JAVA JDBC with MySQL

The objective of this practical is to develop Java GUI applications with **MySql Database connected** Using Java Swing package. You are given set of activities and the sample outputs to your reference.

JDBC stands for **J**ava **D**ata**b**ase **C**onnectivity, which is a standard Java API for database-independent connectivity between the Java programming language and a wide range of databases.

The JDBC library includes APIs for each of the tasks mentioned below that are commonly associated with database usage.

- Making a connection to a database.
- Creating SQL or MySQL statements.
- Executing SQL or MySQL queries in the database.
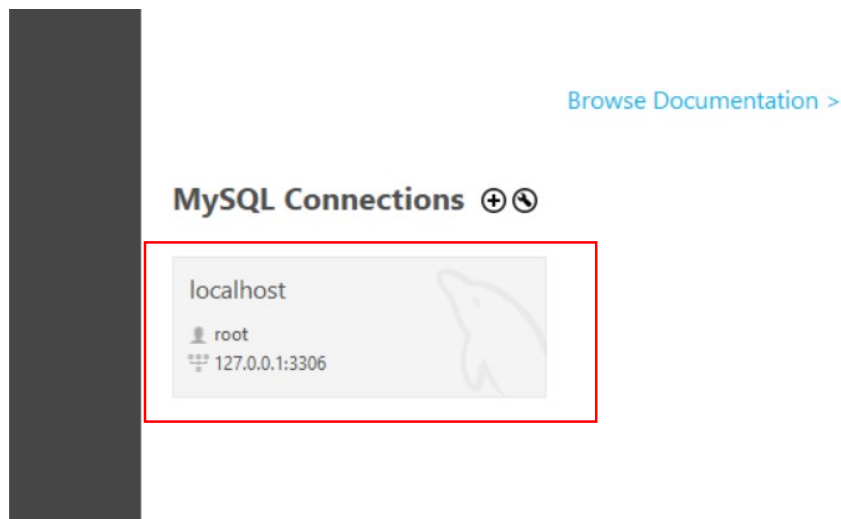- Viewing & Modifying the resulting records.

