



C0302 - DB resources for JDBC Tx

Database resources using JDBC Transactions

Objective

To learn and understand all the resources involved in JDBC transaction process.

1.0 Introduction about JDBC

JDBC stands for Java Database Connectivity. JDBC API, consists of a set of classes and interfaces written in java, which makes it possible to write database applications calls entirely in java. To enable you to do this in database independent fashion, JDBC requires the database vendors to provide concrete implementations of its interfaces. These implementations route your SQL calls to the database in their proprietary format which it recognizes. As a programmer you need not worry about how it is routing your SQL statement. You can be sure that the same code works fine whatever the underlying database.

JDBC has been splitted into two dimensional. The reason for this is, to separate the low level programming such as the driver from the high level application interfaces such as connection. Database and third party software vendors have to supply the drivers to connect to their databases which can be a local or remote data sources. The implementation of the actual connection to the data source/database is left entirely to the JDBC driver.

2.0. Study Plan

S.No.	Topic	Theory
1	Structure of JDBC	15 Min
2	JDBC Driver	10 Min
3	JDBC Driver Manager	20 Min
4	JDBC Datasource	20 Min
5	JDBC Connection	20 Min
6	JDBC Connection Pooling	20 Min
7	What is Distributed Transaction?	15 Min
8	JDBC XA Resources	10 Min
9	How does distributed transaction work?	25 Min
10	How does 2PC work?	25 Min

3.0. Estimation

Total Hrs	Theory	Practical
5 Hrs	3 Hrs	2 Hrs

4.0 Assignments / Assessment Criteria

1. Try to retrieve a connection by using Driver Manager and Data Source. You can create a Data source on your locally installed weblogic server or on your development instance.

2. Assume that your banking details maintained in one Database and your credit card details are maintained in another Database. Create a program to pay your credit card balance from your bank account and this must be in a transaction.

5.0 Assessment Questions

1. What are the different types of driver?
2. Who register the driver with Driver Manager and how?
3. What are all the advantages of using Data Source over Driver Manager?
4. What is the impact on the code if there is a change in the driver mentioned in Data Source?
5. What is the impact of not closing the connection?
6. Will physical connection be closed when issued Connection.close() in all circumstances? Justify your answer.
7. Will TC talks with RM which resides on other Nodes? Justify your answer.
8. What do you mean by Resource enlistment?
9. Can our "ClientPool" participate in Distributed Transactions? Justify your answer.
10. What will happen if you issue Commit in procedure which will be invoked during distributed transactions? Justify your answer.