

# Lecture 14\_Database Metadata

## Metadata Basic Info

The screenshot shows the Eclipse IDE with a Java project named 'jdbc-lecture-14-database-metadata'. The main editor displays the file 'MetadataBasicInfo.java' with the following code:

```
1 import java.sql.Connection;
2
3 public class MetadataBasicInfo {
4
5     public static void main(String[] args) throws SQLException {
6
7         Connection myConn = null;
8
9         try {
10             // 1. Get a connection to database
11             myConn = DriverManager.getConnection(
12                 "jdbc:mysql://localhost:3306/db_zabala", "student", "student");
13
14             // 2. Get metadata
15             DatabaseMetaData databaseMetaData = myConn.getMetaData();
16
17             // 3. Display info about database
18             System.out.println("Product name: " + databaseMetaData.getDatabaseProductName());
19             System.out.println("Product version: " + databaseMetaData.getDatabaseProductVersion());
20             System.out.println();
21
22             // 4. Display info about JDBC Driver
23             System.out.println("JDBC Driver name: " + databaseMetaData.getDriverName());
24             System.out.println("JDBC Driver version: " + databaseMetaData.getDriverVersion());
25
26         } catch (Exception exc) {
27             exc.printStackTrace();
28         } finally {
29             close(myConn);
30         }
31     }
32 }
```

The console output shows the results of the program execution:

```
TransactionDemo [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Nov 12, 2024, 7:34:37 PM) [pid: 15404]
Doe, John, HR, 55000.00
Williams, David, HR, 120000.00
Adams, Carl, HR, 50000.00
Davis, John, HR, 45000.00
Wright, Eric, HR, 33000.00

Show Salaries for Department: Engineering
Public, Mary, Engineering, 115000.00
Johnson, Lisa, Engineering, 90000.00
Brown, Bill, Engineering, 90000.00
Fowler, Mary, Engineering, 105000.00
```

# Schema Info

The screenshot shows the Eclipse IDE interface. The main editor displays the `SchemaInfo.java` file, which is a Java class with a `main` method. The code connects to a MySQL database, retrieves metadata, and prints a list of tables. The console at the bottom shows the output of the program, which is a list of tables: `employees`, `tb_department_zabala`, `tb_employee`, `tb_employee_zabala`, `tb_faculty_zabala`, `tb_graduate_candidate_zabala`, `tb_list_employees`, `tb_pet_zabala`, and `tb_zabala`.

```
1 import java.sql.Connection;
2
3 public class SchemaInfo {
4
5     public static void main(String[] args) throws SQLException {
6
7         String catalog = null;
8         String schemaPattern = null;
9         String tableNamePattern = null;
10        String columnNamePattern = null;
11        String[] types = null;
12
13        Connection myConn = null;
14        ResultSet myRs = null;
15
16        try {
17            // 1. Get a connection to database
18            myConn = DriverManager.getConnection(
19                "jdbc:mysql://localhost:3306/db_zabala", "student", "student");
20
21            // 2. Get metadata
22            DatabaseMetaData databaseMetaData = myConn.getMetaData();
23
24            // 3. Get list of tables
25            System.out.println("List of Tables");
26            System.out.println("-----");
27
28            myRs = databaseMetaData.getTables(catalog, schemaPattern, tableNamePattern,
29                types);
30        }
31    }
32 }
33
```

Console Output:

```
<terminated> SchemaInfo [Java Application] C:\Program Files\Java\jdk-21\bin\javaw.exe (Nov 12, 2024, 7:37:01 PM – 7:37:02 PM) [pid: 8372]
List of Tables
-----
employees
tb_department_zabala
tb_employee
tb_employee_zabala
tb_faculty_zabala
tb_graduate_candidate_zabala
tb_list_employees
tb_pet_zabala
tb_zabala
```