Java DatabaseMetaData interface

DatabaseMetaData interface provides methods to get meta data of a database such as database product name, database product version, driver name, name of total number of tables, name of total number of views etc.

Commonly used methods of DatabaseMetaData interface

* **public String getDriverName()throws SQLException:**it returns the name of the JDBC driver.
* **public String getDriverVersion()throws SQLException:**it returns the version number of the JDBC driver.
* **public String getUserName()throws SQLException:**it returns the username of the database.
* **public String getDatabaseProductName()throws SQLException:**it returns the product name of the database.
* **public String getDatabaseProductVersion()throws SQLException:**it returns the product version of the database.
* **public ResultSet getTables(String catalog, String schemaPattern, String tableNamePattern, String[] types)throws SQLException:**it returns the description of the tables of the specified catalog. The table type can be TABLE, VIEW, ALIAS, SYSTEM TABLE, SYNONYM etc.

How to get the object of DatabaseMetaData:

The getMetaData() method of Connection interface returns the object of DatabaseMetaData. Syntax:

1. **public** DatabaseMetaData getMetaData()**throws** SQLException

Simple Example of DatabaseMetaData interface :

1. **import** java.sql.\*;
2. **class** Dbmd{
3. **public** **static** **void** main(String args[]){
4. **try**{
5. Class.forName("oracle.jdbc.driver.OracleDriver");
7. Connection con=DriverManager.getConnection(
8. "jdbc:oracle:thin:@localhost:1521:xe","system","oracle");
9. DatabaseMetaData dbmd=con.getMetaData();
11. System.out.println("Driver Name: "+dbmd.getDriverName());
12. System.out.println("Driver Version: "+dbmd.getDriverVersion());
13. System.out.println("UserName: "+dbmd.getUserName());
14. System.out.println("Database Product Name: "+dbmd.getDatabaseProductName());
15. System.out.println("Database Product Version: "+dbmd.getDatabaseProductVersion());
17. con.close();
18. }**catch**(Exception e){ System.out.println(e);}
19. }
20. }

Output:Driver Name: Oracle JDBC Driver

Driver Version: 10.2.0.1.0XE

Database Product Name: Oracle

Database Product Version: Oracle Database 10g Express Edition

Release 10.2.0.1.0 -Production

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Example of DatabaseMetaData interface that prints total number of tables :

1. **import** java.sql.\*;
2. **class** Dbmd2{
3. **public** **static** **void** main(String args[]){
4. **try**{
5. Class.forName("oracle.jdbc.driver.OracleDriver");
7. Connection con=DriverManager.getConnection(
8. "jdbc:oracle:thin:@localhost:1521:xe","system","oracle");
10. DatabaseMetaData dbmd=con.getMetaData();
11. String table[]={"TABLE"};
12. ResultSet rs=dbmd.getTables(**null**,**null**,**null**,table);
14. **while**(rs.next()){
15. System.out.println(rs.getString(3));
16. }
18. con.close();
20. }**catch**(Exception e){ System.out.println(e);}
22. }
23. }

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Example of DatabaseMetaData interface that prints total number of views :

1. **import** java.sql.\*;
2. **class** Dbmd3{
3. **public** **static** **void** main(String args[]){
4. **try**{
5. Class.forName("oracle.jdbc.driver.OracleDriver");
7. Connection con=DriverManager.getConnection(
8. "jdbc:oracle:thin:@localhost:1521:xe","system","oracle");
10. DatabaseMetaData dbmd=con.getMetaData();
11. String table[]={"VIEW"};
12. ResultSet rs=dbmd.getTables(**null**,**null**,**null**,table);
14. **while**(rs.next()){
15. System.out.println(rs.getString(3));
16. }
18. con.close();
20. }**catch**(Exception e){ System.out.println(e);}
22. }
23. }