Introduction to MySQL

Open the MySql workbench 8.0 by providing the username and the password as below.
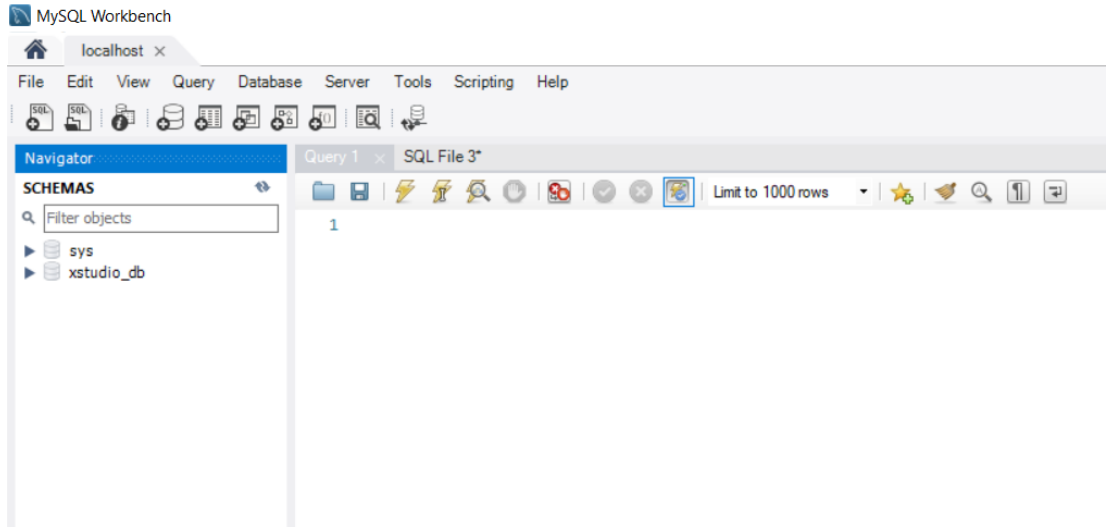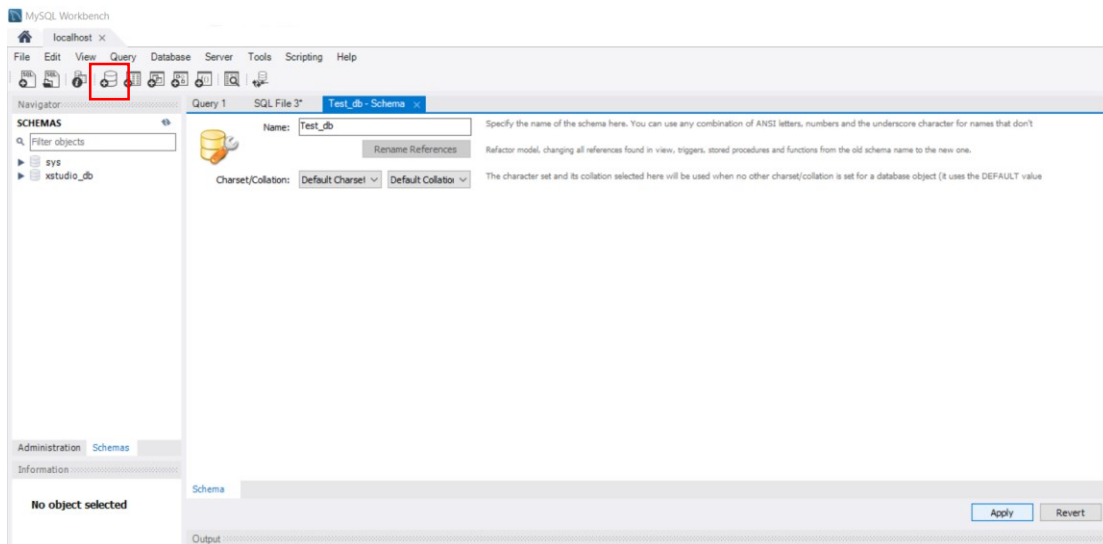
Ex:

Username : **root**
Password: **root**

Once you are logging, you should be able to see the below environment.

