4. Connectivity with MySQL

To connect Java application with the MySQL database, we need to follow 5 following steps. In this example we are using MySql as the database. So, we need to know following information for the mysql database:

1. **Driver class:** The driver class for the mysql database is **com.mysql.jdbc.Driver**.
2. **Connection URL:** The connection URL for the mysql database is **jdbc:mysql://localhost:3306/organization** where jdbc is the API, mysql is the database, localhost is the server name on which mysql is running, we may also use IP address, 3306 is the port number and organization is the database name. We may use any database, in such case, we need to replace the organization with our database name.
3. **Username:** The default username for the mysql database is **root**.
4. **Password:** It is the password given by the user at the time of installing the mysql database. In this example, we are going to use root as the password.

Let's first create a table in the mysql database, but before creating table, we need to create database first.

```
CREATE DATABASE organization;
USE organization;
CREATE TABLE employee(empid INT, name VARCHAR(40), designation
VARCHAR(40), salary INT);
INSERT INTO employee (empid, name, designation, salary)
VALUES
(1, 'John Doe', 'Software Engineer', 60000),
(2, 'Jane Smith', 'Senior Developer', 75000),
(3, 'Robert Brown', 'Project Manager', 90000),
(4, 'Emily White', 'QA Engineer', 55000),
(5, 'Michael Green', 'DevOps Engineer', 65000);
```

Example to Connect Java Application with mysql database
In this example, organization is the database name, root is the username and password both.

```java
package com.lokesh;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.Statement;

public class App {
    public static void main(String[] args) {
        try {
            // Load and Register the Driver (Optional) from JDBC V4.0
            Class.forName("com.mysql.cj.jdbc.Driver");
```

```java
                // We can also use url like jdbc:mysql:///organization
                // If MySQL is running in localhost and default port 3306
                Connection con = DriverManager.getConnection(
                "jdbc:mysql://localhost:3306/organization", "root", "root");

                Statement stmt = con.createStatement();
                ResultSet rs = stmt.executeQuery("SELECT * FROM employee");

                while (rs.next()) {
                        System.out.println(rs.getInt(1) + "\t" +
                            rs.getString(2) + "\t" + rs.getString(3) + "\t" +
                            rs.getInt(4));
                }

                con.close();
        } catch (Exception e) {
                System.out.println(e);
        }
    }
}
```

Output:

```
1       John  Doe      Software Engineer   60000
2       Jane  Smith    Senior Developer    75000
3       Robert Brown  Project Manager      90000
4       Emily White   QA Engineer   55000
5       Michael GreenDevOps Engineer      65000
```