. Explain JDBC Architecture?

116. Explain about how JAVA is Platform Independent & Database Independent?

117. What is Driver and How many Drivers are available in JDBC?

118. Which JDBC Driver should be used?

119. What are various standard steps to develop JDBC Application?

120. Explain about various types of Statements available in JDBC?

121. Explain Differences between Statement & PreparedStatement in JDBC?
122. Explain advantages and disadvantages of Batch updates?
123. How Many Execute Methods Are Available in JDBC?
124. Explain about BLOB and CLOB in JDBC?
125. Difference between setFetchSize() & setMaxRows()