1. Creating a Database

Click on Database and create a new data base. You can give any name for the data base.
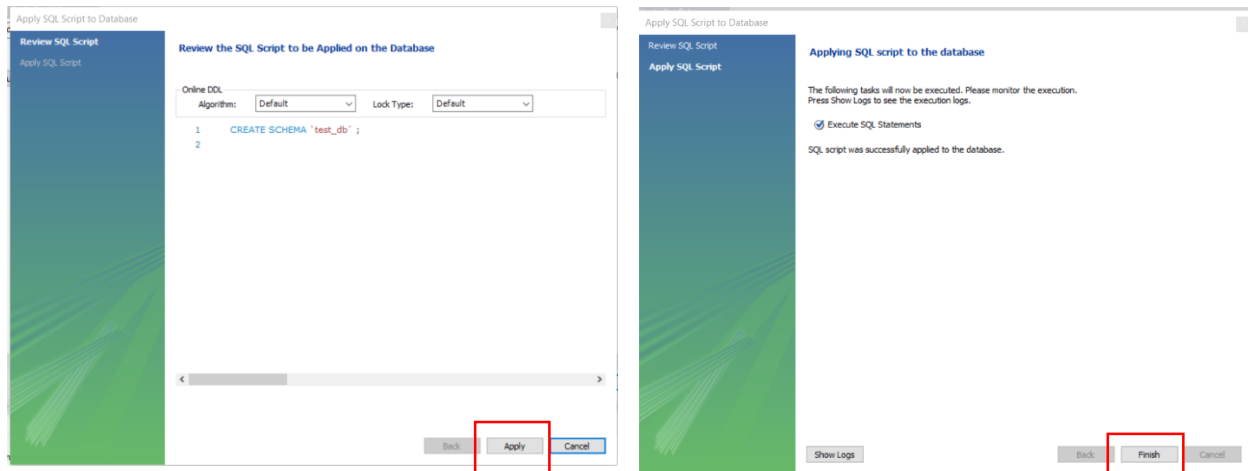
To create the database, click the **create schema** button on menu bar. Then provide the proper name for the database , Ex : **test_db** .
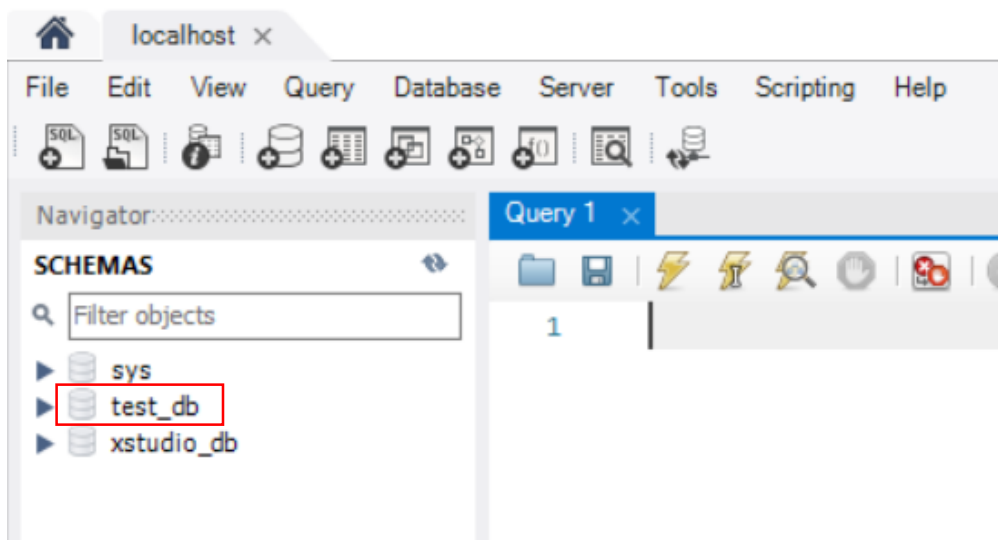
After that you will receive this interface with the Query, Click **Apply** in here.

