Lab 11: Building GUI for DB Transactions

Objectives:

At the end of this lab, you should be able to:

1) Using JDBC Transactions
2) Build GUI that interacts with database.
3) Display data collection in tabular form using JTable.

Transaction Control in JDBC

Transaction: is a set of statements that either all of them are executed (commit) or none of them is executed (rollback).

In JDBC**, by default the** database connection is auto-commit, so if you want to change that, you should explicitly turn auto-commit to off

```
conn.setAutoCommit(false);
…….
…….
conn.commit( );
or
conn.rollback( );
```

Exercise 1:

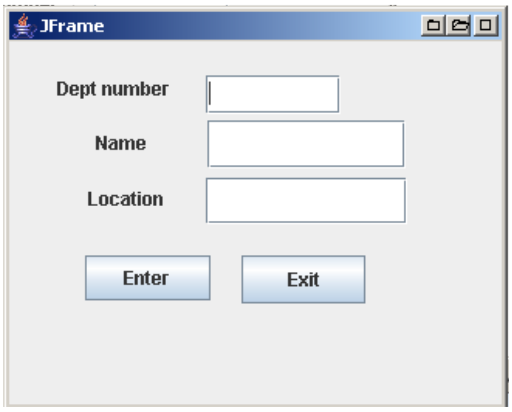
Using commit, and roll back Write Java program to insert

a) a new dept. to table DEPT as follows
   Deptno: 70 dname: 'HR' Loc: 'Doha'
b) a new employee to table EMP as follows:
   empn: 777 ename: ' Naser' sal:3000 deptno: 70.

Using *JOptionPane.showConfirmDialog*,
let the user confirm these changes or ignore them.

Exercise 2

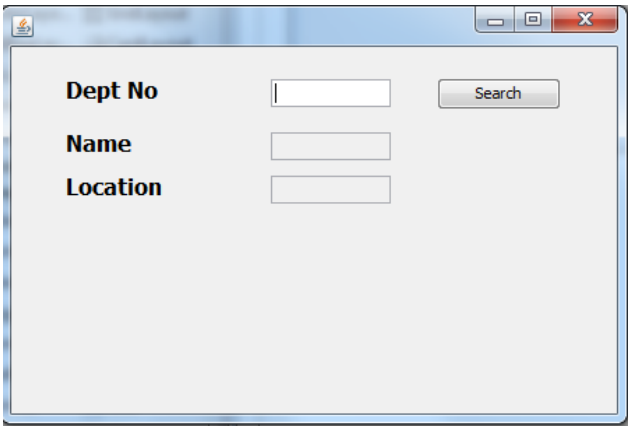
Using java swing components, developed friendly interface that reads department number, name, and its location from the user then insert this data to the table dept.



- Use WindowBuilder to build the GUI.
- To exit, use method dispose( ).

Exercise 3

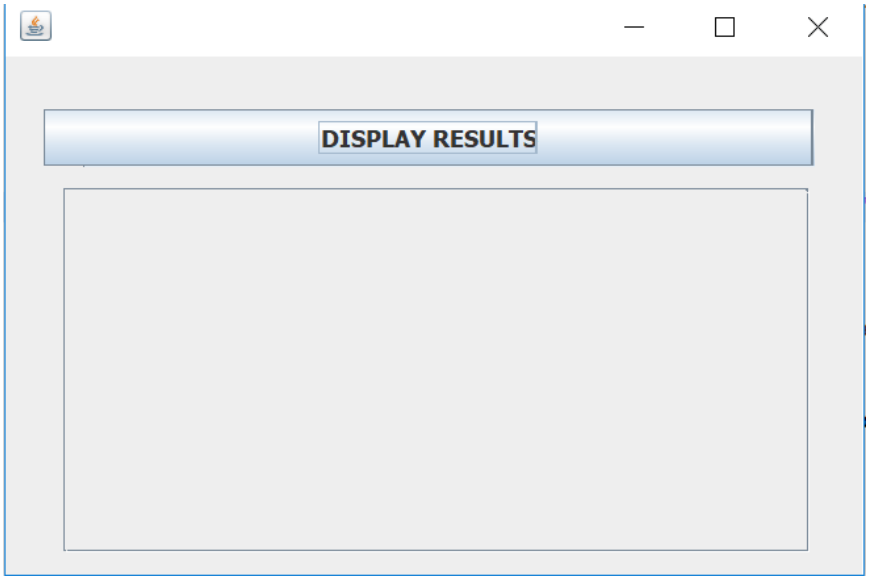
Using Java swing, develop GUI to search for a department using department number, your GUI should look as following
If no dept found, you should display dialog with the message “No dept. found”.

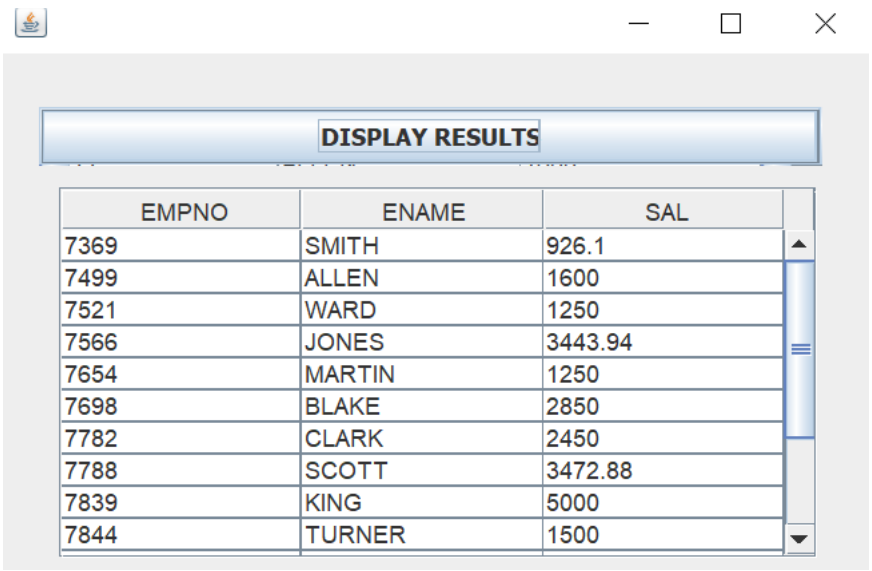


Display Data in a GUI Table

Exercise 4:

Create the GUI below to load data in the Oracle database into JTable in Java.





- To display the data in a tabular form, you need to use JTable component and a JButton.
- Download the following archive file **rs2xml.jar** from the Blackboard or from the internet.
- The jar file **rs2xml.jar** is used to convert the result set to the Data Model (Populate JTable).
- The following the lines are required in your code:

```
try {
        conn=DriverManager.getConnection(url,user,pass);
        stmt=conn.prepareStatement(sql);
        rs=stmt.executeQuery();
        table.setModel(DbUtils.resultSetToTableModel(rs));
    }
```

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