

Dt : 18/11/2023

***imp**

process of Connection Pooling:

Step-1 : User will take the Connection from the pool.

Step-2 : Using Connection user will interact with Database and perform operations

Step-3 : After Completing all operations on Database,the user will return the Connection back to the pool

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Summary of Objects created in JDBC:

1.Connection Object

2.Statement Object

3.PreparedStatement Object

4.CallableStatement Object

5.ResultSet Object

(i)Scrollable ResultSet Object

(ii)NonScrollable ResultSet Object

6.RowSet Object

(i)JdbcRowSet Object

(ii)CachedRowSet Object

=>WebRowSet Object

(i)FilteredRowSet Object

(ii)JoinRowSet Object

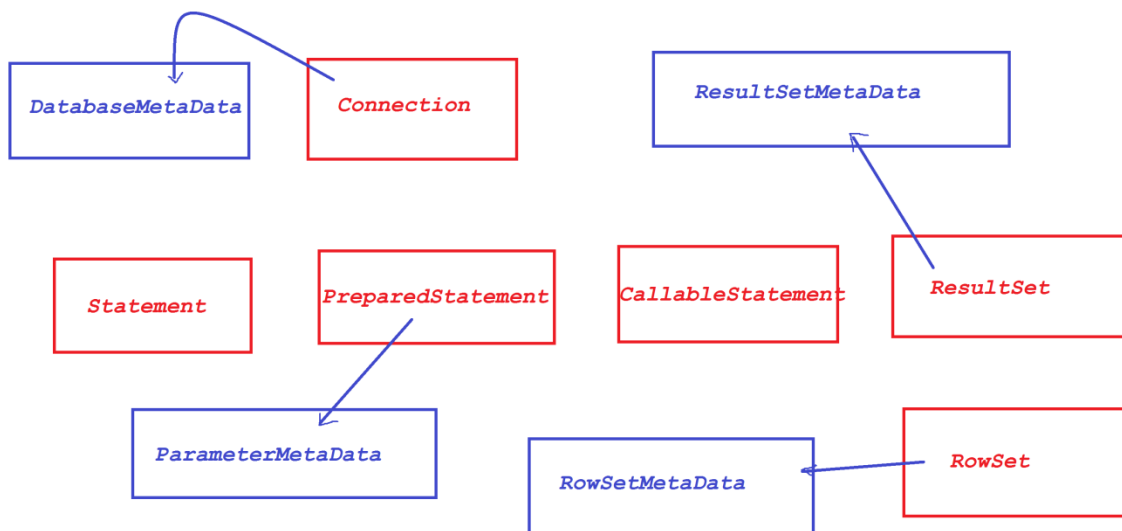
7.DatabaseMetaData Object

8.ParameterMetaData Object

9.ResultSetMetaData Object

10.RowSetMetaData Object

Diagram:



faq:

define Metadata?

=>The data which is holding information about other data is known as Metadata.

=>The following are some important metadata components in JDBC:

1.DatabaseMetaData

2.ParameterMetaData

3.ResultSetMetaData

4.RowSetMetaData

1.DatabaseMetaData:

=>DatabaseMetaData object will hold information about Connection-Object.

syntax:

DatabaseMetaData dmd = con.getMetaData();

2.ParameterMetaData:

=>ParameterMetaData object will hold information about PreparedStatement Object

syntax:

ParameterMetaData pmd = ps.getParameterMetaData();

3.ResultSetMetaData:

=>ResultSetMetaData object will hold information about ResultSet Object.

syntax:

ResultSetMetaData rsmd = rs.getMetaData();

4.RowSetMetaData:

=>RowSetMetaData Object will hold information about RowSet Objects

syntax:

RowSetMetaData rsd = (RowSetMetaData)rs.getMetaData();

Program : DBCon13.java

```
package test;
import java.sql.*;
import java.util.*;
import javax.sql.RowSetMetaData;
public class DBCon13 {
    public static void main(String[] args) {
        Scanner s = new Scanner(System.in);
        try(s){
            try {
                Class.forName("oracle.jdbc.driver.OracleDriver");
                Connection con = DriverManager.getConnection
                    ("jdbc:oracle:thin:@localhost:1521:xe",
                     "system", "manager");
                System.out.println("***DatabaseMetaData***");
                DatabaseMetaData dmd = con.getMetaData();
                System.out.println("DB
Version:" + dmd.getDatabaseMajorVersion());
                System.out.println("DB
Driver:" + dmd.getDriverName());
                PreparedStatement ps = con.prepareStatement
```

```

        ("select fname,mid,phno from Admin56 where
uname=? and pword=?");
        System.out.println("****ParameterMetaData****");
        ParameterMetaData pmd =
ps.getParameterMetaData();
        System.out.println("Count of
Parameters:"+pmd.getParameterCount());
        System.out.println("Enter the UserName:");
        String uName = s.nextLine();
        System.out.println("Enter the PassWord:");
        String pWord = s.nextLine();
        ps.setString(1, uName);
        ps.setString(2, pWord);
        ResultSet rs = ps.executeQuery();

        System.out.println("****ResultSetMetaData****");
        ResultSetMetaData rsmd = rs.getMetaData();
        int count = rsmd.getColumnCount();
        System.out.println("Count of Column:"+count);
        for(int i=1;i<=count;i++)
        {
            String nm = rsmd洗getColumnName(i);
            System.out.println("Column Name : "+nm);
        } //end of loop
        System.out.println("====Details====");
        if(rs.next()) {
            System.out.println(rs.getString(1)+"\t"+
rs.getString(2)+"\t"+rs.getLong(3));
        } //end of if
        else {
            System.out.println("Inavlid UName or
PWord..");
            System.exit(0);
        }
        //RowSetMetaData rsd =
(RowSetMetaData)rs.getMetaData();

        } catch (Exception e) {e.printStackTrace();}
        } //end of try with resource
    }

```

}

o/p:

*****DatabaseMetaData*****

DB Version:11

DB Driver:Oracle JDBC driver

*****ParameterMetaData*****

Count of Parameters:2

Enter the UserName:

nit.v

Enter the PassWord:

mzu672

******ResultSetMetaData******

Count of Column:3

Column Name : FNAME

Column Name : MID

Column Name : PHNO

====Details====

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