Then click **Finish.**

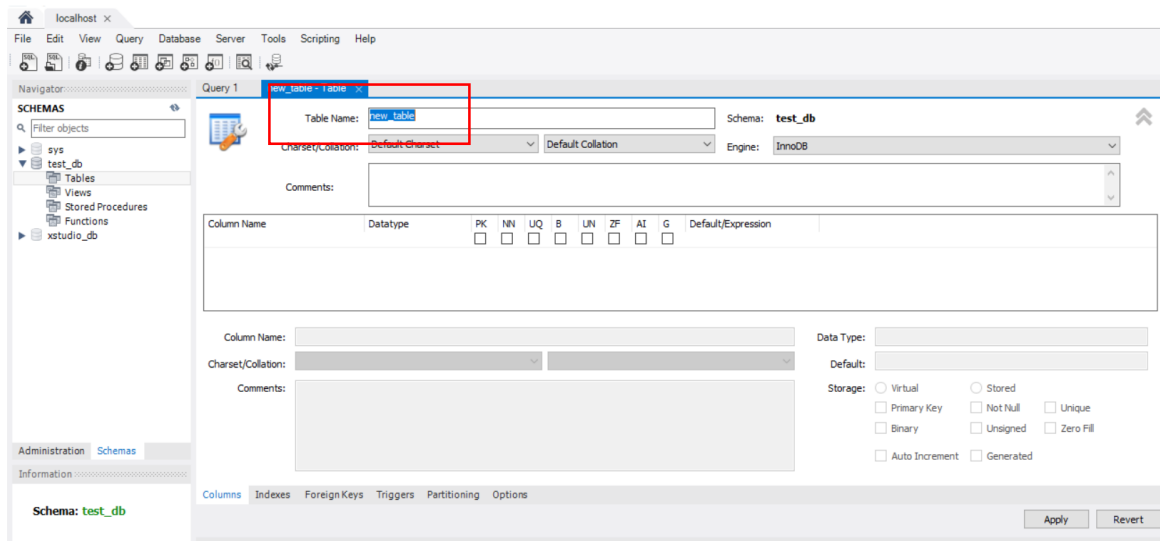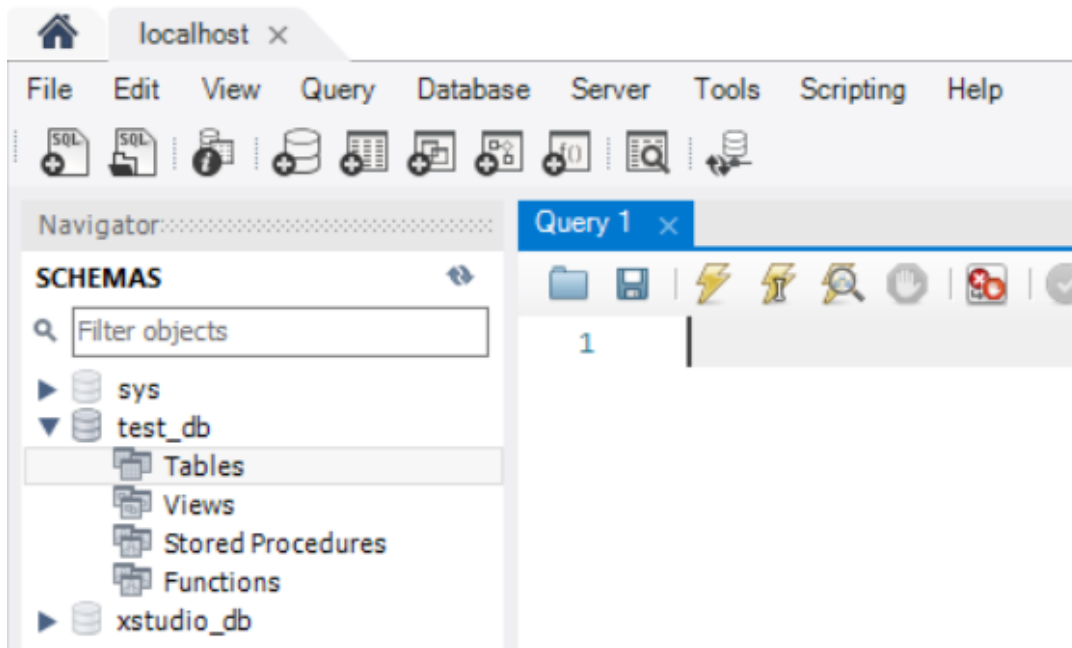Now there you can see, the database which you created can see under the **SCHEMAS**

2. Creating a Tables

Expand the Database by Clicking the arrow near the database name, then you can see several options you can perform under the database.
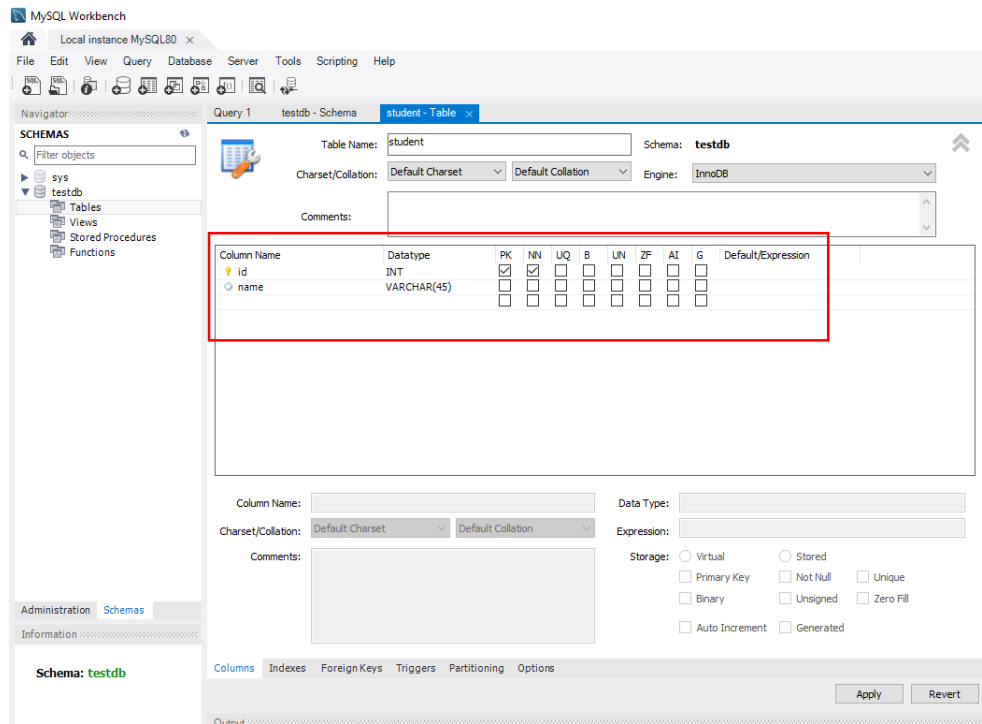
Activity 01

Inside the database schema that you created, create a Table name as student, with two attributes, those two attributes are **'id'** and **'name'.**
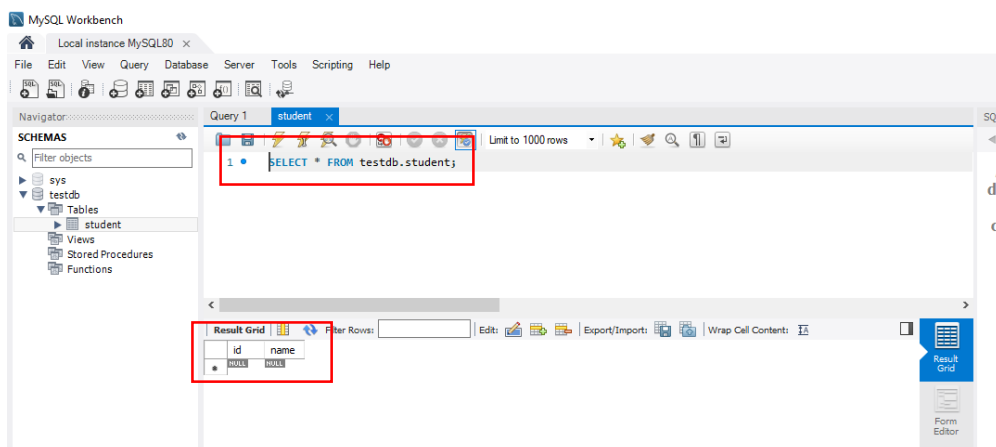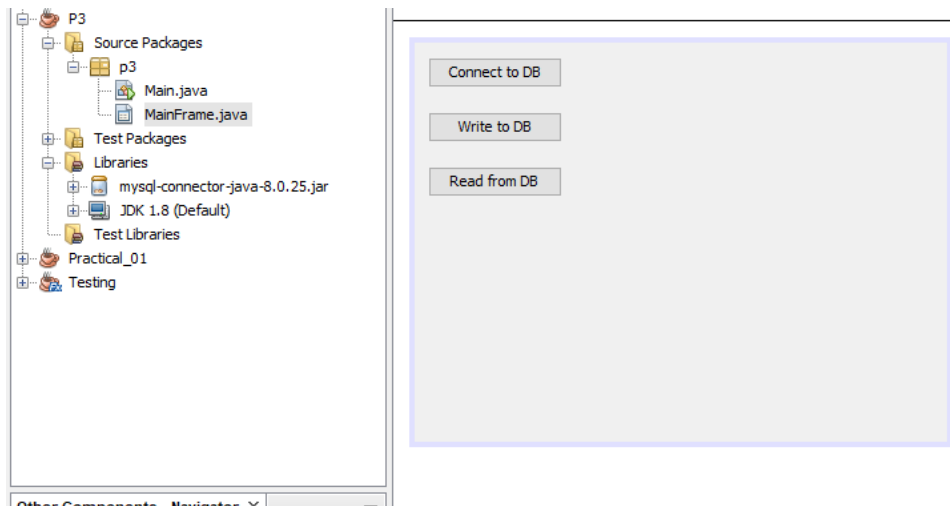
You can check your recently created table by executing SQL query in MySQL Workbench.
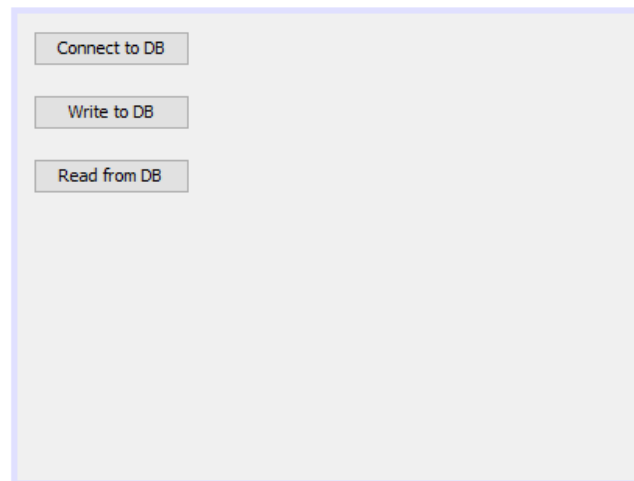
Ex : select * from testdb.student;

3. Creating JAVA Swing GUI

Create a Simple JAVA Swing GUI interface to interact with database table which created.
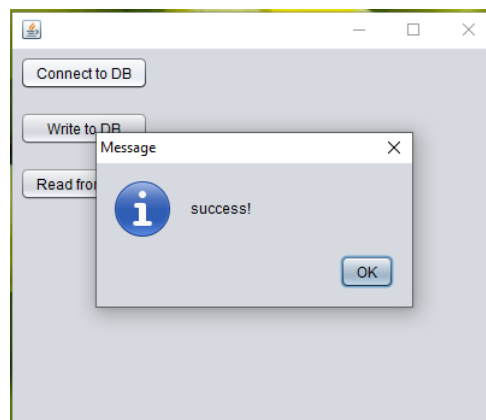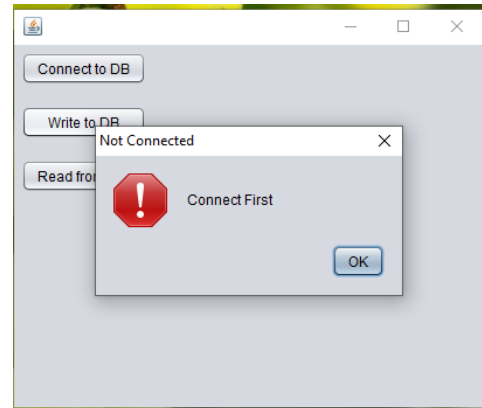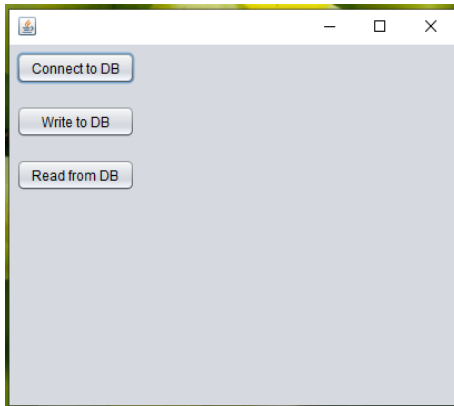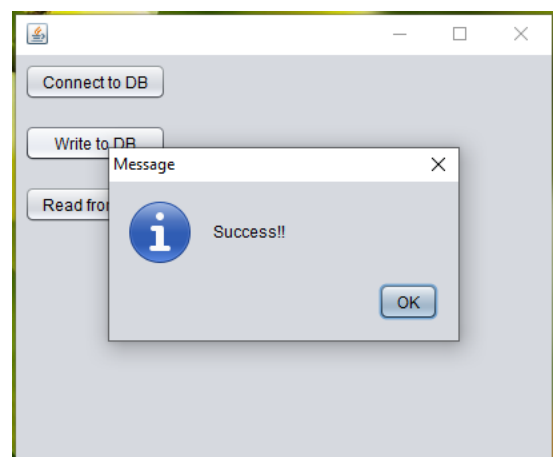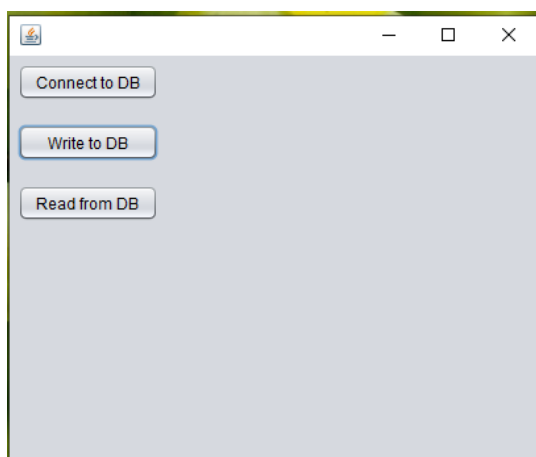

GUI Should be as Follows.

Activity 02

Connect the database with JAVA Swing GUI by using **JAVA JDBC connector**, and if the connection was successful, Show the message box as **Success**, if not Show the error message box as **Connect Database First**.
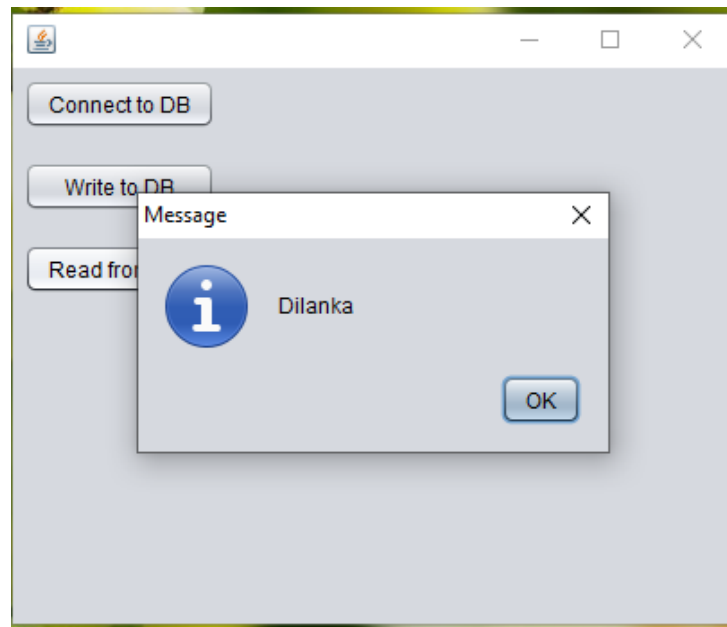
Activity 03

Write data to database using Swing GUI, you should Pass the relevant data to database table by click one single button. Once button clicked data should write in the table on database. If database wring part Success, Show the Show the message box as **Success**

Activity 04

Now read the data from the database by using Swing GUI interface, Retrieve the Student name as a message box with the Student name.

You can use following Queries to see the table values and insert new values to the table,
PS: To this practical we are used **MySQL server 8.0** with **MySQL Workbench 8.0**